

**SUSITNA
HYDROELECTRIC PROJECT**

**FEDERAL ENERGY REGULATORY COMMISSION
PROJECT No. 7114**

**PROCESSED CLIMATIC DATA
OCTOBER 1983 - DECEMBER 1984**

**VOLUME 1
SUSITNA GLACIER STATION
(No. 0610)**

PREPARED BY

R&M
R & M CONSULTANTS, INC.
ENGINEERS GEOLOGISTS PLANNERS SURVEYORS

UNDER CONTRACT TO

HARZA-EBASCO
SUSITNA JOINT VENTURE

FINAL REPORT

**JUNE 1985
DOCUMENT No. 2767**

ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

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Prepared for
Alaska Power Authority

Final Report
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SUSITNA HYDROELECTRIC PROJECT

TASK 4 - HYDROLOGY

PROCESSED CLIMATIC DATA
OCTOBER 1983 - DECEMBER 1984

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ALASKA POWER AUTHORITY
SUSITNA HYDROELECTRIC PROJECT

PROCESSED CLIMATIC DATA - SUSITNA GLACIER STATION
OCTOBER 1983 - DECEMBER 1984

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ACKNOWLEDGMENTS

These climatic data were collected under contract to Harza-Ebasco Susitna Joint Venture for the Alaska Power Authority on the Susitna Hydroelectric Project. Field maintenance and data collection were performed by the hydrology staff of R&M Consultants, Incorporated. Data reduction and processing were performed by Debbie Stephens, Len Story, Blair Parker, Jim Nelson and Jeff Coffin, using computer programs developed by Mark Holmstrand and revised by Bill Ashton.

1.0 BACKGROUND

1.1 Purpose

The Glacier climate station was installed adjacent to Susitna Glacier in the Eastern Alaska Range to obtain data representative of the high elevations within the Susitna drainage basin.

1.2 Station Description

The Glacier weather station lies near the confluence of three major glaciers emanating from the south slope of Mt. Hayes (13,832 feet). The site is located at the 4,700 feet level of a barren ridge which runs roughly east and west, and slopes steeply to the west. The instrument is on the southwest flank, approximately 500 feet above the glacier ice at 63°31'50" N latitude and 146°53'40" W longitude. Mountains rise abruptly from the glacier filled valleys to elevations over 10,000 feet. The mountains to the south of the site rise to over 7,000 feet at a distance of less than 3 miles. This site is shaded for most of the day during December and January and when sun angles are below 9° from the horizontal. (See Table 1.1 for angular elevations of terrain obstructions.)

Winds generally blow downhill in these glaciated mountains resulting in winds from the north or east at the instrument.

1.3 Methods of Data Collection

The climatic data at Glacier are collected using a Model 5100 Weather Wizard Digital Weather Station, manufactured by Meteorology Research, Inc., now part of Belfort Instrument Company. The Weather Wizard measures, processes, and records several weather parameters, which are described below. A 12-volt power supply powers the station and is kept charged by a solar panel. Data are recorded on a low-temperature cassette tape at 30-minute intervals. Fifteen-minute recording intervals were used prior to October 5, 1983. The station is visited approximately

once per month for maintenance and repairs, and to retrieve the data tapes.

Recorded data include instantaneous values of temperature, relative humidity, solar radiation intensity, and battery voltage; the cumulative amount of precipitation measured since the last reset; and several wind parameters. Wind direction is sampled every 15 seconds and averaged over the recording interval. Wind speed is measured by counting each revolution of the cup anemometer and averaging the speed over the recording interval (15 or 30 minutes). The fastest 15-second average speed for the interval is reported as the peak gust.

The anemometer and wind vane are part of a sensor array mounted atop a 3.5-meter tripod adjacent to the recorder shelter. The sensor array also contains a short boom with a radiation shield for the temperature and relative humidity sensors. A rain gage and solar radiation sensor are located on a separate platform 10 meters to the southeast from the main platform. The tipping-bucket rain gage is mounted on a 0.6-meter post and plumbed vertically. The solar sensor is installed facing vertically upward atop a 1.5-meter tripod.

Table 1.2 describes sensor types and performance characteristics for each parameter. The performance characteristics were provided by MRI. Conversion factors for the units are provided in the appendix.

1.4 Station History

The Glacier Station was installed on July 20, 1980. This report covers the period from October 1983 to December 1984 only. There are three previous data reports for this station:

	Report	Period Covered
1.	Processed Climatic Data Volume 1 Susitna Glacier Station (No. 0610) March 1982 (R&M Consultants)	July 1980 - September 1981
2.	Processed Climatic Data Volume 1 Susitna Glacier Station (No. 0610) December 1982 (R&M Consultants)	October 1981 - September 1982
3.	Processed Climatic Data Volume 1 Susitna Glacier Station (No. 0610) June 1984 (R&M Consultants)	October 1982 - September 1983

Tables 1.3 through 1.6 list the inspection dates and maintenance performed for the station, significant data gaps, adjustments to raw data, and values that have been estimated where data are missing. Periods with more than one hour of missing data are shown on Table 1.4. Intermittent gaps in the wind data occur frequently in the winter and are not identified individually. The number of missing days for these cases is approximated by the total number of missing hours during the period. The beginning and ending dates for the data gaps and for the adjustments to raw data correlate with the inspection and maintenance dates. Relative humidity data for measurements with wind speeds less than 1.0 m/sec are not valid and thus not used in calculating the percentage of total observations for each month, which are tabulated in Table 2.2. However, these missing RH values do not constitute data gaps in Table 1.4.

TABLE 1.1. ANGULAR ELEVATIONS OF TERRAIN OBSTRUCTIONS
AROUND GLACIER WEATHER STATION

Azimuth(1) (True)	Elevation(2) (ft, MSL)	Vertical Angle(3)
14°	7690	11°
37°	7381	8.3°
58°	7725	8.9°
73°	7120	14°
75°	8451	11°
94°	5485	15°
139°	7250	7.2°
154°	6990	7.2°
180°	7172	9.7°
228°	5565	2.4°
287°	6490	4.8°
290°	6170	6.5°
305°	6710	7.1°
350°	7110	13°
352°	8220	14°

NOTES:

- (1) Azimuth angles are in degrees from true north.
- (2) Elevations were obtained from U.S.G.S 1:63,360 scale maps. Points used were selected mountain peaks and other features surrounding the weather station. Elevation differences from the weather station at 4700 ft, msl. and horizontal distances were used to triangulate the vertical angles.
- (3) Vertical angles are measured above the horizontal.

TABLE 1.2 DESCRIPTION OF METEOROLOGIC SENSORS

<u>Sensor</u>	<u>Model #</u>	<u>Manufacturer</u>	<u>Description</u>	<u>Operable Range</u>	<u>Accuracy</u>
Temperature	T5100	MRI	Linearized Thermistor	-30°C - +50°C	±1°C
Relative Humidity	PCRC-11 Electro-Humidity Sensor	Phys-Chemical Research Corp.	Exposed circuit element Senses changes in RH by changes in impedance	10% to 95%	±6%
Solar Radiation	RS 1008 Photo Voltaic Pyranometer	RHO Sigma Corp.	Temperature-Compensated Silicon Photovoltaic Cell	0 to 140 Milliwatts/cm ²	±5mw/cm ²
Precipitation	P5100	MRI	Tipping Bucket Rain Gage	0 to 99.8 mm	±1% up to 76.2 mm/hr ±5% from 76.2 mm/hr to 254 mm/hr
Wind Speed	5100	MRI	Cup Anemometer (vertical axis)	0 to 50 m/sec	±0.5 m/sec
Wind Direction	5100	MRI	Sensitive Vane driving a 360° Plastic Film Potentiometer	0 to 359°	±3.6°

TABLE 1.3. INSPECTION DATES AND MAINTENANCE
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

Inspection Date	Maintenance
10/05/83	Changed to 30 minute recording interval.
11/16/83	None.
01/09/84	Reset date to 009.
02/27/84	None.
04/09/84	Weather Wizard removed for repairs.
05/04/84	Re-installed Weather Wizard. RH sensor replaced and calibrated.
05/23/84	None.
07/16/84	None
08/27/84	Weather Wizard removed for repairs.
09/22/84	Weather Wizard replaced. Changed to 5 minute recording interval. RH oscillator replaced.
11/02/84	Changed to 15 minute recording interval. Attached new wind vane tail.
11/28/84	RH sensor calibrated. Changed to 30 minute recording intervals.

NOTE: Inspections noted where no maintenance was performed are dates when cassette tapes were replaced.

TABLE 1.4. EXPLANATION OF DATA GAPS AT
SUSITNA GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

Period	Approximate Number of Missing Days By Parameter							Explanation
	Temp	RH	WS	WD	Precip	Solar	Gust	
10/1 - 10/21/83			1	6			1	Frozen anemometer and wind vane (intermittent).
11/11 - 11/30/83		1.5						Low RH values deleted from raw data.
12/1 - 12/5/83				1				Frozen wind vane (intermittent).
2/13 - 2/25/84				1.5				Frozen wind vane (intermittent).
2/27 - 5/4/84	67	67	67	67	33	67	67	Weather Wizard not functioning.
5/4 - 5/23/84		2						Bad RH oscillator. Intermittent erratic data.
5/23 - 6/11/84		17						Bad RH oscillator.
6/11 - 6/26/84		1.5						Bad RH oscillator. Intermittent erratic data.
6/26 - 9/22/84	87.5	87.5	87.5	87.5	87.5	87.5	87.5	Weather Wizard not functioning.
10/2 - 10/8/84				0.3				Frozen wind vane (intermittent).
10/8 - 11/2/84	25	25	25	25		25	25	Data tape ran out due to 5 minute recording intervals.
11/11 - 12/14/84	2	2	1.5	3		0.5	2	Weather Wizard malfunction. Intermittent garbled data.
11/24 - 12/26/84			0.5	3.5			0.5	Frozen anemometer and wind vane (intermittent).
Total	182	204	182	195	120	180	183	

NOTE:

Precipitation data collected April through September only. Collector is not designed for winter temperatures.

TABLE 1.5. ADJUSTMENTS MADE TO RAW DATA
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

Period	Solar Radiation Adjustment	RH Adjustment	Wind Direction Adjustment
10/1 - 11/16/83	-1 mW/cm ²	-15 RH Points	
11/16 - 12/31/83	-1	-12	
1/1 - 2/27/84	-1	-7	
5/4 - 6/11/84	-1		
6/12 - 6/26/84	-1	-25	
9/22 - 10/8/84	-1	-2	-180°
11/2 - 11/28/84	-1	+5	
11/28 - 12/31/84	-1	+7	

NOTE: No data 2/27 - 5/4 and 6/26 - 9/22 due to Weather Wizard malfunction.

TABLE 1.6. ESTIMATES FOR MISSING DATA
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

<u>Date</u>	<u>Time (AST)</u>	<u>Temp (°C)</u>	<u>Wind Speed (m/s)</u>	<u>Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
11/03/84	2015					33		
11/04/84	0945	-11.0						
11/07/84	1100 1315 2130					94		8 13
11/08/84	0145 0300 0315 0800	-7.7 -7.1 -6.7 -7.8				77 74		0 0 0
11/09/84	0900 1100 1415 1515 1600 2315 2345		1.1			90 90 80 84 57		4 2
11/10/84	0530 0715 0845 0900 1100 1115					54 52 45		0 0 0 6 9
11/11/84	0230 0245 0345-0415 0445-0900 0500 0600 1215 2130-2315 2315 2230 2245 2200-2315	-15.6 -16.4 -15.7 -17.8 -17.5 -17.7				50 50 50 48		0 0
						53		

NOTES:

1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceding and following the missing data.
2. Precipitation values are the amounts estimated to have fallen in the preceding half-hour.

TABLE 1.6. ESTIMATES FOR MISSING DATA
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984
(Continued)

<u>Date</u>	<u>Time (AST)</u>	<u>Temp (°C)</u>	<u>Wind Speed (m/s)</u>	<u>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
11/12/84	0430	-19.0						
	1045	-17.8						
	1200	-16.7						
	0415-0915					44		0
11/20/84	1045					64		
	1300					73		1
	1500					78		
	1600							0
	1830							0
	1915					70		0
	2000	-1.9						
	2015	-2.0						
11/22/84	0415					96		
	0645	-8.0						
	1030							1
	1045							1
	1315					79		1
	1330					78		
	1800							0
11/23/84	0415							0
	1300							0
	1730				1.9			2
	2230					85 83		
11/24/84	0600	-10.9						
	1900	-14.2				87		
	1830					89		
	2330					84		
11/25/84	0815							
	0830							0
	1330					87		
	1345					89		
	1315					92		
	1830							1 0

NOTES:

1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceding and following the missing data.
2. Precipitation values are the amounts estimated to have fallen in the preceding half-hour.

TABLE 1.6. ESTIMATES FOR MISSING DATA
GLACIER CLIMATE STATION
OCTOBER 1982 TO DECEMBER 1984
(Continued)

<u>Date</u>	<u>Time (AST)</u>	<u>Temp (°C)</u>	<u>Wind Speed (m/s)</u>	<u>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
11/26/84	0045					66		
	0345					71		0
	0545-0630							0
	0715							0
	0600	-16.7						
	0830							0
	0930-1115							0
	1130					51		
11/27/84	1845					74		
	0345	-16.0				53		0
	0330							0
	0415	-16.0				53		0
	0745					48		
11/28/84	1130	-13.0				69		2
12/03/84	2100					73		
12/04/84	0830					66		
	0000					81		
12/09/84	0930					60		
	1000	-14.2						1
	1030	-14.4						1
	1100					57		2
	1130							2
	1200							1
	1230	-14.7						0
	1300-1330							0
	1400	-16.8						0
	1430-0000							0
	1500					70		
	1530					71		
12/10/84	0030-0230							0
	0630-1030							0
	1900	-15.6						
	1430-0000							0

NOTES:

1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceding and following the missing data.
2. Precipitation values are the amounts estimated to have fallen in the preceding half-hour.

TABLE 1.6. ESTIMATES FOR MISSING DATA
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984
(Continued)

<u>Date</u>	<u>Time (AST)</u>	<u>Temp (°C)</u>	<u>Wind Speed (m/s)</u>	<u>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
12/11/84	0030					53		0
	0100	-16.3						
	0130	-16.4				53		
	0200	-16.4						
	0300					53		
	0400					57		
	0500	-16.5						0
	0600							0
	1030	-13.4						
	1300							1
	2000					57		
	2130	-16.0						
	0000					55		0
12/12/84	0100					56		
	0230					60		
	0630-0730							0
	0700	-19.2						0
	0900-1000							0
	1100					62		
	1130					60		
	1330							2
	1400	-17.0						
	1600	-17.5						
	1730-0000							0
12/13/84	0600					54		
	1600					56		
12/14/84						41		
	1700					60		
	1930					23		
12/15/84	2130	-12.8				24		
12/17/84	1600	-14.1						
	1700					75		
12/17/84	1030	-4.0				80		0

NOTES:

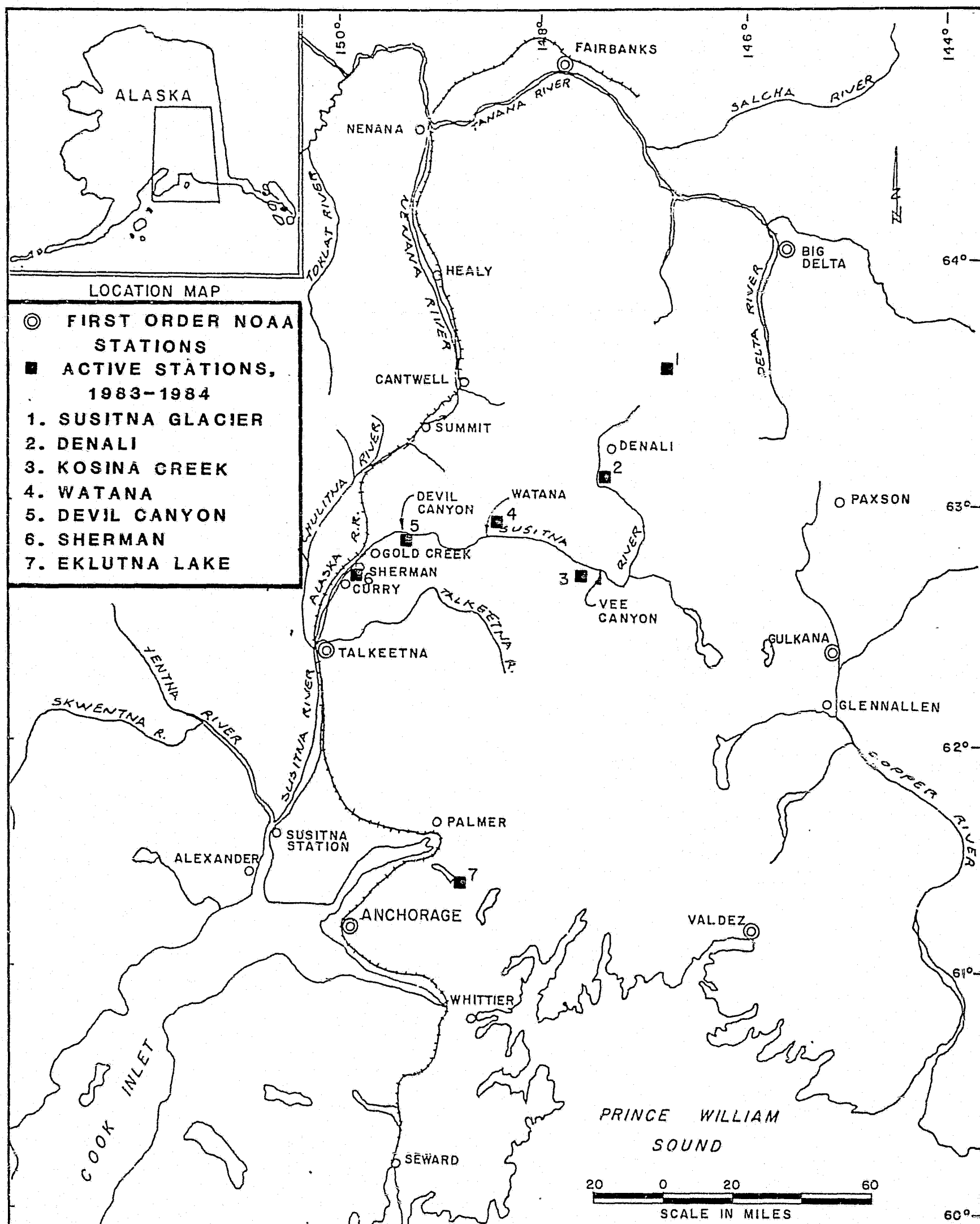
1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceding and following the missing data.
2. Precipitation values are the amounts estimated to have fallen in the preceding half-hour.

TABLE 1.6. ESTIMATES FOR MISSING DATA
GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984
(Continued)

<u>Date</u>	<u>Time</u> <u>(AST)</u>	<u>Temp</u> <u>(°C)</u>	<u>Wind</u> <u>Speed</u> <u>(m/s)</u>	<u>Wind</u> <u>Dir</u> <u>(Deg)</u>	<u>Gust</u> <u>(m/s)</u>	<u>RH</u> <u>(%)</u>	<u>Precip</u> <u>(mm)</u>	<u>Solar Radiation</u> <u>(mw/cm²)</u>
12/20/84	0030					30		0
	0200	-15.0				26		
12/24/84	1100	-15.7						
	1430	-15.1						
	1900	-15.0						
	1830							0
12/29/84	0400					86		

NOTES:

1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceding and following the missing data.
2. Precipitation values are the amounts estimated to have fallen in the preceding half-hour.



LOCATION MAP: SUSITNA PROJECT METEOROLOGIC STATIONS

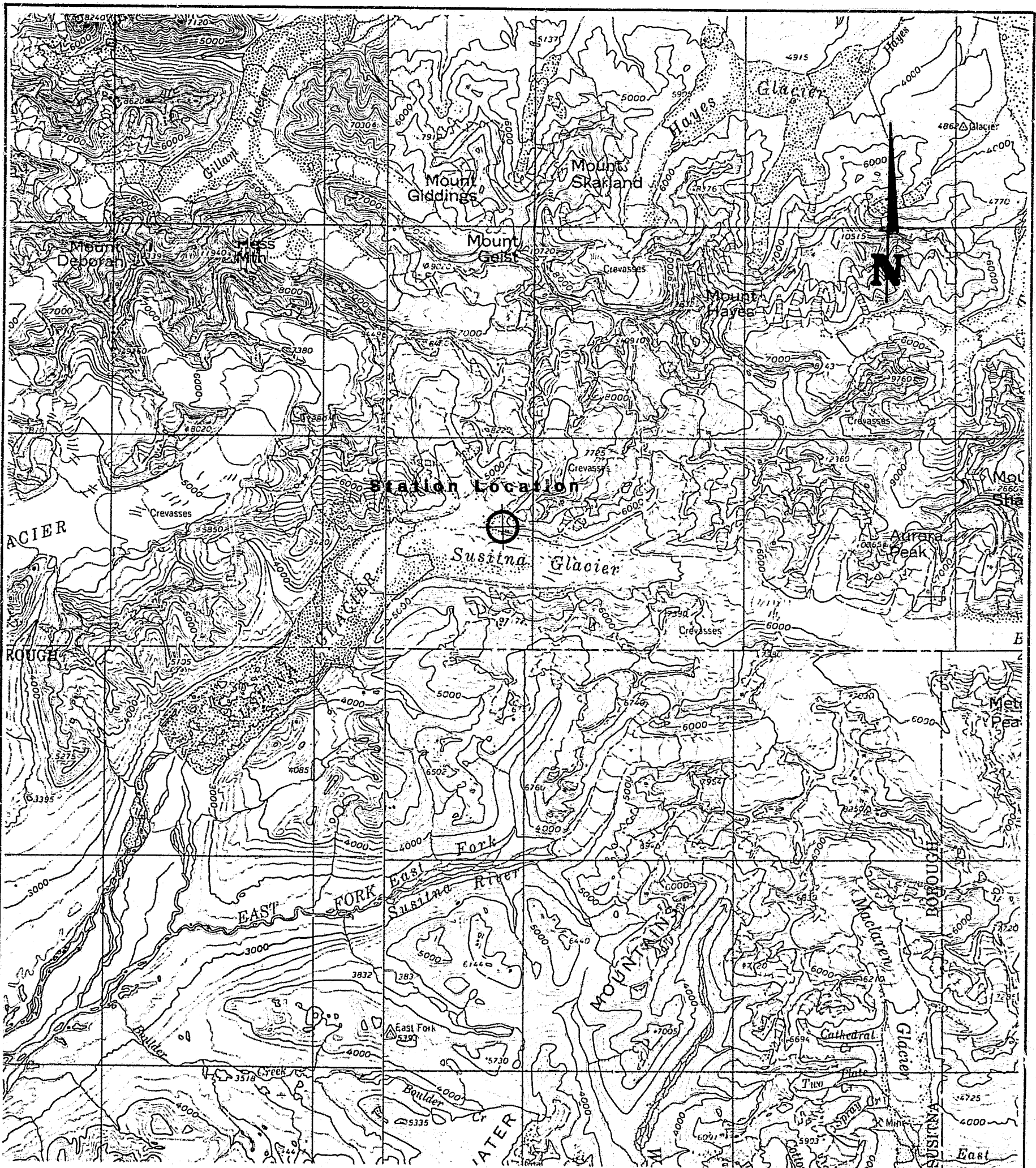
PREPARED BY:

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FIGURE 1-1

PREPARED FOR:

HARZA-EBASCO
 SUSITNA JOINT VENTURE



USGS MT. HAYES (1955) SCALE 1:250,000

Figure 1.2

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GLACIER CLIMATE STATION

PREPARED FOR:

HARZA-EBASCO
SUSITNA JOINT VENTURE

2.0 ANNUAL DATA SUMMARY

Table 2.1 presents a summary of the monthly averages or totals for each parameter for the full period covered by this report, October 1983 to December 1984. The symbols used in the table are explained in Section 3, Report Preparation. Conversion factors are provided in the appendix. The data reported herein are also summarized in Figure 2.1, a sequential plot of all the measured parameters. Annual summaries for prior years are provided in the previous data report (R&M Consultants, 1984).

With this report, a shift has been made from presenting the climatic data on a water year basis to presenting it for the calendar year. The calendar year format matches that used by the National Oceanic and Atmospheric Administration (NOAA) in reporting climatic data, and simplifies comparisons. Future reports will also be for calendar years.

A summary of the percentage of usable data recovered for each climatic parameter by month during this reporting period is presented in Table 2.2. The cumulative percentage in this case applies for the whole 15-month period.

TABLE 2.1. SUMMARY OF CLIMATE DATA RECORDED AT
SUSITNA GLACIER STATION (NO. 0610)
OCTOBER 1983 TO DECEMBER 1984

Month	Temperature			Wind						Mean RH (%)	Mean DP (°C)	Precip (mm)	Total Solar Energy (WH/m ²)
	Max (°C)	Min (°C)	Mean (°C)	Res Dir (°True)	Res Speed (m/sec)	Ave Speed (m/sec)	Max Gust Dir (°True)	Max Gust Speed (m/sec)	P' Val Dir (True)				
October 1983	3.6	-15.3	-5.5	M	M	1.8M	M	19.0M	M	62	M	M	31,859
November	5.5	-13.8	-5.3	083	2.2	2.5	118	19.7	ENE	46M	M	M	8,665
December	4.5	-21.5	-8.1	070M	1.3M	0.8	099M	12.7	ENE(M)	48	M	M	1,525
January 1984	1.2	-27.8	-10.4	087	1.6	2.2	118	19.7	ENE	61	M	M	3,650
February	-1.6M	-26.7M	-11.2M	-85M	1.4M	2.0M	155M	18.4M	ENE(M)	60M	M	M	15,030M
March	M	M	M	M	M	M	M	M	M	M	M	M	M
April	M	M	M	M	M	M	M	M	M	M	M	M	M
May	13.2M	-9.2M	2.9M	061M	0.9M	1.5M	027M	11.4M	ENE(M)	M	M	18.2M	187,763M
June	15.3M	-0.4M	7.2M	089M	0.8M	1.9M	128M	13.3M	ENE(M)	M	M	105.4M	168,663
July	M	M	M	M	M	M	M	M	M	M	M	M	M
August	M	M	M	M	M	M	M	M	M	M	M	M	M
September	M	M	M	M	M	M	M	M	M	M	M	M	M
October	M	M	M	M	M	M	M	M	M	M	M	M	M
November	-0.6M	-19.1M	-10.0M	070M	1.2M	1.6M	120M	26.0M	ENE(M)	63M	M	M	7,159M
December	1.8M	-20.0M	-11.1M	072M	1.4M	1.9M	338M	17.8M	ENE(M)	68M	M	M	1,085M
Annual-WY (10/83 - 9/84)	M	M	M	M	M	M	M	M	M	M	M	M	M
Annual-CY (1/84-12/84)	M	M	M	M	M	M	M	M	M	M	M	M	M

NOTE: See section on interpretation of data for explanation of symbols used. Annual values are for water year (WY) and calendar year (CY).

TABLE 2.2. PERCENT OF TOTAL POSSIBLE OBSERVATIONS RECORDED AT
SUSITNA GLACIER CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

<u>Month</u>	<u>Temp</u>	<u>Wind Speed</u>	<u>Wind Direction</u>	<u>Peak Gust</u>	<u>RH</u>	<u>Precip</u>	<u>Solar Radiation</u>	<u>Dew Point</u>
October 1983	100	98	80	98	77	0	100	77
November	100	100	100	100	87	0	100	87
December	100	100	96	100	77	0	100	77
January 1984	100	100	100	100	87	0	100	87
February	91	91	85	91	72	0	91	72
March	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0
May	89	89	86	89	42	89	89	42
June	85	85	85	85	39	85	85	39
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	27	27	27	27	22	27	27	22
October	23	23	22	23	19	0	23	19
November	94	92	87	89	68	0	94	68
December	95	95	85	93	81	0	100	80
Total	60	60	57	60	45	13	60	45

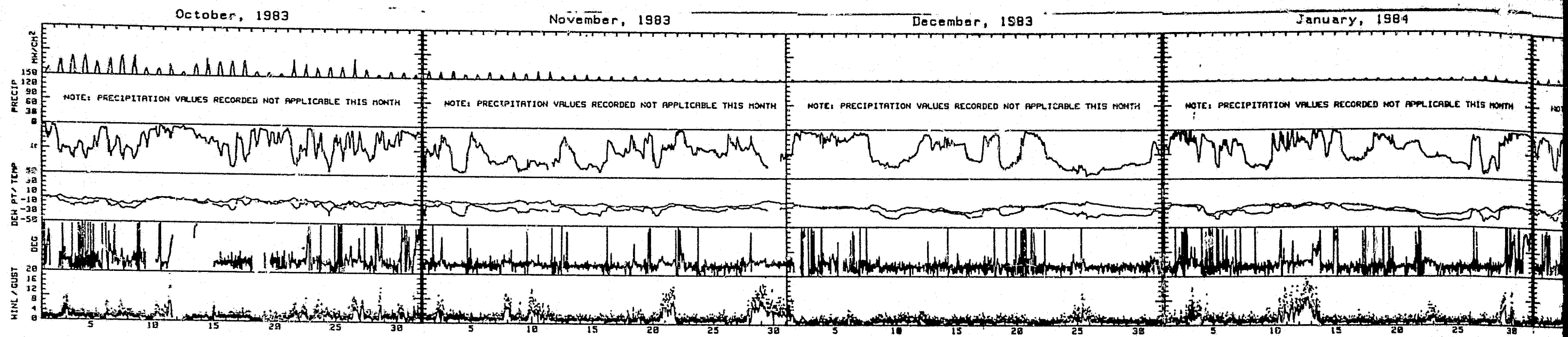
NOTES:

1. RH and dewpoint data are not valid and have been discarded for samples when the wind speed is less than 1.0 m/s.
2. Precipitation data are recorded from April through September only. Collector is not designed for winter temperatures.
3. The percentage reported as TOTAL is for the full 15-month period (10/83-12/84).

INSERT

FIGURE

2.1

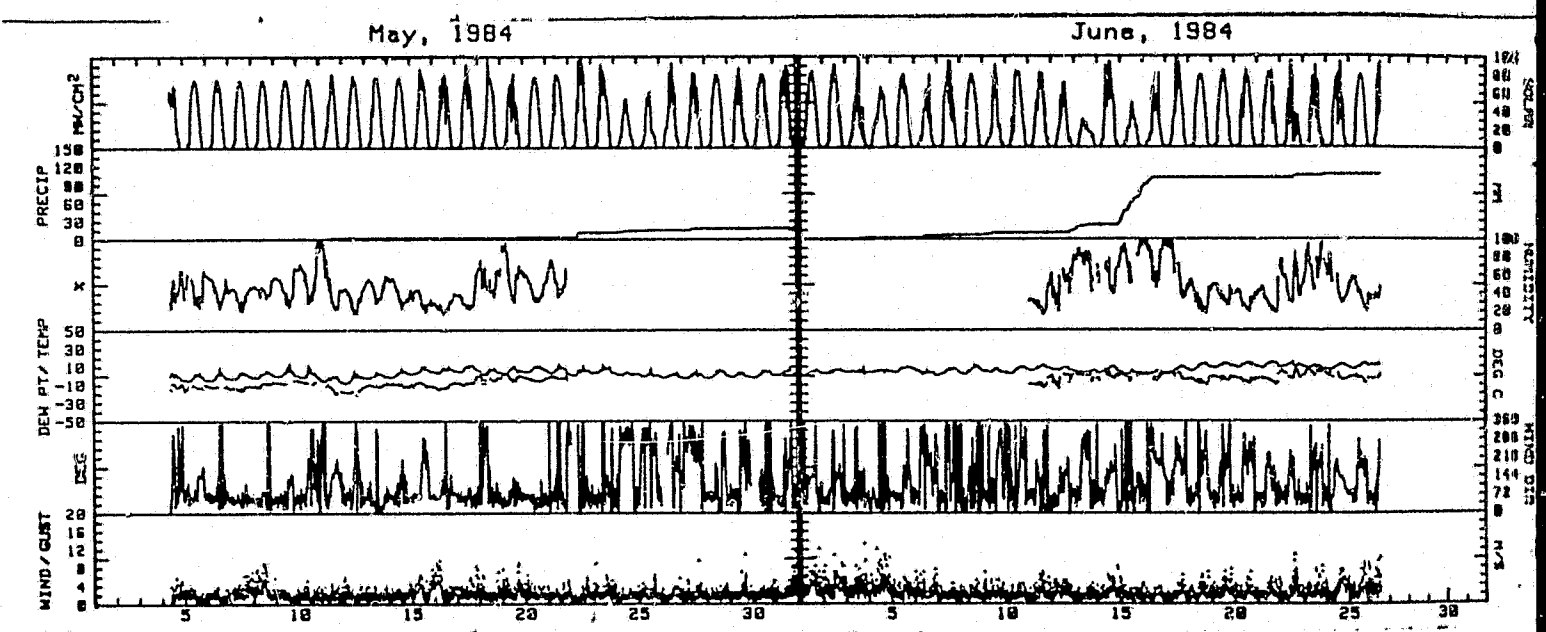


NO DATA FOR MARCH 1984

NO DATA FOR APRIL 1984

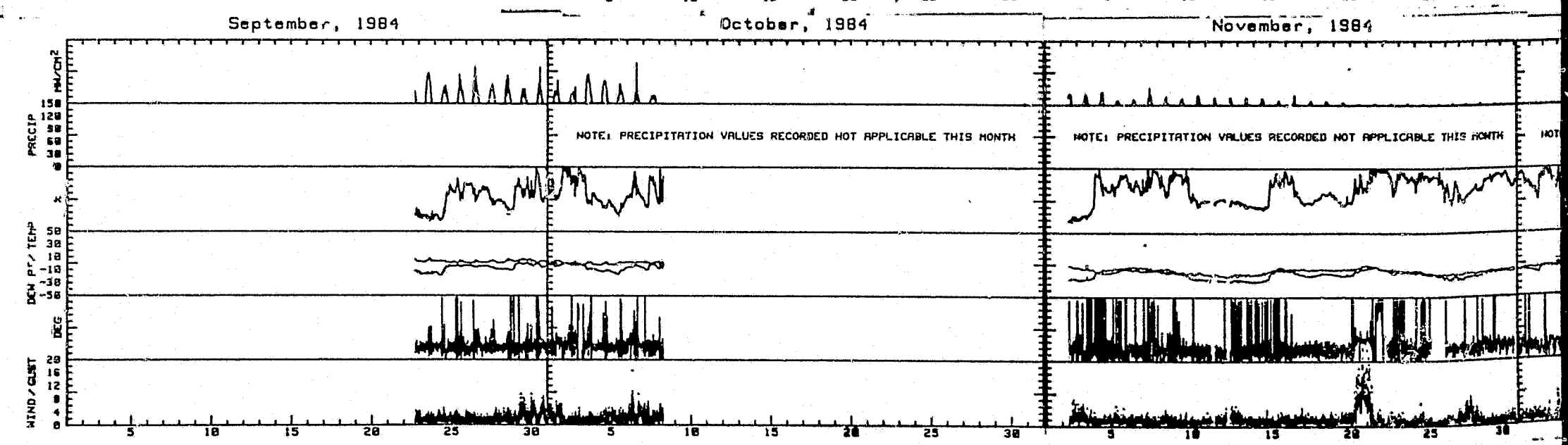
STATION NOT WORKING

STATION NOT WORKING

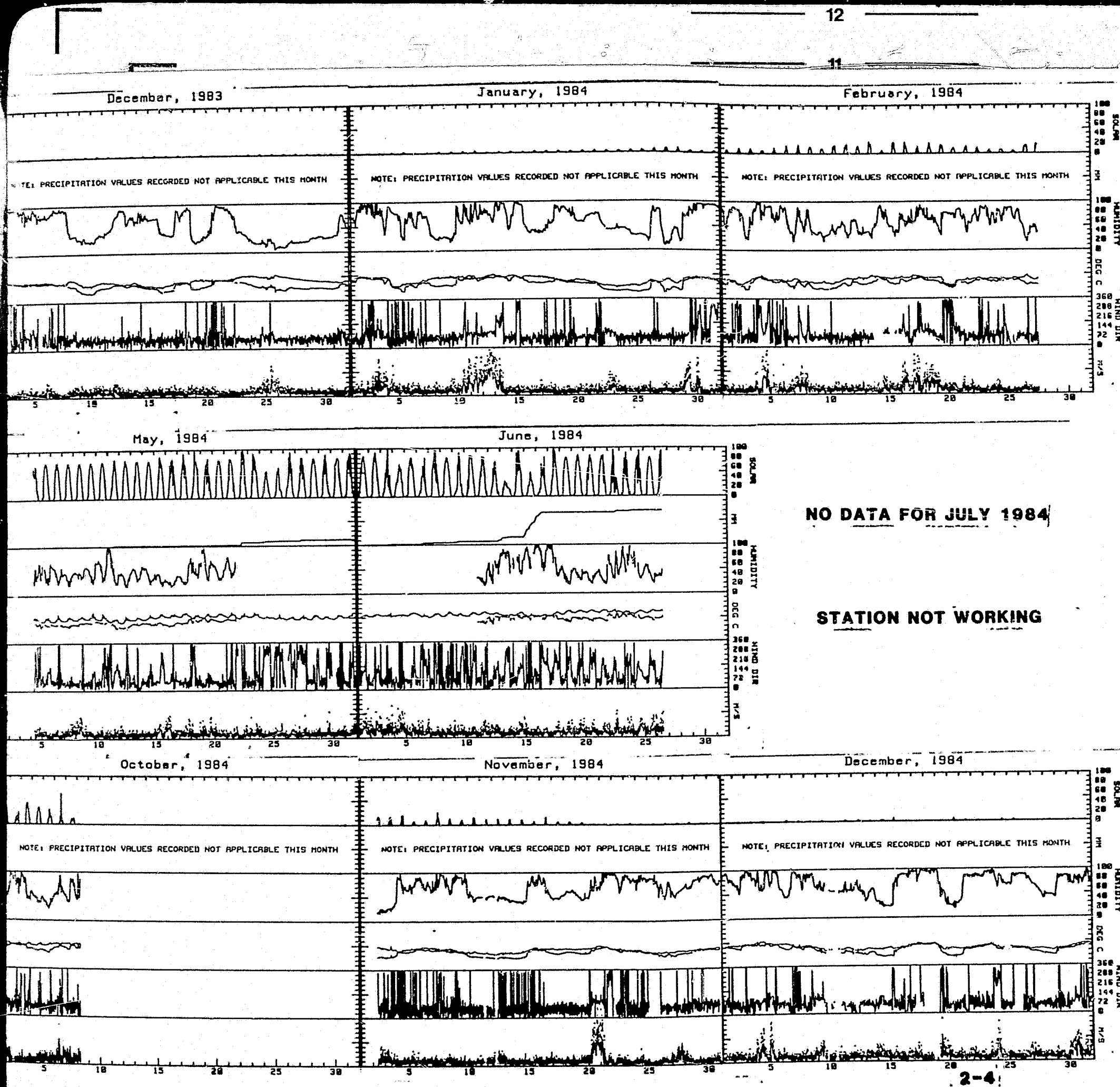


NO DATA FOR AUGUST 1984

STATION NOT WORKING



Continued



NOTE: A larger copy of each plot is presented in Section 5, Climatic Data Summaries.

FIGURE 2.1:
SEQUENTIAL PLOT
OF CLIMATIC DATA,
SUSITNA GLACIER
STATION,
OCTOBER 1983-
DECEMBER 1984

Continued

FOLD LENGTH
12
11
8.5
8
AUTO
MANUA
FEED

002767

3.0 REPORT PREPARATION

3.1 Description of Symbols Used in Annual and Monthly Summaries

3.1.1 Annual Summary

Blank entries for monthly values indicate the station had not yet been installed at the site or that it had been removed prior to that month. Installation and removal dates are noted on the table as well.

M Insufficient or partial data. M follows average and/or total values if 1-9 daily values were missing data for all or part of the day. M appears alone for the month if 10 or more daily values were missing or contained missing data. Parentheses surround the M where other letters may cause confusion (i.e. in prevailing direction). M follows average and/or total values for the year if any month was missing data. M appears alone for the year if any month was missing enough data to require it to have an M alone or if three or more months were missing any data.

3.1.2 Monthly Summaries

**** Erroneous or missing data (may be from 2 to 6 asterisks, depending on number of digits possible in the value). Asterisks appear in place of the value if all readings required for determination of the table value were missing.

- A dash in the hourly precipitation table indicates the volume for that hour is not known, but the cumulative total of precipitation over the interval of consecutive dashed hours is included in the next hour where a value is

reported. Similarly, a dash for precipitation in the monthly summary table indicates the volume for that day is not known, but the cumulative total over the interval of consecutive dashed days is included in the next day where a value is reported.

3.2 Data-Computation Standards (Climate)

Conversion factors for units are presented in the appendix. Specific segments of the monthly reports are described below.

3.2.1 Graphical Data Plot

The data plot is a graphical representation of valid recorded and/or computed data.

3.2.2 Hourly Precipitation Summary Table

Hourly precipitation values are calculated as the difference between valid (current and preceding) consecutive hourly readings. When either of these hourly precipitation readings are invalid, no value is reported for the current hour. No table is published for the winter months (October through March) unless a heater is part of the tipping bucket installation.

3.2.3 Monthly Summary Table

1. Maximum daily and monthly temperatures are determined from all valid recorded temperatures.
2. Minimum daily and monthly temperatures are determined from all valid recorded temperatures.

3. Mean daily and monthly temperatures are determined from all valid recorded temperatures. The mean daily temperature is determined from the mean of the maximum and minimum temperatures. The mean monthly temperature is determined from the mean of all reported daily mean temperatures.
4. Resultant daily and monthly wind directions and speeds are summed vectorially from all valid readings.
5. Average daily and monthly wind speeds are determined from all valid readings (arithmetic mean).
6. Maximum daily and monthly gust speeds are determined from all valid readings. Associated directions are the resultant directions from the recording interval in which the peak interval gust was observed.
7. Prevailing daily and monthly directions are determined from all valid readings. The reported value is the most frequent direction observed.
8. Mean daily and monthly relative humidities are determined from all valid readings (arithmetic mean). When the wind speed is less than 1 m/sec, the RH value is omitted from the averaging (but is displayed in the graphical data plot and in the three-hour table).
9. Mean daily and monthly dewpoint temperatures are determined from all valid readings (arithmetic mean). Dewpoints are omitted when the wind speed is less than 1 m/s, when the dewpoint calculates to a value greater than the recorded temperature, or when the dewpoint calculates

to less than minus 47 degrees or more than 27 degrees Centigrade.

10. Daily and monthly precipitation values are determined from all valid readings.
11. Daily and monthly solar energy values are determined from all valid readings. Daily solar energy (in watt-hours per square meter) is determined by averaging the recorded solar intensity (which is in milliwatts per square centimeter) and converting the units. The monthly value is the sum of the daily values.

3.2.4 Three-Hour Summary Tables

1. The temperature reported is the temperature recorded at the specified time.
2. The dewpoint temperature reported is the dewpoint calculated at the specified time. Dewpoints are omitted when the wind speed is less than 1 m/s, when the dewpoint is calculated to a value greater than the recorded temperature, or when the dewpoint calculates to less than minus 47 degrees or more than 27 degrees centigrade, or when either the temperature or R.H. reading is invalid.
3. The relative humidity reported is the humidity recorded at the specified time.
4. The wind direction reported is the three-hour vectorial resultant sum of data recorded up to the specified time.
5. The wind speed reported is the three-hour vectorial resultant of data recorded up to the specified time.

6. The gust direction reported is the direction of the maximum gust recorded during the preceding three-hour period.
7. The gust reported is the maximum recorded during the three-hour period.
8. The radiation reported is the solar radiation intensity recorded at the specified time.

3.2.5 Wind Frequency Summary Table

Reported data are determined from all valid pairs of readings. Valid pairs of wind data are composed of valid wind speed and wind direction data for the same interval.

3.2.6 Hourly Solar Radiation Table

An addition to this year's report series, hourly solar radiation values are averages of all valid readings recorded during the preceding hour. If any data are missing or invalid, the remaining values are arithmetically averaged for the hour. The daily average values are determined by summing the hourly averages for the day and dividing by 24. If all data are missing for the hour, no value is printed; asterisks (***) appear instead, and no value is used for the hour in computing the daily average.

3.2.7 Wind Rose Graphical Plot

The plot is a graphical representation of the wind frequency summary table.

3.2.8 Observation Summary Table

Another addition to this year's report series is an observation summary. The number of usable observations for each parameter is determined by counting the number of valid readings for the entire month. The percentage of total observations is determined by dividing the number of usable observations by the number possible for the month. Data adjustments and additional comments applicable to the month are manually entered below the summary table.

3.2.9 General Notes

1. The following are the data ranges assumed valid, based on reasonable expectations for the parameters in south-central Alaska; data outside these ranges are not used:

Time: 0000 through 2400 hours - at specified time intervals.

Temperature: -50 through +35 °C

Wind Speed: 0 through 99.9 meters per second and less than or equal to GUST

Direction: 0 through 360 degrees

Relative Humidity: 0 through 99 percent

Precipitation: 0 through 99.8 mm. Precipitation during recording interval (15 or 30 minutes) should not exceed 30 mm.

Solar: 0 through 150 milliwatts/cm²

Gust: 0 through 99.9 m/sec

Battery: 9 through 14.5 volts

2. Accuracy of the MRI (Meteorology Research, Inc.) sensors and processor are as follows:

Temperature: $\pm 1^{\circ}\text{C}$

Wind Speed: ± 0.5 meters per second

Wind Direction: $\pm 1\%$ of full scale (i.e., ± 3.6 degrees)

Relative Humidity: $\pm 6\%$

Precipitation: $\pm 1\%$ up to 76.2 mm/hr, $\pm 5\%$ from 76.2 mm/hr to 254 mm/hr

Solar Radiation: $\pm 5\text{mw cm}^{-2}$

Tape Recorder Error Rate: 1 bit in 10^7

3. The following are the direction ranges used in the prevailing direction, wind frequency and wind rose summaries:

DIRECTION	COMPASS HEADING
North	350 through 11
North-Northeast	12 through 34
Northeast	35 through 56
East-Northeast	57 through 79
East	80 through 101
East-Southeast	102 through 124
Southeast	125 through 146
South-Southeast	147 through 169
South	170 through 191
South-Southwest	192 through 214
Southwest	215 through 236
West-Southwest	237 through 259
West	260 through 281
West-Northwest	282 through 304
Northwest	305 through 326
North-Northwest	327 through 349

4.0 INTERPRETATION OF DATA, 1983-84

4.1 General Comments

- 4.1.1 Many of the sensors or the methods of measuring various parameters have peculiarities that affect how the data should be interpreted. The user is encouraged to become familiar with the methods of summation for each parameter and each table. These are described in Section 3.2 "Data Computation Standards."
- 4.1.2 As described in Section 2.0, a shift is being made from presenting the climatic data on a water year basis to presenting it for the calendar year. Thus, this report includes fifteen months of data. All future reports will be for the calendar year.
- 4.1.3 Changes made to the format of this year's report series include addition of an hourly solar radiation table and tabulation of the actual number of usable observations on a monthly basis for each parameter. Also, the data-processing program was modified slightly to permit output of daily prevailing direction when the wind speed sensor was not operational, and output of speed-only parameters (peak gust and daily average speed) when the wind direction sensor was not operational.
- 4.1.4 The U.S. Department of Transportation ordered a shift in the time zones of central and Southeast Alaska in October 1983. The official time in central Alaska was advanced one hour, and the official Southeast Alaska time was retarded one hour, making the two areas on the same time. This transition occurred when daylight savings time ended, on Sunday, October 30, 1983. The effect on the reporting of

the data is that one hour was "lost" between midnight and 0100 on October 30. There are thus no data at all for 0030 and 0100 on that date.

- 4.1.5 Missing data values have been estimated where possible. Estimation, which was accomplished by manually editing the raw computer data files, was generally limited to data gaps of an hour or less, where interpolation between the preceding and following valid data points could be used to estimate the missing points. Interpolation was performed in this manner for temperature, relative humidity, and solar radiation data.

Solar data have been estimated only for clear or uniformly cloudy days and then only if not near the peak value of the day. Solar data are also estimated at night where zero minimum values should occur. Precipitation is estimated only if none at all occurred during the interval or if the tips of the tipping-bucket were manually counted during a rainfall event. Wind speed and direction data have been estimated by interpolation only if the preceding and following winds were very uniform. Peak gust speeds have not been estimated at all.

- 4.1.6 Intermittent garbled data due to a Weather Wizard malfunction at the Glacier station caused several data gaps from mid-November 1984 through mid-December. It was possible to estimate temperature, relative humidity, and solar radiation values where the gaps were not more than two or three hours. However, approximately two to three days of data were lost from the record during this period.

- 4.1.7 The recording interval was changed prior to the winter of 1983-84 to permit recording of data for longer periods of

time in the event monthly maintenance trips to the station were delayed. The interval was changed from 15 minutes to 30 minutes, which increased the maximum record length per data tape from approximately six weeks to approximately three months. The switch was made in November 1983 at all Susitna Basin stations and in December 1983 at the Eklutna Lake Station.

4.1.8 The Weather Wizard stopped functioning on February 27 at the Glacier Station. The propane heater probably didn't supply sufficient heat to keep the unit operating. The Weather Wizard was removed on April 9 for maintenance, and then replaced on May 4. Following re-installation, data were recorded until June 26 when the unit again ceased to function. The station was inspected on July 16. However, no data were recorded following the inspection. The unit was removed from the site on August 27 and sent back to Belfort for repairs. The Weather Wizard was re-installed on September 22, after which data were recorded consistently. A total of 154 days of data for all parameters were lost during the periods from 2/27 to 5/4 and 6/26 to 9/22, as indicated on Table 1.4.

4.1.9 Normal station maintenance procedure is to switch the recording interval from 30 minutes to 5 minutes for ease and expediency of inspection. This was done at the Glacier station on September 22 when the Weather Wizard was re-installed. However, the interval was not changed back to 30 minutes upon completion of the station inspection. Since the data tapes are designed to have a duration of approximately 15 days for 5 minute data, the tape ran out on October 8, after which no data were recorded. The cassette tape was replaced and the recording interval was switched to 15 minutes on November 2, 1984.

Approximately 25 days of data were lost from the record during this period.

4.2 Comments on Specific Parameters

4.2.1 Precipitation

Precipitation data are generally reported for April through September only. The stations do not have heaters in their precipitation sensors (tipping-buckets), so they are unable to record precipitation when the temperature is below freezing. The sensors are calibrated to tip for 0.2 mm of rainfall and not for snowfall. The sub-freezing temperatures may cause a loss or a delay of the recorded precipitation. Winds frequently blow snow away from or out of (or occasionally into) the collector, and snow collected in the bucket may not be melted and recorded until the next occurrence of warm weather, possibly days or weeks later. The months of October through March very often have sub-freezing temperatures on nearly every day of the month, so their precipitation records have been omitted. It should be noted that even in the months where precipitation data are reported (i.e. April through September), the occurrence of sub-freezing temperatures could affect the timing and the recorded amount of precipitation. The timing within the day may not be accurate but daily totals should be reasonable. The user should exercise caution and make note of the concurrent temperatures in interpreting the precipitation records.

4.2.2 Relative Humidity and Dewpoint

The relative humidity (R.H.) sensors used are printed circuit elements which sense changes in R.H. by changes in

impedance. The sensors, manufactured by Phys-Chem Research Corporation, have chemically-treated surfaces which degrade with time, and are thus very difficult to keep in calibration. Many of the months throughout the year (and at all stations) therefore display significant variations in R.H. patterns. Theoretically, the maximum value and RH reading can attain is 99%. However, when the sensor is not calibrated correctly readings may exceed 100%, or they may be noticeably too low. Adjustments are therefore made accordingly, as noted in Table 1.5.

An additional consideration with respect to dewpoint is the fact that it is not computed when the reported wind speed falls below 1 m/sec, due to inadequate aspiration of the R.H. sensor. This typically causes elimination of at least one dewpoint value on nearly every day of data-collection.

The oscillator for the Glacier relative humidity sensor was bad during May and June 1984. Data were recorded for 17 days from mid-May to mid-June, but have all been deleted due to the unreliable oscillator. Data from the beginning of May and the end of June are somewhat erratic as well, but generally follow the diurnal cycle indicative of the summer RH. The station was not functioning from June 26 to September 22. The RH oscillator was replaced on 9/22 when the Weather Wizard was re-installed. RH data are reliable after this date.

4.2.3 Solar Radiation

Daily and monthly solar radiation values are the cumulative total energy, computed from all valid readings for the period. Either the daily or monthly value can be significantly above or below the true energy value if there are

large segments of missing readings (i.e. from the period of very low intensity at night or the period of very high intensity at mid-day). A check should be made, therefore, of the hourly solar radiation summary table to get a feel for the frequency and timing of lost solar radiation data. Caution should be used when a significant amount of data are missing.

Another frequent concern in the processing of solar data is the presence of non-zero minimum values. Since the sensors have a stated accuracy of $\pm 5 \text{ mW/cm}^2$, they often record a reading of 0 (during night) as 1 or even 2 mW/cm^2 . This also can bias the daily or monthly totals, making the computed energy much higher than the true solar energy. An error of $+1 \text{ mW/cm}^2$ on every reading will cause the computed daily total energy to be high by 240 watt-hr/cm^2 . Readings during periods when this sensor offset was demonstrated have been adjusted downward, as noted in Table 1.5.

4.2.4 Wind Speed and Direction

Occasional measurements of wind speed, wind direction, and peak wind gusts were lost between October 1983 and February 1984 and again from October to December 1984 due to intermittent freezing of the wind vane or anemometer. One or both of the sensors typically freezes and seizes up when the temperature drops after a rainstorm or freezing rain event and then stays stuck until the temperature rises above 0°C or until a wind event occurs that is sufficiently strong to free it.

When the Glacier Weather Wizard was replaced on September 22, 1984, the wind vane tail was not attached, causing all

wind direction data to be off by 180° . A new wind vane tail was attached on November 2. Therefore, all wind direction data from September 22 to October 8 when the data tape ran out (see Section 4.1.9) have been adjusted downward 180° , as indicated in Table 1.5.

5.0 MONTHLY CLIMATIC DATA SUMMARIES
SUSITNA GLACIER STATION
OCTOBER 1983 - DECEMBER 1984

Note:

Each month's climatic data summary report consists of the following 11 pages:

- (1) Hourly Precipitation Summary Table (or note page)
- (2) Three-Hour Summary Table (Days 1-9)
- (3) Three-Hour Summary Table (Days 10-18)
- (4) Three-Hour Summary Table (Days 19-27)
- (5) Three-Hour Summary Table (Days 28-31)
- (6) Monthly Summary Table
- (7) Monthly Graphical Plot
- (8) Wind Frequency Summary Table
- (9) Wind Rose Plot
- (10) Hourly Solar Radiation Summary Table
- (11) Observation Summary and Note Page

No precipitation data for October

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

DAY 01								DAY 02								DAY 03							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-1.1	*****	97	273	1.0	230	3.8	0	0300	-1.9	*****	94	***	****	***	1.9	0	0300	-4.7	-13.8	49	084	4.5
0600	-1.5	*****	98	308	.6	279	2.5	0	0600	-1.2	*****	80	***	****	***	1.9	0	0600	-6.6	-15.3	50	072	2.5
0900	-.6	-3.1	83	115	.7	124	4.4	6	0900	1.1	-7.9	51	***	****	***	1.9	16	0900	-4.4	-17.3	36	062	1.8
1200	.9	*****	69	213	.9	223	3.8	11	1200	1.1	*****	42	073	.9	016	2.5	21	1200	-5.6	-18.4	36	032	1.6
1500	.3	*****	71	265	.5	282	1.9	9	1500	.2	-10.7	44	056	1.2	058	5.1	10	1500	-5.8	-17.7	39	034	2.7
1800	-2.0	*****	84	120	.7	116	3.2	0	1800	-2.1	-9.9	55	023	.6	205	5.1	0	1800	-6.1	*****	49	033	1.5
2100	-2.2	-2.5	98	***	****	***	3.2	0	2100	-4.1	-13.3	49	099	3.5	092	8.9	0	2100	-6.0	-15.3	48	050	1.3
2400	-2.1	*****	95	***	****	***	3.2	0	2400	-4.2	-13.6	48	082	4.0	073	10.8	0	2400	-8.5	-14.7	61	023	1.5
DAY 04								DAY 05								DAY 06							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-8.4	-14.4	62	041	1.2	025	3.2	0	0300	-5.3	*****	48	047	1.1	037	3.8	0	0300	-5.1	-6.5	90	***	****
0600	-8.1	-14.7	59	037	1.2	073	3.8	0	0600	-6.6	*****	73	011	.7	042	3.2	0	0600	-5.9	-7.6	88	202	1.3
0900	-6.7	-17.0	44	020	2.0	028	4.4	24	0900	-4.7	-11.1	61	079	.9	068	3.2	15	0900	-7.0	-12.8	63	086	2.7
1200	-3.7	-17.4	34	037	1.9	022	5.7	38	1200	-4.0	-12.4	52	081	1.5	079	4.4	22	1200	-6.8	-15.3	51	249	.1
1500	-2.7	*****	30	073	.5	112	2.5	16	1500	-4.6	*****	71	089	1.4	129	5.1	7	1500	-6.7	-20.4	33	162	1.9
1800	-5.3	-14.7	48	063	.9	051	3.2	0	1800	-4.3	-5.7	90	046	.8	025	2.5	0	1800	-8.8	-18.9	44	128	1.7
2100	-4.4	*****	46	067	1.0	024	3.2	0	2100	-4.9	*****	92	029	.4	015	1.9	0	2100	-10.4	*****	53	149	.6
2400	-5.5	*****	47	040	1.0	042	3.2	0	2400	-5.0	*****	91	347	1.0	344	1.9	0	2400	-10.8	-18.1	55	049	.7
DAY 07								DAY 08								DAY 09							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-11.7	-15.5	73	099	1.3	106	3.2	0	0300	-14.3	-22.7	49	049	2.5	037	5.1	0	0300	-10.2	-13.1	79	095	1.1
0600	-12.9	-17.2	70	061	1.2	076	3.2	0	0600	-13.5	-22.0	49	063	2.0	073	4.4	0	0600	-8.5	*****	84	135	1.3
0900	-12.0	-21.1	47	068	2.7	082	5.7	25	0900	-10.8	-23.7	34	063	1.5	037	4.4	21	0900	-7.7	-11.0	77	087	1.1
1200	-9.5	-22.9	33	116	2.6	119	8.3	34	1200	-10.5	-24.8	30	157	1.1	089	3.2	38	1200	-3.8	*****	58	065	.7
1500	-10.4	-24.4	31	109	1.4	162	5.7	15	1500	-9.5	*****	34	117	1.0	135	2.5	14	1500	-5.7	*****	68	***	****
1800	-13.6	-21.8	50	055	1.6	052	4.4	0	1800	-7.7	-18.8	41	069	1.1	063	3.2	0	1800	-6.0	*****	85	***	****
2100	-14.3	-21.2	56	042	2.4	042	5.1	0	2100	-10.1	-17.9	53	299	.5	339	3.8	0	2100	-5.1	-6.9	87	***	****
2400	-14.3	-22.0	52	088	1.8	100	4.4	0	2400	-10.1	-15.6	64	005	.3	005	3.2	0	2400	-3.5	*****	89	***	****

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSTNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

DAY 10

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-2.3	-4.0	88	***	***	***
0600	-1.5	-2.8	91	***	***	***
0900	.4	-3.7	74	070	3.2	072
1200	.8	-3.1	75	080	3.3	080
1500	-.5	-1.1	96	338	1.6	091
1800	.4	-.6	93	001	1.5	040
2100	.5	-.5	93	055	1.7	070
2400	.9	-2.0	81	054	1.8	058

DAY 11

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	0.0	-1.5	90	066	2.8	073
0600	.7	-1.4	86	047	1.7	068
0900	.6	-1.6	85	095	5.0	107
1200	-.2	-4.4	73	149	6.2	124
1500	-.9	*****	82	202	1.8	170
1800	-1.6	-2.2	96	263	1.6	263
2100	-2.2	-2.9	95	***	***	***
2400	-3.6	-4.6	93	***	***	***

DAY 12

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-3.7	-4.7	93	***	***	***
0600	-4.1	-5.2	92	***	***	***
0900	-3.2	-3.9	95	***	***	***
1200	-3.1	*****	97	***	***	***
1500	-3.3	-4.9	89	***	***	***
1800	-4.3	*****	92	***	***	***
2100	-4.6	*****	91	***	***	***
2400	-4.7	-5.8	92	***	***	***

DAY 13

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-5.6	*****	90	***	***	***
0600	-5.8	*****	91	***	***	***
0900	-4.7	-7.0	84	***	***	***
1200	-3.8	-6.7	80	301	1.1	247
1500	-4.6	*****	74	339	1.2	332
1800	-8.1	-11.1	79	***	***	***
2100	-9.0	-12.3	77	***	***	***
2400	-8.6	-12.5	73	***	***	***

DAY 14

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-8.8	-12.9	72	***	***	***
0600	-8.1	-11.9	74	***	***	***
0900	-6.6	-11.9	66	***	***	***
1200	-3.0	-9.0	63	***	***	***
1500	-5.2	*****	63	***	***	***
1800	-7.6	*****	71	***	***	***
2100	-8.1	*****	73	***	***	***
2400	-9.2	-14.4	66	***	***	***

DAY 15

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-9.0	-14.5	64	047	3.0	035
0600	-10.6	-15.5	67	072	1.6	070
0900	-8.6	-17.0	51	071	1.2	063
1200	-7.5	-17.7	44	056	1.9	051
1500	-7.4	-20.0	36	090	1.2	067
1800	-8.6	-15.6	57	066	1.5	042
2100	-8.3	-14.7	60	071	1.3	096
2400	-8.4	-15.0	59	070	1.2	058

DAY 16

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-8.3	-14.7	60	072	1.3	084
0600	-6.7	-19.8	35	082	1.4	118
0900	-3.3	-24.9	17	076	1.8	087
1200	-2.2	-25.4	15	075	1.3	040
1500	-3.2	*****	15	070	1.3	041
1800	-2.4	-18.6	28	055	1.4	020
2100	-2.8	-5.1	84	073	1.4	088
2400	-.9	-5.1	73	062	1.3	032

DAY 17

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-.7	-5.3	71	076	1.4	023
0600	-.8	-5.2	72	078	1.2	053
0900	1.4	-8.5	48	069	1.5	091
1200	2.4	-13.2	31	071	1.9	071
1500	.1	-14.1	34	098	1.4	103
1800	.3	-12.2	39	069	2.1	074
2100	.1	-11.7	41	079	1.3	058
2400	-1.6	-5.6	74	062	1.7	043

DAY 18

HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-2.3	*****	87	058	.5	002
0600	-3.3	*****	91	017	.7	017
0900	-2.8	*****	75	***	***	***
1200	-1.8	*****	61	***	***	***
1500	-3.0	-6.3	78	***	***	***
1800	-4.6	*****	92	***	***	***
2100	-5.8	-6.9	92	***	***	***
2400	-6.2	*****	91	***	***	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	DEG C	DEG C	%	DEG.	M/S
0300	-6.8	****	90	***	****	***	0300	-5.2	-11.3	62	092	1.6	0300	-3.6	****	88	***
0600	-6.7	-8.1	90	075	1.1	141	0600	-7.5	****	85	059	.9	0600	-2.7	-6.0	78	080
0900	-8.2	-11.0	80	***	****	***	0900	-5.0	****	75	046	.9	0900	-.6	-11.4	44	074
1200	-5.2	****	58	***	****	***	1200	-4.2	-8.8	70	044	1.1	1200	1.6	-15.8	26	096
1500	-6.6	-11.5	68	086	2.3	086	1500	-4.5	-7.7	78	067	.5	1500	.4	-19.4	21	084
1800	-9.0	****	85	080	1.3	063	1800	-4.4	****	89	040	1.0	1800	-.7	-20.9	20	081
2100	-7.6	-10.0	83	096	.9	077	2100	-4.0	-5.4	90	045	.8	2100	-2.8	-19.3	27	044
2400	-5.6	-11.3	64	077	1.7	059	2400	-3.9	****	94	031	1.3	2400	-2.7	-16.9	33	074

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	DEG C	DEG C	%	DEG.	M/S
0300	-2.8	-9.3	61	073	1.8	097	0300	-5.8	****	84	061	1.1	0300	-7.4	-20.4	35	069
0600	-1.3	-11.0	48	084	2.8	075	0600	-6.2	-4.2	53	080	2.0	0600	-7.5	-22.2	30	073
0900	-1.4	-10.0	52	090	3.7	106	0900	-4.1	-17.1	36	079	2.5	0900	-5.9	-27.0	17	063
1200	-1.0	-10.2	50	084	3.2	098	1200	-4.6	-11.6	58	094	3.1	1200	-3.4	-25.6	16	083
1500	-3.9	-9.1	67	113	2.8	096	1500	-5.8	-11.7	63	100	3.4	1500	-7.2	-19.9	36	033
1800	-5.3	****	92	249	.9	249	1800	-6.8	-8.9	85	034	1.2	1800	-8.3	-17.2	49	031
2100	-5.4	****	94	346	.1	012	2100	-6.2	-15.2	49	071	3.0	2100	-10.7	-15.4	68	020
2400	-5.6	****	91	047	.7	152	2400	-8.2	-17.6	47	065	2.5	2400	-14.3	-16.6	83	022

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	DEG C	DEG C	%	DEG.	M/S
0300	-11.6	-17.4	62	056	1.4	014	0300	-2.2	-9.8	56	088	1.8	0300	-8.9	-16.5	54	089
0600	-13.1	-17.9	67	025	1.4	350	0600	-8.2	-9.9	88	163	1.2	0600	-7.7	-16.9	48	086
0900	-13.5	-18.7	65	012	1.7	000	0900	-6.5	-9.2	61	083	1.0	0900	-6.8	-14.8	53	060
1200	-10.7	****	45	359	1.0	354	1200	-3.5	-15.0	41	093	5.2	1200	-5.6	-15.2	47	071
1500	-11.1	-22.2	40	060	.6	112	1500	-5.3	-15.5	45	092	5.5	1500	-5.0	-16.6	40	051
1800	-7.4	-15.4	53	039	1.3	007	1800	-6.4	-14.7	52	086	4.7	1800	-3.9	-19.9	28	054
2100	-7.9	-10.1	84	113	.9	126	2100	-8.1	-9.5	90	104	3.1	2100	-4.9	-18.8	33	033
2400	-5.0	-7.0	86	093	1.1	116	2400	-8.5	-12.3	74	173	.8	2400	-6.4	-17.9	40	090

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-6.7	****	39	058	1.2	060	5.1	0	0300	-5.8	-13.9	53	071	2.2	080	4.4	0
0600	-7.7	-12.9	66	041	1.8	068	6.3	0	0600	-5.5	-11.4	63	077	1.9	095	5.1	0
0900	-4.6	-6.6	86	016	1.1	065	4.4	3	0900	-4.8	-10.2	66	047	1.8	041	3.8	5
1200	-3.9	****	74	224	.6	233	3.8	5	1200	-4.5	-10.5	63	070	1.6	063	3.8	11
1500	-4.6	-8.3	75	101	3.6	099	10.8	1	1500	-4.6	-10.4	64	057	1.7	068	3.8	2
1800	-6.8	****	89	137	3.7	193	14.0	0	1800	-4.2	****	59	045	2.0	047	5.1	0
2100	-6.7	-10.7	73	078	.7	102	3.2	0	2100	-4.9	-8.5	76	052	2.0	031	3.8	0
2400	-6.9	-14.2	56	072	2.0	052	5.1	0	2400	-4.5	-6.7	85	044	1.4	071	4.4	0

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.
DEG C	DEG C	%	DEG.	M/S	DEG.
0300	-10.5	-12.3	87	027	.5
0600	-8.7	-11.1	83	071	1.4
0900	-8.4	-10.8	83	032	1.2
1200	-8.1	****	84	141	3.3
1500	-6.8	-9.1	84	172	1.0
1800	-9.2	-11.0	87	240	2.9
2100	-10.9	-12.8	86	281	2.7
2400	-12.8	-15.1	83	329	.9

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR CLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

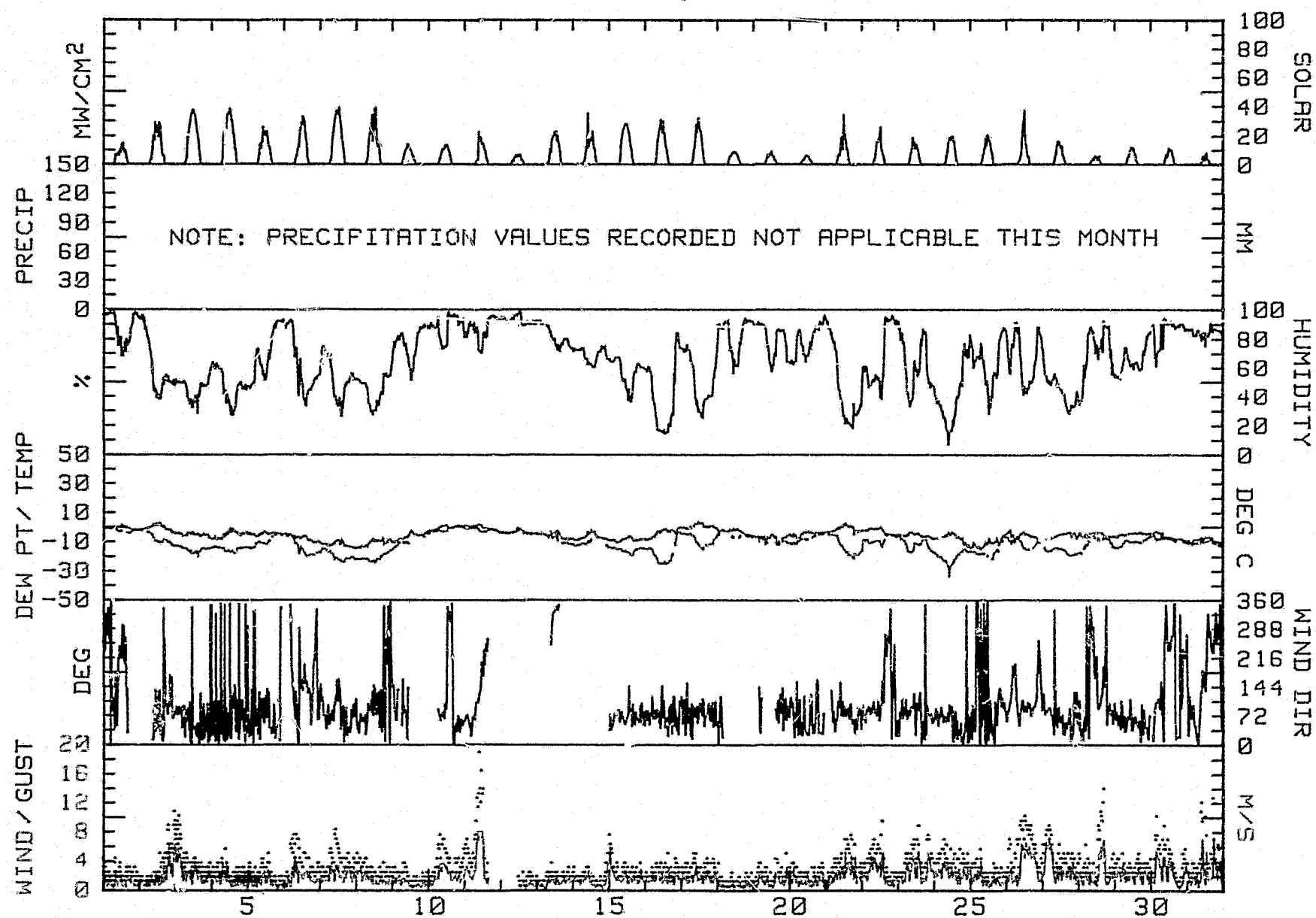
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQ M	DAY
1	1.6	-2.3	-4	243	.3	1.1	124	4.4	WNW	88	-3.1	****	708	1
2	2.6	-4.7	-1.1	081	1.9	1.9	073	10.8	ENE	56	-9.4	****	1548	2
3	-3.7	-8.5	-6.1	055	2.0	2.3	092	10.2	NE	45	-15.9	****	2276	3
4	-1.1	-8.7	-4.9	042	1.2	1.4	022	5.7	NNE	49	-15.2	****	2253	4
5	-3.2	-6.8	-5.0	056	.8	1.1	129	5.1	NE	63	-11.2	****	1135	5
6	-4.8	-10.8	-7.8	126	.9	1.7	097	7.6	SE	57	-15.5	****	1555	6
7	-8.7	-14.7	-11.7	079	1.7	2.1	119	8.3	E	52	-20.4	****	2245	7
8	-7.7	-14.7	-11.2	065	1.0	1.5	037	5.1	ENE	44	-21.6	****	1770	8
9	-3.0	-11.1	-7.1	095	1.0	.9	075	3.8	ENE	79	-11.1	****	690	9
10	.9	-3.1	-1.1	051	1.8	2.0	072	7.6	ENE	88	-2.2	****	740	10
11	1.6	-3.6	-1.0	115	2.3	3.8	124	19.0	ENE	87	-2.6	****	835	11
12	-.9	-4.9	-2.9	***	****	.6	***	2.5	***	93	-4.6	****	375	12
13	-2.8	-9.0	-5.9	323	1.1	1.0	247	3.8	NNW	79	-9.8	****	1215	13
14	-2.3	-9.4	-5.9	***	****	1.2	***	5.1	***	69	-12.2	****	1110	14
15	-6.5	-10.9	-8.7	065	1.6	1.7	035	7.6	ENE	57	-16.1	****	1635	15
16	-.3	-9.0	-4.7	071	1.4	1.6	020	5.1	ENE	40	-17.8	****	1525	16
17	3.6	-1.6	1.0	074	1.5	1.7	091	5.1	ENE	50	-9.6	****	1410	17
18	-1.3	-6.2	-3.8	051	.5	.6	002	3.8	NE	82	-6.7	****	495	18
19	-5.0	-10.5	-7.8	082	1.3	1.2	059	5.1	E	82	-10.4	****	370	19
20	-3.3	-8.4	-5.9	055	.9	1.2	093	3.8	NNE	77	-8.6	****	275	20
21	2.4	-5.3	-1.5	077	2.1	2.1	101	7.6	E	41	-14.4	****	995	21
22	-.2	-5.9	-3.1	089	1.7	2.3	096	9.5	E	61	-9.6	****	860	22
23	-3.8	-8.2	-6.0	079	2.3	2.5	097	8.9	ENE	61	-12.7	****	745	23
24	-3.4	-14.3	-8.9	053	2.1	2.4	072	7.0	ENE	39	-20.9	****	985	24
25	-5.0	-15.3	-10.2	044	1.0	1.4	000	5.7	N	66	-16.6	****	940	25
26	-2.2	-9.2	-5.7	097	2.7	3.2	084	10.2	E	66	-11.8	****	940	26
27	-3.9	-9.0	-6.5	071	2.7	3.0	190	8.9	E	45	-16.8	****	705	27
28	-3.9	-7.7	-5.8	091	1.3	2.2	193	14.0	ENE	70	-10.7	****	270	28
29	-3.9	-7.0	-5.5	058	1.8	1.9	095	5.1	ENE	65	-10.8	****	525	29
30	-3.1	-9.2	-6.2	166	.2	2.5	102	10.2	ESE	85	-8.7	****	490	30
31	-6.7	-12.8	-9.8	214	.3	2.3	229	12.7	W	53	-11.2	****	235	31
MONTH	3.6	-15.3	-5.5	072	1.3	1.8	124	19.0	ENE	62	-11.9	****	31859	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 11.4
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 13.3
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 14.0
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 12.1

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
October, 1983



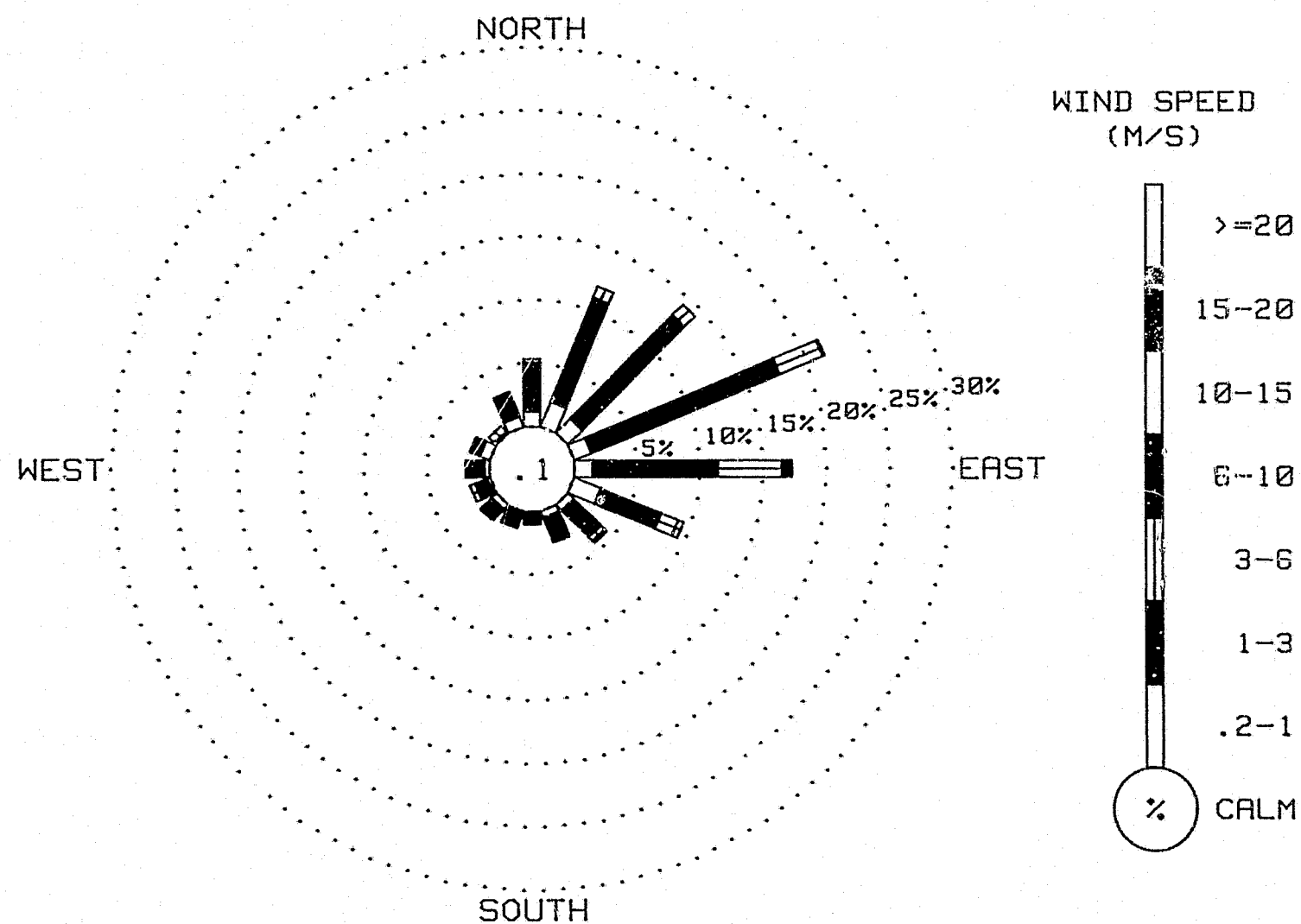
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	1.19	3.78	.30	0.00	0.00	0.00	0.00	5.27
NNE	2.15	8.83	.96	0.00	0.00	0.00	0.00	11.94
NE	1.63	11.42	1.19	0.00	0.00	0.00	0.00	14.24
ENE	1.48	16.10	3.71	.15	0.00	0.00	0.00	21.44
E	1.48	9.87	5.12	.74	0.00	0.00	0.00	17.21
ESE	2.30	5.12	1.48	.45	0.00	0.00	0.00	9.35
SE	.67	2.97	.45	.22	0.00	0.00	0.00	4.30
SSE	.59	1.85	.22	0.00	0.00	0.00	0.00	2.67
S	.22	.74	.07	0.00	0.00	0.00	0.00	1.04
SSW	.15	1.04	.15	.15	0.00	0.00	0.00	1.48
SW	.52	1.04	.15	.07	0.00	0.00	0.00	1.78
WSW	.30	.96	.45	0.00	0.00	0.00	0.00	1.71
W	.45	1.19	.30	0.00	0.00	0.00	0.00	1.93
WNW	.89	.82	0.00	0.00	0.00	0.00	0.00	1.71
NW	.22	.59	0.00	0.00	0.00	0.00	0.00	.82
NNW	.89	2.08	0.00	0.00	0.00	0.00	0.00	2.97
CALM								.15
TOTAL	15.13	68.40	14.54	1.78	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1348 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
2976 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 15 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
October, 1983



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	1	7	7	7	10	14	11	9	5	1	0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	0	3	10	19	24	24	24	27	15	6	3	0	0	0	0	0	0	0	6
3	0	0	0	0	0	0	2	10	21	29	35	37	35	29	21	11	3	0	0	0	0	0	0	0	10
4	0	0	0	0	0	0	1	12	22	28	34	37	33	28	20	10	2	0	0	0	0	0	0	0	9
5	0	0	0	0	0	0	2	9	12	21	22	21	21	14	10	3	0	0	0	0	0	0	0	0	6
6	0	0	0	0	0	0	1	4	8	13	24	28	32	27	17	4	1	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	2	10	23	31	37	35	36	27	17	8	1	0	0	0	0	0	0	0	9
8	0	0	0	0	0	0	1	8	19	27	25	30	33	16	13	6	1	0	0	0	0	0	0	0	7
9	0	0	0	0	0	0	1	6	10	13	13	11	8	6	3	1	0	0	0	0	0	0	0	0	3
10	0	0	0	0	0	0	1	4	8	11	12	13	12	9	5	1	0	0	0	0	0	0	0	0	3
11	0	0	0	0	0	0	0	1	3	20	18	14	14	10	4	1	0	0	0	0	0	0	0	0	3
12	0	0	0	0	0	0	1	2	4	6	6	7	7	4	3	1	0	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	1	8	12	19	22	23	18	14	6	0	0	0	0	0	0	0	0	5
14	0	0	0	0	0	0	1	3	10	24	13	18	20	15	8	2	0	0	0	0	0	0	0	0	5
15	0	0	0	0	0	0	1	7	19	25	28	28	24	19	11	4	0	0	0	0	0	0	0	0	7
16	0	0	0	0	0	0	1	7	18	25	31	26	23	14	8	2	0	0	0	0	0	0	0	0	6
17	0	0	0	0	0	0	1	4	11	24	25	29	24	17	7	1	0	0	0	0	0	0	0	0	6
18	0	0	0	0	0	0	0	3	6	8	9	9	8	6	3	1	0	0	0	0	0	0	0	0	2
19	0	0	0	0	0	0	0	1	3	6	7	8	6	4	3	1	0	0	0	0	0	0	0	0	2
20	0	0	0	0	0	0	0	1	3	4	6	6	5	3	2	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	2	7	9	15	22	22	14	9	2	0	0	0	0	0	0	0	0	4
22	0	0	0	0	0	0	0	2	5	13	15	20	19	9	5	1	0	0	0	0	0	0	0	0	4
23	0	0	0	0	0	0	0	2	8	15	14	11	13	9	3	1	0	0	0	0	0	0	0	0	3
24	0	0	0	0	0	0	0	2	8	16	19	19	18	14	5	1	0	0	0	0	0	0	0	0	4
25	0	0	0	0	0	0	0	2	7	12	16	21	18	13	7	1	0	0	0	0	0	0	0	0	4
26	0	0	0	0	0	0	0	1	3	6	21	33	17	10	5	1	0	0	0	0	0	0	0	0	4
27	0	0	0	0	0	0	0	1	6	13	16	13	13	6	3	1	0	0	0	0	0	0	0	0	3
28	0	0	0	0	0	0	0	1	3	4	4	6	3	6	2	0	0	0	0	0	0	0	0	0	1
29	0	0	0	0	0	0	0	1	4	7	11	12	10	7	3	0	0	0	0	0	0	0	0	0	2
30	***	0	0	0	0	0	0	0	1	4	6	9	10	10	6	2	0	0	0	0	0	0	0	0	2
31	0	0	0	0	0	0	0	0	0	2	5	3	7	4	3	1	0	0	0	0	0	0	0	0	

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1983

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1694	100
WIND SPEED	1653	98
WIND DIRECTION	1348	80
PEAK GUST	1653	98
RELATIVE HUMIDITY	1307	77
PRECIPITATION	0	0
SOLAR RADIATION	1694	100
DEW POINT	1307	77

THERE ARE 1694 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 15 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -15 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. One hour of data "lost" between 0000 and 0100 on 10/30 due to change of official time zone. See note in section 4 of text.
2. Recording time interval was changed on 10/5 from 15 minutes to 30 minutes.
3. Intermittent wind speed and direction data lost due to frozen anemometer and wind vane.

No precipitation data for November

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-8.8	-23.7	29	076	2.0	099	0300	-8	-10.8	47	063	1.7	052	0300	-4.5	-10.5	63	056	1.8	055
0600	-5.8	-16.5	43	067	1.7	068	0600	-2	-12.3	40	074	4.0	076	0600	-5.2	-11.5	61	077	1.8	089
0900	-5.0	-12.7	55	091	1.4	100	0900	-2.0	-7.9	64	090	5.1	099	0900	-4.8	-14.7	46	045	2.6	040
1200	-3.7	-12.4	51	080	1.1	088	1200	-1.8	****	63	094	3.2	093	1200	-8	-24.2	15	059	2.2	062
1500	-2.0	-13.0	43	069	1.6	054	1500	-2.5	-7.0	71	183	1.6	110	1500	-1.0	-26.0	13	072	1.8	069
1800	-1.9	-12.1	46	085	1.4	127	1800	-4.3	-7.1	81	091	4.2	078	1800	-2.2	-26.1	14	071	1.8	051
2100	-1.7	-12.2	45	053	1.5	074	2100	-4.2	-8.1	74	088	1.1	107	2100	-2.8	-28.3	12	067	1.9	069
2400	-3.3	-10.6	57	113	1.1	102	2400	-4.6	-10.2	65	059	1.7	069	2400	-2.2	-30.9	9	069	2.1	061

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-2.2	-30.9	9	066	2.2	060	0300	-5.1	-7.4	84	061	1.6	047	0300	-6.4	-15.4	49	066	1.6	046
0600	-4.3	-29.5	12	076	1.6	067	0600	-5.8	-9.0	78	040	1.0	037	0600	-7.3	-16.8	47	078	1.5	050
0900	-2.6	-31.3	9	068	2.1	052	0900	-5.8	-9.8	73	066	1.1	054	0900	-6.2	-17.1	42	063	1.4	050
1200	-3.0	****	11	068	1.7	050	1200	-5.5	-12.0	60	040	1.2	054	1200	-4.0	-19.5	29	073	1.6	080
1500	-2.0	-13.3	42	061	1.4	081	1500	-5.8	****	63	082	1.0	062	1500	-5.8	-20.7	30	075	1.1	031
1800	-3.6	-11.6	54	027	1.3	042	1800	-6.6	-12.1	65	061	1.3	048	1800	-6.5	-20.3	33	067	1.4	103
2100	-3.1	****	64	056	.9	016	2100	-6.8	-12.6	63	060	1.7	047	2100	-4.8	-19.5	31	062	1.8	063
2400	-4.9	-7.2	84	109	.8	041	2400	-6.6	-14.4	54	076	1.4	066	2400	-4.6	-20.5	28	070	1.6	110

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-5.8	-21.9	27	051	1.8	030	0300	-2.0	-13.9	40	099	6.6	089	0300	1.4	-23.3	14	084	3.5	074
0600	-4.7	-21.0	27	076	1.8	073	0600	-1.6	-12.9	42	099	4.2	107	0600	.1	-22.1	17	065	1.3	053
0900	-5.3	-21.1	28	058	1.7	077	0900	-3.3	-13.9	44	117	2.4	124	0900	-.3	-23.1	16	081	1.7	079
1200	-4.6	-20.1	29	062	1.6	070	1200	-1.5	-14.4	37	068	1.7	056	1200	-.3	-22.4	17	066	1.1	096
1500	-3.5	-19.5	28	100	1.9	109	1500	-1.6	-15.2	35	071	1.5	068	1500	-6.1	-21.4	29	077	1.0	068
1800	-5.2	-19.1	33	105	2.6	104	1800	.9	-19.6	20	063	1.9	074	1800	-4.0	-23.2	21	065	2.1	072
2100	-3.7	-18.9	30	101	6.1	114	2100	.5	-22.5	16	077	2.0	059	2100	-2.3	-16.2	34	093	4.9	101
2400	-4.0	-16.4	38	096	6.2	100	2400	1.9	-20.6	17	085	2.7	096	2400	-2.4	-16.3	34	094	5.3	116

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

DAY 10

DAY 11

DAY 12

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-2.8	-16.6	34	102	5.5	096	13.3	0	0300	-1.1	-17.8	27	072	1.9	077	5.1	0	0300	-6.9	-21.3	31	086	1.7	101	5.7	0
0600	-2.2	-16.8	32	082	4.2	102	9.5	0	0600	-.2	-18.4	24	072	1.8	059	4.4	0	0600	-5.5	-18.3	36	030	1.3	030	3.8	0
0900	-1.8	-18.5	27	082	4.6	091	10.2	0	0900	2.7	*****	**	063	3.5	070	7.6	1	0900	-6.3	-11.6	66	064	1.3	055	3.8	0
1200	-.8	-17.2	28	075	4.1	083	8.3	15	1200	1.7	*****	**	069	3.0	076	7.6	16	1200	-6.2	-9.9	75	055	1.0	091	3.8	4
1500	-2.9	-17.8	31	094	3.4	073	8.3	3	1500	-1.8	*****	**	081	1.8	057	4.4	3	1500	-6.6	*****	77	061	.9	052	2.5	3
1800	-3.5	-19.5	28	076	3.5	072	7.0	0	1800	-5.4	-20.8	29	029	1.6	009	5.1	0	1800	-7.0	-10.2	78	092	1.0	071	3.2	0
2100	-2.5	-18.6	28	075	2.0	066	5.1	0	2100	-7.5	-21.1	33	070	1.7	096	4.4	0	2100	-6.2	*****	66	063	.9	047	3.2	0
2400	-1.4	-17.3	29	061	3.5	063	8.3	0	2400	-9.2	-21.0	38	058	.9	068	3.2	0	2400	-6.3	-11.8	65	032	.8	063	3.8	0

DAY 13

DAY 14

DAY 15

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.																						
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-7.4	-13.8	60	065	2.0	057	3.8	0	0300	-6.9	-27.9	17	068	1.5	065	3.2	0	0300	-7.5	-25.1	23	069	1.4	076	2.5	0													
0600	-7.1	-14.0	58	067	1.9	062	3.8	0	0600	-7.2	-26.9	19	072	1.4	069	3.8	0	0600	-7.6	-24.8	24	075	1.5	062	3.2	0													
0900	-7.5	-15.9	51	064	1.6	059	3.2	0	0900	-7.5	-27.2	19	073	1.6	064	3.2	1	0900	-6.7	-26.0	20	065	1.5	079	3.2	0													
1200	-6.1	-16.5	44	070	1.6	072	3.2	9	1200	-5.6	-26.8	17	065	1.8	058	3.8	10	1200	-4.8	-24.9	19	072	1.5	069	3.2	7													
1500	-7.1	-21.1	32	074	1.2	073	2.5	2	1500	-8.2	-26.2	22	087	1.2	082	2.5	2	1500	-3.3	-29.7	11	072	1.9	066	4.4	2													
1800	-6.3	-23.2	25	069	1.6	079	3.8	0	1800	-7.0	-22.5	28	058	1.3	061	2.5	0	1800	-3.4	-22.6	21	067	2.0	067	4.4	0													
2100	-7.2	-24.4	24	067	1.5	078	3.2	0	2100	-8.0	-24.2	26	072	1.7	069	3.8	0	2100	-3.7	-19.7	28	070	1.6	089	3.8	0													
2400	-6.7	-27.1	18	064	1.5	066	4.4	0	2400	-7.8	-24.9	24	072	1.4	069	2.5	0	2400	-4.8	-19.1	32	043	1.4	030	3.2	0													

DAY 16

DAY 17

DAY 18

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-5.6	-19.1	34	067	1.3	064	3.8	0	0300	-9.3	-17.9	50	073	1.4	054	3.2	0	0300	-9.3	-12.7	76	047	1.1	105	3.8	0
0600	-7.5	*****	71	047	1.0	111	3.2	0	0600	-9.8	-18.1	51	070	1.5	073	3.8	0	0600	-10.0	*****	87	049	.8	040	2.5	0
0900	-7.6	-11.1	76	049	1.1	071	3.2	0	0900	-8.4	-17.8	47	065	1.7	057	3.8	0	0900	-8.7	-14.3	64	095	1.8	098	7.0	0
1200	-7.6	*****	73	037	.9	006	2.5	8	1200	-7.5	-18.0	43	065	1.9	067	4.4	6	1200	-9.3	*****	69	139	1.1	109	6.3	7
1500	-8.7	-14.1	65	082	1.2	163	5.7	1	1500	-7.3	-17.0	46	068	1.6	078	3.8	1	1500	-9.3	-16.5	56	094	1.6	106	5.1	2
1800	-9.4	-15.9	59	067	1.5	057	3.2	0	1800	-8.7	*****	61	049	.9	050	3.2	0	1800	-9.3	-16.0	58	081	1.3	085	4.4	0
2100	-9.3	-17.4	52	073	1.3	065	3.8	0	2100	-8.3	-16.2	53	092	1.4	092	3.2	0	2100	-9.2	-16.4	56	079	2.8	067	5.7	0
2400	-9.2	-17.8	50	059	1.4	042	3.2	0	2400	-8.4	-16.3	53	076	2.7	096	5.7	0	2400	-9.7	-17.5	53	074	2.6	071	6.3	0

*** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.
SUSTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.																						
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-8.4	-18.8	43	057	1.8	061	4.4	0	0300	-10.4	-22.7	36	063	1.9	035	5.1	0	0300	-7.1	-13.1	62	090	6.5	096	12.7	0													
0600	-8.3	-15.5	56	072	2.0	072	4.4	0	0600	-11.1	-27.7	24	059	1.9	059	5.1	0	0600	-5.5	-10.4	68	094	5.4	090	10.8	0													
0900	-8.5	*****	82	076	1.1	049	3.2	0	0900	-10.8	-27.9	23	067	2.0	039	4.4	0	0900	-3.1	-8.7	65	089	5.8	081	12.7	0													
1200	-8.0	-12.0	73	061	.9	056	1.9	3	1200	-10.2	-26.1	26	085	1.6	057	5.7	4	1200	-2.8	-7.7	69	085	5.4	090	14.6	2													
1500	-9.8	*****	86	013	.7	039	2.5	0	1500	-10.1	-21.5	39	113	2.1	114	6.3	0	1500	-1.6	-8.3	60	086	8.0	085	14.0	0													
1800	-10.6	-12.1	89	345	.5	276	3.2	0	1800	-9.1	-15.4	60	121	4.4	128	9.9	0	1800	-2.5	-7.6	68	109	8.4	103	15.2	0													
2100	-12.5	-14.5	85	056	1.1	087	3.8	0	2100	-8.7	-14.8	61	116	5.4	103	12.7	0	2100	-3.8	-5.5	88	116	4.4	127	11.4	0													
2400	-11.6	-24.1	35	070	1.7	075	3.8	0	2400	-7.9	-14.1	61	100	7.2	107	10.8	0	2400	-3.4	-5.1	88	002	1.5	337	5.1	0													

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.																						
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-4.0	-4.6	96	360	1.2	008	3.2	0	0300	-5.8	-11.1	66	086	1.6	081	3.2	0	0300	-10.6	-17.1	59	060	1.4	057	3.2	0													
0600	-4.3	*****	99	068	.6	155	4.4	0	0600	-5.3	-13.6	52	074	1.6	104	3.2	0	0600	-10.9	-17.8	57	068	1.1	067	3.2	0													
0900	-4.8	*****	96	189	.7	162	3.2	0	0900	-4.6	-14.0	48	060	1.9	051	4.4	0	0900	-9.4	-16.6	56	077	1.0	125	3.2	0													
1200	-4.7	*****	96	138	.9	149	3.2	2	1200	-5.8	-14.6	50	077	1.3	072	3.2	3	1200	-9.0	-16.4	55	077	1.5	051	3.8	3													
1500	-5.4	-7.7	84	094	1.6	107	4.4	0	1500	-9.0	-14.5	64	054	1.2	014	4.4	1	1500	-10.1	*****	57	070	1.3	052	3.2	1													
1800	-5.5	-10.6	67	061	1.3	042	3.2	0	1800	-8.9	-14.6	63	026	1.1	011	2.5	0	1800	-9.9	-16.6	58	078	1.8	061	4.4	0													
2100	-5.0	-10.5	65	055	1.3	057	3.8	0	2100	-9.9	-15.6	63	024	1.2	020	2.5	0	2100	-10.9	-17.3	59	074	1.6	088	3.2	0													
2400	-5.7	-11.2	65	082	1.3	059	3.2	0	2400	-10.1	-16.2	61	026	1.4	022	3.2	0	2400	-10.2	-17.3	56	075	1.7	065	4.4	0													

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.																						
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM
0300	-11.5	-18.1	58	042	1.3	013	3.8	0	0300	-6.0	*****	54	083	1.4	108	3.8	0	0300	-7.2	-11.7	70	083	1.4	051	3.2	0													
0600	-9.2	-18.5	47	065	1.2	058	3.8	0	0600	-6.8	-8.6	87	073	.8	100	3.8	0	0600	-5.6	-11.1	65	059	1.3	074	3.2	0													
0900	-9.8	-19.1	47	043	1.4	076	3.2	0	0900	-7.0	-9.7	81	059	1.1	078	3.2	0	0900	-5.7	*****	63	059	1.3	063	4.4	0													
1200	-8.5	-18.9	43	068	1.8	081	5.1	3	1200	-6.6	*****	76	074	.9	056	3.2	3	1200	-5.4	-12.4	58	089	1.4	063	4.4	3													
1500	-8.0	-17.7	46	067	1.9	070	4.4	1	1500	-6.7	-11.6	68	061	1.3	058	3.8	1	1500	-5.3	-11.6	61	085	1.3	085	3.8	0													
1800	-7.7	-16.6	49	066	1.9	059	4.4	0	1800	-8.4	-13.2	68	065	1.4	039	3.2	0	1800	-5.3	-11.2	63	081	1.5	098	3.8	0													
2100	-7.6	-16.0	51	068	2.0	059	5.7	0	2100	-6.5	-12.8	61	076	2.1	062	5.1	0	2100	-4.3	-11.1	59	084	3.2	076	6.3	0													
2400	-7.5	-15.2	54	042	1.8	050	6.3	0	2400	-7.8	-9.8	86	058	1.3	038	3.2	0	2400	-5.8	-11.3	65	096	4.8	106	10.2	0													

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

DAY 28

DAY 29

DAY 30

DAY 28										DAY 29										DAY 30									
HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.										
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S									
0300	-5.8	-8.7	80	169	1.1	164	0300	2.5	-13.5	30	105	8.3	117	0300	2.0	*****	**	094	4.3	087	8.3								
0600	-3.8	-8.6	69	099	3.3	035	0600	2.9	-14.4	27	117	7.6	123	0600	1.3	*****	**	088	5.0	084	8.3								
0900	-3.2	-9.2	63	113	7.4	100	0900	3.5	-15.3	24	116	6.9	118	0900	1.1	*****	**	083	4.6	093	9.5								
1200	-2.8	-10.1	57	102	5.6	112	1200	3.0	-16.2	23	078	5.4	077	1200	.9	*****	**	080	4.2	081	11.4								
1500	-1.8	-10.1	53	095	7.5	105	1500	5.5	*****	**	079	5.2	067	1500	-1.6	-10.5	51	105	5.5	104	11.4								
1800	-1.5	-9.9	53	096	6.4	083	1800	3.4	*****	**	087	5.0	085	1800	-1.2	-11.1	47	086	3.7	078	8.3								
2100	-.9	-11.1	46	099	6.8	110	2100	3.0	*****	**	083	5.8	090	2100	-1.0	-12.4	42	094	4.7	118	10.8								
2400	.7	-12.5	37	115	9.7	112	2400	1.1	*****	**	096	4.2	111	2400	-1.4	-10.5	50	096	4.3	099	8.3								

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSTINA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

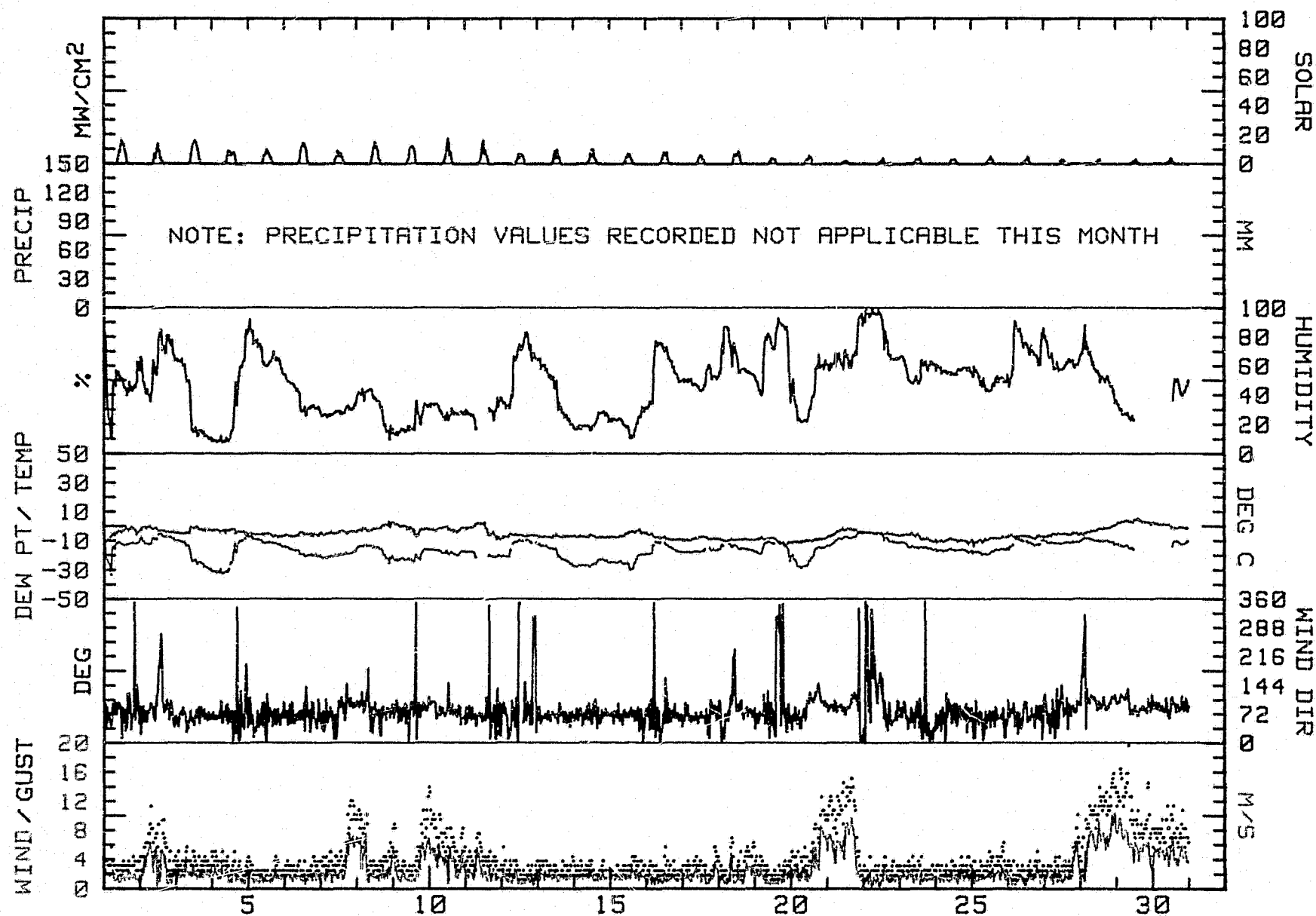
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQK	DAY
1	-6	-12.5	-6.6	078	1.4	1.6	068	5.7	E	47	-15.1	****	615	1
2	.4	-4.6	-2.1	088	2.5	3.1	099	11.4	E	61	-9.2	****	410	2
3	-2	-5.2	-2.7	064	2.0	2.0	040	5.7	ENE	31	-20.5	****	695	3
4	-1.6	-5.3	-3.5	065	1.4	1.7	060	5.1	ENE	28	-23.4	****	425	4
5	-5.0	-7.6	-6.3	061	1.3	1.4	047	4.4	NE	68	-11.2	****	400	5
6	-4.0	-7.3	-5.7	069	1.5	1.6	063	4.4	ENE	38	-18.4	****	575	6
7	-3.2	-6.1	-4.7	089	2.8	3.1	114	12.1	E	29	-19.9	****	335	7
8	3.2	-3.9	-.4	090	2.8	3.0	089	10.8	E	33	-16.5	****	510	8
9	2.9	-7.0	-2.1	084	2.6	2.7	116	14.0	E	21	-21.4	****	500	9
10	-6	-4.1	-2.4	082	3.7	3.9	096	13.3	ENE	29	-18.0	****	465	10
11	2.9	-9.2	-3.2	066	2.0	2.2	070	7.6	ENE	29	-19.7	****	460	11
12	-5.0	-8.9	-7.0	063	1.1	1.3	101	5.7	E	57	-14.5	****	280	12
13	-5.8	-7.7	-6.8	067	1.6	1.7	066	4.4	ENE	42	-18.6	****	310	13
14	-5.6	-8.3	-7.0	071	1.5	1.5	069	3.8	ENE	22	-25.8	****	305	14
15	-2.1	-7.7	-4.9	067	1.6	1.6	066	4.4	ENE	22	-24.3	****	250	15
16	-4.4	-9.7	-7.1	061	1.2	1.3	163	5.7	ENE	57	-15.3	****	265	16
17	-7.0	-10.1	-8.6	071	1.6	1.7	096	5.7	ENE	49	-17.4	****	190	17
18	-8.4	-10.3	-9.4	082	1.5	1.8	098	7.0	ENE	61	-15.4	****	335	18
19	-7.5	-12.6	-10.1	059	1.1	1.5	061	4.4	ENE	67	-15.1	****	130	19
20	-7.9	-11.8	-9.9	099	3.1	3.4	103	12.7	ESE	41	-21.5	****	185	20
21	-1.5	-7.7	-4.6	093	5.4	5.7	103	15.2	E	68	-8.9	****	65	21
22	-3.6	-6.1	-4.9	076	.8	1.3	155	4.4	ENE	82	-7.6	****	80	22
23	-4.6	-10.8	-7.7	056	1.3	1.5	051	4.4	NE	58	-14.3	****	130	23
24	-8.1	-12.3	-10.2	073	1.4	1.6	061	4.4	ENE	57	-16.8	****	125	24
25	-7.0	-13.8	-10.4	059	1.6	1.8	050	6.3	ENE	49	-17.6	****	140	25
26	-5.8	-8.7	-7.3	069	1.3	1.4	062	5.1	ENE	70	-11.9	****	125	26
27	-4.3	-7.8	-6.1	084	2.0	2.2	106	10.2	E	64	-11.3	****	100	27
28	.9	-5.9	-2.5	105	5.8	6.2	112	15.9	ESE	58	-10.0	****	80	28
29	5.5	.9	3.2	097	5.9	6.1	118	19.7	E	28	-14.0	****	85	29
30	2.9	-1.6	.7	092	4.5	4.6	081	11.4	E	45	-11.7	****	95	30
MONTH	5.5	-13.8	-5.3	083	2.2	2.5	118	19.7	ENE	46	-16.2	****	8665	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 14.6
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 15.9
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 12.7
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 9.5

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
November, 1983



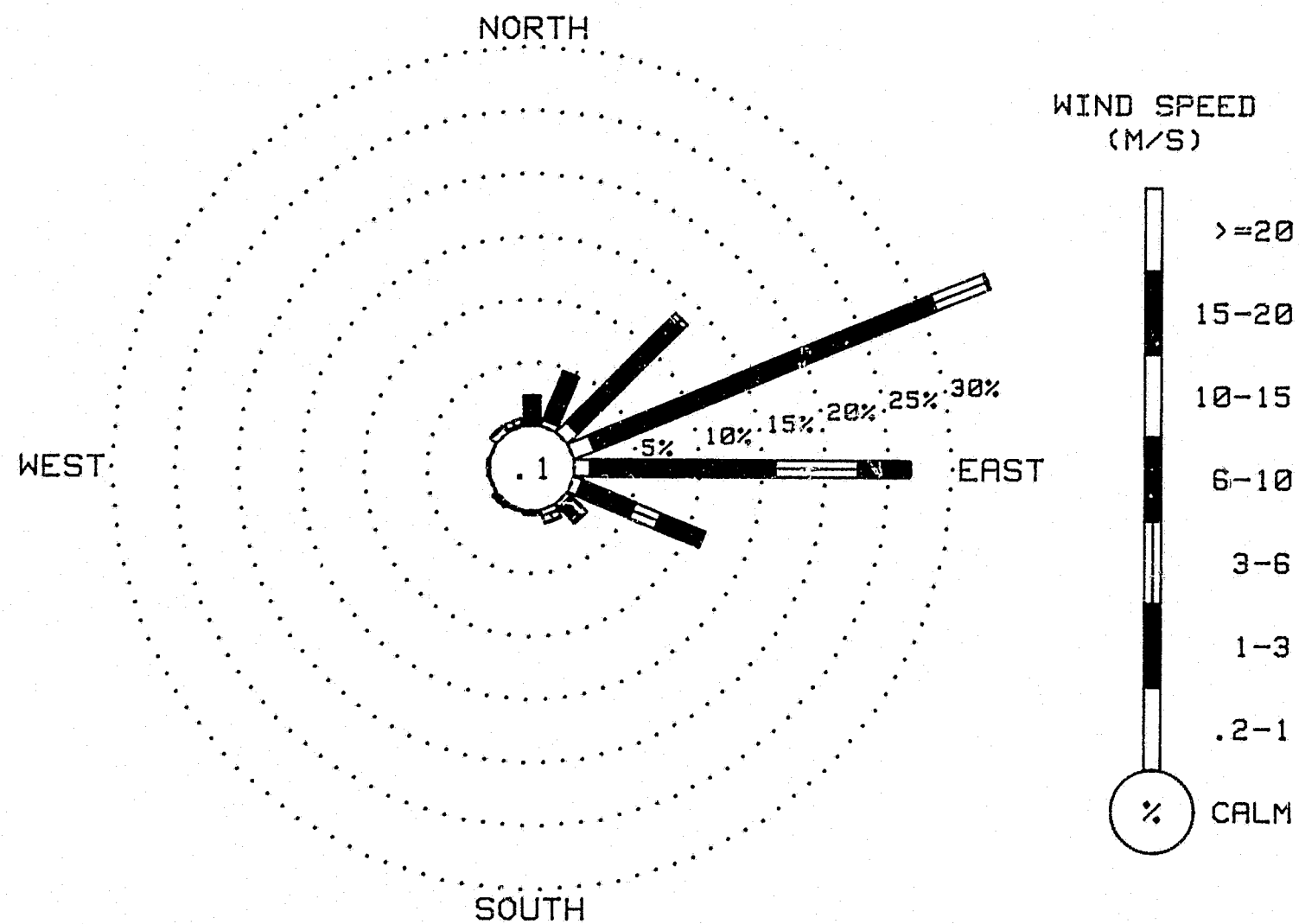
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO	TO	TO	TO	TO	TO	OR	
	1.0	3.0	6.0	10.0	15.0	20.0	GREATER	
N	.14	2.16	.07	0.00	0.00	0.00	0.00	2.37
NNE	.56	4.04	.07	0.00	0.00	0.00	0.00	4.67
NE	1.18	11.70	.49	0.00	0.00	0.00	0.00	13.37
ENE	1.81	29.25	4.46	.14	0.00	0.00	0.00	35.65
E	1.32	14.62	6.62	4.11	0.00	0.00	0.00	26.67
ESE	.77	4.53	2.23	3.62	.14	0.00	0.00	11.28
SE	.42	1.18	.35	.21	0.00	0.00	0.00	2.16
SSE	.49	.56	.07	0.00	0.00	0.00	0.00	1.11
S	.07	.28	0.00	0.00	0.00	0.00	0.00	.35
SSW	.14	0.00	.07	0.00	0.00	0.00	0.00	.21
SW	.21	.21	0.00	0.00	0.00	0.00	0.00	.42
WSW	0.00	.07	0.00	0.00	0.00	0.00	0.00	.07
W	0.00	.21	0.00	0.00	0.00	0.00	0.00	.21
WNW	.07	0.00	0.00	0.00	0.00	0.00	0.00	.07
NW	.56	.14	0.00	0.00	0.00	0.00	0.00	.70
NNW	.14	.49	0.00	0.00	0.00	0.00	0.00	.63
CALM								.07
TOTAL	7.87	69.43	14.42	8.08	.14	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1436 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1440 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
November, 1983



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG	
1	0	0	0	0	0	0	0	0	1	5	9	14	14	12	7	2	0	0	0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	0	0	1	6	6	13	10	5	2	1	0	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	1	4	11	15	16	13	9	3	0	0	0	0	0	0	0	0	0	3
4	0	0	0	0	0	0	0	0	1	4	8	8	7	8	7	1	0	0	0	0	0	0	0	0	0	2
5	0	0	0	0	0	0	0	0	1	4	6	9	8	7	5	2	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	1	2	9	13	14	12	6	2	0	0	0	0	0	0	0	0	0	2
7	0	0	0	0	0	0	0	0	0	4	7	8	6	6	3	1	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	4	9	13	12	10	4	1	0	0	0	0	0	0	0	0	0	2
9	0	0	0	0	0	0	0	0	1	3	8	12	12	11	5	1	0	0	0	0	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	2	5	12	16	8	5	1	0	0	0	0	0	0	0	0	0	2
11	0	0	0	0	0	0	0	0	1	3	8	15	9	8	4	1	0	0	0	0	0	0	0	0	0	2
12	0	0	0	0	0	0	0	0	0	2	4	6	7	6	4	1	0	0	0	0	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	2	5	9	7	5	4	1	0	0	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	0	0	1	2	5	9	8	5	3	1	0	0	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	2	4	6	6	5	3	1	0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	1	4	7	6	7	2	1	0	0	0	0	0	0	0	0	0	1
17	0	0	0	0	0	0	0	0	0	1	3	6	6	3	2	0	0	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	0	2	6	7	7	9	4	1	0	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	1	2	4	4	3	1	0	0	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	0	0	1	3	4	6	5	1	0	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	1	2	3	3	4	2	0	0	0	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	0	1	3	3	3	3	1	0	0	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	1	2	3	5	3	2	0	0	0	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	0	0	0	1	3	3	5	2	0	0	0	0	0	0	0	0	0	0	1
27	0	0	0	0	0	0	0	0	0	0	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	1	1	3	4	2	1	0	0	0	0	0	0	0	0	0	0	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1983

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1440	100
WIND SPEED	1440	100
WIND DIRECTION	1436	100
PEAK GUST	1440	100
RELATIVE HUMIDITY	1256	87
PRECIPITATION	0	0
SOLAR RADIATION	1440	100
DEW POINT	1256	87

THERE ARE 1440 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -15 RH Points 11/1 - 11/16
 -12 11/16 - 11/30
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. RH data looks suspiciously low in several places. Bad data deleted on days 10, 29, and 30.

No precipitation data for December

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	.3	-10.3	45	087	4.9	083	10.2	0	0300	-3.7	-6.5	81	067	1.4	075	2.5	0	0300	-7.9	-9.3	90	.001	1.1	022	3.2	0
0600	-1.3	-10.4	50	111	3.5	114	8.3	0	0600	-5.0	-5.7	95	025	1.0	016	3.8	0	0600	-8.2	*****	93	039	.6	021	2.5	0
0900	.1	-9.9	47	101	2.5	125	10.8	0	0900	-6.1	-6.8	95	337	.8	303	3.2	0	0900	-8.4	*****	91	063	.7	095	2.5	0
1200	-.6	-9.3	52	100	3.9	128	9.5	4	1200	-6.0	-6.7	95	316	1.2	330	2.5	1	1200	-7.7	*****	86	051	1.1	038	3.2	2
1500	-2.2	-6.2	74	070	1.6	078	3.8	0	1500	-6.7	*****	93	300	.8	302	1.9	0	1500	-8.6	*****	88	065	.5	002	2.5	0
1800	-3.3	*****	90	***	****	***	2.5	0	1800	-7.2	*****	94	***	****	***	1.3	0	1800	-9.2	-11.0	87	068	.9	021	3.2	0
2100	-3.5	-5.2	88	***	****	***	1.9	0	2100	-7.3	*****	94	027	.6	000	1.9	0	2100	-9.8	-10.7	93	051	1.0	105	3.8	0
2400	-3.8	*****	90	***	****	***	1.3	0	2400	-7.5	-8.2	95	013	.9	013	2.5	0	2400	-9.3	-10.7	90	083	.7	103	3.2	0

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-8.2	-11.5	77	104	1.1	089	3.8	0	0300	-7.0	*****	77	091	1.0	118	3.2	0	0300	-7.8	-10.8	79	034	3.9	028	6.3	0
0600	-7.6	-11.4	74	097	1.0	084	2.5	0	0600	-8.0	*****	80	066	.8	108	3.2	0	0600	-7.0	-9.7	81	074	1.5	043	5.7	0
0900	-8.4	*****	86	095	.9	090	2.5	0	0900	-7.5	*****	75	***	****	***	2.5	0	0900	-7.6	-9.8	84	056	1.1	075	4.4	0
1200	-7.9	-11.2	77	068	1.1	045	3.2	0	1200	-7.4	-11.2	74	***	****	***	1.9	1	1200	-7.5	-9.2	88	038	1.6	036	4.4	1
1500	-7.1	-10.4	77	058	1.7	093	4.4	0	1500	-7.4	-10.6	78	***	****	***	3.2	0	1500	-9.3	-10.4	92	020	1.0	019	3.2	0
1800	-8.3	-9.0	95	130	1.4	127	3.2	0	1800	-7.2	-10.1	80	087	1.1	043	3.2	0	1800	-10.1	*****	90	050	.8	027	3.2	0
2100	-8.2	*****	88	138	.6	153	2.5	0	2100	-7.0	-9.6	82	070	.9	076	3.2	0	2100	-10.6	-11.9	90	041	.9	090	2.5	0
2400	-7.8	-9.9	85	085	1.0	053	3.2	0	2400	-6.4	-10.1	75	079	1.0	077	3.8	0	2400	-10.8	-12.3	89	058	.5	001	2.5	0

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-9.8	*****	95	040	.5	031	1.9	0	0300	-3.8	-17.2	35	070	1.0	085	3.2	0	0300	-11.8	-28.8	23	069	1.4	068	5.1	0
0600	-10.2	*****	91	079	.4	072	1.9	0	0600	-4.2	*****	36	077	1.2	071	3.2	0	0600	-16.4	-29.4	32	086	1.7	084	4.4	0
0900	-11.1	*****	91	089	.5	092	1.3	0	0900	-4.2	-17.2	36	080	1.2	095	3.8	0	0900	-17.2	-29.7	33	057	1.1	091	3.2	0
1200	-10.9	*****	91	081	.3	095	1.3	1	1200	-4.7	-17.3	37	104	1.3	129	3.2	2	1200	-15.9	-31.1	26	056	1.5	044	3.8	2
1500	-12.6	*****	89	044	.3	352	1.9	0	1500	-7.1	-19.1	38	110	1.3	099	4.4	0	1500	-16.3	-31.8	25	071	1.1	032	3.2	0
1800	-10.0	*****	84	058	.5	036	1.9	0	1800	-8.3	-23.7	28	058	1.8	071	4.4	0	1800	-17.0	*****	26	067	1.1	053	2.5	0
2100	-9.8	*****	68	082	.6	123	2.5	0	2100	-10.7	-24.7	31	047	1.7	045	4.4	0	2100	-15.7	-31.7	24	050	1.3	032	3.8	0
2400	-5.3	*****	46	058	.9	043	2.5	0	2400	-11.2	-25.8	29	067	1.3	069	3.2	0	2400	-18.1	*****	27	083	1.4	081	3.8	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

DAY 10										DAY 11										DAY 12									
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		
0300	-15.8	-31.4	25	051	1.0	076	2.5	0		0300	-8.4	-20.9	36	074	1.4	076	3.8	0		0300	-11.0	-14.2	77	066	3.1	062	5.7	0	
0600	-13.8	-29.6	25	074	1.7	058	4.4	0		0600	-9.4	-20.3	41	064	1.3	055	3.8	0		0600	-11.4	-14.3	79	071	2.3	062	5.7	0	
0900	-14.3	-27.2	33	071	1.4	044	4.4	0		0900	-9.5	-19.9	43	071	1.7	065	3.8	0		0900	-11.8	-13.4	88	071	1.7	083	5.1	0	
1200	-11.0	-23.3	36	053	1.9	057	5.1	3		1200	-10.0	-19.5	46	056	1.5	016	3.2	2		1200	-12.9	-14.4	89	062	1.8	058	4.4	1	
1500	-10.8	-22.8	37	079	2.2	101	4.4	0		1500	-10.0	-18.5	50	070	1.7	060	4.4	0		1500	-12.5	-14.1	88	041	1.3	040	4.4	0	
1800	-10.6	-21.7	40	059	2.3	039	5.1	0		1800	-9.9	-17.5	54	071	1.7	090	3.2	0		1800	-13.0	-14.5	89	048	.7	019	3.2	0	
2100	-9.6	-21.7	37	071	1.7	074	4.4	0		2100	-9.6	-15.9	60	053	1.5	056	4.4	0		2100	-14.4	-16.5	64	067	1.2	067	3.8	0	
2400	-8.8	-20.7	38	066	1.9	067	5.1	0		2400	-10.1	-14.2	72	054	2.7	036	5.7	0		2400	-12.6	-17.8	65	062	1.0	053	2.5	0	
DAY 13										DAY 14										DAY 15									
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		
0300	-13.2	*****	63	061	1.2	091	3.2	0		0300	-15.9	*****	86	094	1.0	081	2.5	0		0300	-17.4	*****	71	066	.8	025	3.2	0	
0600	-13.6	*****	72	089	.9	028	3.8	0		0600	-14.3	-18.2	72	069	.8	101	2.5	0		0600	-17.7	-21.8	70	070	1.1	084	3.2	0	
0900	-12.6	*****	76	081	1.0	058	3.2	0		0900	-15.8	-18.5	80	048	.8	092	1.9	0		0900	-18.3	-22.1	72	053	1.2	084	3.8	0	
1200	-11.5	*****	72	053	1.1	092	3.2	2		1200	-16.5	*****	73	066	.9	039	2.5	2		1200	-19.5	-23.4	71	042	1.3	032	3.2	2	
1500	-11.3	-14.5	77	104	.9	100	1.9	0		1500	-17.3	-21.1	72	079	.9	093	3.8	0		1500	-19.2	-23.1	71	062	1.4	042	3.2	0	
1800	-9.6	-15.9	60	074	1.4	059	3.2	0		1800	-17.7	-21.5	72	050	1.3	046	3.2	0		1800	-19.9	-23.6	72	075	1.3	078	2.5	0	
2100	-10.1	-15.4	65	085	1.4	075	3.2	0		2100	-17.1	-20.8	73	041	1.5	037	4.4	0		2100	-19.2	-27.3	49	066	1.5	066	3.8	0	
2400	-12.2	-17.0	67	073	1.2	070	3.2	0		2400	-16.9	-21.1	70	045	1.6	039	3.8	0		2400	-19.5	*****	41	064	1.4	019	4.4	0	
DAY 16										DAY 17										DAY 18									
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		
0300	-19.9	-30.4	39	088	1.0	081	3.2	0		0300	-14.3	-25.9	37	073	1.2	067	3.2	0		0300	-7.9	*****	90	090	.6	092	2.5	0	
0600	-21.2	*****	42	056	.9	042	3.8	0		0600	-10.9	-16.5	63	059	1.8	042	5.1	0		0600	-10.3	*****	90	360	.7	006	2.5	0	
0900	-18.6	*****	39	076	.9	100	2.5	0		0900	-10.7	-12.5	87	078	.8	031	3.8	0		0900	-11.1	-12.3	91	093	1.5	113	4.4	0	
1200	-16.8	-27.9	38	073	1.3	080	3.8	2		1200	-11.0	-13.6	81	044	1.1	042	2.5	1		1200	-12.9	-14.4	89	105	1.3	092	3.8	1	
1500	-16.9	-28.3	37	065	1.4	060	3.8	0		1500	-10.2	-14.1	73	066	1.2	066	3.8	0		1500	-8.4	-20.6	37	046	1.4	024	4.4	0	
1800	-16.4	-28.1	36	079	1.6	056	3.8	0		1800	-10.3	-13.1	80	084	1.5	047	3.8	0		1800	-7.7	-23.2	28	051	1.7	057	5.1	0	
2100	-15.2	-27.3	35	060	1.3	038	4.4	0		2100	-9.8	-12.0	84	084	1.0	140	3.2	0		2100	-6.8	-24.5	23	074	1.6	068	3.8	0	
2400	-13.6	-25.0	38	087	1.8	093	4.4	0		2400	-9.7	*****	86	053	1.0	085	3.2	0		2400	-5.5	-24.4	21	073	1.8	064	3.8	0	

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-4.4	-23.0	22	077	1.8	067	4.4	0	0300	-6.1	-17.3	41	076	.9	045	3.2	0
0600	-7.3	-24.1	25	049	1.0	080	3.8	0	0600	-6.4	-17.0	43	072	1.0	029	3.2	0
0900	-6.6	-24.4	23	072	1.3	064	3.8	0	0900	-7.0	-16.7	46	053	.5	009	3.8	0
1200	-5.7	-21.8	27	062	1.4	094	3.2	2	1200	-11.2	-15.6	70	034	1.4	080	4.4	1
1500	-3.5	-20.3	26	054	1.4	043	4.4	0	1500	-7.1	-9.5	83	090	1.1	125	4.4	0
1800	-7.7	-21.0	34	062	1.0	043	3.8	0	1800	-6.1	-6.7	96	050	.9	098	4.4	0
2100	-4.5	-19.2	31	056	1.3	045	5.1	0	2100	-6.1	-6.8	95	082	1.0	092	3.2	0
2400	-5.7	-19.2	34	077	.7	109	5.1	0	2400	-5.9	*****	94	092	.6	132	2.5	0
0300	-6.7	*****	95	134	.5	134	1.3	0	0600	-6.6	*****	94	013	.4	042	2.5	0
0900	-6.3	-7.4	92	061	.8	075	2.5	0	1200	-5.7	-6.7	93	155	.1	139	3.2	0
1500	-6.3	*****	90	079	.4	063	2.5	0	1800	-6.1	-7.6	89	056	.8	025	2.5	0
2100	-4.9	-7.5	82	077	1.3	102	3.2	0	2400	-5.1	*****	82	059	.8	024	2.5	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-3.7	-8.0	72	056	.9	084	2.5	0	0300	1.6	-11.3	38	074	1.2	055	2.5	0
0600	-4.6	*****	74	059	.6	026	2.5	0	0600	2.3	-11.7	35	053	1.1	032	3.2	0
0900	-2.1	*****	58	073	.4	343	2.5	0	0900	1.3	-13.0	34	057	1.4	035	3.2	0
1200	-.5	-11.4	44	054	.8	044	2.5	1	1200	1.8	-14.9	28	071	1.2	052	2.5	1
1500	0.0	*****	41	075	.7	081	1.9	0	1500	.7	-15.4	29	044	1.5	035	4.4	0
1800	-.3	*****	44	080	.7	077	1.9	0	1800	2.6	-15.6	25	059	1.7	062	4.4	0
2100	-.3	*****	44	066	1.0	061	2.5	0	2100	1.9	-17.6	22	065	1.4	055	3.8	0
2400	1.8	-10.8	39	067	1.3	068	3.2	0	2400	2.1	-18.6	20	057	1.7	034	5.1	0
0300	1.6	-20.2	18	077	1.5	077	2.5	0	0600	.2	-20.8	19	061	1.8	044	3.8	0
0900	.3	-21.3	18	058	2.1	048	4.4	0	1200	-.5	-21.3	19	062	1.6	062	4.4	2
1500	.2	-20.8	19	090	1.4	106	5.1	1	1800	-.6	-20.3	21	124	2.8	103	8.3	0
2100	-2.3	-22.3	20	090	2.8	094	7.0	0	2400	.6	-26.6	11	099	3.1	093	7.0	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-.2	-24.5	14	089	3.0	101	7.6	0	0300	.9	-25.4	12	074	2.7	076	6.3	0
0600	-3.3	-20.6	25	069	1.7	076	7.0	0	0600	0.0	-26.1	12	077	1.4	089	4.4	0
0900	.5	-16.5	27	061	2.3	099	12.7	0	0900	-.3	-27.3	11	072	1.9	077	4.4	0
1200	1.7	-18.4	21	117	4.4	115	11.4	2	1200	-.6	-28.6	10	068	1.8	057	5.1	2
1500	-.9	-21.1	20	092	2.5	110	10.8	0	1500	-.7	-28.7	10	068	1.6	071	3.8	1
1800	2.2	-24.4	12	061	2.5	044	6.3	0	1800	-.6	-26.6	12	054	1.6	023	4.4	0
2100	3.4	-27.9	8	061	3.3	071	7.0	0	2100	-2.1	-23.9	17	062	1.7	044	3.8	0
2400	1.8	-26.7	10	070	3.0	065	7.6	0	2400	-1.7	-22.3	19	078	1.4	087	3.2	0
0300	-2.6	-21.5	22	060	1.5	073	3.8	0	0600	-3.5	-22.7	21	064	1.4	039	3.8	0
0900	-4.1	-23.8	20	081	1.6	085	3.2	0	1200	-4.4	-24.0	20	071	1.1	057	2.5	2
1500	-5.0	-24.1	21	069	1.2	065	3.2	0	1800	-4.3	-23.4	21	063	1.4	066	3.2	0
2100	-5.9	-24.2	22	058	1.4	094	3.2	0	2400	-6.2	-25.0	21	066	1.3	038	3.2	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-6.7	-25.4	21	062	1.3	033	3.2	0	0300	-8.9	-24.2	28	078	1.3	101	2.5	0
0600	-6.7	-25.4	21	065	1.1	052	2.5	0	0600	-9.2	-24.1	29	075	1.2	089	1.9	0
0900	-7.0	-25.2	22	063	1.3	100	3.2	0	0900	-9.5	-23.6	31	086	1.5	107	3.2	0
1200	-7.6	-25.7	22	050	1.2	064	2.5	2	1200	-10.0	-23.7	32	059	1.4	037	3.2	2
1500	-8.1	*****	23	075	1.2	093	2.5	0	1500	-10.1	-23.4	33	073	1.3	064	1.9	0
1800	-8.0	-23.4	28	069	1.3	039	2.5	0	1800	-10.1	-23.8	32	054	1.2	027	2.5	0
2100	-8.4	-23.4	29	080	1.5	070	3.8	0	2100	-9.6	-24.4	29	075	1.3	079	2.5	0
2400	-9.2	-23.7	30	076	1.3	048	2.5	0	2400	-9.2	-24.5	28	092	1.4	097	2.5	0
0300	-11.4	-25.6	30	069	1.2	039	3.2	0	0300	-11.4	-25.6	30	069	1.2	039	3.2	0
0600	-10.4	-24.8	30	053	1.3	032	3.2	0	0600	-10.4	-24.8	30	053	1.3	032	3.2	0
0900	-11.2	-25.1	31	081	1.4	055	3.8	0	0900	-11.2	-25.1	31	081	1.4	055	3.8	0
1200	-10.9	-25.2	30	063	1.6	057	4.4	2	1200	-10.9	-25.2	30	063	1.6	057	4.4	2
1500	-11.5	-25.4	31	071	1.1	052	3.2	0	1500	-11.5	-25.4	31	071	1.1	052	3.2	0
1800	-11.7	-24.9	33	055	.9	106	2.5	0	1800	-11.7	-24.9	33	055	.9	106	2.5	0
2100	-11.0	-23.9	34	088	.8	084	2.5	0	2100	-11.0	-23.9	34	088	.8	084	2.5	0
2400	-11.3	*****	35	074	1.1	047	3.2	0	2400	-11.3	*****	35	074	1.1	047	3.2	0

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.
DEG C	DEG C	%	DEG.	M/S	DEG.
0300	-12.4	-22.0	45	106	.9
0600	-12.6	-16.6	72	101	.8
0900	-12.2	*****	77	110	.7
1200	-12.0	-15.7	74	117	1.0
1500	-10.5	-16.0	64	096	1.2
1800	-9.0	-16.6	54	048	1.1
2100	-9.2	*****	50	074	1.0
2400	-9.6	-17.0	51	071	1.5

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

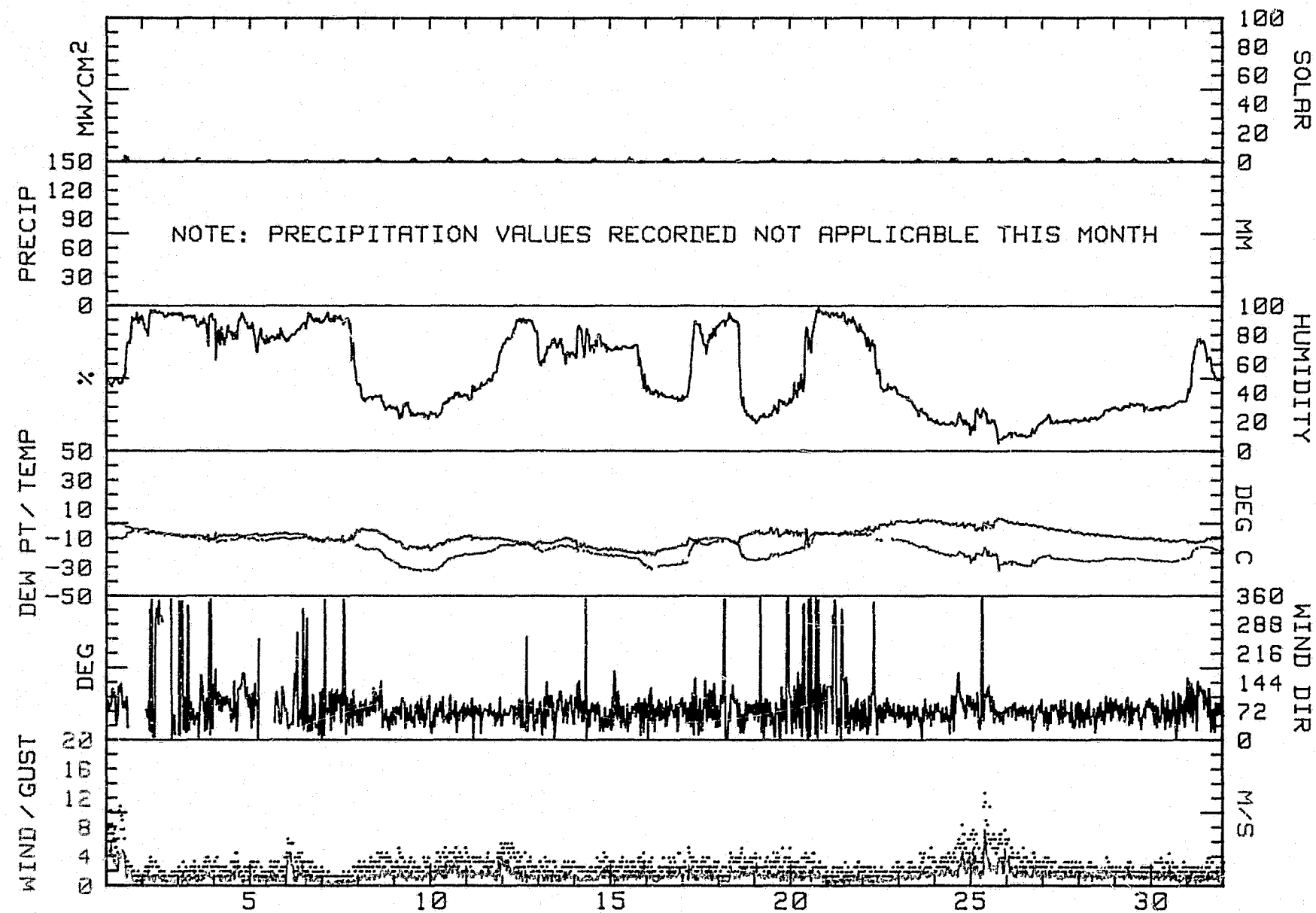
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SON	DAY
1	.5	-4.1	-1.8	096	3.3	2.5	125	10.8	E	57	-8.8	****	100	1
2	-3.5	-7.5	-5.5	360	.7	.9	016	3.8	N	92	-6.7	****	35	2
3	-7.5	-10.5	-9.0	051	.8	1.1	105	3.8	NNE	90	-10.1	****	40	3
4	-6.5	-9.9	-8.2	093	1.0	1.2	093	4.4	E	81	-10.7	****	0	4
5	-6.0	-8.4	-7.2	080	1.0	1.1	077	3.8	ESE	78	-10.4	****	15	5
6	-6.5	-11.4	-9.0	043	1.4	1.7	028	6.3	NE	85	-10.2	****	25	6
7	-4.2	-12.6	-8.4	066	.5	.6	123	2.5	ENE	63	-13.6	****	35	7
8	-3.3	-11.8	-7.6	075	1.3	1.4	099	4.4	ENE	34	-20.0	****	55	8
9	-11.8	-18.1	-15.0	068	1.3	1.4	068	5.1	E	26	-30.4	****	70	9
10	-8.4	-18.1	-13.3	066	1.8	1.9	057	5.1	ENE	33	-25.1	****	75	10
11	-7.6	-11.3	-9.5	064	1.7	1.8	036	5.7	ENE	48	-18.8	****	59	11
12	-10.4	-15.0	-12.7	063	1.6	1.7	062	5.7	ENE	83	-14.6	****	40	12
13	-9.2	-13.7	-11.5	076	1.1	1.3	028	3.8	E	68	-16.3	****	45	13
14	-11.4	-18.5	-15.0	059	1.1	1.2	037	4.4	NE	74	-20.1	****	60	14
15	-16.4	-20.3	-18.4	062	1.2	1.4	019	4.4	ENE	66	-23.6	****	65	15
16	-13.6	-21.5	-17.6	074	1.3	1.4	038	4.4	E	38	-28.3	****	70	16
17	-9.2	-15.3	-12.3	068	1.1	1.4	042	5.1	E	70	-15.8	****	50	17
18	-5.5	-12.9	-9.2	070	1.2	1.4	057	5.1	E	55	-18.7	****	30	18
19	-2.7	-8.7	-5.7	064	1.2	1.5	045	5.1	E	27	-22.2	****	45	19
20	-3.3	-11.3	-7.3	067	.9	1.3	080	4.4	N	71	-11.7	****	20	20
21	-4.3	-7.0	-5.7	069	.6	.9	139	3.2	ENE	88	-7.4	****	5	21
22	2.1	-5.5	-1.7	066	.8	.9	068	3.2	ENE	52	-9.9	****	25	22
23	3.5	.6	2.1	060	1.4	1.5	034	5.1	ENE	29	-14.5	****	50	23
24	2.2	-2.5	-.2	085	2.0	2.3	103	8.3	ENE	19	-20.9	****	80	24
25	4.5	-4.7	-.1	080	2.7	3.0	099	12.7	ENE	18	-22.7	****	75	25
26	2.2	-2.7	-.3	069	1.8	1.8	076	6.3	ENE	12	-26.6	****	70	26
27	-1.9	-6.3	-4.1	067	1.4	1.4	073	3.8	ENE	21	-23.5	****	65	27
28	-5.3	-9.2	-7.3	068	1.2	1.3	070	3.8	ENE	24	-24.8	****	70	28
29	-8.5	-10.4	-9.5	074	1.3	1.4	107	3.2	E	30	-23.9	****	55	29
30	-9.7	-12.3	-11.0	069	1.2	1.3	057	4.4	NE	31	-25.0	****	70	30
31	-8.6	-13.3	-11.0	088	1.0	1.2	058	3.8	ENE	59	-17.2	****	35	31
MONTH	4.5	-21.5	-8.1	070	1.3	.8	099	12.7	ENE	48	-17.8	****	1525	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 4.4
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 10.8
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 11.4
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 8.9

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
December, 1983



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

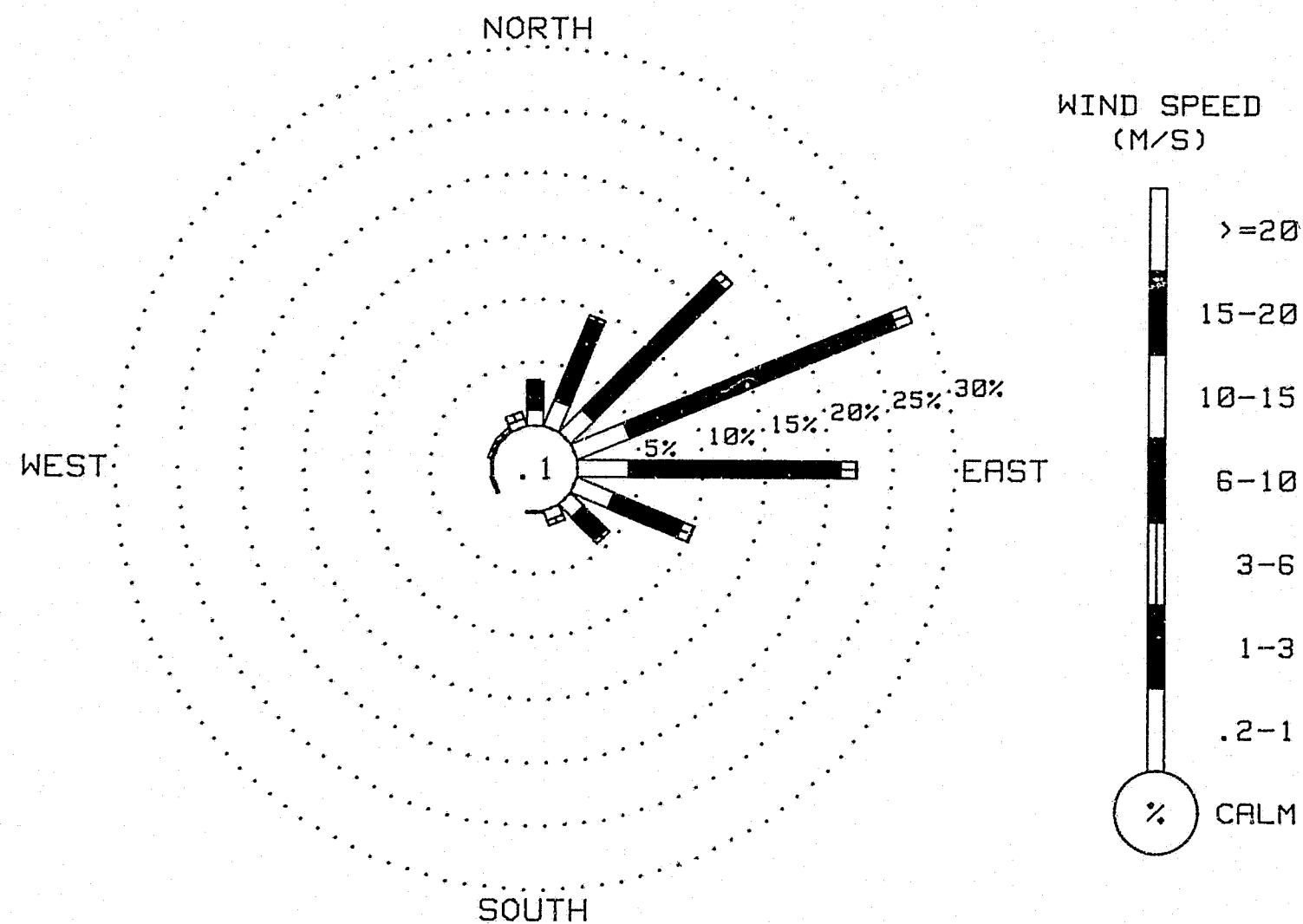
WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2 TO 1.0	1.0 TO 3.0	3.0 TO 6.0	6.0 TO 10.0	10.0 TO 15.0	15.0 TO 20.0	20.0 OR GREATER	
N	1.26	2.31	0.00	0.00	0.00	0.00	0.00	3.57
NNE	2.24	6.85	.35	0.00	0.00	0.00	0.00	9.44
NE	2.59	14.62	.77	0.00	0.00	0.00	0.00	17.97
ENE	4.55	22.73	1.33	0.00	0.00	0.00	0.00	28.60
E	4.13	16.71	1.26	.07	0.00	0.00	0.00	22.17
ESE	3.22	5.87	.91	.07	0.00	0.00	0.00	10.07
SE	1.47	2.52	.35	0.00	0.00	0.00	0.00	4.34
SSE	.84	.42	0.00	0.00	0.00	0.00	0.00	1.26
S	.07	.07	0.00	0.00	0.00	0.00	0.00	.14
SSW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WSW	.21	0.00	0.00	0.00	0.00	0.00	0.00	.21
W	.14	0.00	0.00	0.00	0.00	0.00	0.00	.14
WNW	.14	.28	0.00	0.00	0.00	0.00	0.00	.42
NW	.14	.28	0.00	0.00	0.00	0.00	0.00	.42
NNW	.63	.56	0.00	0.00	0.00	0.00	0.00	1.19
CALM								.07
TOTAL	21.61	73.22	4.97	.14	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1430 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1488 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

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R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
December, 1983



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	0	0	0	1	3	3	3	1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
5	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	1	3	2	2	1	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	2	2	1	1	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	1	1	2	2	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	2	2	2	2	1	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	1	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	1	2	2	1	1	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1983

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1488	100
WIND SPEED	1488	100
WIND DIRECTION	1430	96
PEAK GUST	1488	100
RELATIVE HUMIDITY	1142	77
PRECIPITATION	0	0
SOLAR RADIATION	1488	100
DEW POINT	1142	77

THERE ARE 1488 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -12 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Intermittent wind direction data lost due to frozen wind vane.

No precipitation data for January

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-7.6	-12.5	68	046	1.7	058	3.2	0	0300	-2.6	*****	94	079	1.0	059	3.2	0
0600	-6.7	-12.4	64	056	1.3	064	2.5	0	0600	-3.1	*****	95	137	.8	088	2.5	0
0900	-5.3	-12.5	57	069	1.5	061	5.1	0	0900	-3.0	-6.3	78	091	2.7	083	6.3	0
1200	-3.7	-7.5	75	062	1.4	030	5.1	1	1200	-4.3	-4.7	97	347	.7	089	3.8	1
1500	-2.9	-4.8	87	042	1.8	051	4.4	0	1500	-4.1	-5.5	90	026	1.7	051	3.8	1
1800	-2.5	-3.8	91	051	1.6	040	3.2	0	1800	-3.6	-7.0	77	102	1.0	089	8.3	0
2100	-2.9	-3.2	98	067	2.2	085	6.3	0	2100	-4.4	-6.1	88	094	.5	110	7.6	0
2400	-2.2	-4.1	87	022	1.4	000	3.2	0	2400	-3.7	-7.3	76	097	4.4	107	8.3	0

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-6.7	-7.8	92	033	1.0	046	3.2	0	0300	-22.9	-27.3	67	074	1.1	102	4.4	0
0600	-8.9	-10.3	90	023	1.9	006	5.1	0	0600	-18.9	-31.9	31	066	1.8	037	4.4	0
0900	-17.5	-19.7	83	079	1.6	098	7.0	0	0900	-16.9	-32.3	25	046	2.2	034	4.4	0
1200	-21.1	-23.8	79	030	2.1	025	12.7	2	1200	-17.7	-33.0	25	049	1.4	089	5.1	2
1500	-21.5	-24.3	78	041	1.9	104	5.7	0	1500	-18.5	-23.1	67	062	1.4	020	3.8	0
1800	-22.6	-25.5	77	007	2.2	016	4.4	0	1800	-17.3	-23.4	59	095	2.2	098	5.1	0
2100	-22.3	-25.2	77	030	1.6	018	4.4	0	2100	-16.7	*****	78	072	1.0	350	3.2	0
2400	-21.3	-25.9	66	039	1.5	016	5.1	0	2400	-15.2	-19.9	67	083	.9	056	4.4	0

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-11.1	-15.1	72	063	1.5	052	3.8	0	0300	-5.8	-22.8	25	067	2.0	054	5.7	0
0600	-11.9	-16.6	68	057	1.0	075	2.5	0	0600	-5.1	-22.6	24	083	1.8	061	3.8	0
0900	-11.7	-15.7	72	072	1.3	071	3.8	0	0900	-3.1	-21.9	22	063	1.5	049	4.4	0
1200	-8.2	*****	60	064	1.2	048	4.4	1	1200	-7.2	*****	30	038	1.1	049	3.2	2
1500	-7.7	-17.1	47	071	1.2	052	3.2	0	1500	-5.2	-21.8	26	063	1.2	050	3.8	1
1800	-8.1	-21.0	35	071	1.2	075	2.5	0	1800	-5.4	-21.2	28	082	1.5	080	2.5	0
2100	-6.7	-21.1	31	065	1.3	043	3.8	0	2100	-5.8	-20.7	30	047	1.4	051	3.2	0
2400	-6.0	-21.7	28	072	1.6	077	4.4	0	2400	-4.0	-20.4	27	071	1.5	100	3.8	0
0300	-3.9	-20.7	26	061	1.4	071	3.8	0	0300	-3.9	-20.7	26	061	1.4	071	3.8	0
0600	-5.7	-21.8	27	071	1.9	076	4.4	0	0600	-5.7	-21.8	27	071	1.9	076	4.4	0
0900	-1.1	-22.4	18	073	2.3	071	6.3	0	0900	-1.1	-22.4	18	073	2.3	071	6.3	0
1200	-3.8	-22.5	22	068	1.8	098	7.0	2	1200	-3.8	-22.5	22	068	1.8	098	7.0	2
1500	-5.6	-20.2	31	086	1.5	045	7.0	1	1500	-5.6	-20.2	31	086	1.5	045	7.0	1
1800	-6.0	-19.5	34	085	1.4	102	4.4	0	1800	-6.0	-19.5	34	085	1.4	102	4.4	0
2100	-4.8	-7.7	80	059	1.5	030	4.4	0	2100	-4.8	-7.7	80	059	1.5	030	4.4	0
2400	-3.3	-5.0	88	070	1.7	065	5.1	0	2400	-3.3	-5.0	88	070	1.7	065	5.1	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

DAY 10

DAY 11

DAY 12

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-3.0	-9.4	61	090	2.6	089	4.4	0	0300	-3.8	-4.9	92	107	3.8	116	9.5	0	0300	-5.0	-8.1	79	093	6.1	093	10.8	0
0600	-3.1	-10.4	57	076	1.6	058	5.1	0	0600	-1.5	-8.2	60	076	2.7	097	8.3	0	0600	-4.3	-6.3	86	108	7.7	121	12.7	0
0900	-2.0	-9.4	57	081	4.0	101	10.2	0	0900	-3.8	-6.4	82	104	6.4	109	13.3	0	0900	-2.7	-5.2	83	098	7.3	096	12.7	0
1200	-5.0	-7.9	80	169	3.2	130	10.8	4	1200	-6.8	-7.1	98	155	4.6	172	15.9	2	1200	-1.8	-4.8	80	115	10.1	116	16.5	1
1500	-5.3	-6.6	91	315	1.0	270	7.0	0	1500	-6.5	-11.0	70	078	1.5	104	7.6	1	1500	-1.3	-5.3	74	117	9.4	121	19.0	0
1800	-5.6	-7.3	88	101	3.6	083	10.2	0	1800	-6.3	-12.0	64	094	5.8	109	10.8	0	1800	-.5	-5.1	71	121	11.0	120	17.8	0
2100	-1.6	-7.5	64	115	6.1	106	15.2	0	2100	-5.9	-9.6	75	100	6.8	125	15.9	0	2100	.6	-5.8	62	109	8.7	118	16.5	0
2400	-1.5	-8.0	61	109	5.2	110	12.7	0	2400	-6.0	-8.4	83	126	4.3	155	10.8	0	2400	.1	-6.1	63	114	8.2	118	19.7	0

DAY 13

DAY 14

DAY 15

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-1.6	-3.2	89	116	5.5	100	15.9	0	0300	-3.7	-7.8	73	075	1.4	089	3.2	0	0300	-4.5	*****	95	335	1.3	340	3.2	0
0600	-1.6	-2.6	93	205	4.0	216	14.6	0	0600	-2.1	-12.5	45	072	1.8	060	3.8	0	0600	-6.8	-7.8	93	037	1.5	355	3.8	0
0900	-2.5	-3.6	92	190	3.9	180	12.7	0	0900	-1.8	-12.0	46	051	1.9	084	3.8	0	0900	-6.4	-7.2	94	066	1.2	087	3.2	0
1200	-1.8	-4.2	84	159	5.9	148	15.2	2	1200	-1.8	-6.3	71	078	1.4	084	3.2	2	1200	-4.1	-8.0	74	051	1.3	016	3.8	2
1500	-3.3	-3.9	96	196	2.5	161	10.2	0	1500	-.6	-5.2	71	075	1.5	053	3.2	1	1500	-3.2	-11.7	52	065	1.4	071	3.2	1
1800	-3.8	-4.4	96	245	2.4	230	9.5	0	1800	-1.6	*****	93	068	1.4	085	3.2	0	1800	-2.8	-12.3	48	064	1.4	092	3.8	0
2100	-4.5	-5.1	96	068	1.2	081	3.2	0	2100	-2.2	-2.5	98	012	.5	020	3.8	0	2100	-3.3	*****	41	071	1.4	060	3.2	0
2400	-5.0	-6.9	87	065	1.5	056	4.4	0	2400	-3.8	-4.2	97	287	1.7	265	4.4	0	2400	-3.4	-15.8	38	049	1.2	039	2.5	0

DAY 16

DAY 17

DAY 18

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-3.3	-16.4	36	035	1.5	039	3.8	0	0300	-4.2	-16.9	37	066	1.5	030	3.8	0	0300	-10.6	-13.4	80	049	1.5	098	4.4	0
0600	-4.0	-15.1	42	064	1.1	032	1.9	0	0600	-5.3	-16.9	40	042	1.0	039	3.2	0	0600	-9.8	*****	91	018	.5	337	1.9	0
0900	-4.1	-15.2	42	086	1.7	058	3.8	0	0900	-6.1	-16.5	44	060	1.2	087	3.8	0	0900	-10.1	-11.6	89	058	1.0	102	3.2	0
1200	-4.8	-16.8	39	067	1.5	032	3.8	3	1200	-4.9	-14.8	46	036	.9	081	3.8	3	1200	-10.9	*****	81	059	.6	054	1.9	4
1500	-4.6	-16.9	38	056	1.3	050	3.8	1	1500	-8.2	*****	58	053	1.2	057	3.8	1	1500	-10.7	*****	83	086	1.1	055	2.5	1
1800	-4.4	-16.7	38	083	1.3	110	3.2	0	1800	-6.7	-14.7	53	071	1.6	094	5.1	0	1800	-11.9	-13.9	85	088	.9	037	3.2	0
2100	-2.5	-16.0	35	061	2.2	071	6.3	0	2100	-7.5	-15.2	54	051	1.4	064	3.2	0	2100	-13.0	*****	87	061	.8	096	3.2	0
2400	-4.8	-16.8	39	066	1.6	079	4.4	0	2400	-7.7	-14.7	57	078	1.3	065	3.2	0	2400	-13.3	*****	87	012	.7	006	1.9	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.						
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.					
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S					
0300	-15.0	-17.3	83	023	1.6	083	3	0300	-10.4	-17.1	58	071	1.5	066	4.4	0	0300	-16.0	-19.7	73	082	1.7	066	4.4	0
0600	-14.3	-16.8	81	040	1.3	019	3	0600	-12.1	-18.3	60	071	2.1	061	4.4	0	0600	-16.3	-19.8	74	069	1.7	063	3.8	0
0900	-13.3	*****	78	054	.8	102	3	0900	-12.1	-18.5	59	071	1.4	095	3.8	0	0900	-15.9	-19.6	73	072	1.1	047	2.5	0
1200	-11.6	-15.6	72	027	.9	337	3	1200	-11.8	-18.2	59	076	1.5	075	3.2	3	1200	-16.0	-19.7	73	085	1.6	079	4.4	3
1500	-15.1	*****	77	103	.9	111	1	1500	-12.8	-18.5	62	080	1.1	071	3.8	2	1500	-17.5	*****	76	353	.2	063	1.9	1
1800	-12.2	-16.2	72	032	.2	185	0	1800	-13.3	-18.1	67	043	1.8	051	4.4	0	1800	-19.2	-22.6	74	041	1.2	010	4.4	0
2100	-11.2	-16.6	64	078	1.2	082	0	2100	-14.0	-18.4	69	042	.7	022	3.2	0	2100	-19.5	-23.9	68	043	1.0	024	3.2	0
2400	-10.7	-16.9	60	059	1.2	075	0	2400	-14.8	-19.0	70	070	1.2	050	3.8	0	2400	-21.4	-27.3	59	001	1.4	316	5.7	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-22.6	-29.6	53	048	.9	112	3.2	0	0300	-24.3	-33.4	43	101	3.5	109	7.6	0	0300	-23.6	-33.0	42	070	1.2	076	2.5	0
0600	-22.7	-30.3	50	064	1.3	065	4.4	0	0600	-26.0	-34.2	46	074	1.9	093	4.4	0	0600	-23.4	-33.0	41	060	1.3	033	3.2	0
0900	-23.1	-31.8	45	124	1.7	116	4.4	0	0900	-27.8	-35.0	50	038	1.5	015	5.7	0	0900	-24.3	-33.9	41	048	1.2	030	3.2	0
1200	-22.9	-32.3	42	117	2.2	123	5.7	3	1200	-24.8	-33.8	43	066	1.6	067	3.8	4	1200	-22.7	*****	34	067	1.1	060	2.5	4
1500	-23.4	-32.8	42	122	2.9	134	8.3	2	1500	-24.4	-33.0	45	041	1.2	008	3.8	2	1500	-22.4	-35.0	31	062	1.1	028	3.2	2
1800	-23.6	-33.0	42	100	2.5	115	9.5	0	1800	-25.3	-33.8	45	063	1.6	063	4.4	0	1800	-23.0	-35.5	31	059	1.1	066	3.2	0
2100	-23.6	-33.2	41	109	3.3	126	8.3	0	2100	-24.3	-32.9	45	048	1.6	066	3.8	0	2100	-22.1	-34.7	31	058	1.1	033	2.5	0
2400	-24.7	-33.5	44	104	3.9	101	7.0	0	2400	-24.3	-32.9	45	064	1.3	056	3.8	0	2400	-23.4	*****	31	059	.9	095	2.5	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD				
	DEG C	DEG C	%	DEG.	M/S	DEG.		DEG C	DEG C	%	DEG.	M/S	DEG.		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW				
0300	-24.4	*****	32	073	1.2	033	3.2	0	0300	-14.5	-29.1	28	055	1.6	089	5.1	0	0300	-14.7	-25.1	41	070	1.5	073	4.4	0
0600	-24.4	-36.4	32	060	1.1	061	4.4	0	0600	-15.2	-19.3	71	074	1.1	064	3.2	0	0600	-14.2	-29.2	27	067	2.0	081	4.4	0
0900	-23.9	-35.7	33	067	1.1	092	3.2	0	0900	-16.2	*****	86	092	.8	115	2.5	0	0900	-13.2	-37.5	11	064	2.1	056	4.4	1
1200	-21.2	-34.2	30	067	1.4	045	3.8	4	1200	-14.2	*****	77	079	.5	042	2.5	6	1200	-11.2	-32.0	16	072	1.8	059	5.1	7
1500	-20.7	-33.8	30	076	1.4	069	3.8	2	1500	-15.2	*****	78	076	.6	112	1.9	3	1500	-10.7	-31.6	16	066	1.6	050	4.4	5
1800	-20.2	-33.7	29	072	1.5	050	3.8	0	1800	-16.3	-18.7	82	063	.6	113	2.5	0	1800	-10.8	-33.9	13	081	1.2	068	2.5	0
2100	-18.5	-33.7	25	058	1.6	038	3.8	0	2100	-17.7	-19.8	84	068	1.0	036	2.5	0	2100	-12.5	*****	20	037	.8	011	2.5	0
2400	-16.0	-32.0	24	061	1.8	079	4.4	0	2400	-16.4	-20.4	71	072	1.2	078	2.5	0	2400	-15.5	-28.2	33	111	.9	130	3.2	0

*** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.
SUSTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD				
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW					
0300	-16.3	-26.6	41	040	1.3	088	2.5	0	0300	-8.4	-12.7	71	082	5.5	080	10.8	0	0300	-6.2	-6.9	95	157	3.5	135	15.2	0
0600	-18.3	-27.1	46	054	1.3	040	3.8	0	0600	-7.5	-11.5	73	089	6.4	090	12.1	0	0600	-7.0	*****	95	256	2.8	255	6.3	0
0900	-19.8	-29.0	44	062	1.1	041	2.5	0	0900	-5.8	-10.7	68	107	7.7	119	13.3	0	0900	-7.3	-8.0	95	213	.3	198	3.2	0
1200	-19.0	-30.7	35	079	1.5	104	3.8	7	1200	-6.6	-9.0	83	186	1.1	151	10.8	3	1200	-6.7	*****	94	119	.7	095	2.5	3
1500	-16.0	-33.3	21	065	1.9	062	5.1	3	1500	-6.4	-9.1	81	032	.8	060	3.2	3	1500	-6.6	*****	85	075	.8	071	2.5	1
1800	-15.3	-31.8	23	079	1.8	058	5.1	0	1800	-6.1	-9.3	78	148	1.3	166	4.4	0	1800	-7.5	*****	93	352	.7	066	1.9	0
2100	-12.7	-18.3	63	062	1.7	068	5.7	0	2100	-6.7	-7.5	94	049	.8	104	4.4	0	2100	-7.7	*****	92	093	.5	085	1.9	0
2400	-9.9	-14.0	72	079	3.6	087	8.3	0	2400	-4.9	-7.8	80	107	4.1	129	13.3	0	2400	-7.6	*****	94	063	.3	084	1.3	0

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-8.4	-9.4	93	202	.5	166	3.8	0
0600	-9.4	-10.3	93	263	1.4	221	3.8	0
0900	-10.0	*****	94	305	.8	288	1.9	0
1200	-10.4	-11.3	93	305	.9	301	2.5	2
1500	-11.1	*****	92	258	1.9	246	4.4	2
1800	-12.8	-14.0	91	242	.9	234	3.2	0
2100	-14.1	*****	87	318	1.4	317	3.2	0
2400	-15.2	*****	86	319	1.1	319	1.9	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

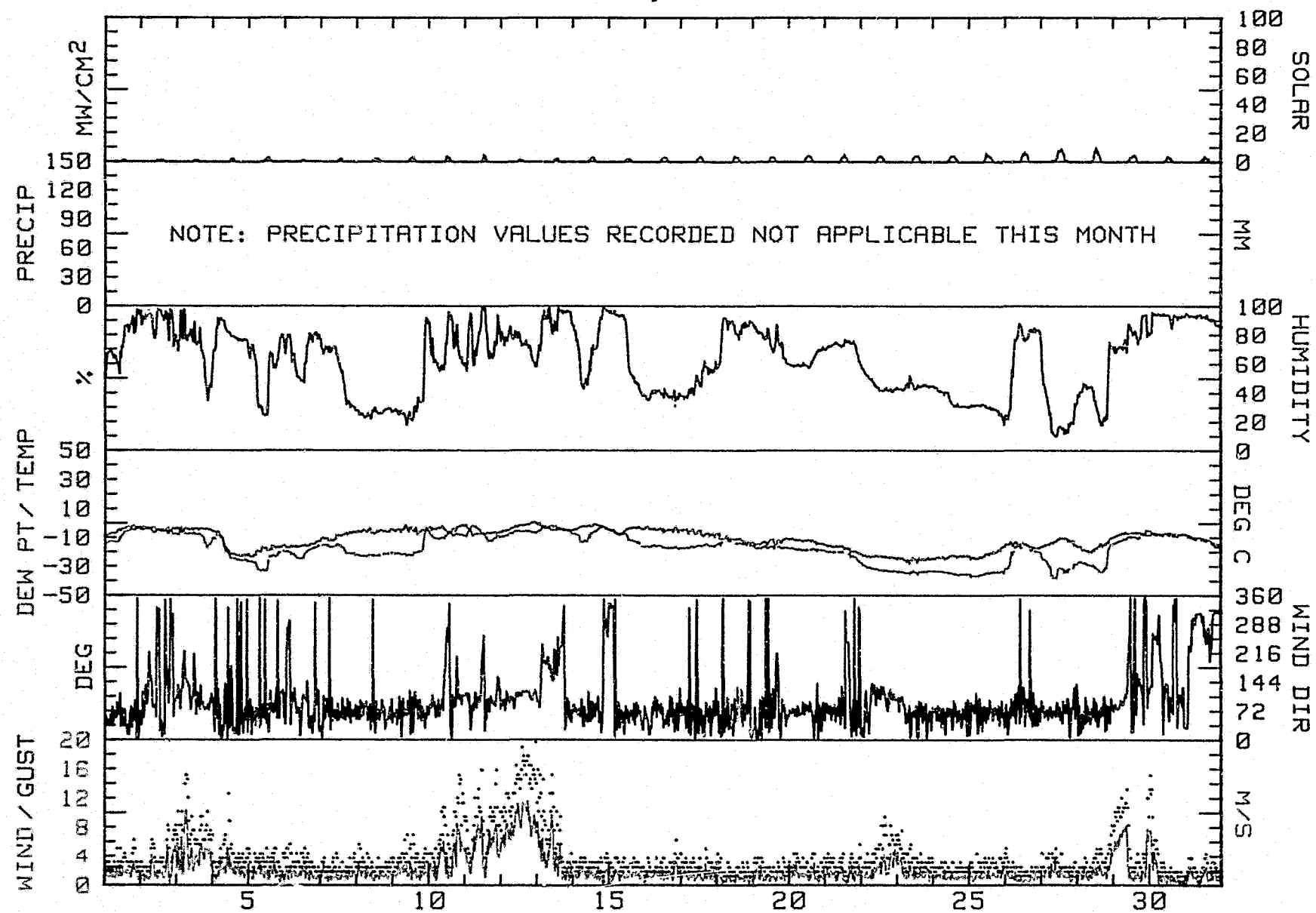
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY DAY WH/SOM
1	-1.2	-8.9	-5.1	052	1.6	1.8	085	6.3	NE	76	-8.3	****	20 1
2	-2.2	-5.0	-3.6	085	1.3	2.1	089	8.3	E	88	-5.4	****	50 2
3	-2.9	-5.1	-4.0	113	3.8	4.4	149	15.2	E	71	-8.7	****	30 3
4	-5.5	-22.8	-14.2	034	1.6	2.2	025	12.7	NNE	80	-19.6	****	50 4
5	-15.2	-23.2	-19.2	060	1.4	1.7	089	5.1	ENE	52	-26.8	****	80 5
6	-12.1	-17.2	-14.7	077	1.0	1.6	037	5.7	E	67	-20.6	****	20 6
7	-5.4	-12.3	-8.9	067	1.3	1.4	048	4.4	ENE	51	-17.7	****	40 7
8	-3.1	-7.2	-5.2	066	1.4	1.6	054	5.7	ENE	26	-21.8	****	80 8
9	-1.1	-7.3	-4.2	071	1.7	1.8	098	7.0	ENE	37	-18.2	****	95 9
10	-.9	-6.3	-3.6	106	2.9	3.8	106	15.2	E	70	-8.3	****	90 10
11	-.8	-7.1	-4.0	107	4.2	5.2	172	15.9	E	78	-8.3	****	95 11
12	1.2	-5.8	-2.3	111	8.5	8.6	118	19.7	ESE	74	-6.1	****	40 12
13	.2	-5.0	-2.4	166	2.3	3.7	100	15.9	E	89	-4.1	****	60 13
14	-.3	-4.7	-2.5	059	1.0	1.6	265	4.4	ENE	71	-7.3	****	90 14
15	-2.2	-7.3	-4.8	050	1.2	1.4	355	3.8	ENE	69	-9.8	****	70 15
16	-2.0	-6.1	-4.1	065	1.5	1.7	071	6.3	ENE	39	-16.1	****	110 16
17	-3.7	-9.3	-6.5	059	1.2	1.5	094	5.1	ENE	48	-15.6	****	115 17
18	-7.0	-13.7	-10.4	058	.8	1.0	098	4.4	NE	80	-13.3	****	120 18
19	-10.3	-15.3	-12.8	051	.9	1.3	083	3.8	NE	74	-16.5	****	105 19
20	-10.4	-14.8	-12.6	066	1.4	1.5	066	4.4	ENE	62	-18.0	****	155 20
21	-14.8	-21.4	-18.1	058	1.1	1.5	316	5.7	ENE	71	-21.5	****	135 21
22	-21.2	-24.7	-23.0	106	2.2	2.4	115	9.5	ESE	46	-31.6	****	145 22
23	-23.8	-27.8	-25.8	068	1.6	1.9	109	7.6	ENE	45	-33.6	****	165 23
24	-22.0	-25.0	-23.5	060	1.1	1.2	033	3.2	ENE	36	-34.2	****	175 24
25	-15.6	-25.0	-20.3	067	1.4	1.5	061	4.4	ENE	29	-34.6	****	195 25
26	-12.6	-17.7	-15.2	071	.9	1.1	089	5.1	ENE	61	-22.3	****	225 26
27	-9.9	-16.6	-13.3	070	1.4	1.6	059	5.1	EKE	23	-31.2	****	390 27
28	-9.9	-20.1	-15.0	068	1.7	1.9	087	8.3	ENE	40	-27.5	****	390 28
29	-4.8	-9.4	-7.1	098	3.1	3.9	119	13.3	E	79	-10.0	****	170 29
30	-5.0	-7.9	-6.5	170	.4	1.6	135	15.2	SE	92	-7.7	****	115 30
31	-7.7	-15.2	-11.5	281	.9	1.3	246	4.4	NW	92	-12.2	****	120 31
MONTH	1.2	-27.8	-10.4	087	1.6	2.2	118	19.7	ENE	61	-17.3	****	3650

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 15.2
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 14.6
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 14.0
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 11.4

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
January, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

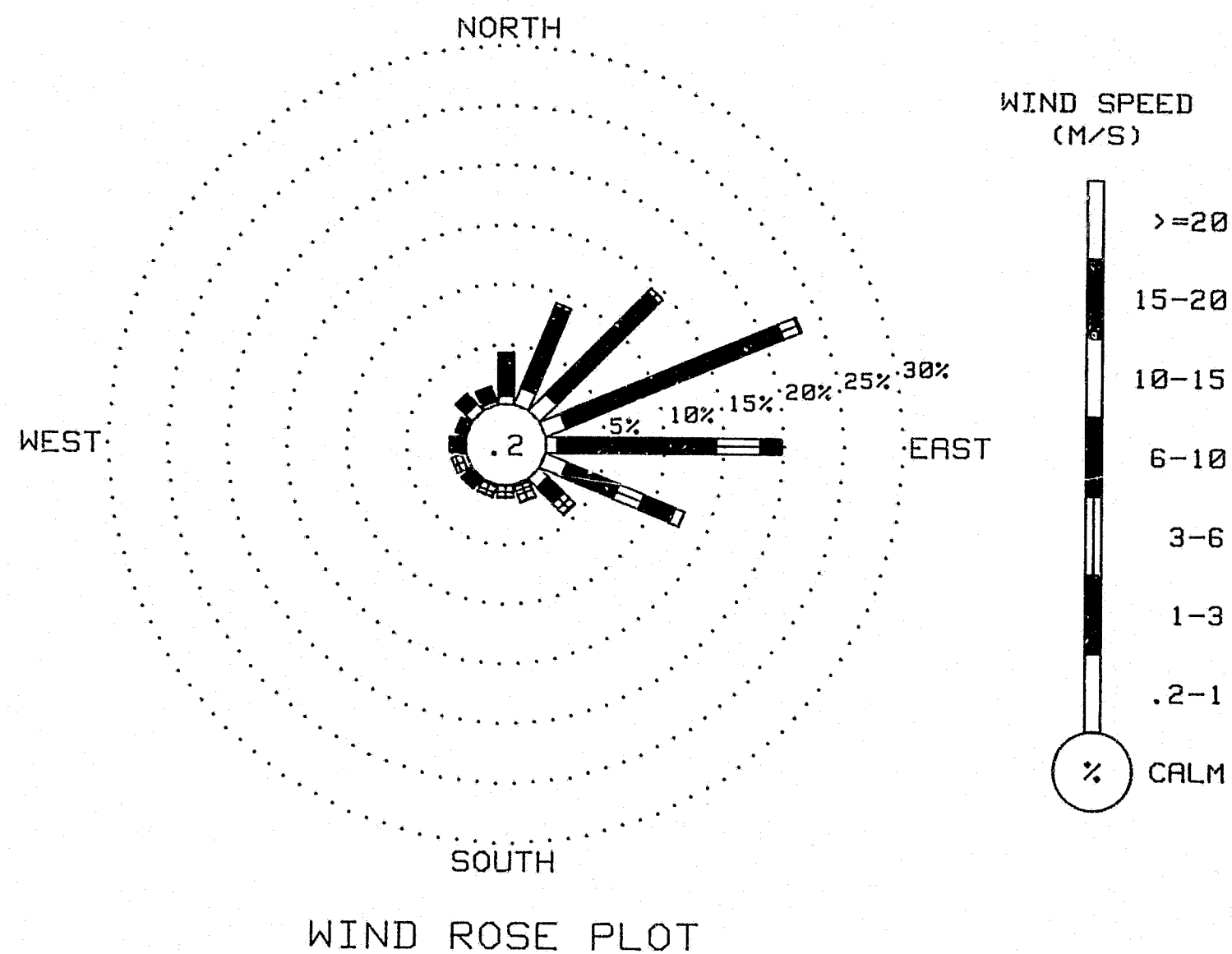
WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	.74	3.49	.07	0.00	0.00	0.00	0.00	4.30
NNE	1.55	7.26	.34	0.00	0.00	0.00	0.00	9.14
NE	2.02	11.96	.47	0.00	0.00	0.00	0.00	14.45
ENE	1.88	19.62	1.48	.13	0.00	0.00	0.00	23.12
E	1.01	13.24	3.76	1.75	0.00	0.00	0.00	19.76
ESE	2.02	4.64	2.35	2.76	.87	0.00	0.00	12.63
SE	1.08	1.81	.67	.60	.07	0.00	0.00	4.23
SSE	.20	.40	.34	.60	.07	0.00	0.00	1.61
S	.07	.54	.40	.07	0.00	0.00	0.00	1.08
SSW	.20	.54	.34	.07	0.00	0.00	0.00	1.14
SW	.20	.67	.20	.13	0.00	0.00	0.00	1.21
WSW	.40	.54	.34	0.00	0.00	0.00	0.00	1.28
W	.27	.87	.20	0.00	0.00	0.00	0.00	1.34
WNW	.27	.67	0.00	0.00	0.00	0.00	0.00	.94
NW	.81	1.14	0.00	0.00	0.00	0.00	0.00	1.95
NNW	.34	1.21	.07	0.00	0.00	0.00	0.00	1.61
CALM								.20
TOTAL	13.04	68.62	11.02	6.12	1.01	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1488 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1488 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

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R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
January, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	2	2	2	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	1	4	3	2	1	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	2	4	3	1	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	2	2	2	1	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	2	3	4	3	2	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	1	4	3	3	2	0	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	1	3	3	3	2	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	2	3	4	4	3	1	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	0	0	0	2	3	5	3	2	0	0	0	0	0	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	0	2	3	4	4	2	1	0	0	0	0	0	0	0	0	1
23	0	0	0	0	0	0	0	0	0	0	2	4	4	4	3	1	0	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	0	1	2	4	4	4	3	2	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	1	3	5	5	4	3	1	0	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	0	0	0	2	5	5	6	4	1	0	0	0	0	0	0	0	0	1
27	0	0	0	0	0	0	0	1	1	2	5	8	8	8	6	2	1	1	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	0	0	1	3	7	8	7	4	2	0	0	0	0	0	0	0	0	1
29	0	0	0	0	0	0	0	0	0	1	2	3	4	5	4	1	0	0	0	0	0	0	0	0	1
30	0	0	0	0	0	0	0	0	0	0	1	3	4	3	2	1	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	1	2	3	3	2	1	0	0	0	0	0	0	0	0	1

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING January, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1488	100
WIND SPEED	1488	100
WIND DIRECTION	1488	100
PEAK GUST	1488	100
RELATIVE HUMIDITY	1291	87
PRECIPITATION	0	0
SOLAR RADIATION	1488	100
DEW POINT	1291	87

THERE ARE 1488 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -7 RH Points
2. Solar -1 mW/CM²

No precipitation data for February

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-15.2	-17.3	84	043	.9	078	3.8	0	0300	-13.0	-14.6	88	070	.7	051	2.5	0	0300	-16.8	*****	25	079	1.0	061	2.5	0
0600	-15.2	-20.3	65	072	1.5	055	3.2	0	0600	-18.1	-20.0	85	318	1.2	319	2.5	0	0600	-15.2	-30.9	25	072	1.0	031	3.2	0
0900	-13.4	-20.7	54	072	1.7	067	3.8	0	0900	-20.2	-22.3	83	013	1.3	029	3.8	0	0900	-14.4	-24.6	42	090	1.4	062	3.8	0
1200	-11.5	-18.5	56	085	1.3	068	3.2	6	1200	-20.0	-22.0	84	040	.5	129	3.2	5	1200	-10.6	*****	58	075	1.1	069	3.2	6
1500	-10.7	*****	70	048	.7	058	2.5	3	1500	-20.6	*****	61	308	.9	289	2.5	5	1500	-8.7	-16.3	54	067	1.2	049	2.5	3
1800	-12.2	-14.2	85	078	1.1	039	3.2	0	1800	-20.8	*****	74	057	1.3	088	3.8	0	1800	-8.4	-10.8	83	063	1.1	102	3.8	0
2100	-13.4	-16.1	80	047	1.1	088	4.4	0	2100	-19.6	-25.0	62	061	.8	044	1.9	0	2100	-6.1	-8.8	81	064	3.0	094	8.9	0
2400	-12.7	*****	90	088	.8	071	3.8	0	2400	-17.8	-31.3	30	074	1.2	050	4.4	0	2400	-6.6	*****	94	023	1.6	031	9.5	0

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-4.8	-5.5	95	298	.5	215	3.2	0	0300	-10.7	-12.2	89	076	.8	359	3.2	0	0300	-13.4	-15.0	88	227	1.5	229	12.7	0
0600	-4.7	*****	96	286	.9	246	2.5	0	0600	-10.3	-12.5	84	110	.5	359	8.3	0	0600	-13.3	-16.0	80	056	1.4	358	4.4	0
0900	-2.7	-8.7	63	153	2.8	137	14.6	0	0900	-11.6	*****	76	125	2.7	115	8.3	0	0900	-14.8	*****	89	350	.5	032	1.9	0
1200	-5.8	-9.0	78	108	7.3	134	15.9	5	1200	-11.0	-16.6	63	071	1.2	128	4.4	4	1200	-13.7	*****	67	343	.5	281	4.4	7
1500	-6.7	-10.9	72	104	7.0	103	11.4	3	1500	-11.8	*****	77	115	1.1	092	4.4	3	1500	-14.4	-21.5	55	067	1.5	075	4.4	7
1800	-8.0	-9.5	89	151	7.0	155	18.4	0	1800	-11.2	-16.5	65	063	1.6	070	4.4	0	1800	-13.9	-24.4	41	077	2.0	076	4.4	0
2100	-11.4	-12.9	89	205	3.9	168	12.7	0	2100	-10.9	-16.0	66	049	1.2	105	5.1	0	2100	-13.4	-24.8	38	068	2.5	080	6.3	0
2400	-11.0	-12.2	91	322	1.2	335	5.1	0	2400	-10.9	*****	92	048	1.0	023	4.4	0	2400	-10.9	-23.2	36	053	2.0	053	4.4	0

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	
0300	-9.2	-24.9	27	074	3.2	070	7.0	0	0300	-14.2	-21.5	54	085	3.5	088	8.9	0	0300	-17.9	-30.0	34
0600	-8.8	-21.6	35	075	3.9	069	7.6	0	0600	-15.8	-18.0	83	134	1.2	121	7.6	0	0600	-18.1	-29.0	38
0900	-9.3	-15.2	62	079	4.6	086	7.6	0	0900	-16.6	-20.3	73	113	.8	262	3.2	0	0900	-17.9	-29.2	37
1200	-11.3	-13.3	85	013	.3	084	6.3	13	1200	-16.3	-24.1	51	076	2.1	094	4.4	13	1200	-16.2	-29.8	30
1500	-14.8	-17.1	83	196	4.0	202	9.5	7	1500	-16.0	-26.6	40	058	1.6	049	3.8	9	1500	-14.3	*****	18
1800	-15.5	-21.9	58	110	4.3	119	12.1	0	1800	-18.1	-29.0	38	061	1.2	054	3.2	0	1800	-17.7	-31.5	29
2100	-16.3	-24.3	50	074	3.6	074	7.0	0	2100	-18.1	-29.9	35	078	1.8	076	4.4	0	2100	-16.8	-31.8	31
2400	-14.6	-25.6	39	073	4.2	077	8.9	0	2400	-18.2	-30.6	33	071	1.6	065	8.8	0	2400	-18.2	*****	32

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DAY 10									DAY 11									DAY 12								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-19.1	-30.8	35	053	.7	034	1.9	0	0300	-13.6	-20.9	54	061	1.4	072	3.2	0	0300	-9.4	-15.3	62	055	.7	100	2.5	0
0600	-20.0	-29.7	42	042	1.0	019	3.2	0	0600	-11.3	-18.6	55	050	1.4	048	3.2	0	0600	-10.1	-15.8	63	066	1.3	064	3.8	0
0900	-20.3	-28.7	47	080	1.3	080	3.2	0	0900	-10.5	-18.7	51	061	2.1	061	4.4	0	0900	-9.7	-16.8	56	078	1.4	096	3.2	0
1200	-18.4	-28.5	41	077	1.9	087	5.1	9	1200	-9.1	-21.3	37	065	1.7	059	4.4	11	1200	-6.9	-19.0	38	068	1.9	067	3.8	12
1500	-15.7	-28.4	33	050	1.5	036	4.4	17	1500	-8.8	-24.1	28	043	.9	013	2.5	13	1500	-8.7	-20.3	39	056	1.2	091	3.8	8
1800	-16.4	-25.4	46	084	1.9	085	5.1	0	1800	-9.5	-23.3	32	065	1.3	056	3.2	0	1800	-7.9	-20.5	36	058	1.4	049	3.2	0
2100	-16.1	-24.4	49	047	1.5	075	4.4	0	2100	-9.5	-21.9	36	035	1.8	022	3.8	0	2100	-9.3	-21.7	36	073	2.0	075	5.1	0
2400	-14.3	-23.0	48	047	1.7	056	3.8	0	2400	-10.2	-16.5	60	075	1.3	085	3.2	0	2400	-8.4	-20.9	36	083	.9	097	1.9	0
DAY 13									DAY 14									DAY 15								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-7.9	-20.5	36	069	1.1	070	3.8	0	0300	-4.6	*****	66	***	****	***	4.4	0	0300	-9.5	-18.0	50	103	2.1	103	5.1	0
0600	-7.3	-19.3	38	068	1.3	071	3.8	0	0600	-6.2	*****	88	***	****	***	1.9	0	0600	-10.9	-19.3	50	***	****	***	4.4	0
0900	-6.7	-18.8	38	063	1.5	066	3.8	0	0900	-7.4	*****	93	***	****	***	3.8	0	0900	-10.0	-19.0	48	***	****	***	4.4	1
1200	-4.0	*****	30	073	1.5	068	3.2	19	1200	-6.9	-9.2	84	***	****	***	5.7	2	1200	-9.0	-20.9	38	100	2.0	***	3.2	22
1500	-3.2	*****	27	078	.9	100	2.5	16	1500	-7.1	-10.9	74	101	3.5	104	7.6	3	1500	-8.5	-20.1	39	102	1.5	101	3.8	10
1800	-4.8	-15.0	45	063	1.0	062	5.1	0	1800	-7.7	-11.5	74	109	2.5	104	7.0	0	1800	-8.9	-19.6	42	***	****	***	5.7	0
2100	-5.0	-14.6	47	***	****	***	2.5	0	2100	-8.3	*****	72	112	2.0	099	5.7	0	2100	-7.8	-20.1	37	103	1.2	***	3.8	0
2400	-4.3	-12.7	52	***	****	***	3.8	0	2400	-9.2	-16.6	55	096	1.7	095	3.8	0	2400	-7.8	-11.6	74	105	2.2	105	5.1	0
DAY 16									DAY 17									DAY 18								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-5.5	-10.6	67	110	3.4	114	11.4	0	0300	-3.1	-9.8	60	109	5.7	117	16.5	0	0300	-8.0	-13.0	67	122	4.6	113	12.7	0
0600	-8.4	-12.5	72	176	3.4	134	12.1	0	0600	-3.9	-10.1	62	097	4.5	094	12.7	0	0600	-8.7	-13.0	71	121	5.6	133	10.2	0
0900	-8.4	-14.4	62	120	5.7	146	13.3	1	0900	-3.8	-9.0	67	121	6.0	129	13.3	1	0900	-8.4	-13.8	65	113	3.3	106	10.2	2
1200	-7.9	-15.6	54	092	5.1	109	8.9	12	1200	-4.0	-8.8	69	125	1.4	141	15.9	10	1200	-8.2	-13.8	64	118	4.6	113	11.4	18
1500	-7.0	-15.0	53	095	3.8	115	8.3	9	1500	-4.6	*****	82	119	2.5	115	10.8	4	1500	-8.4	-13.8	65	112	5.4	117	12.1	9
1800	-8.6	-12.9	71	024	1.5	025	5.1	0	1800	-5.7	-8.0	84	142	.8	124	5.1	0	1800	-8.3	-13.7	65	095	3.4	107	10.2	0
2100	-5.9	-13.3	56	039	2.3	035	5.1	0	2100	-6.8	-9.1	84	118	3.3	110	7.0	0	2100	-7.7	-15.0	56	102	4.7	105	8.9	0
2400	-5.0	-8.1	79	050	2.3	072	7.6	0	2400	-8.0	-12.1	72	107	5.3	097	8.9	0	2400	-8.1	-14.5	60	080	4.5	080	8.3	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-7.1	-15.1	53	066	3.7	070	8.9	0	0300	-23.2	-26.4	75	334	1.4	353	4.4	0	0300	-14.6	-19.0	69	092	1.1	096	3.8	0
0600	-7.9	-16.8	49	059	2.9	074	7.0	0	0600	-24.5	*****	74	344	.9	347	5.1	0	0600	-13.0	-18.5	63	094	2.6	079	5.7	0
0900	-8.2	*****	38	072	1.7	089	5.1	2	0900	-24.6	-27.7	75	352	1.7	350	5.7	1	0900	-13.6	-17.5	72	086	1.7	100	7.0	1
1200	-13.4	-16.6	77	055	1.4	043	4.4	11	1200	-22.9	-26.1	75	168	.8	233	4.4	10	1200	-11.8	-19.5	53	053	1.4	052	3.2	7
1500	-17.7	-20.9	76	025	1.2	346	5.1	9	1500	-16.3	-21.1	66	127	1.1	146	3.8	7	1500	-11.0	*****	39	041	1.3	048	4.4	10
1800	-20.1	-22.9	78	334	2.2	343	5.7	0	1800	-14.6	*****	83	128	.7	133	2.5	0	1800	-12.5	-19.1	58	068	1.5	061	3.8	0
2100	-22.0	-24.9	77	337	1.2	042	4.4	0	2100	-13.6	*****	84	130	.8	127	1.9	0	2100	-12.0	-19.2	55	075	1.6	056	3.8	0
2400	-20.5	-23.5	77	301	1.1	311	4.4	0	2400	-13.7	*****	85	090	.4	064	1.9	0	2400	-10.9	-17.5	58	069	2.3	072	5.7	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-10.7	-15.1	70	070	1.3	037	4.4	0	0300	-10.8	-13.0	84	098	.8	062	2.5	0	0300	-12.0	-16.0	72	111	1.6	105	5.7	0
0600	-10.3	-14.0	74	061	1.4	085	3.8	0	0600	-11.0	-12.9	86	096	1.2	110	3.2	0	0600	-10.6	-14.5	73	077	.8	105	5.1	0
0900	-10.1	-13.4	77	060	1.0	061	3.2	0	0900	-10.4	*****	81	081	.3	037	2.5	0	0900	-10.7	-14.1	76	072	1.2	119	3.2	1
1200	-7.7	*****	59	060	1.2	042	3.2	6	1200	-9.2	-15.3	61	065	.9	061	2.5	6	1200	-9.6	*****	63	106	.8	112	2.5	5
1500	-9.4	-13.7	71	351	.7	359	2.5	5	1500	-9.9	*****	61	084	1.3	090	3.2	3	1500	-10.1	*****	74	032	.5	070	1.9	5
1800	-10.1	*****	89	066	.5	040	1.9	0	1800	-10.9	-14.6	74	071	1.4	073	3.8	0	1800	-11.3	*****	86	187	.4	264	1.9	0
2100	-10.8	*****	87	338	.5	258	1.9	0	2100	-10.7	-15.1	70	052	1.5	044	3.8	0	2100	-11.4	-13.3	86	112	.6	028	2.5	0
2400	-10.5	-12.7	84	052	.7	065	1.9	0	2400	-11.1	-17.3	60	085	1.7	115	5.1	0	2400	-11.0	*****	84	076	.8	063	2.5	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.						
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S						
0300	-10.9	*****	86	050	.6	057	2.5	0	0300	-9.7	-16.6	57	075	1.4	068	2.5	0	0300	-12.4	-22.0	45	057	1.0	071	2.5	0
0600	-10.8	*****	86	014	.5	014	1.3	0	0600	-8.9	-16.8	53	077	1.5	067	4.4	0	0600	-12.3	-21.4	47	052	.9	044	1.9	0
0900	-10.1	*****	83	***	***	***	1.3	1	0900	-7.5	-18.3	42	080	1.7	100	3.2	1	0900	-12.9	-21.9	47	067	.8	356	2.5	3
1200	-8.4	-13.2	68	035	1.0	026	2.5	5	1200	-5.1	-21.7	26	063	1.7	068	4.4	14	1200	-10.1	*****	36	058	.8	098	2.5	18
1500	-8.4	*****	63	024	1.6	024	2.5	3	1500	-2.6	*****	17	082	1.0	090	2.5	16	1500	*****	*****	**	***	****	***	****	***
1800	-9.6	-12.6	79	051	1.1	035	2.5	0	1800	-8.0	-21.2	34	018	1.0	357	3.2	0	1800	*****	*****	**	***	****	***	****	***
2100	-9.8	-12.3	82	076	.8	082	2.5	0	2100	-8.4	*****	33	084	1.3	082	3.2	0	2100	*****	*****	**	***	****	***	****	***
2400	-9.9	-14.1	71	078	1.0	050	1.9	0	2400	-10.5	-20.2	45	045	1.2	025	3.2	0	2400	*****	*****	**	***	****	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DAY 28

DAY 29

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***	****	***
0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***	****	***
0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***	****	***
1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***	****	***
1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***	****	***
1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***	****	***
2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***	****	***
2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS INC.

SUSITNA HYDROELECTRIC PROJECT

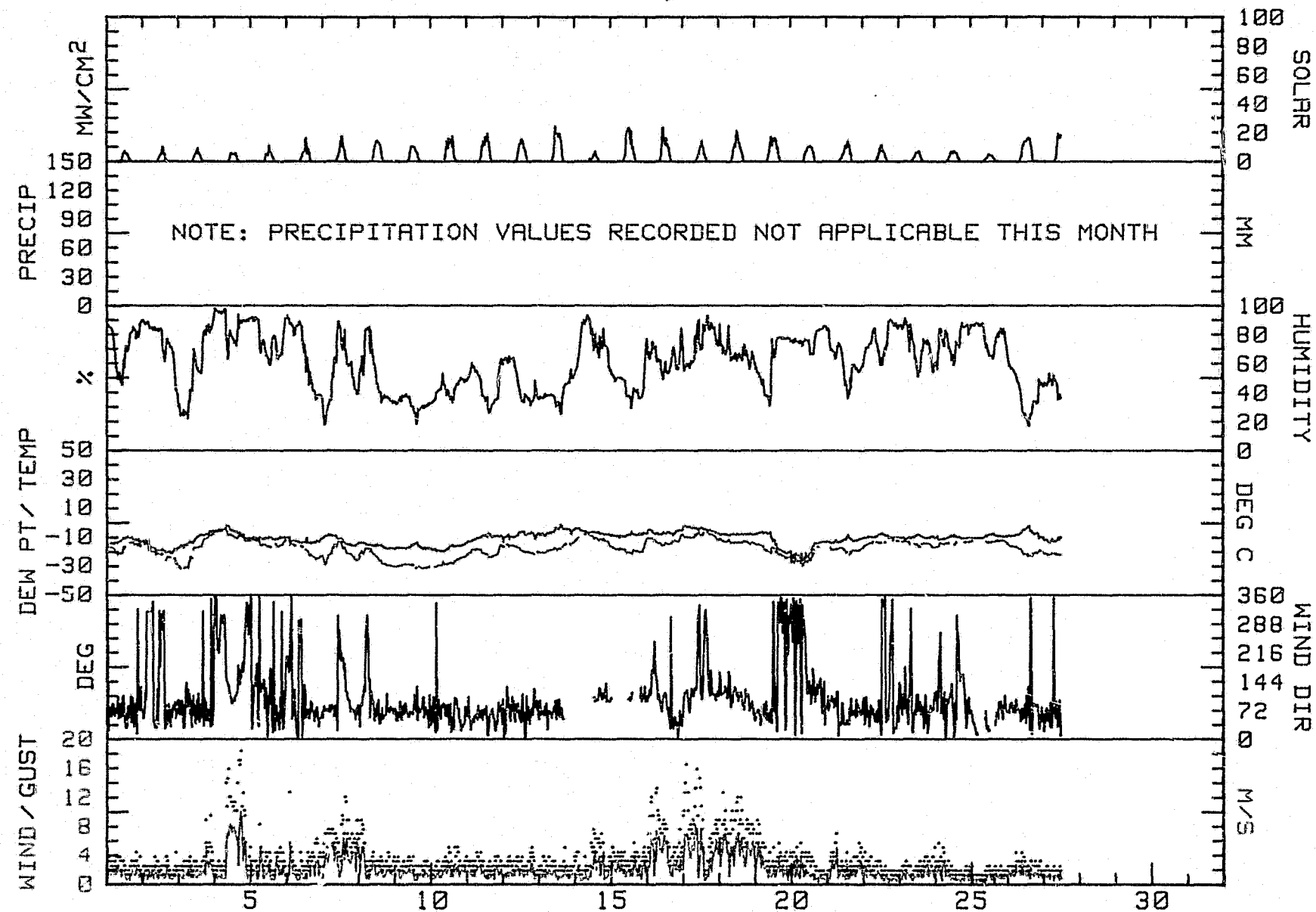
MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQM	DAY
1	-10.0	-15.6	-12.8	068	1.1	1.3	088	4.4	ENE	72	-17.6	****	245	1
2	-12.2	-22.0	-17.1	031	.7	1.2	050	4.4	NW	76	-21.8	****	255	2
3	-5.9	-17.8	-11.9	065	1.4	1.7	031	9.5	ENE	58	-18.7	****	290	3
4	-2.3	-11.1	-6.9	135	2.6	4.2	155	18.4	ESE	85	-9.2	****	255	4
5	-10.1	-12.1	-11.1	086	1.1	1.7	359	8.3	NNE	75	-14.7	****	305	5
6	-10.8	-14.8	-12.8	061	1.0	1.7	229	12.7	ENE	59	-20.3	****	455	6
7	-8.7	-16.4	-12.6	090	2.7	3.8	119	12.1	ENE	53	-20.9	****	525	7
8	-14.1	-18.7	-16.4	081	1.6	2.0	088	8.9	ENE	50	-24.9	****	630	8
9	-14.3	-18.9	-16.6	069	1.3	1.4	047	3.8	ENE	33	-30.4	****	485	9
10	-14.3	-20.6	-17.5	062	1.4	1.6	087	5.1	E	43	-27.3	****	720	10
11	-7.4	-13.6	-10.5	057	1.5	1.5	061	4.4	ENE	46	-20.5	****	790	11
12	-6.1	-14.0	-10.1	067	1.3	1.5	075	5.1	ENE	46	-18.6	****	640	12
13	-1.6	-9.9	-5.8	069	1.2	1.3	***	5.1	ENE	40	-17.8	****	970	13
14	-4.2	-9.2	-6.7	105	2.4	1.7	104	7.6	E	72	-11.3	****	200	14
15	-6.6	-10.9	-8.8	103	1.8	2.0	***	5.7	ESE	45	-18.9	****	975	15
16	-5.0	-8.7	-6.9	099	2.7	3.7	146	13.3	NE	63	-12.9	****	800	16
17	-2.5	-8.0	-5.3	113	3.6	4.3	117	16.5	ESE	73	-9.1	****	435	17
18	-7.7	-9.6	-8.7	109	4.4	4.7	113	12.7	ESE	67	-13.4	****	820	18
19	-6.7	-22.0	-14.4	037	1.4	2.2	070	8.9	NE	61	-19.7	****	880	19
20	-13.4	-26.7	-20.1	046	.3	1.3	350	5.7	SE	74	-25.8	****	555	20
21	-8.9	-14.6	-11.8	074	1.6	1.8	100	7.0	ENE	60	-19.0	****	575	21
22	-7.7	-11.1	-9.4	052	.8	1.0	037	4.4	ENE	72	-14.2	****	395	22
23	-8.5	-12.1	-10.3	078	1.1	1.3	115	5.1	ENE	71	-14.8	****	290	23
24	-8.9	-12.2	-10.6	092	.7	1.1	105	5.7	ESE	74	-14.8	****	365	24
25	-7.8	-11.3	-9.6	054	.8	.8	057	2.5	NE	74	-13.1	****	230	25
26	-2.6	-11.5	-7.1	068	1.3	1.5	067	4.4	ENE	41	-19.3	****	935	26
27	-10.1	-14.3	-12.2	058	.8	1.0	071	2.5	E	47	-21.8	****	1010	27
28	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	28
29	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	29
MONTH	-1.6	-26.7	-11.2	085	1.4	2.0	155	18.4	ENE	60	-18.2	****	15030	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 16.5
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 17.1
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 10.8
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 6.3

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
February, 1984



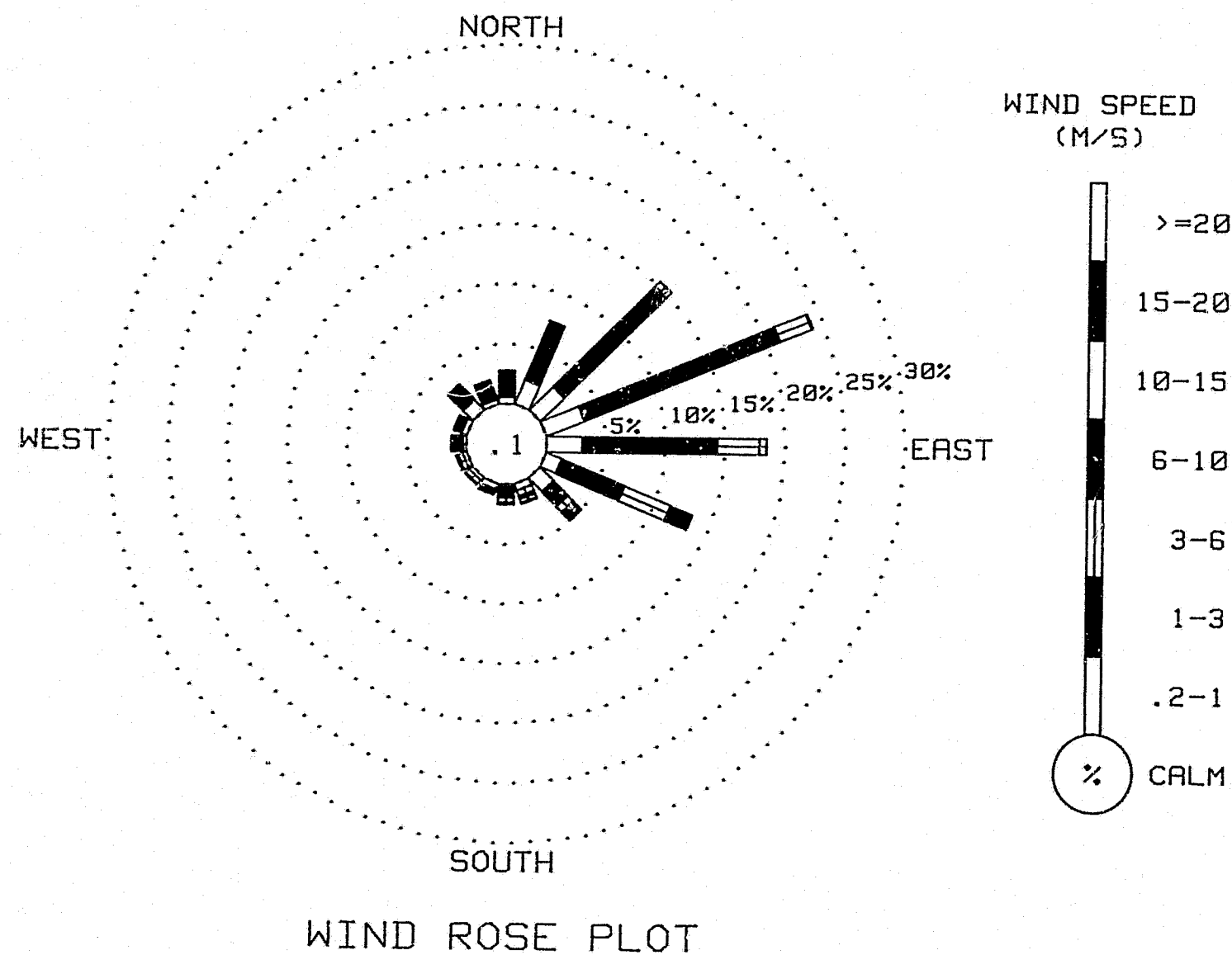
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2 TO 1.0	1.0 TO 3.0	3.0 TO 6.0	6.0 TO 10.0	10.0 TO 15.0	15.0 TO 20.0	20.0 OR GREATER	
N	.59	2.03	.17	0.00	0.00	0.00	0.00	2.79
NNE	2.20	5.24	.08	0.00	0.00	0.00	0.00	7.52
NE	2.79	11.91	.59	0.00	0.00	0.00	0.00	15.29
ENE	3.46	17.57	2.87	.08	0.00	0.00	0.00	23.99
E	3.04	11.23	3.55	.59	0.00	0.00	0.00	18.41
ESE	1.44	5.66	4.22	1.94	0.00	0.00	0.00	13.26
SE	1.60	1.69	.68	.93	0.00	0.00	0.00	4.90
SSE	.59	.51	.25	.34	.08	0.00	0.00	1.77
S	.25	.84	.42	.17	0.00	0.00	0.00	1.69
SSW	.51	.17	.17	.17	0.00	0.00	0.00	1.01
SW	.34	.42	.08	0.00	0.00	0.00	0.00	.84
WSW	.34	.42	.17	0.00	0.00	0.00	0.00	.93
W	.34	.93	0.00	0.00	0.00	0.00	0.00	1.27
WNW	.51	.68	0.00	0.00	0.00	0.00	0.00	1.18
NW	1.18	1.77	0.00	0.00	0.00	0.00	0.00	2.96
NNW	.42	1.44	.25	0.00	0.00	0.00	0.00	2.11
CALM								.08
TOTAL	19.59	62.50	13.51	4.22	.08	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1184 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1392 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
February, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	0	0	1	2	6	7	5	4	2	0	0	0	0	0	0	0	0	1
2	0	0	0	0	0	0	0	0	0	0	2	4	5	10	5	1	0	0	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	1	4	6	9	6	4	2	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	1	4	6	5	6	4	1	0	0	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0	1	5	5	9	6	4	2	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	0	0	2	4	7	11	11	8	4	1	0	0	0	0	0	0	0	2
7	0	0	0	0	0	0	0	0	0	2	4	10	14	14	8	2	1	0	0	0	0	0	0	0	2
8	0	0	0	0	0	0	0	0	0	1	9	12	14	13	10	4	1	0	0	0	3	0	0	0	3
9	0	0	0	0	0	0	0	0	0	2	7	10	10	9	7	4	2	0	0	0	0	0	0	0	2
10	0	0	0	0	0	0	0	0	0	2	11	10	15	15	14	5	2	0	0	0	0	0	0	0	3
11	0	0	0	0	0	0	0	0	0	3	11	13	15	15	16	7	2	0	0	0	0	0	0	0	3
12	0	0	0	0	0	0	0	0	0	2	8	12	15	14	9	6	1	0	0	0	0	0	0	0	3
13	0	0	0	0	0	0	0	0	0	3	11	22	19	17	18	8	1	0	0	0	0	0	0	0	4
14	0	0	0	0	0	0	0	0	0	1	2	2	4	6	4	2	1	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	1	4	17	22	23	17	10	6	2	0	0	0	0	0	0	0	4
16	0	0	0	0	0	0	0	0	1	4	19	18	12	14	10	4	1	0	0	0	0	0	0	0	3
17	0	0	0	0	0	0	0	0	1	2	4	9	12	10	5	2	0	0	0	0	0	0	0	0	2
18	0	0	0	0	0	0	0	0	1	6	11	14	20	13	10	6	2	0	0	0	0	0	0	0	3
19	0	0	0	0	0	0	0	0	1	6	14	14	15	16	12	8	3	0	0	0	0	0	0	0	4
20	0	0	0	0	0	0	0	0	1	5	7	10	10	11	8	5	1	0	0	0	0	0	0	0	2
21	0	0	0	0	0	0	0	0	1	2	4	6	11	11	12	8	4	0	0	0	0	0	0	0	2
22	0	0	0	0	0	0	0	0	0	2	4	8	11	7	6	3	1	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	0	2	3	6	6	7	4	2	1	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	1	3	6	6	7	7	6	3	1	0	0	0	0	0	0	0	2
25	0	0	0	0	0	0	0	0	1	2	3	4	5	4	4	2	1	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	0	1	4	10	13	14	15	16	14	8	1	0	0	0	0	0	0	4
27	0	0	0	0	0	0	0	0	2	14	18	17	***	***	***	***	***	***	***	***	***	***	***	***	2
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING February, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1272	91
WIND SPEED	1272	91
WIND DIRECTION	1184	85
PEAK GUST	1272	91
RELATIVE HUMIDITY	1009	72
PRECIPITATION	0	0
SOLAR RADIATION	1272	91
DEW POINT	1009	72

THERE ARE 1392 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -7 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. No data after 2/27. Weather wizard not functioning.
2. Intermittent wind direction data lost due to frozen wind vane.

00276

No Data for March
(See INTERPRETATION OF DATA)

No Data for April
(See INTERPRETATION OF DATA)

R A M CONSULTANTS, INC.
SUSTITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	DATE
1	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	1
2	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	2
3	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	3
4	****	****	****	****	****	****	****	****	****	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5
6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	.8	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11
12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12
13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14
15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15
16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.8	.2	0.0	0.0	0.0	0.0	0.0	0.0	19
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	1.8	4.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	.4	0.0	0.0	.2	0.0	.2	.4	.4	.4	.4	0.0	.2	0.0	.2	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.4	1.8	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30
31	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

DAY 01									DAY 02									DAY 03								
HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	*****	*****	**	***	****	***	****	***	0300	*****	*****	**	***	****	***	****	***	0300	*****	*****	**	***	****	***	****	***
0600	*****	*****	**	***	****	***	****	***	0600	*****	*****	**	***	****	***	****	***	0600	*****	*****	**	***	****	***	****	***
0900	*****	*****	**	***	****	***	****	***	0900	*****	*****	**	***	****	***	****	***	0900	*****	*****	**	***	****	***	****	***
1200	*****	*****	**	***	****	***	****	***	1200	*****	*****	**	***	****	***	****	***	1200	*****	*****	**	***	****	***	****	***
1500	*****	*****	**	***	****	***	****	***	1500	*****	*****	**	***	****	***	****	***	1500	*****	*****	**	***	****	***	****	***
1800	*****	*****	**	***	****	***	****	***	1800	*****	*****	**	***	****	***	****	***	1800	*****	*****	**	***	****	***	****	***
2100	*****	*****	**	***	****	***	****	***	2100	*****	*****	**	***	****	***	****	***	2100	*****	*****	**	***	****	***	****	***
2400	*****	*****	**	***	****	***	****	***	2400	*****	*****	**	***	****	***	****	***	2400	*****	*****	**	***	****	***	****	***
DAY 04									DAY 05									DAY 06								
HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	*****	*****	**	***	****	***	****	***	0300	-5.1	-15.3	45	076	1.6	045	3.2	0	0300	-4.9	-12.3	56	061	1.3	062	2.5	0
0600	*****	*****	**	***	****	***	****	***	0600	-5.2	*****	**	057	1.2	038	3.8	3	0600	-5.0	-12.9	54	063	1.2	066	2.5	3
0900	-1.2	*****	30	006	.2	006	3.8	57	0900	-3.4	-12.1	51	056	1.6	059	3.2	57	0900	-1.5	-12.9	42	062	1.3	070	3.2	51
1200	3.3	*****	39	092	.3	050	3.8	47	1200	1.4	*****	32	075	1.2	052	3.2	72	1200	2.0	*****	31	094	1.3	107	3.8	74
1500	3.1	-12.5	31	030	.5	089	5.7	65	1500	.2	*****	33	108	.5	050	1.9	66	1500	.9	*****	30	324	.4	317	1.9	67
1800	-.9	-12.9	40	061	1.4	063	4.4	19	1800	-1.7	*****	38	143	.9	140	2.5	30	1800	-.9	*****	37	087	.2	025	1.9	31
2100	-4.7	*****	**	121	1.4	102	5.1	0	2100	-4.3	*****	62	140	.5	157	2.5	0	2100	-3.0	-11.5	52	082	1.0	041	3.2	0
2400	-4.7	-16.7	39	041	1.2	346	3.2	0	2400	-4.5	-11.3	59	070	1.2	054	2.5	0	2400	-3.2	-14.7	41	056	1.1	058	2.5	0
DAY 07									DAY 08									DAY 09								
HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.		HOUR	DEW		WIND		WIND		GUST MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-3.8	-14.1	45	057	1.3	060	3.2	0	0300	-1.6	-11.8	46	051	1.9	062	7.0	0	0300	-.6	-8.3	56	054	1.2	052	3.2	0
0600	-3.3	-14.2	43	047	1.3	048	3.8	4	0600	-2.1	-12.5	45	049	3.3	065	7.6	4	0600	-.1	-8.3	54	064	1.6	062	3.2	5
0900	-2.1	-16.4	33	056	1.6	066	4.4	51	0900	.3	-13.2	36	043	2.5	042	5.7	51	0900	2.2	-8.9	44	044	1.4	042	3.2	51
1200	2.1	-18.0	21	043	1.5	042	4.4	73	1200	2.2	-8.9	44	082	4.7	086	8.9	73	1200	7.2	*****	28	042	1.2	038	2.5	74
1500	2.0	-16.1	25	061	1.5	060	6.3	66	1500	5.9	-8.9	34	056	2.7	087	8.3	66	1500	6.6	*****	31	108	.6	137	2.5	66
1800	1.2	-11.7	38	082	2.1	087	6.3	30	1800	4.1	*****	38	352	1.4	018	5.1	30	1800	3.4	*****	38	142	.5	137	1.9	31
2100	-1.2	-12.0	44	059	2.6	076	6.3	1	2100	.9	-7.6	53	038	1.1	037	4.4	1	2100	.1	*****	66	045	.7	037	1.9	1
2400	-1.9	-11.8	47	055	2.7	048	7.0	0	2400	-.2	-7.7	57	048	1.9	053	5.7	0	2400	0.0	-5.8	65	061	1.1	077	3.2	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

DAY 10

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-2.6	-6.9	72	052	1.0	042	2.5	0
0600	-1.6	-7.1	66	057	1.5	044	3.8	4
0900	-.7	-7.3	61	087	1.6	110	5.1	51
1200	4.1	*****	37	165	.6	086	3.2	74
1500	5.3	*****	32	348	.1	325	1.9	67
1800	1.5	-7.8	50	199	.5	236	3.2	24
2100	-1.7	-2.6	94	336	.1	280	3.8	1
2400	-4.0	-5.9	87	075	.7	081	3.2	0

DAY 11

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-5.5	-6.5	93	322	.9	093	3.8	0
0600	-6.2	-12.1	63	042	.8	123	2.5	5
0900	-1.2	*****	50	049	.8	053	1.9	20
1200	-2.9	-15.1	39	119	1.5	128	4.4	58
1500	-1.8	-18.0	28	154	1.1	162	3.2	75
1800	-1.4	-19.5	24	185	1.2	170	3.8	32
2100	-7.2	-17.5	44	135	.7	130	2.5	1
2400	-7.3	-18.4	41	099	1.6	104	5.1	0

DAY 12

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-9.0	-18.8	45	048	2.2	051	5.7	0
0600	-8.1	-19.1	41	069	1.5	065	3.8	5
0900	-4.5	-17.8	35	061	1.1	054	3.2	52
1200	5.0	*****	18	135	.5	067	1.9	79
1500	2.5	*****	18	324	.6	349	2.5	67
1800	-2.2	-16.1	34	145	.8	125	3.8	32
2100	-2.2	-13.5	42	068	1.2	043	3.8	1
2400	-2.0	-11.6	48	057	1.5	061	3.8	0

DAY 13

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-2.7	-10.7	54	067	1.3	051	3.8	0
0600	-2.5	-10.8	53	061	.8	031	2.5	5
0900	-1.1	-11.3	46	041	1.4	039	3.8	39
1200	2.6	*****	30	346	.7	006	1.9	74
1500	1.6	-12.7	34	019	1.2	030	2.5	66
1800	-.5	*****	44	023	1.2	024	2.5	28
2100	-1.4	-9.8	53	058	1.7	039	3.8	1
2400	-2.0	-9.2	58	077	1.3	094	2.5	0

DAY 14

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-2.2	-10.0	55	064	1.0	061	3.2	0
0600	-1.3	-9.4	54	058	1.2	064	2.5	10
0900	1.4	-9.9	43	077	1.3	035	3.2	50
1200	2.7	-11.4	35	059	1.0	037	3.2	75
1500	3.0	-13.4	29	125	.7	174	2.5	68
1800	5.3	*****	30	095	1.0	040	2.5	33
2100	2.1	-13.4	31	055	1.7	060	4.4	2
2400	1.3	-9.7	44	059	1.7	051	4.4	0

DAY 15

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	2.8	-10.9	36	065	1.4	066	3.8	0
0600	3.0	-8.8	42	071	2.7	077	4.4	6
0900	4.7	-8.2	39	072	3.5	060	6.3	51
1200	8.9	*****	26	144	1.9	115	5.7	81
1500	6.8	-10.6	28	233	.7	173	5.1	71
1800	5.9	-11.8	27	179	.7	100	4.4	33
2100	3.6	-11.3	33	064	3.3	067	6.3	2
2400	3.8	-12.3	30	065	3.9	058	7.6	0

DAY 16

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	2.9	-14.8	26	057	4.7	056	8.9	0
0600	3.6	-16.2	22	061	4.1	060	9.5	11
0900	5.8	*****	20	091	1.6	080	5.7	52
1200	9.0	*****	19	133	.7	145	3.2	74
1500	5.8	-12.8	25	027	1.1	020	3.8	62
1800	7.3	-10.1	28	107	1.2	101	3.8	34
2100	5.0	-8.3	38	078	2.0	069	3.8	2
2400	4.6	-8.6	38	074	1.8	078	3.8	0

DAY 17

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	4.0	-8.8	39	064	1.6	076	3.8	0
0600	3.7	-10.1	36	055	1.5	053	3.8	4
0900	8.2	-9.4	28	056	1.4	056	3.2	54
1200	9.7	-8.5	27	070	1.2	069	3.8	78
1500	10.5	-8.8	25	077	2.2	101	5.7	69
1800	10.0	-8.3	27	053	1.5	043	4.4	44
2100	6.0	-.9	61	042	2.4	021	8.3	2
2400	5.1	*****	66	075	1.6	106	5.7	0

DAY 18

HOUR	DEW	WIND	WIND	GUST MAX.				
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	.5	-4.9	67	075	1.4	093	6.3	0
0600	1.2	-7.9	51	338	.4	107	5.7	5
0900	.6	*****	44	323	.7	298	2.5	29
1200	4.9	-3.4	55	119	.6	144	2.5	76
1500	6.5	-5.3	43	052	1.1	025	2.5	69
1800	4.5	-5.9	47	086	1.0	119	5.1	25
2100	3.1	-3.2	63	076	2.1	086	7.0	2
2400	2.9	*****	**	039	2.1	020	7.6	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

DAY 19

DAY 20

DAY 21

HR	DEW	WIND	WIND	GUST MAX.	HR	DEW	WIND	WIND	GUST MAX.	HR	DEW	WIND	WIND	GUST MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	2.1	.6	90	045	1.8	023	4.4	0	0300	3.5	*****	59	067	2.1	077	6.3	0
0600	2.7	.6	86	037	2.5	045	5.7	6	0600	3.8	-4.7	54	064	1.7	073	4.4	3
0900	6.0	-3.4	51	062	1.6	058	3.8	58	0900	6.4	-5.4	43	058	1.2	076	3.2	54
1200	7.7	-7.7	33	089	1.0	046	3.8	29	1200	10.2	-6.3	31	032	1.2	048	3.8	76
1500	6.7	-6.4	39	066	1.3	033	4.4	46	1500	8.8	-6.7	33	049	1.3	060	3.8	63
1800	6.6	-1.5	56	100	3.6	079	8.9	40	1800	7.8	-6.5	36	065	1.1	127	3.2	34
2100	4.5	-1.3	66	072	1.8	073	4.4	1	2100	5.9	*****	50	065	1.4	076	3.8	1
2400	4.4	-3.1	58	064	1.9	068	4.4	0	2400	5.5	-3.3	53	048	1.3	027	3.8	0

DAY 22

DAY 23

DAY 24

DEW WIND WIND GUST MAX.								DEW WIND WIND GUST MAX.								DEW WIND WIND GUST MAX.																			
HOUR		DEW		WIND		WIND		GUST		MAX.		HOUR		DEW		WIND		WIND		GUST		MAX.		HOUR		DEW		WIND		WIND		GUST		MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	0.0	*****	**	285	.7	264	1.9	0	0300	3.7	*****	**	057	1.9	064	8.9	0	0300	.9	*****	**	039	.7	007	2.5	0									
0600	-.1	*****	**	***	****	***	1.9	1	0600	3.9	*****	**	048	1.5	019	3.8	4	0600	.3	*****	**	235	.5	250	2.5	5									
0900	6.4	*****	**	355	.8	346	1.9	53	0900	4.6	*****	**	053	1.0	067	2.5	31	0900	1.3	*****	**	284	.9	257	3.2	27									
1200	3.6	*****	**	110	.6	104	3.8	83	1200	8.1	*****	**	353	1.5	341	3.8	58	1200	3.6	*****	**	299	.8	273	1.9	48									
1500	4.5	*****	**	335	.6	240	3.2	74	1500	7.7	*****	**	122	2.6	101	6.3	60	1500	1.7	*****	**	300	1.0	261	3.2	35									
1800	5.6	*****	**	112	2.0	133	5.7	38	1800	8.1	*****	**	105	1.8	118	5.1	38	1800	1.0	*****	**	322	1.2	293	2.5	15									
2100	3.4	*****	**	056	1.1	032	3.8	1	2100	3.1	*****	**	345	1.3	003	5.1	2	2100	1.6	*****	**	007	1.0	317	2.5	1									
2400	2.3	*****	**	072	1.2	063	4.4	0	2400	2.5	*****	**	070	1.8	096	4.4	0	2400	1.6	*****	**	050	1.1	027	3.8	0									

DAY 25

DAY 26

DAY 27

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-.6	*****	**	144	.3	274	3.2	0	0300	-3.0	*****	**	***	****	***	3.2	0
0600	-1.4	*****	**	300	1.6	253	4.4	3	0600	-1.9	*****	**	***	****	***	1.9	14
0900	-.8	*****	**	324	1.0	017	3.8	14	0900	-.6	*****	**	264	.8	253	1.9	30
1200	1.3	*****	**	318	1.3	337	3.2	52	1200	.1	*****	**	334	1.3	357	3.2	55
1500	1.9	*****	**	334	.5	154	3.2	44	1500	1.4	*****	**	077	.4	055	3.8	71
1800	.1	*****	**	239	3.0	227	6.3	16	1800	1.2	*****	**	188	1.6	182	3.8	24
2100	-.2	*****	**	081	.3	056	2.5	2	2100	-2.2	*****	**	211	.4	223	5.7	2
2400	-1.2	*****	**	068	.9	029	2.5	0	2400	-2.5	*****	**	115	.5	102	3.2	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

DAY 28

DAY 29

DAY 30

DAY 28								DAY 29								DAY 30										
HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.					
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST			
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-3.1	*****	**	066	.9	054	1.9	0	0300	-2.1	*****	**	080	.8	086	2.5	0	0300	-2.6	*****	**	***	***	***	1.9	0
0600	-2.8	*****	**	062	1.3	041	3.2	4	0600	-1.6	*****	**	067	1.1	037	2.5	6	0600	-1.7	*****	**	***	***	***	2.5	10
0900	.3	*****	**	080	.9	143	3.2	57	0900	.9	*****	**	042	1.0	040	2.5	50	0900	.3	*****	**	112	1.1	138	3.2	67
1200	1.6	*****	**	117	.6	194	2.5	79	1200	.1	*****	**	347	1.2	287	7.0	53	1200	2.7	*****	**	101	.8	173	3.8	79
1500	6.8	*****	**	029	.9	042	3.8	72	1500	1.4	*****	**	219	1.4	170	4.4	52	1500	4.6	*****	**	013	1.2	349	3.2	75
1800	3.0	*****	**	265	.8	278	3.2	39	1800	-.8	*****	**	260	1.3	251	10.8	16	1800	3.1	*****	**	010	1.2	029	3.2	24
2100	0.0	*****	**	124	1.1	114	4.4	2	2100	-1.7	*****	**	254	1.0	228	2.5	7	2100	.9	*****	**	004	.9	342	3.8	3
2400	-.9	*****	**	048	1.1	030	3.2	0	2400	-2.4	*****	**	123	1.7	131	3.8	0	2400	.5	*****	**	080	1.9	140	5.1	0

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	.3	*****	**	056	1.3	073	3.8	0
0600	.2	*****	**	045	1.1	030	2.5	7
0900	1.1	*****	**	044	.7	193	3.2	75
1200	3.7	*****	**	252	.5	177	3.8	84
1500	4.7	*****	**	168	1.9	166	5.1	80
1800	3.7	*****	**	316	1.0	323	8.3	27
2100	0.0	*****	**	041	3.4	027	11.4	6
2400	1.7	*****	**	062	1.9	019	8.9	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

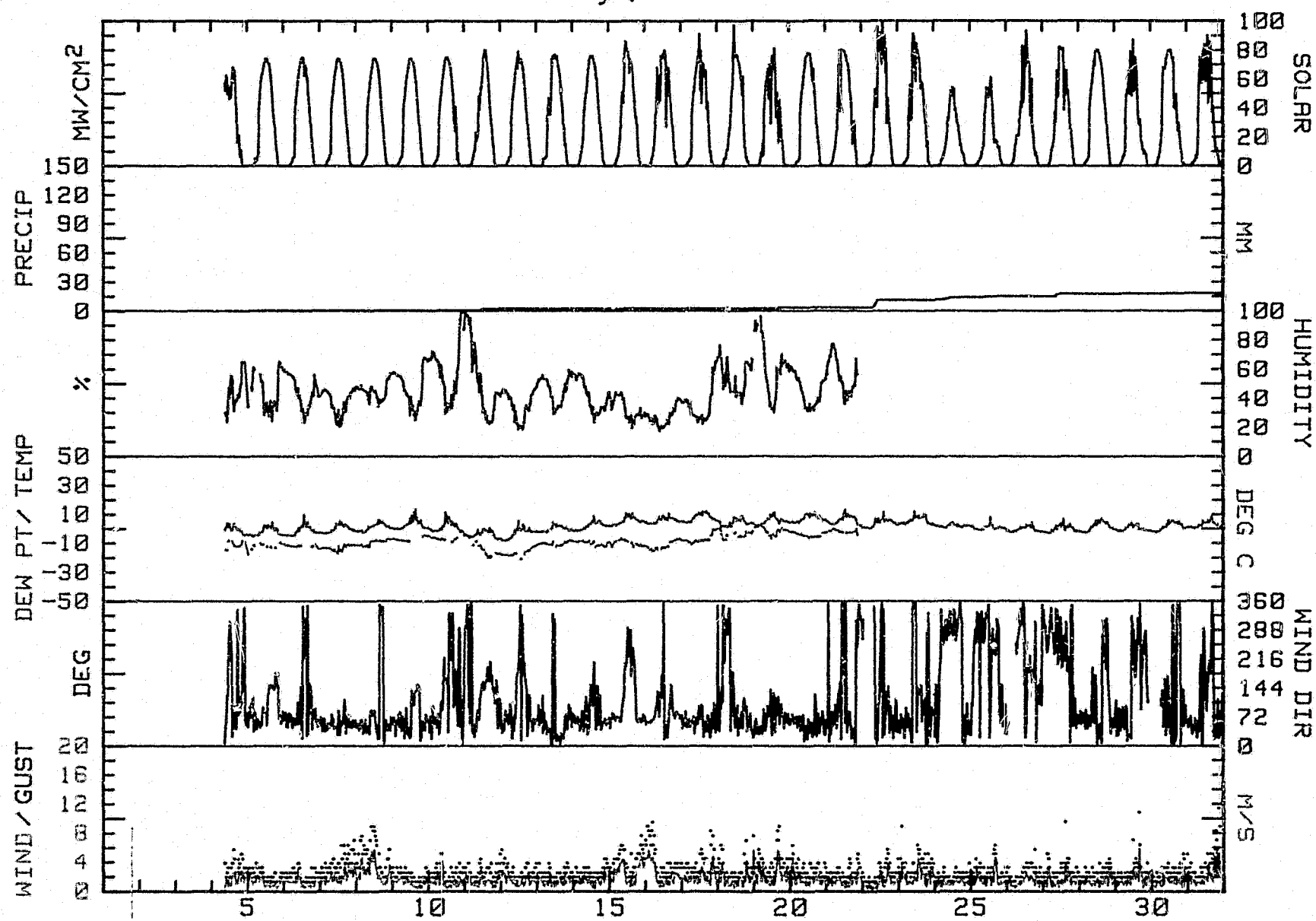
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQM	DAY
1	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	1
2	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	2
3	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	3
4	3.8	-5.2	-7.7	071	.8	1.6	089	5.7	E	44	-12.2	0.0	7858	4
5	4.3	-6.2	-1.0	079	.9	1.2	038	3.8	ENE	51	-12.5	.4	6705	5
6	9.2	-5.4	1.9	067	.9	1.1	107	3.8	ENE	49	-12.7	0.0	6615	6
7	4.7	-4.1	.3	059	1.8	1.9	048	7.0	NE	37	-13.9	0.0	6615	7
8	5.9	-3.2	1.4	053	2.3	2.5	086	8.9	NE	45	-10.2	0.0	6650	8
9	13.2	-.8	6.2	060	.9	1.1	052	3.2	ENE	55	-7.8	0.0	6770	9
10	11.0	-4.0	3.5	079	.5	1.1	110	5.1	NE	64	-6.9	0.0	6895	10
11	.1	-8.0	-4.0	113	.6	1.3	104	5.1	SE	53	-14.1	2.0	5965	11
12	5.0	-9.2	-2.1	064	.9	1.4	051	5.7	ENE	39	-17.2	0.0	6950	12
13	4.1	-2.9	.6	045	1.1	1.3	051	3.8	NNE	47	-10.9	0.0	6815	13
14	8.5	-2.2	3.2	069	1.1	1.3	060	4.4	ENE	41	-10.8	0.0	7075	14
15	10.4	1.5	6.0	078	1.8	2.5	058	7.6	ENE	34	-10.5	0.0	7020	15
16	10.4	2.8	6.6	070	2.0	2.2	060	9.5	ENE	28	-12.1	0.0	7080	16
17	11.8	3.7	7.8	061	1.6	1.8	021	8.3	ENE	34	-8.1	0.0	7075	17
18	8.5	.5	4.5	059	1.0	1.5	020	7.6	NE	57	-4.3	0.0	6575	18
19	10.9	1.8	6.4	069	1.8	2.1	079	8.9	ENE	63	-2.1	1.0	6520	19
20	10.9	3.4	7.2	058	1.4	1.5	077	6.3	ENE	44	-5.0	0.0	7275	20
21	12.8	1.0	6.9	034	.7	1.3	270	5.1	NE	58	-2.5	0.0	7230	21
22	11.2	-.2	5.5	077	.7	1.1	133	5.7	NNE	**	*****	7.8	7200	22
23	11.9	2.3	7.1	064	1.2	1.9	064	8.9	NE	**	*****	0.0	7370	23
24	3.7	0.0	1.9	331	.6	1.1	027	3.8	NW	**	*****	3.0	3960	24
25	7.9	-1.5	3.2	291	.6	1.5	227	6.3	NW	**	*****	.8	3955	25
26	3.7	-3.0	.4	226	.2	1.2	223	5.7	S	**	*****	0.0	6130	26
27	6.3	-3.6	1.4	260	.5	1.3	210	9.5	NNW	**	*****	2.6	6810	27
28	6.8	-3.2	1.8	071	.6	1.2	114	4.4	ENE	**	*****	0.0	7670	28
29	3.6	-2.4	.6	317	.1	1.5	251	10.8	E	**	*****	0.0	5975	29
30	5.7	-3.3	1.2	055	.9	1.3	140	5.1	N	**	*****	.6	7610	30
31	8.4	-.3	4.1	052	.9	2.0	027	11.4	NE	**	*****	0.0	7395	31
MONTH	13.2	-9.2	2.9	061	.9	1.5	027	11.4	ENE	46	-9.6	18.2	187763	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 4.4
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 8.9
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 3.2

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
May, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

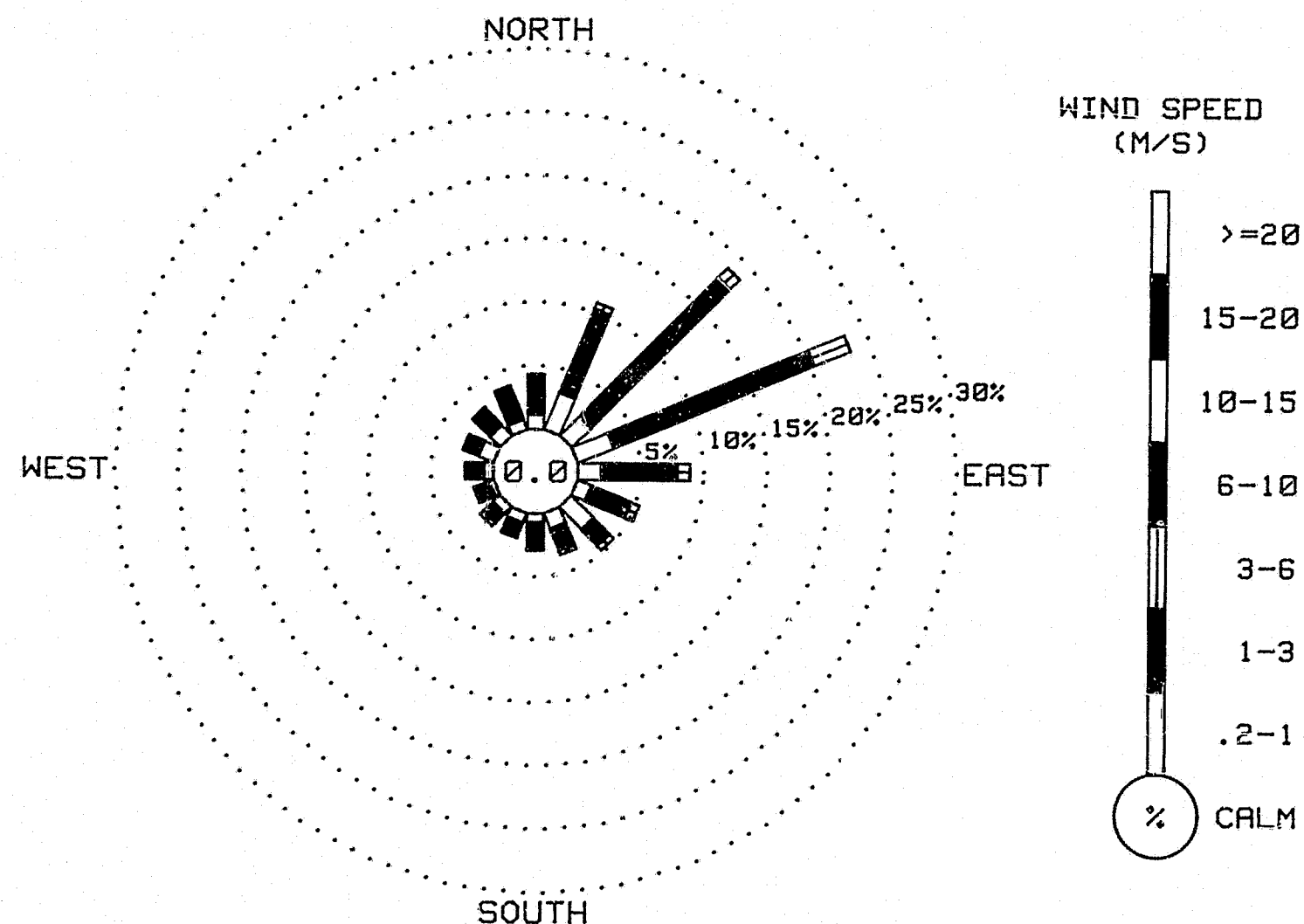
WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	1.17	3.12	0.00	0.00	0.00	0.00	0.00	4.28
NNE	3.12	7.09	.55	0.00	0.00	0.00	0.00	10.75
NE	2.18	15.42	1.09	0.00	0.00	0.00	0.00	18.69
ENE	3.12	17.06	3.12	0.00	0.00	0.00	0.00	23.29
E	1.87	6.00	1.01	0.00	0.00	0.00	0.00	8.88
ESE	1.17	3.43	.70	0.00	0.00	0.00	0.00	5.30
SE	2.49	1.79	.47	0.00	0.00	0.00	0.00	4.75
SSE	1.32	1.87	.31	0.00	0.00	0.00	0.00	3.50
S	.70	2.10	.08	0.00	0.00	0.00	0.00	2.88
SSW	.86	1.17	.08	0.00	0.00	0.00	0.00	2.10
SW	.78	1.01	.39	0.00	0.00	0.00	0.00	2.18
WSW	.39	1.01	.31	0.00	0.00	0.00	0.00	1.71
W	.78	1.48	0.00	0.00	0.00	0.00	0.00	2.26
WNW	1.32	1.32	0.00	0.00	0.00	0.00	0.00	2.65
NW	1.17	1.87	.08	0.00	0.00	0.00	0.00	3.12
NNW	.86	2.80	0.00	0.00	0.00	0.00	0.00	3.66
CALM								0.00
TOTAL	23.29	68.54	8.18	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1284 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1488 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

000276

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
May, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUSTNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOURLY ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	57	57	55	52	50	55	67	62	42	18	15	9	2	0	0	0	22
5	0	0	0	0	1	4	5	23	52	62	68	72	74	72	68	60	48	34	20	10	1	0	0	0	28
6	0	0	0	0	1	3	6	22	48	59	67	73	75	68	69	61	48	36	21	10	1	0	0	0	28
7	0	0	0	0	1	4	6	23	48	59	66	72	74	72	67	60	48	34	20	10	2	0	0	0	28
8	0	0	0	0	2	4	6	23	48	59	67	72	74	72	68	60	48	34	21	10	2	0	0	0	28
9	0	0	0	0	2	4	6	28	48	59	67	73	74	73	68	60	49	35	22	10	2	0	0	0	28
10	0	0	0	0	2	4	7	33	48	59	68	73	75	73	69	61	51	29	34	7	2	0	0	0	29
11	0	0	0	0	1	4	9	17	19	36	44	56	71	78	78	65	52	36	22	12	2	0	0	0	25
12	0	0	0	0	2	4	7	35	49	60	69	73	74	74	69	61	50	36	22	12	2	0	0	0	29
13	0	0	0	0	3	5	7	35	43	44	74	75	76	75	68	61	48	35	20	12	2	0	0	0	28
14	0	0	0	0	2	8	15	33	47	55	68	74	76	75	70	62	51	37	23	12	3	1	0	0	29
15	0	0	0	0	2	5	10	21	41	47	72	84	80	70	73	65	53	39	30	11	3	1	0	0	29
16	0	0	0	1	4	9	20	36	60	51	61	75	77	78	45	67	52	38	24	11	3	1	0	0	30
17	0	0	0	0	2	4	6	38	52	62	69	76	72	62	71	63	59	42	22	10	3	0	0	0	29
18	0	0	0	0	3	5	11	18	27	45	63	87	76	76	71	63	53	44	13	6	3	0	0	0	27
19	0	0	0	1	2	8	11	40	57	66	58	49	74	72	64	42	29	43	24	15	2	1	0	0	27
20	0	0	0	1	2	3	5	40	52	63	71	76	78	77	69	63	54	39	23	14	2	1	0	0	30
21	0	0	0	1	3	8	14	24	55	47	77	80	79	76	71	63	50	29	20	22	6	0	0	0	30
22	0	0	0	1	2	1	4	9	42	44	68	80	87	87	80	77	55	43	25	15	3	1	0	0	30
23	0	0	0	1	2	4	6	38	44	58	90	72	82	78	68	56	54	42	29	15	3	1	0	0	31
24	0	0	0	0	2	5	8	13	23	32	42	50	53	46	38	30	23	15	10	8	2	1	0	0	17
25	0	0	0	0	1	3	5	8	13	30	47	53	48	59	48	24	17	17	12	10	3	1	0	0	16
26	0	0	0	1	3	10	18	21	26	40	62	49	75	91	72	54	47	24	12	8	4	1	0	0	26
27	0	0	0	0	2	8	13	20	34	66	57	82	81	81	43	59	52	43	25	16	6	1	0	0	28
28	0	0	0	1	2	4	6	42	55	65	71	79	80	78	74	65	55	43	29	17	6	1	0	0	32
29	0	0	0	1	3	6	9	42	51	57	75	51	69	69	59	34	30	17	11	9	8	1	0	0	25
30	0	0	0	1	4	8	18	45	68	69	75	78	80	79	75	42	45	31	27	14	6	2	0	0	32
31	0	0	0	2	3	5	7	35	72	62	69	82	70	75	62	84	48	34	15	12	7	2	0	0	31

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING May, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1326	89
WIND SPEED	1325	89
WIND DIRECTION	1284	86
PEAK GUST	1325	89
RELATIVE HUMIDITY	632	42
PRECIPITATION	1326	89
SOLAR RADIATION	1326	89
DEW POINT	632	42

THERE ARE 1488 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. Solar -1 mW/CM²

Additional comments on this month's data:

1. Station reinstalled on 5/4. No data prior to this date.
2. RH data suspected to be poor all month due to bad oscillator, but have been published as indicative of true RH. All RH data invalid after 5/23. Many erratic values have been deleted prior to this date also.

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	DATE	
1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1	
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2	
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	3	
4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4	
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5	
6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.6	0.8	1.0	0.4	0.6	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	6	
7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7	
8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8	
9	0.0	0.8	0.2	0.0	0.0	0.0	0.0	0.2	0.8	0.6	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9	
10	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10	
11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11	
12	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.2	0.0	0.4	0.6	0.6	12	
13	0.6	1.2	2.4	1.4	0.6	0.4	0.2	0.0	0.0	0.0	0.2	0.0	0.2	0.6	0.2	0.2	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	13	
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	2.4	2.0	14	
15	3.2	3.6	3.8	4.0	1.8	1.6	0.0	1.2	3.0	3.2	2.6	2.6	2.0	2.0	1.4	1.2	1.6	0.6	0.8	2.0	2.8	3.8	4.2	4.8	15	
16	1.2	1.2	0.6	1.2	0.8	1.8	1.4	2.2	1.2	1.6	0.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16	
17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17	
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18	
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19	
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20	
21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21	
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	22	
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.2	0.6	23	
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24	
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25	
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	****	****	****	****	****	****	****	****	****	****	****	****	26
27	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	27
28	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	28
29	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	29
30	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	30

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	.3	*****	**	080	1.6	080	7.0	0	0300	2.6	*****	**	039	3.0	039	8.3	0
0600	1.0	*****	**	028	1.8	045	6.3	20	0600	2.2	*****	**	052	2.2	043	5.1	5
0900	3.4	*****	**	121	2.4	106	7.0	61	0900	5.5	*****	**	101	1.2	073	3.8	63
1200	4.6	*****	**	136	4.4	151	10.2	81	1200	5.1	*****	**	011	1.3	321	10.8	86
1500	3.6	*****	**	156	3.6	222	8.3	72	1500	6.1	*****	**	141	3.4	118	7.0	72
1800	5.3	*****	**	052	.7	261	10.2	39	1800	7.0	*****	**	153	2.7	131	5.7	40
2100	2.9	*****	**	032	2.2	001	12.1	3	2100	5.1	*****	**	059	2.9	106	8.9	2
2400	2.8	*****	**	064	1.9	086	7.0	0	2400	3.8	*****	**	062	2.0	346	8.3	0

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	3.3	*****	**	034	2.6	032	6.3	0	0300	4.4	*****	**	067	1.9	057	5.1	0
0600	4.4	*****	**	077	1.6	085	3.8	18	0600	3.7	*****	**	061	1.5	049	3.8	4
0900	4.6	*****	**	033	3.2	040	12.1	28	0900	5.9	*****	**	061	1.4	048	4.4	58
1200	5.4	*****	**	358	3.4	334	9.5	52	1200	7.9	*****	**	112	1.1	125	5.7	77
1500	4.7	*****	**	014	4.0	346	10.8	61	1500	9.9	*****	**	147	2.6	186	5.1	60
1800	5.4	*****	**	008	4.2	350	10.8	30	1800	8.9	*****	**	191	1.2	150	4.4	40
2100	5.2	*****	**	095	2.1	010	10.2	5	2100	7.7	*****	**	108	1.5	158	4.4	2
2400	4.3	*****	**	069	1.7	078	3.8	0	2400	7.7	*****	**	075	1.8	096	5.1	0

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.												
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	1.7	*****	**	051	.9	026	3.8	0	0300	1.9	*****	**	023	1.4	347	3.2	0	0300	4.9	*****	**	077	2.2	085	7.9	0
0600	2.0	*****	**	062	1.1	039	2.5	5	0600	1.5	*****	**	047	1.1	095	2.5	5	0600	3.6	*****	**	030	.8	065	2.5	6
0900	3.8	*****	**	034	1.0	071	2.5	60	0900	3.5	*****	**	108	.4	163	2.5	58	0900	3.9	*****	**	098	1.2	044	5.1	14
1200	8.2	*****	**	316	.7	291	2.5	80	1200	7.0	*****	**	101	.7	181	3.8	79	1200	5.8	*****	**	096	1.1	130	3.8	58
1500	5.8	*****	**	089	1.1	127	4.4	34	1500	11.7	*****	**	004	.8	275	3.2	72	1500	7.8	*****	**	168	.6	100	5.1	74
1800	7.7	*****	**	027	.2	114	4.4	43	1800	10.5	*****	**	188	.9	168	5.1	43	1800	3.5	*****	**	267	1.5	269	5.1	25
2100	4.8	*****	**	056	.6	058	2.5	3	2100	7.2	*****	**	008	1.1	006	4.4	5	2100	3.9	*****	**	357	.3	062	4.4	5
2400	2.6	*****	**	006	1.2	346	3.8	0	2400	5.3	*****	**	035	1.0	056	3.8	0	2400	3.3	*****	**	033	.6	051	2.5	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DAY 10								DAY 11								DAY 12							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	2.6	*****	**	318	.5	346	1.9	0	0300	5.3	*****	33	068	1.0	054	3.2	0	0300	5.6	-5.2	46	045	1.5
0600	1.9	*****	**	054	.5	055	3.8	7	0600	6.2	*****	28	054	1.2	043	3.8	12	0600	6.1	-10.3	30	036	2.6
0900	3.9	*****	**	065	.9	072	3.2	16	0900	9.4	*****	26	129	.8	122	4.4	51	0900	5.7	-3.7	51	095	1.5
1200	7.0	*****	**	039	.9	038	3.8	81	1200	8.6	-11.5	23	110	1.4	072	6.3	82	1200	8.3	*****	**	110	2.3
1500	10.2	*****	**	177	1.2	161	4.4	80	1500	11.0	-13.2	17	102	2.4	133	7.0	81	1500	8.2	-.0	56	142	2.3
1800	8.1	*****	**	233	1.5	210	4.4	41	1800	9.8	-10.3	25	297	1.5	300	5.1	15	1800	7.1	*****	**	161	1.8
2100	7.7	*****	**	291	.6	222	3.2	6	2100	7.7	-2.4	49	035	1.6	029	5.7	10	2100	5.8	-2.8	54	044	1.5
2400	5.9	*****	**	071	1.0	085	2.5	0	2400	7.1	.1	61	042	1.5	061	4.4	0	2400	4.6	*****	82	074	.8
DAY 13								DAY 14								DAY 15							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	4.0	.4	77	071	1.2	052	3.2	0	0300	3.4	*****	**	078	1.0	049	3.2	0	0300	2.9	.6	85	033	1.7
0600	3.9	*****	81	054	1.0	048	3.2	17	0600	4.1	*****	**	056	1.6	026	3.8	7	0600	1.5	-.4	87	046	1.0
0900	3.9	1.3	83	235	.8	178	1.9	30	0900	7.7	1.8	66	089	1.1	047	2.5	90	0900	1.8	*****	73	354	.8
1200	3.8	1.5	85	271	.9	284	1.9	21	1200	6.7	*****	**	130	2.2	147	6.3	52	1200	3.8	*****	58	357	1.2
1500	3.2	.6	83	257	.7	250	3.2	17	1500	9.8	-2.6	42	170	2.6	147	5.7	74	1500	4.3	*****	**	040	.7
1800	4.6	-4.2	53	010	.8	312	3.8	15	1800	10.0	-3.1	40	166	3.2	154	5.7	47	1800	3.0	.1	81	109	1.0
2100	5.6	*****	**	055	1.4	015	4.4	6	2100	6.5	*****	**	070	.3	059	8.3	6	2100	2.4	.9	90	098	.7
2400	3.6	*****	**	037	1.0	346	3.8	0	2400	3.6	-.0	77	023	2.1	004	5.7	0	2400	2.0	1.4	96	082	1.2
DAY 16								DAY 17								DAY 18							
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	2.4	1.7	95	092	1.3	083	3.8	0	0300	2.8	*****	91	083	.8	118	2.5	0	0300	5.1	-4.0	52	062	1.4
0600	1.9	*****	91	025	1.0	089	2.5	7	0600	3.2	*****	92	101	.7	046	1.9	7	0600	6.3	*****	41	057	1.2
0900	1.7	*****	86	337	.4	002	1.9	15	0900	5.1	2.1	81	153	1.1	156	2.5	33	0900	9.0	-4.7	38	089	.8
1200	2.9	-2.6	67	232	.9	231	3.2	49	1200	6.5	*****	**	213	1.5	204	4.4	73	1200	10.7	-4.7	34	330	1.4
1500	3.8	-2.6	63	205	1.7	203	3.2	53	1500	8.7	.9	58	221	2.0	198	4.4	83	1500	12.7	-10.4	19	167	2.6
1800	3.7	-.1	76	197	2.1	193	3.8	24	1800	9.3	-3.7	40	164	2.4	145	6.3	40	1800	13.8	*****	20	242	1.4
2100	3.2	*****	88	223	.7	202	3.2	3	2100	7.3	*****	41	218	.9	180	3.8	3	2100	9.6	-4.5	37	153	1.0
2400	2.8	*****	96	148	.7	167	1.9	0	2400	6.2	-4.3	47	062	1.1	074	3.2	0	2400	9.4	-1.7	46	064	1.8

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	8.9	-1.3	49	051	1.3	091	4.4	0	0300	9.1	-3.6	41	059	1.5	076	4.4	0
0600	8.5	-1.6	49	058	1.3	051	3.8	4	0600	9.5	-3.5	40	073	1.3	105	3.8	3
0900	10.5	-2.6	40	097	.7	042	3.2	58	0900	12.1	-7.4	25	069	.6	068	3.8	57
1200	13.6	-.9	37	111	.6	019	5.7	81	1200	13.8	-6.0	25	235	.9	185	4.4	77
1500	13.0	-4.3	30	179	2.6	140	7.0	68	1500	14.0	-8.7	20	200	2.4	229	5.7	76
1800	12.5	-5.2	29	217	1.9	168	5.1	33	1800	12.3	-4.1	32	232	2.0	222	7.0	42
2100	11.2	-2.7	38	042	1.6	080	7.6	5	2100	10.7	-5.5	32	205	.9	208	3.2	9
2400	10.3	-3.2	39	065	1.4	094	3.8	0	2400	9.7	****	40	050	1.2	076	3.2	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	10.3	2.4	58	069	1.1	075	4.4	0	0300	8.5	3.6	71	052	1.4	065	3.2	0
0600	10.2	1.8	56	064	1.0	064	2.5	6	0600	9.3	5.3	76	080	2.3	093	4.4	4
0900	12.7	-1.4	38	125	.7	163	3.8	57	0900	9.3	4.4	71	017	.7	002	3.8	34
1200	12.7	-2.9	34	185	1.6	134	5.7	39	1200	11.9	.9	47	204	1.4	168	3.8	62
1500	8.9	4.9	76	110	2.9	081	10.8	7	1500	10.4	3.0	60	232	.7	231	7.6	73
1800	10.3	5.5	72	063	3.7	064	7.6	17	1800	10.2	6.0	75	202	1.9	198	6.3	21
2100	11.4	-2.9	37	080	1.6	093	3.8	10	2100	7.7	****	**	195	.3	227	8.3	6
2400	10.1	.1	50	050	1.8	027	3.8	0	2400	6.7	1.9	71	081	1.6	093	5.1	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	7.6	-1.1	54	082	1.8	085	3.8	0	0300	12.0	-3.5	34	061	2.1	057	5.1	0
0600	7.3	-1.1	55	066	1.7	071	4.4	3	0600	12.1	-3.4	34	049	2.8	045	5.7	8
0900	9.1	-2.0	46	115	.8	171	3.8	57	0900	11.3	-3.0	37	082	2.4	093	7.6	27
1200	10.1	-2.7	41	198	1.8	176	4.4	78	1200	12.2	-1.8	38	139	1.7	129	9.5	93
1500	13.0	-3.9	31	193	2.7	239	7.6	72	1500	****	****	**	***	****	278	10.2	***
1800	13.3	-7.5	23	176	3.2	169	8.9	42	1800	****	****	**	***	****	***	****	***
2100	12.4	****	26	172	1.4	176	4.4	2	2100	****	****	**	***	****	***	****	***
2400	11.4	-4.0	34	055	3.8	052	8.9	0	2400	****	****	**	***	****	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DAY 28

DAY 29

DAY 30

DAY 28							DAY 29							DAY 30						
HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***
0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***
0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***
1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***
1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***
1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***
2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***
2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

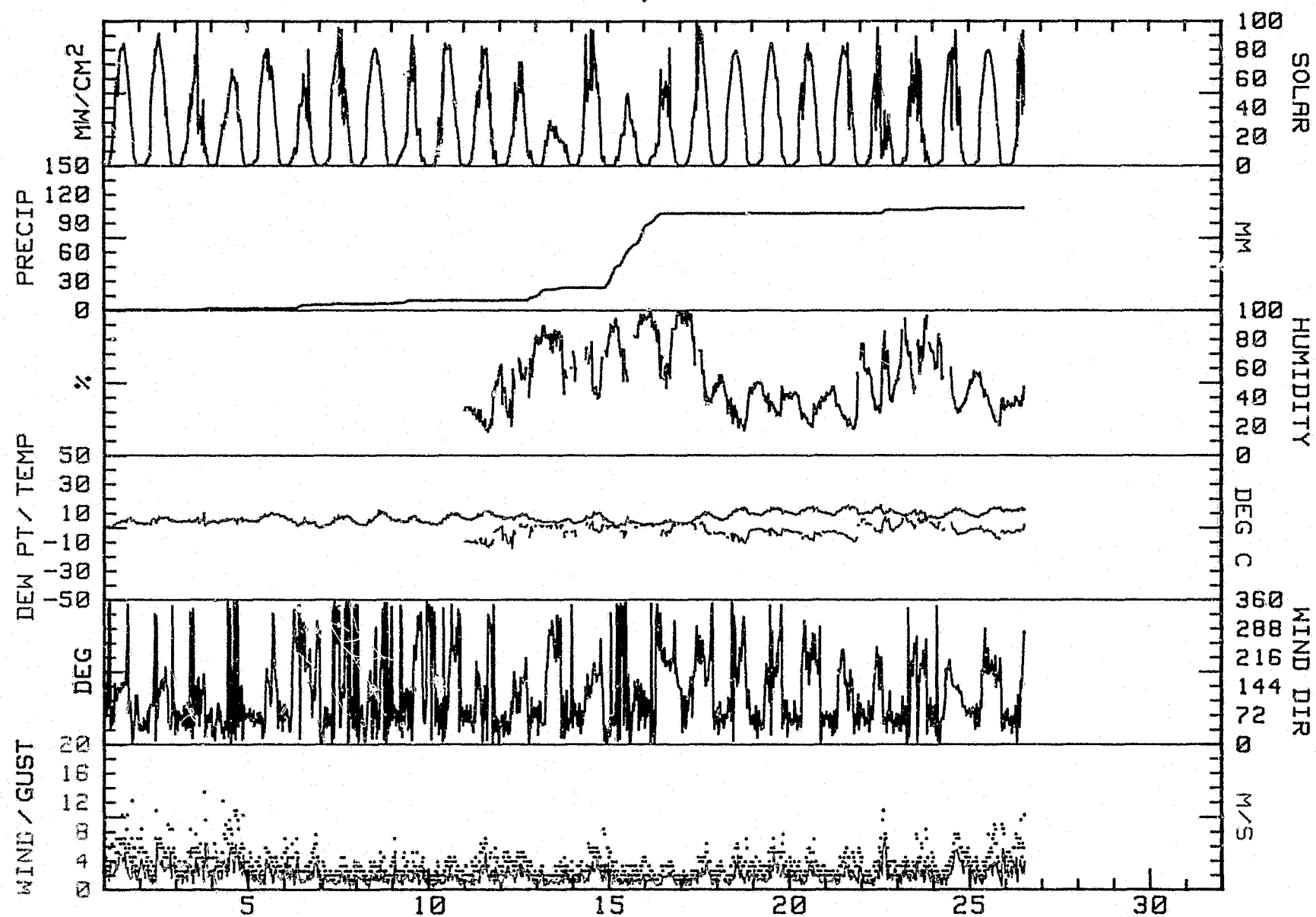
MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/50H	DAY
1	6.8	.3	3.6	102	1.6	2.8	001	12.1	SE	**	*****	0.0	8065	1
2	7.4	1.7	4.6	081	1.6	2.7	321	10.8	NE	**	*****	0.0	7965	2
3	9.9	1.1	5.5	075	1.8	2.5	128	13.3	ENE	**	*****	1.6	5425	3
4	6.8	2.6	4.7	030	2.5	3.2	040	12.1	NE	**	*****	0.0	6160	4
5	10.1	3.6	6.9	099	1.2	2.0	125	5.7	ENE	**	*****	0.0	7645	5
6	6.8	-.4	3.2	189	.4	2.1	193	7.6	W	**	*****	3.8	4335	6
7	8.5	-.1	4.2	041	.7	1.2	127	4.4	N	**	*****	1.0	7495	7
8	11.7	1.5	6.6	041	.6	1.4	168	5.1	NE	**	*****	0.0	7930	8
9	8.4	3.1	5.8	075	.5	1.5	085	7.0	NE	**	*****	3.6	5120	9
10	10.2	1.9	6.1	073	.1	1.2	161	4.4	E	**	*****	0.0	7580	10
11	11.4	5.0	8.2	068	.9	1.7	133	7.0	NE	31	-8.8	0.0	7005	11
12	9.4	4.6	7.0	090	1.2	2.0	025	5.1	ENE	48	-4.0	4.4	4965	12
13	5.8	2.8	4.3	030	.4	1.2	015	4.4	NE	75	-.3	8.6	3015	13
14	10.4	2.6	6.5	117	1.1	2.1	059	8.3	S	58	-.9	5.0	7100	14
15	6.8	.7	3.8	047	.8	1.2	018	5.1	N	83	-.5	57.8	3480	15
16	5.1	1.6	3.4	188	.5	1.2	083	3.8	SSW	77	-.8	14.2	4830	16
17	10.7	2.5	6.6	171	.8	1.5	145	6.3	SSW	64	-.6	0.0	7425	17
18	13.8	4.8	9.3	160	.5	1.7	174	7.0	ENE	35	-6.0	0.0	7885	18
19	13.6	8.3	11.0	104	.6	2.0	080	7.6	NE	39	-2.8	0.0	7755	19
20	14.4	8.6	11.5	169	.3	1.7	222	7.0	NE	33	-5.0	0.0	7525	20
21	15.2	7.9	11.6	106	.9	1.8	159	5.7	ENE	32	-5.1	0.0	7765	21
22	15.3	8.9	12.1	085	1.4	2.1	081	10.8	ENE	50	.5	3.6	5110	22
23	11.9	5.7	8.8	114	.5	2.0	227	8.3	ENE	70	3.6	1.8	5720	23
24	13.2	5.9	9.6	118	1.9	2.6	141	7.6	SE	45	-2.3	0.0	7115	24
25	13.8	7.0	10.4	134	1.1	2.4	169	8.9	S	40	-3.1	0.0	7845	25
26	13.6	10.7	12.2	073	1.7	2.7	278	10.2	NE	36	-2.8	0.0	6403	26
27	*****	*****	*****	***	***	***	***	***	***	**	*****	***	*****	27
28	*****	*****	*****	***	***	***	***	***	***	**	*****	***	*****	28
29	*****	*****	*****	***	***	***	***	***	***	**	*****	***	*****	29
30	*****	*****	*****	***	***	***	***	***	***	**	*****	***	*****	30
MONTH	15.3	-.4	7.2	089	.8	1.9	128	13.3	ENE	49	-2.4	105.4	168663	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 3.8
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 3.2
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 9.5
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 6.3

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
June, 1984



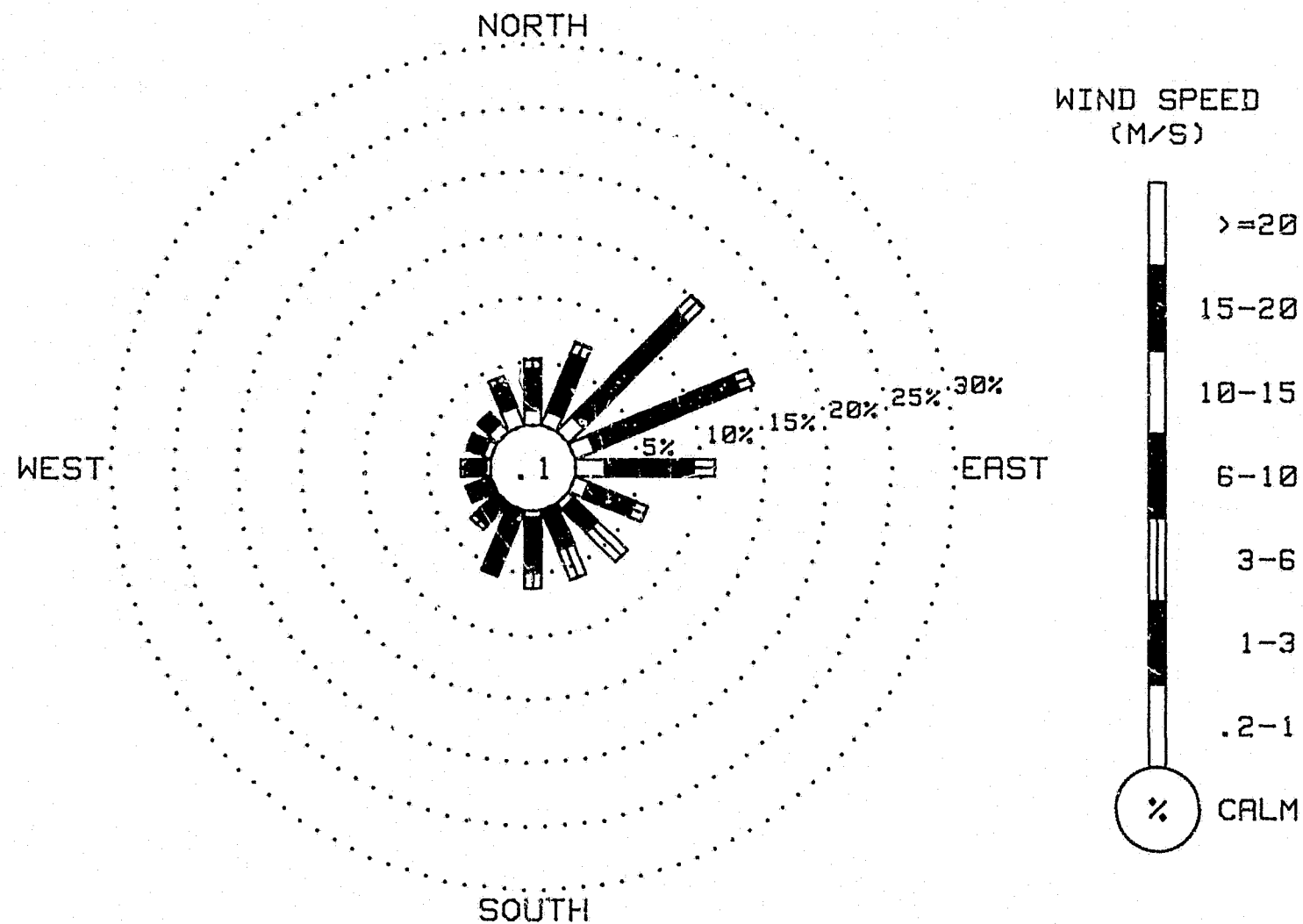
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2 TO 1.0	1.0 TO 3.0	3.0 TO 6.0	6.0 TO 10.0	10.0 TO 15.0	15.0 TO 20.0	20.0 OR GREATER	
N	1.22	3.18	.73	.08	0.00	0.00	0.00	5.22
NNE	1.22	4.82	.98	.08	0.00	0.00	0.00	7.10
NE	1.71	11.59	1.71	.08	0.00	0.00	0.00	15.10
ENE	1.71	12.33	1.14	.08	0.00	0.00	0.00	15.27
E	2.37	6.94	1.71	0.00	0.00	0.00	0.00	11.02
ESE	1.22	3.92	1.06	0.00	0.00	0.00	0.00	6.20
SE	.65	2.53	3.35	0.00	0.00	0.00	0.00	6.53
SSE	.24	3.18	2.53	0.00	0.00	0.00	0.00	5.96
S	.57	4.33	1.22	0.00	0.00	0.00	0.00	6.12
SSW	.16	5.31	.16	0.00	0.00	0.00	0.00	5.63
SW	.16	2.29	.49	0.00	0.00	0.00	0.00	2.94
WSW	.24	1.80	.08	0.00	0.00	0.00	0.00	2.12
W	.41	1.63	.33	0.00	0.00	0.00	0.00	2.37
WNW	.65	1.31	.08	0.00	0.00	0.00	0.00	2.04
NW	.98	1.06	0.00	.08	0.00	0.00	0.00	2.12
NNW	1.63	2.04	.49	0.00	0.00	0.00	0.00	4.16
CALM								.08
TOTAL	15.18	68.24	16.08	.41	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1225 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1440 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT
 GLACIER WEATHER STATION
 June, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	2	6	15	26	40	60	56	74	80	80	83	75	66	56	43	29	15	4	2	0	0	34
2	0	0	0	1	3	5	7	47	60	67	78	83	90	82	74	65	52	37	27	16	6	1	0	0	33
3	0	0	0	2	6	10	12	17	34	40	41	55	67	67	60	35	30	23	27	13	7	2	0	0	23
4	0	0	0	3	9	17	25	25	29	34	40	51	58	64	60	55	55	34	33	20	7	2	0	0	26
5	0	0	0	2	3	4	8	43	56	65	73	77	73	79	60	67	58	44	30	19	7	2	0	0	32
6	0	0	0	1	3	5	10	10	12	29	42	42	54	52	44	33	53	28	11	6	3	1	0	0	18
7	0	0	0	1	2	4	12	50	58	66	74	79	72	82	64	50	40	44	30	17	7	2	0	0	31
8	0	0	0	2	4	5	15	45	56	65	73	78	80	78	71	66	57	47	29	21	6	1	0	0	33
9	0	0	0	2	5	7	9	11	14	21	47	55	75	74	78	43	22	23	16	5	5	3	0	0	21
10	0	0	0	1	2	7	18	24	16	54	79	83	80	82	81	66	57	45	31	22	11	2	0	0	32
11	0	0	0	2	4	11	22	35	50	43	58	73	71	79	79	58	50	33	20	8	9	1	0	0	29
12	0	0	0	1	2	6	13	19	23	48	41	48	69	58	60	44	30	15	7	8	8	2	0	0	21
13	0	0	0	1	4	13	14	21	29	28	26	23	23	21	19	17	16	16	12	12	8	3	1	0	13
14	0	0	0	2	5	7	15	31	73	45	56	55	73	76	76	63	55	47	22	6	5	1	0	0	30
15	0	0	0	0	2	5	6	13	21	22	25	40	46	44	33	30	23	23	12	5	2	1	0	0	15
16	0	0	0	3	6	7	7	12	14	22	55	46	47	50	56	43	59	25	18	11	5	2	0	0	20
17	0	0	0	1	3	6	12	25	33	43	71	62	90	92	85	68	57	45	33	12	6	2	0	0	31
18	0	0	0	1	2	4	19	43	54	63	73	77	79	78	74	66	57	45	33	19	4	2	0	0	33
19	0	0	0	1	3	4	19	44	55	65	73	80	84	79	72	61	58	34	31	8	6	2	0	0	32
20	0	0	0	1	2	3	18	43	55	37	57	77	82	75	77	69	57	45	33	14	8	2	0	0	31
21	0	0	0	1	2	4	18	43	54	63	72	77	81	77	75	61	46	48	32	20	5	2	0	0	32
22	0	0	0	1	3	7	10	44	54	44	58	67	81	10	10	26	18	19	31	19	12	2	0	0	21
23	0	0	0	1	5	4	8	41	44	61	61	53	69	45	55	68	21	19	0	7	6	1	1	0	24
24	0	0	0	2	3	3	17	43	54	64	76	78	53	80	83	55	28	51	13	9	3	1	0	0	30
25	0	0	0	1	2	3	15	43	53	64	72	78	79	78	74	66	58	46	31	18	7	1	0	0	33
26	0	0	0	1	2	5	13	16	50	82	83	64	***	***	***	***	***	***	***	***	***	***	***	***	13
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING June, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1225	85
WIND SPEED	1225	85
WIND DIRECTION	1225	85
PEAK GUST	1225	85
RELATIVE HUMIDITY	564	39
PRECIPITATION	1225	85
SOLAR RADIATION	1225	85
DEW POINT	564	39

THERE ARE 1440 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -25 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. No data after 6/26 due to weather wizard malfunction.
2. Recorded RH data invalid 6/1 - 6/11. RH data suspected to be poor 6/11 - 6/26, but have been published as indicative of true RH. Many erratic values have been deleted during this period.

00276

No Data for July
(See INTERPRETATION OF DATA)

000210

No Data for August
(See INTERPRETATION OF DATA)

R A M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	DATE
1	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	1
2	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	2
3	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	3
4	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	4
5	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	5
6	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	6
7	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	7
8	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	8
9	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	9
10	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	10
11	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	11
12	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	12
13	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	13
14	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	14
15	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	15
16	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	16
17	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	17
18	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	18
19	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	19
20	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	20
21	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	21
22	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	****	22
23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24
25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25
26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26
27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27
28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29
30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	****	30

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

DAY 10							DAY 11							DAY 12						
HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***
0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***
0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***
1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***
1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***
1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***
2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***
2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***
DAY 13							DAY 14							DAY 15						
HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***
0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***
0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***
1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***
1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***
1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***
2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***
2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***
DAY 16							DAY 17							DAY 18						
HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.	
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***	0300	*****	*****	**	***	****	***
0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***	0600	*****	*****	**	***	****	***
0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***	0900	*****	*****	**	***	****	***
1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***	1200	*****	*****	**	***	****	***
1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***	1500	*****	*****	**	***	****	***
1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***	1800	*****	*****	**	***	****	***
2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***	2100	*****	*****	**	***	****	***
2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***	2400	*****	*****	**	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

DAY 19								DAY 20								DAY 21									
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.		
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		
0300	*****	*****	**	***	****	***	*****	0300	*****	*****	**	***	****	***	*****	0300	*****	*****	**	***	****	***	*****		
0600	*****	*****	**	***	****	***	*****	0600	*****	*****	**	***	****	***	*****	0600	*****	*****	**	***	****	***	*****		
0900	*****	*****	**	***	****	***	*****	0900	*****	*****	**	***	****	***	*****	0900	*****	*****	**	***	****	***	*****		
1200	*****	*****	**	***	****	***	*****	1200	*****	*****	**	***	****	***	*****	1200	*****	*****	**	***	****	***	*****		
1500	*****	*****	**	***	****	***	*****	1500	*****	*****	**	***	****	***	*****	1500	*****	*****	**	***	****	***	*****		
1800	*****	*****	**	***	****	***	*****	1800	*****	*****	**	***	****	***	*****	1800	*****	*****	**	***	****	***	*****		
2100	*****	*****	**	***	****	***	*****	2100	*****	*****	**	***	****	***	*****	2100	*****	*****	**	***	****	***	*****		
2400	*****	*****	**	***	****	***	*****	2400	*****	*****	**	***	****	***	*****	2400	*****	*****	**	***	****	***	*****		
DAY 22								DAY 23								DAY 24									
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.		
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		
0300	*****	*****	**	***	****	***	*****	0300	2.9	-16.3	23	075	1.5	059	3.8	0	0300	3.7	-14.6	25	064	1.3	048	3.2	
0600	*****	*****	**	***	****	***	*****	0600	2.2	-15.9	25	074	1.2	059	2.5	0	0600	3.3	-18.2	19	074	1.9	057	4.4	
0900	*****	*****	**	***	****	***	*****	0900	1.5	-16.5	25	065	1.3	056	2.5	2	0900	3.4	-17.5	20	073	1.6	050	3.8	
1200	*****	*****	**	***	****	***	*****	1200	4.2	-14.7	24	081	1.4	105	3.2	42	1200	3.4	-14.0	27	081	1.2	124	5.1	
1500	*****	*****	**	***	****	***	*****	1500	6.7	*****	19	114	.9	150	3.8	43	1500	2.4	-7.8	47	088	1.1	134	4.4	
1800	5.9	-11.8	27	059	1.1	039	4.4	14	1800	3.3	*****	28	131	.8	136	3.8	4	1800	2.3	-5.3	57	047	1.6	036	3.2
2100	2.8	-14.0	28	071	1.6	052	4.4	0	2100	3.3	-14.0	27	064	1.2	071	3.2	0	2100	1.0	-3.5	72	078	1.5	149	3.2
2400	2.7	-13.3	30	056	1.7	051	4.4	0	2400	4.2	-14.2	25	081	1.3	081	2.5	0	2400	1.4	-4.0	67	071	1.9	049	3.8
DAY 25								DAY 26								DAY 27									
HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.	HOUR	DEW		WIND	WIND	GUST		MAX.		
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		
0300	2.4	-4.3	61	074	1.2	076	3.2	0	0300	.3	-3.9	73	058	1.6	039	3.8	0	0300	1.3	*****	69	066	1.2	050	2.5
0600	2.2	*****	61	082	1.3	075	3.8	0	0600	.7	-3.7	72	044	1.4	034	3.8	0	0600	1.8	-3.4	68	071	.9	063	3.2
0900	-.2	-3.4	79	334	.6	290	4.4	2	0900	1.3	-4.5	65	074	1.3	100	3.2	5	0900	1.8	*****	64	058	1.3	050	3.2
1200	2.6	-3.9	62	069	1.1	273	3.2	21	1200	.9	-4.5	67	046	1.2	336	3.8	17	1200	3.3	-5.4	53	086	.9	041	2.5
1500	2.7	*****	55	067	.8	027	3.8	25	1500	2.7	-5.7	54	094	.8	155	2.5	29	1500	4.3	*****	44	075	.9	043	2.5
1800	2.9	*****	58	076	.6	124	2.5	10	1800	2.1	-4.8	60	113	.8	048	3.2	6	1800	2.8	-7.8	46	092	1.0	150	3.8
2100	1.1	*****	73	071	.7	131	2.5	0	2100	1.9	*****	63	078	1.4	063	3.2	0	2100	1.5	-8.4	48	063	2.1	062	5.1
2400	.7	-3.7	72	051	1.7	032	5.1	0	2400	1.2	-3.8	69	050	.8	019	3.2	0	2400	1.6	-8.3	48	063	1.5	058	4.4

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	1.2	-8.1	50	069	1.6	056	3.8	0	0300	4.1	-1.0	69	065	1.3	038	3.2	0
0600	1.8	-9.3	44	068	1.3	063	3.2	0	0600	3.1	-.2	79	055	1.4	053	6.3	0
0900	1.6	-8.9	46	069	1.6	062	5.1	2	0900	5.3	.3	70	074	3.5	071	9.5	1
1200	4.5	-8.7	38	082	1.6	134	4.4	36	1200	6.7	-.3	61	071	3.3	090	8.3	20
1500	4.9	-9.1	36	098	1.8	127	5.1	22	1500	6.7	-.7	59	080	3.6	106	8.3	16
1800	5.4	-10.5	31	047	1.6	038	4.4	6	1800	5.1	.1	70	082	1.8	116	6.3	3
2100	4.5	-9.8	35	062	1.2	000	3.2	0	2100	5.9	*****	65	071	1.8	165	5.1	0
2400	2.6	*****	53	068	1.4	046	4.4	0	2400	4.9	-1.5	63	120	1.7	175	9.5	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

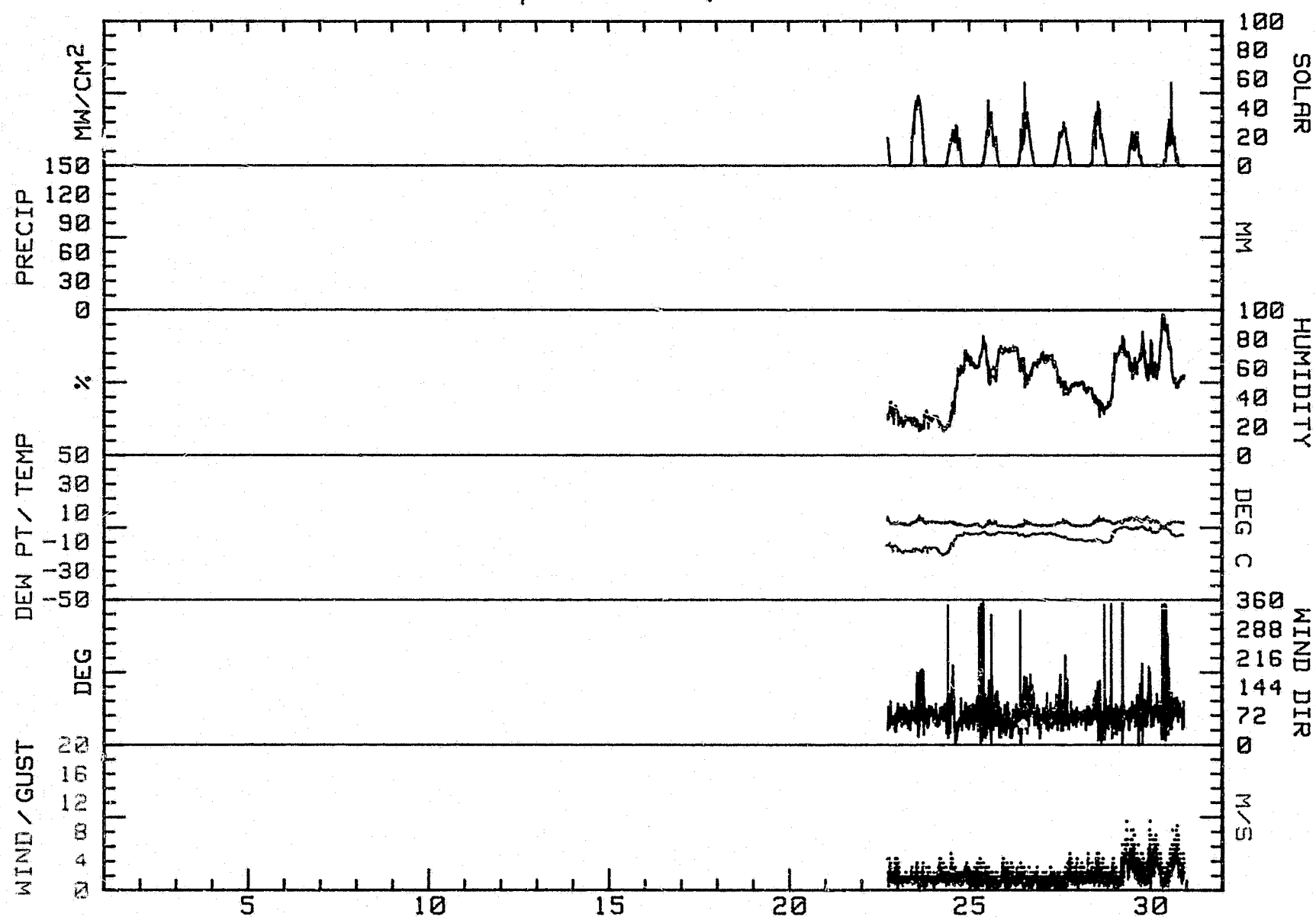
MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQW	DAY
1	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	1
2	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	2
3	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	3
4	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	4
5	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	5
6	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	6
7	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	7
8	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	8
9	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	9
10	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	10
11	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	11
12	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	12
13	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	13
14	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	14
15	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	15
16	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	16
17	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	17
18	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	18
19	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	19
20	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	20
21	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	21
22	7.4	1.9	4.7	063	1.6	1.7	039	4.4	NE	30	-12.8	0.0	592	22
23	8.5	1.4	5.0	082	1.1	1.3	059	3.8	ENE	24	-15.4	0.0	2829	23
24	4.3	.8	2.6	072	1.5	1.7	124	5.1	ENE	39	-11.4	0.0	1574	24
25	5.1	-.4	2.4	064	.9	1.3	032	5.1	NE	67	-4.0	0.0	1896	25
26	5.1	-.3	2.4	066	1.1	1.4	039	3.8	ENE	65	-4.4	0.0	2007	26
27	5.8	.4	3.1	069	1.2	1.4	062	5.1	ENE	55	-6.1	0.0	1662	27
28	7.7	.9	4.3	071	1.5	1.7	062	5.1	ENE	41	-9.0	0.0	2088	28
29	7.7	2.2	5.0	077	2.2	2.6	071	9.5	ENE	67	-.5	0.0	1151	29
30	5.2	.3	2.8	083	2.5	3.0	119	8.9	E	65	-3.0	0.0	1419	30
MONTH	8.5	-.4	3.6	074	1.5	1.8	071	9.5	ENE	51	-7.4	0.0	15219	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 8.3
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 8.3
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 6.3

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.
SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
September, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	.21	1.10	.08	0.00	0.00	0.00	0.00	1.40
NNE	.51	4.36	.38	0.00	0.00	0.00	0.00	5.25
NE	3.09	15.50	1.31	0.00	0.00	0.00	0.00	19.90
ENE	8.76	23.12	4.70	.08	0.00	0.00	0.00	36.66
E	4.66	12.36	3.98	0.00	0.00	0.00	0.00	21.00
ESE	1.40	4.19	1.61	.04	0.00	0.00	0.00	7.24
SE	.04	2.92	.72	0.00	0.00	0.00	0.00	3.68
SSE	.04	1.52	.21	0.00	0.00	0.00	0.00	1.78
S	0.00	.80	.13	0.00	0.00	0.00	0.00	.93
SSW	0.00	.13	.04	0.00	0.00	0.00	0.00	.17
SW	0.00	.04	0.00	0.00	0.00	0.00	0.00	.04
WSW	0.00	.17	0.00	0.00	0.00	0.00	0.00	.17
W	0.00	.47	.04	0.00	0.00	0.00	0.00	.51
WNW	0.00	.25	0.00	0.00	0.00	0.00	0.00	.25
NW	0.00	.30	0.00	0.00	0.00	0.00	0.00	.30
NNW	0.00	.38	.04	0.00	0.00	0.00	0.00	.42
CALM								.30
TOTAL	18.71	67.61	13.25	.13	0.00	0.00	0.00	100.00

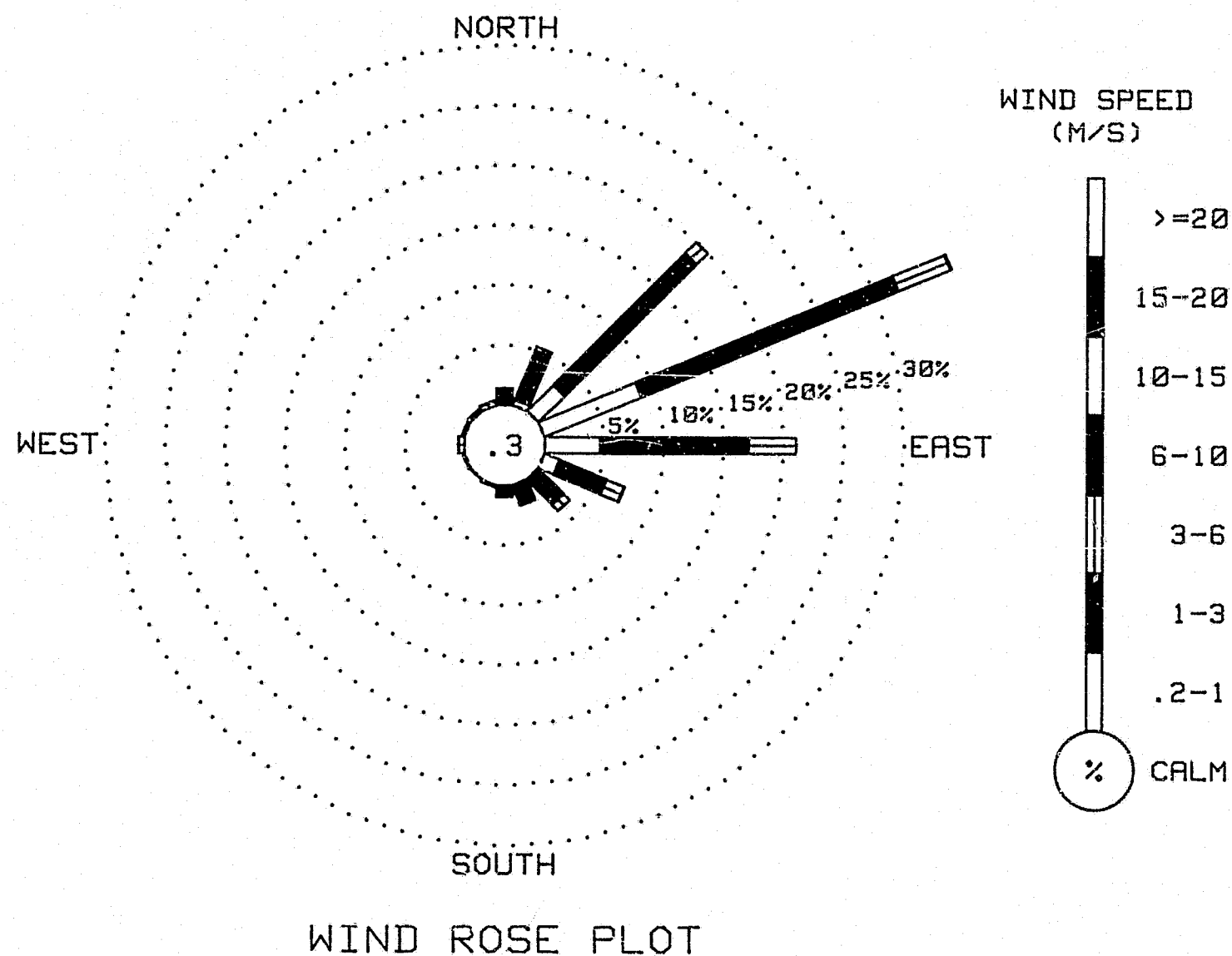
NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT

2362 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

8640 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 5 MINUTE DATA.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
September, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
2	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
3	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
4	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
5	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
7	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
8	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
11	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	16	7	0	0	0	0	0	1
23	0	0	0	0	0	0	0	0	1	11	26	35	43	42	45	38	28	12	4	0	0	0	0	0	12
24	0	0	0	0	0	0	0	0	2	7	12	17	21	23	21	23	15	15	4	0	0	0	0	0	7
25	0	0	0	0	0	0	0	0	2	5	13	21	31	32	31	18	15	15	6	1	0	0	0	0	8
26	0	0	0	0	0	0	0	0	2	11	17	23	32	32	33	24	15	9	3	0	0	0	0	0	8
27	0	0	0	0	0	0	0	0	2	6	12	19	21	23	26	24	17	11	5	0	0	0	0	0	7
28	0	0	0	0	0	0	0	0	1	9	22	28	34	38	30	21	15	8	3	0	0	0	0	0	9
29	0	0	0	0	0	0	0	0	0	4	12	19	17	12	18	19	8	5	1	0	0	0	0	0	5
30	0	0	0	0	0	0	0	0	0	3	10	20	22	21	22	18	10	6	2	0	0	0	***	***	6

*** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING September, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	2364	27
WIND SPEED	2364	27
WIND DIRECTION	2362	27
PEAK GUST	2364	27
RELATIVE HUMIDITY	1915	22
PRECIPITATION	2364	27
SOLAR RADIATION	2364	27
DEW POINT	1915	22

THERE ARE 8640 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 5 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -2 RH Points
2. Solar -1 mW/CM²
3. Wind Direction -180 degrees

Additional comments on this month's data:

1. Station reinstalled on 9/22. No data prior to this date.
2. Data recorded at 5 minute intervals.
3. Wind vane tail not attached. All wind direction data off by 180 degrees,
but have been adjusted prior to publication.

No precipitation data for October

(See INTERPRETATION OF DATA).

R A M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

DAY 01									DAY 02									DAY 03								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	4.1	-2.3	63	072	2.6	083	6.3	0	0300	0.0	*****	96	063	.7	044	2.5	0	0300	-1.0	-2.5	90	***	****	***	3.2	0
0600	3.4	*****	62	081	3.5	099	6.3	0	0600	.7	*****	86	077	.6	079	1.3	0	0600	-1.4	-3.3	87	026	1.1	047	2.5	0
0900	1.8	-2.3	74	048	.9	243	5.7	2	0900	-1.6	-1.2	96	120	.8	132	2.5	2	0900	-1.7	-4.4	82	077	1.1	056	2.5	2
1200	4.0	-5.0	52	058	1.3	052	4.4	15	1200	.5	-2.9	78	111	.7	125	2.5	11	1200	.7	-10.0	45	078	1.2	070	2.5	42
1500	4.5	-4.0	54	112	2.7	122	7.0	23	1500	.5	-2.5	80	074	.9	086	3.2	12	1500	1.0	-9.1	47	142	1.1	147	3.8	31
1800	3.8	-3.9	57	103	3.2	101	6.3	2	1800	1.1	*****	80	087	.8	102	2.5	5	1800	1.3	-9.1	46	183	1.4	162	3.8	7
2100	1.9	-2.1	75	094	3.3	086	6.3	0	2100	.6	-3.3	75	091	1.6	068	3.8	0	2100	-1.4	-8.4	59	067	1.0	063	3.2	0
2400	.1	-.5	96	068	1.5	075	6.3	0	2400	-1.2	*****	97	273	1.0	227	5.1	0	2400	-1.4	-9.5	54	071	1.4	064	2.5	0
DAY 04									DAY 05									DAY 06								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-2.0	-11.1	50	068	1.1	079	2.5	0	0300	-1.8	-13.7	40	067	2.0	093	5.1	0	0300	2.6	-5.3	56	088	2.1	104	5.7	0
0600	-2.3	-11.9	48	074	1.2	066	3.2	0	0600	-1.2	-15.9	32	062	1.9	070	5.1	0	0600	2.5	-5.6	55	108	2.2	120	6.3	0
0900	-2.2	-12.3	46	075	1.3	065	3.8	1	0900	-.4	*****	28	071	1.4	057	4.4	3	0900	1.3	-3.7	69	118	4.1	139	16.5	1
1200	.1	-12.0	40	090	1.4	062	3.8	30	1200	2.6	-13.4	30	061	1.3	011	4.4	29	1200	1.1	*****	78	141	1.3	115	7.0	9
1500	.9	-11.3	40	131	2.0	139	4.4	31	1500	.9	-12.0	38	087	.5	281	5.1	14	1500	1.8	-4.0	65	045	.8	015	3.2	9
1800	.8	*****	40	094	.8	133	5.1	7	1800	1.1	-10.8	41	063	1.4	131	4.4	3	1800	2.5	-4.7	59	080	2.6	077	9.5	1
2100	-2.0	*****	48	065	1.5	058	5.1	0	2100	2.1	-7.3	50	070	2.0	058	4.4	0	2100	2.4	-6.5	52	075	3.1	091	6.3	0
2400	-1.6	*****	41	065	1.6	060	4.4	0	2400	2.0	-6.3	54	075	1.5	052	3.8	0	2400	2.6	-7.1	49	073	2.6	074	5.7	0
DAY 07									DAY 08									DAY 09								
HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.				HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	2.8	-9.6	40	067	3.0	089	6.3	0	0300	2.3	-6.3	53	057	2.2	087	7.0	0	0300	*****	*****	**	***	****	***	****	***
0600	2.4	-10.0	40	072	1.7	052	5.7	0	0600	*****	*****	**	***	****	102	7.0	***	0600	*****	*****	**	***	****	***	****	***
0900	-.1	-2.6	83	069	2.6	073	7.0	0	0900	*****	*****	**	***	****	***	****	***	0900	*****	*****	**	***	****	***	****	***
1200	.9	*****	79	053	1.1	040	2.5	9	1200	*****	*****	**	***	****	***	****	***	1200	*****	*****	**	***	****	***	****	***
1500	1.5	-1.7	79	054	1.3	036	4.4	10	1500	*****	*****	**	***	****	***	****	***	1500	*****	*****	**	***	****	***	****	***
1800	2.9	-3.0	65	051	1.6	023	4.4	7	1800	*****	*****	**	***	****	***	****	***	1800	*****	*****	**	***	****	***	****	***
2100	3.1	-6.6	49	068	1.8	081	4.4	0	2100	*****	*****	**	***	****	***	****	***	2100	*****	*****	**	***	****	***	****	***
2400	2.6	-8.2	45	074	1.6	065	4.4	0	2400	*****	*****	**	***	****	***	****	***	2400	*****	*****	**	***	****	***	****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	*****	*****	**	***	****	***	*****	***	0300	*****	*****	**	***	****	***	*****	***
0600	*****	*****	**	***	****	***	*****	***	0600	*****	*****	**	***	****	***	*****	***
0900	*****	*****	**	***	****	***	*****	***	0900	*****	*****	**	***	****	***	*****	***
1200	*****	*****	**	***	****	***	*****	***	1200	*****	*****	**	***	****	***	*****	***
1500	*****	*****	**	***	****	***	*****	***	1500	*****	*****	**	***	****	***	*****	***
1800	*****	*****	**	***	****	***	*****	***	1800	*****	*****	**	***	****	***	*****	***
2100	*****	*****	**	***	****	***	*****	***	2100	*****	*****	**	***	****	***	*****	***
2400	*****	*****	**	***	****	***	*****	***	2400	*****	*****	**	***	****	***	*****	***

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	*****	*****	**	***	****	***	*****	***	0300	*****	*****	**	***	****	***	*****	***
0600	*****	*****	**	***	****	***	*****	***	0600	*****	*****	**	***	****	***	*****	***
0900	*****	*****	**	***	****	***	*****	***	0900	*****	*****	**	***	****	***	*****	***
1200	*****	*****	**	***	****	***	*****	***	1200	*****	*****	**	***	****	***	*****	***
1500	*****	*****	**	***	****	***	*****	***	1500	*****	*****	**	***	****	***	*****	***
1800	*****	*****	**	***	****	***	*****	***	1800	*****	*****	**	***	****	***	*****	***
2100	*****	*****	**	***	****	***	*****	***	2100	*****	*****	**	***	****	***	*****	***
2400	*****	*****	**	***	****	***	*****	***	2400	*****	*****	**	***	****	***	*****	***

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	*****	*****	**	***	****	***	*****	***	0300	*****	*****	**	***	****	***	*****	***
0600	*****	*****	**	***	****	***	*****	***	0600	*****	*****	**	***	****	***	*****	***
0900	*****	*****	**	***	****	***	*****	***	0900	*****	*****	**	***	****	***	*****	***
1200	*****	*****	**	***	****	***	*****	***	1200	*****	*****	**	***	****	***	*****	***
1500	*****	*****	**	***	****	***	*****	***	1500	*****	*****	**	***	****	***	*****	***
1800	*****	*****	**	***	****	***	*****	***	1800	*****	*****	**	***	****	***	*****	***
2100	*****	*****	**	***	****	***	*****	***	2100	*****	*****	**	***	****	***	*****	***
2400	*****	*****	**	***	****	***	*****	***	2400	*****	*****	**	***	****	***	*****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	H	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	*****	*****	**	***	****	***	*****	***	0300	*****	*****	**	***	****	***	*****	***	0300	*****	*****	**	***	****	***	*****	***
0600	*****	*****	**	***	****	***	*****	***	0600	*****	*****	**	***	****	***	*****	***	0600	*****	*****	**	***	****	***	*****	***
0900	*****	*****	**	***	****	***	*****	***	0900	*****	*****	**	***	****	***	*****	***	0900	*****	*****	**	***	****	***	*****	***
1200	*****	*****	**	***	****	***	*****	***	1200	*****	*****	**	***	****	***	*****	***	1200	*****	*****	**	***	****	***	*****	***
1500	*****	*****	**	***	****	***	*****	***	1500	*****	*****	**	***	****	***	*****	***	1500	*****	*****	**	***	****	***	*****	***
1800	*****	*****	**	***	****	***	*****	***	1800	*****	*****	**	***	****	***	*****	***	1800	*****	*****	**	***	****	***	*****	***
2100	*****	*****	**	***	****	***	*****	***	2100	*****	*****	**	***	****	***	*****	***	2100	*****	*****	**	***	****	***	*****	***
2400	*****	*****	**	***	****	***	*****	***	2400	*****	*****	**	***	****	***	*****	***	2400	*****	*****	**	***	****	***	*****	***

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	*****	*****	**	***	****	***	*****	***
0600	*****	*****	**	***	****	***	*****	***
0900	*****	*****	**	***	****	***	*****	***
1200	*****	*****	**	***	****	***	*****	***
1500	*****	*****	**	***	****	***	*****	***
1800	*****	*****	**	***	****	***	*****	***
2100	*****	*****	**	***	****	***	*****	***
2400	*****	*****	**	***	****	***	*****	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSTINA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

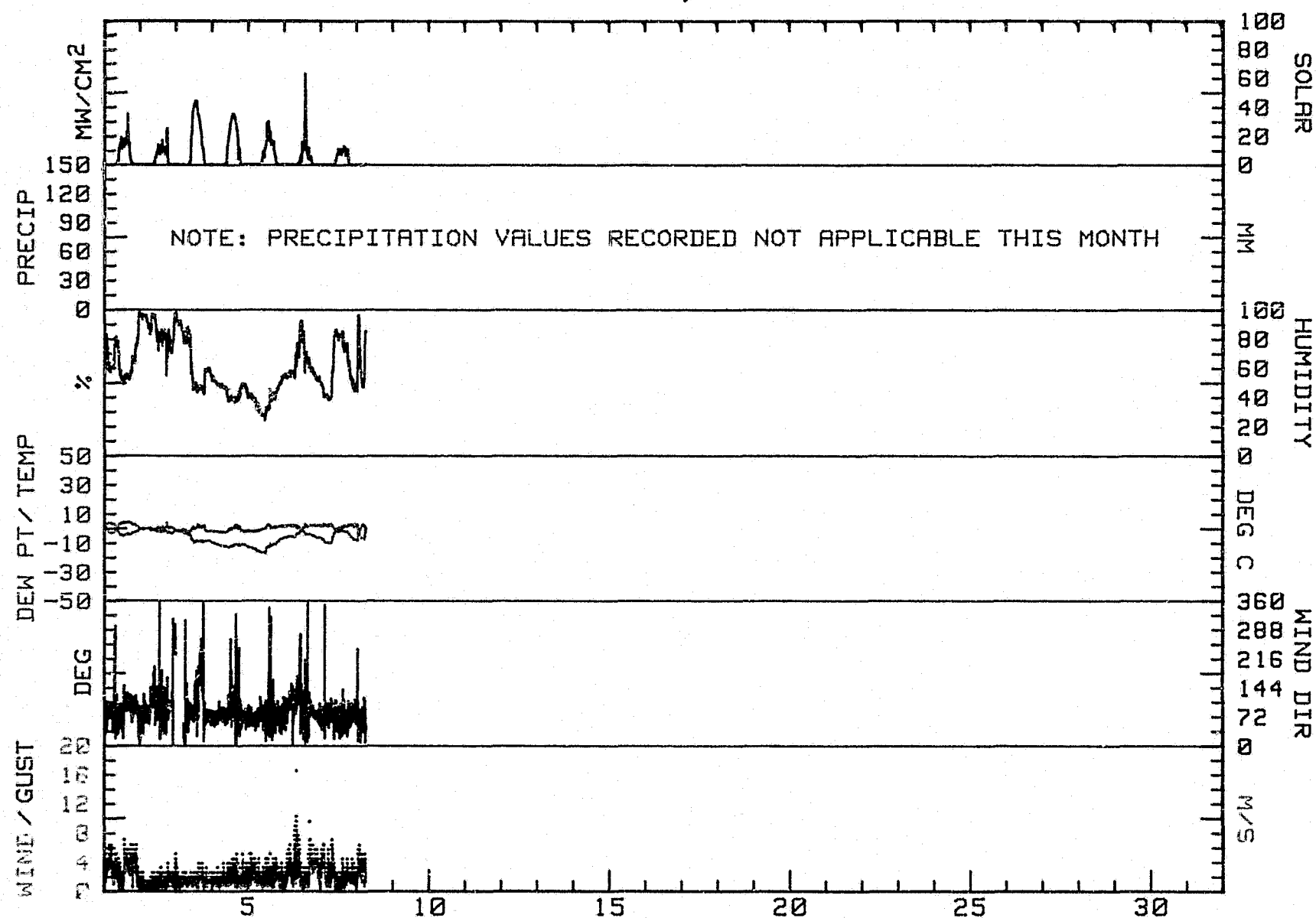
DAY	HAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	HAX. GUST DIR. DFG	HAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQM	DAY
1	5.1	-1	2.5	086	2.3	2.7	122	7.0	E	66	-2.9	****	1243	1
2	4.3	-1.4	1.5	089	.7	1.1	***	5.1	E	83	-2.2	****	872	2
3	3.2	-2.2	.5	094	.8	1.3	147	3.8	ENE	64	-6.8	****	2588	3
4	3.1	-2.7	.2	084	1.3	1.6	133	5.1	ENE	44	-11.7	****	2073	4
5	3.3	-2.5	.4	068	1.5	1.8	093	5.1	ENE	39	-12.4	****	1327	5
6	3.3	-.8	1.3	093	2.1	2.6	139	16.5	ENE	61	-4.9	****	945	6
7	3.9	-.4	1.8	065	1.8	2.0	073	7.0	ENE	58	-5.7	****	741	7
8	3.5	-2.9	.3	065	2.2	3.0	087	7.0	NE	65	-5.5	****	0	8
9	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	9
10	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	10
11	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	11
12	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	12
13	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	13
14	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	14
15	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	15
16	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	16
17	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	17
18	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	18
19	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	19
20	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	20
21	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	21
22	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	22
23	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	23
24	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	24
25	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	25
26	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	26
27	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	27
28	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	28
29	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	29
30	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	30
31	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	31
MONTH	5.1	-2.9	1.0	081	1.5	1.9	139	16.5	ENE	58	-6.5	****	9789	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 8.9
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 8.3
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 10.2
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 9.5

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
October, 1984



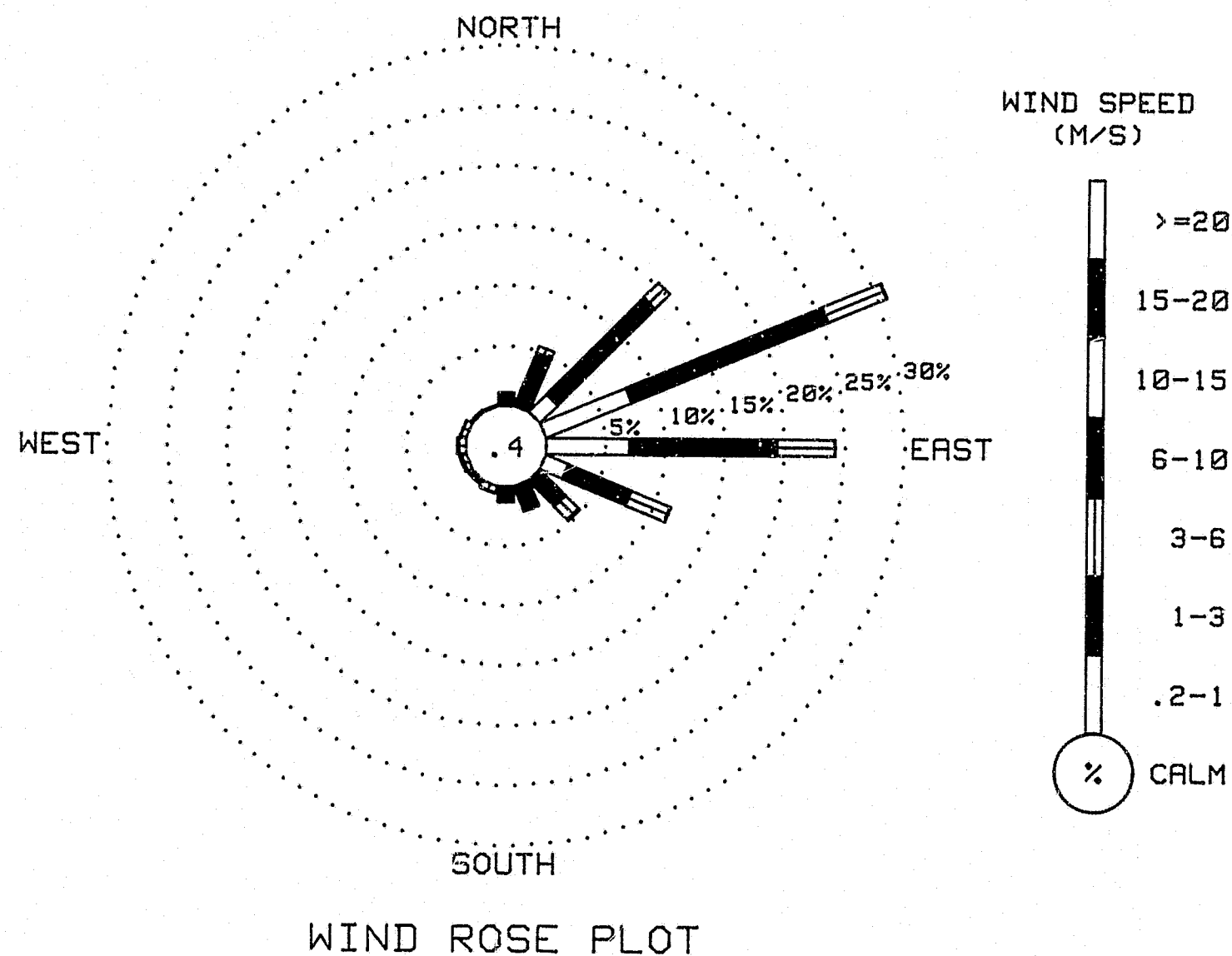
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	0.00	.95	.15	0.00	0.00	0.00	0.00	1.10
NNE	.20	4.55	.65	0.00	0.00	0.00	0.00	5.40
NE	2.10	11.39	1.75	0.00	0.00	0.00	0.00	15.24
ENE	7.75	17.69	5.25	.05	0.00	0.00	0.00	30.73
E	7.00	12.29	4.85	.05	0.00	0.00	0.00	24.19
ESE	2.05	5.70	3.50	.10	0.00	0.00	0.00	11.34
SE	.25	2.80	1.55	.15	0.00	0.00	0.00	4.75
SSE	.05	2.00	.20	0.00	0.00	0.00	0.00	2.25
S	0.00	1.25	.05	0.00	0.00	0.00	0.00	1.30
SSW	0.00	.60	.05	0.00	0.00	0.00	0.00	.65
SW	0.00	.30	.15	0.00	0.00	0.00	0.00	.45
WSW	0.00	.40	.20	0.00	0.00	0.00	0.00	.60
W	0.00	.60	.15	0.00	0.00	0.00	0.00	.75
WNW	0.00	.50	.05	0.00	0.00	0.00	0.00	.55
NW	0.00	.20	0.00	0.00	0.00	0.00	0.00	.20
NNW	0.00	.10	0.00	0.00	0.00	0.00	0.00	.10
CALM								.40
TOTAL	19.39	61.32	18.54	.35	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
2001 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
8928 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 5 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
October, 1984



R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	0	1	7	13	15	16	16	18	21	14	4	1	0	0	0	0	0	5
2	0	0	0	0	0	0	0	0	0	2	6	10	9	12	12	10	9	15	2	0	0	0	0	0	4
3	0	0	0	0	0	0	0	0	1	9	30	41	44	40	34	28	19	10	3	0	0	0	0	0	11
4	0	0	0	0	0	0	0	0	1	6	19	27	32	35	33	28	18	8	2	0	0	0	0	0	9
5	0	0	0	0	0	0	0	0	1	8	9	17	24	22	17	16	13	7	1	0	0	0	0	0	6
6	0	0	0	0	0	0	0	0	0	2	4	8	12	39	14	7	5	4	0	0	0	0	0	0	4
7	0	0	0	0	0	0	0	0	0	2	5	9	9	9	10	11	8	9	2	0	0	0	0	0	3
8	0	0	0	0	0	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
9	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
10	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
11	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
12	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
13	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
14	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
19	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
20	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
23	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
25	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
26	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
31	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING October, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	2085	23
WIND SPEED	2085	23
WIND DIRECTION	2001	22
PEAK GUST	2085	23
RELATIVE HUMIDITY	1655	19
PRECIPITATION	0	0
SOLAR RADIATION	2085	23
DEW POINT	1655	19

THERE ARE 8928 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 5 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH -2 RH Points
2. Solar -1 mW/CM²
3. Wind Direction -180 degrees

Additional comments on this month's data:

1. No data after 10/8. Data tape ran out due to 5 minute recording intervals.
2. Intermittent wind direction data lost due to frozen wind vane.
3. Wind vane tail not attached. All wind direction data off by 180 degrees, but have been adjusted prior to publication.

No precipitation data for November

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

DAY 01

DAY 02

DAY 03

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.
NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD
DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW
0300 ***** ** *** **	0300 ***** ** *** **	0300 ***** ** *** **	0300 ***** ** *** **	0300 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **
0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0600 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **
0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	0900 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **
1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1200 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **
1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1500 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **
1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	1800 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **
2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2100 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **					
2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **	2400 ***** ** *** **										

DAY 04

DAY 05

DAY 06

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.
NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD
DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW
0300 -11.6 ***** 92 359 .3 356 3.2 0	0300 -8.4 -12.0 75 079 .9 106 2.5 0	0300 -4.6 ***** 82 047 1.1 039 3.2 0	0600 -10.9 -12.4 89 025 .7 356 2.5 0	0600 -6.7 -11.8 67 041 1.4 028 4.4 0	0600 -4.1 -7.9 75 066 1.4 072 3.8 0	0900 -11.5 ***** 91 012 .7 345 2.5 1	0900 -7.2 -11.5 71 032 1.6 027 6.3 0	0900 -3.9 ***** 67 077 1.5 028 3.8 0	1200 -9.2 -13.5 71 040 .9 026 2.5 19	1200 -6.4 -10.3 74 058 1.7 097 5.1 7	1200 -3.5 ***** 65 052 1.2 062 2.5 7	1500 -8.9 -13.4 70 058 1.1 119 3.8 2	1500 -5.9 -8.6 81 044 1.0 039 3.8 2	1500 -5.0 -7.8 81 055 1.1 039 3.2 3
1800 -9.8 ***** 72 044 .9 087 3.2 0	1800 -5.8 -7.8 86 041 1.2 071 3.2 0	1800 -5.1 -9.0 74 065 1.4 040 3.2 0	2100 -7.9 -13.5 64 074 1.1 059 3.2 0	2100 -5.0 -7.0 86 039 1.5 056 5.7 0	2100 -4.5 -9.7 67 073 1.4 063 3.2 0	2400 -7.8 -13.2 65 064 1.5 041 3.8 0	2400 -5.1 -6.9 87 006 1.4 063 2.5 0	2400 -4.6 -10.8 62 067 1.5 094 3.8 0						

DAY 07

DAY 08

DAY 09

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.
NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD
DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW
0300 -4.6 -10.0 66 072 .7 116 2.5 0	0300 -7.1 -10.4 77 057 1.0 007 3.2 0	0300 -11.9 ***** 92 032 .4 020 3.2 0	0600 -6.7 ***** 70 058 1.3 002 3.8 0	0600 -7.6 -10.6 79 092 1.1 049 3.8 0	0600 -12.4 ***** 90 101 .6 114 2.5 0	0900 -8.4 -8.5 99 056 .9 079 4.4 0	0900 -7.6 -11.8 72 041 1.4 034 3.8 0	0900 -12.1 -13.4 90 075 .9 076 3.8 0	1200 -5.4 -9.8 71 043 .6 352 2.5 26	1200 -5.8 -12.5 59 061 1.9 059 5.1 8	1200 -13.0 -14.7 87 068 .7 080 1.9 5	1500 -7.0 -9.7 81 307 .4 001 3.2 2	1500 -6.5 ***** 61 065 .8 085 3.8 3	1500 -13.0 -15.4 82 075 .8 080 3.2 2
1800 -8.4 -9.1 95 358 .8 034 3.2 0	1800 -8.9 -11.4 82 112 .9 038 3.2 0	1800 -14.9 -16.5 88 057 1.3 047 4.4 0	2100 -7.8 -8.5 95 087 .7 121 2.5 0	2100 -9.7 -11.8 85 089 .7 119 3.8 0	2100 -15.0 ***** 87 058 1.0 061 1.9 0	2400 -8.2 ***** 90 079 .6 317 3.2 0	2400 -9.8 -11.3 89 001 .7 359 3.2 0	2400 -13.7 ***** 56 070 1.0 059 2.5 0						

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

DAY 10

DAY 11

DAY 12

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-15.0	-22.9	51	082	1.1	014	3.2	0	0300	-16.3	-24.3	50	048	1.0	074	2.7	0	0300	-17.7	-25.2	52	037	1.3	047	4.4	0
0600	-16.1	-23.1	55	064	.7	102	2.3	0	0600	-16.4	*****	**	044	1.6	030	3.2	0	0600	*****	*****	**	050	2.6	056	5.7	0
0900	-14.9	-22.6	52	064	.8	097	1.9	0	0900	-16.8	*****	**	***	****	***	****	0	0900	*****	*****	**	***	****	***	****	0
1200	-12.4	*****	42	071	1.0	063	2.5	15	1200	-15.3	-24.4	46	089	1.7	***	****	***	1200	-16.7	-26.2	44	041	2.6	064	5.7	11
1500	-13.5	-22.7	46	052	.8	033	1.9	2	1500	-16.0	-24.3	49	040	1.2	058	3.2	2	1500	-16.0	-24.3	49	064	1.5	092	6.3	2
1800	-14.5	-22.9	49	071	1.3	036	3.2	0	1800	-17.6	-25.3	51	055	1.6	080	3.8	0	1800	-14.3	-23.2	47	021	1.5	005	5.1	0
2100	-15.5	-23.4	51	040	1.1	027	3.2	0	2100	-17.3	-24.6	53	040	1.6	044	3.8	0	2100	-15.5	-23.6	50	053	1.2	055	6.3	0
2400	-15.5	-23.6	50	062	1.3	036	4.4	0	2400	-17.7	-25.2	52	046	1.8	040	3.8	0	2400	-17.2	-25.2	50	045	1.5	072	5.1	0

DAY 13

DAY 14

DAY 15

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-15.3	-24.6	45	043	1.5	050	4.4	0	0300	-17.5	*****	41	023	.9	341	2.5	0	0300	-8.3	*****	73	023	1.2	026	3.2	0
0600	-16.5	*****	47	056	1.2	064	3.2	0	0600	-16.4	*****	41	039	.9	035	3.2	0	0600	-7.6	*****	81	034	.6	028	1.9	0
0900	-16.0	*****	45	065	1.3	018	3.2	0	0900	-15.0	-26.0	39	061	1.1	011	3.2	0	0900	-6.9	*****	88	023	.6	019	1.9	0
1200	-14.1	-24.9	40	047	1.0	070	2.5	11	1200	-12.6	*****	38	071	1.0	026	3.2	10	1200	-4.5	*****	75	045	1.3	032	3.8	6
1500	-15.4	-25.5	42	058	.7	072	3.2	2	1500	-13.0	-23.9	40	057	.9	060	2.5	2	1500	-4.6	-8.5	74	069	1.3	051	4.4	1
1800	-17.0	*****	42	073	.9	002	3.2	0	1800	-12.9	*****	42	036	1.1	014	5.1	0	1800	-5.1	-8.5	77	076	1.4	019	3.8	0
2100	-17.2	-27.1	42	065	1.0	005	3.2	0	2100	-10.9	-19.1	51	067	.9	352	2.5	0	2100	-8.3	-9.0	95	076	1.0	112	3.2	0
2400	-16.0	-26.3	41	063	.9	103	2.5	0	2400	-10.3	*****	82	055	.9	047	2.5	0	2400	-7.5	*****	86	027	.8	359	3.8	0

DAY 16

DAY 17

DAY 18

HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.		HOUR	DEW	WIND	WIND	GUST	MAX.							
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-7.0	-10.0	79	049	1.5	017	3.8	0	0300	-6.5	-16.8	44	056	1.4	045	3.8	0	0300	-6.8	-14.1	56	068	1.0	094	2.5	0
0600	-6.7	-9.6	80	066	.8	037	2.5	0	0600	-8.5	*****	47	085	1.3	095	3.2	0	0600	-7.7	-13.7	62	061	1.5	049	3.8	0
0900	-7.4	-9.5	85	064	.7	054	2.5	0	0900	-8.3	-17.7	47	061	1.5	048	4.4	0	0900	-8.2	*****	61	063	1.2	036	3.2	0
1200	-6.6	-13.3	59	051	1.2	024	3.8	14	1200	-8.8	-17.9	48	081	1.4	119	3.2	5	1200	-7.2	-13.6	60	074	1.0	113	2.5	6
1500	-7.5	-12.9	65	058	1.4	033	3.8	1	1500	-8.4	-17.8	47	074	1.4	095	3.2	2	1500	-8.0	-13.8	63	062	.9	032	2.5	2
1800	-7.7	-14.5	58	069	1.3	039	3.2	0	1800	-8.3	-16.7	51	075	1.1	071	2.5	0	1800	-8.5	-14.3	63	053	1.9	049	4.4	0
2100	-6.9	-15.4	51	058	1.4	041	3.8	0	2100	-8.2	*****	53	071	1.0	030	3.2	0	2100	-8.4	-15.0	59	059	1.4	062	3.2	0
2400	-6.7	-16.2	47	072	2.2	067	5.7	0	2400	-7.5	*****	55	063	.8	022	2.5	0	2400	-8.1	-15.1	57	057	1.1	057	2.5	0

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R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	-8.4	-15.8	55	059	1.0	052	3.8	0	0300	-7.7	-15.6	53	020	1.3	346	4.4	0
0600	-8.1	-16.5	51	056	1.4	034	3.2	0	0600	-7.5	-9.9	83	105	2.1	117	10.8	0
0900	-7.8	-17.2	47	068	1.1	076	1.9	0	0900	-5.4	-11.3	63	106	5.6	103	15.2	0
1200	-7.4	-17.7	44	055	1.6	036	4.4	4	1200	-5.0	-10.5	65	130	7.6	121	17.8	1
1500	-6.7	-17.3	43	074	1.5	055	3.8	2	1500	-4.3	-7.6	78	127	4.7	125	13.3	0
1800	-7.6	-17.0	47	064	1.4	054	4.4	0	1800	-2.0	-7.3	67	117	10.6	130	24.1	0
2100	-8.3	-17.4	48	055	1.9	044	4.4	0	2100	-1.6	-6.7	68	118	10.4	120	26.0	0
2400	-6.9	-16.4	47	074	1.6	101	4.4	0	2400	-1.5	-6.0	71	118	8.1	128	17.8	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	-7.6	-8.1	96	107	.5	015	2.5	0	0300	-10.9	-11.7	94	352	1.2	342	3.2	0
0600	-8.2	*****	95	***	****	***	1.3	0	0600	-10.2	*****	92	032	.4	095	4.3	0
0900	-8.8	*****	89	061	1.4	051	3.2	0	0900	-10.6	*****	87	026	.7	019	2.5	0
1200	-7.7	-9.9	84	088	1.6	122	4.4	1	1200	-9.8	*****	86	048	.5	057	1.9	1
1500	-6.6	-13.3	59	061	1.1	000	4.4	0	1500	-10.3	*****	81	060	.7	012	1.9	0
1800	-9.2	-14.2	67	059	1.0	354	3.2	0	1800	-10.9	*****	87	072	.5	016	1.9	0
2100	-10.1	*****	83	029	.8	011	3.2	0	2100	-10.3	*****	81	068	.6	047	2.5	0
2400	-8.9	-10.8	86	032	1.2	042	3.8	0	2400	-9.7	-13.1	76	044	1.2	050	3.2	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	DEG.	M/S	MW
0300	-14.9	*****	87	106	1.0	117	2.5	0	0300	-16.4	-20.1	73	046	.8	341	1.9	0
0600	-15.1	*****	86	***	****	***	1.3	0	0600	-16.7	*****	**	067	1.6	061	3.2	0
0900	-16.0	*****	87	***	****	***	1.3	0	0900	-16.0	-23.6	52	077	1.5	065	3.2	0
1200	-15.8	-18.6	79	***	****	***	1.3	1	1200	-15.0	-22.5	53	072	1.7	082	3.2	1
1500	-15.8	-18.6	79	***	****	***	1.9	0	1500	-15.5	*****	65	064	1.2	098	3.2	0
1800	-16.5	*****	83	***	****	***	1.9	0	1800	-16.8	-19.7	78	053	.9	028	1.9	0
2100	-15.8	*****	72	***	****	***	1.9	0	2100	-15.5	-20.2	67	064	1.3	059	3.2	0
2400	-16.0	*****	61	***	****	***	2.5	0	2400	-16.1	-22.3	59	059	2.7	060	5.1	0

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R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR CLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.	HOUR	DEW	WIND	WIND	GUST MAX.
NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD	NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD
DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW	DEG C DEG C % DEG. M/S DEG. M/S MW
0300 -14.1 -18.4 70 046 1.4 033 4.4 0	0300 -11.2 ***** 83 090 .6 049 1.9 0	0300 -9.4 -11.0 88 088 .9 107 2.5 0	0600 -15.1 -19.2 71 062 1.9 057 5.7 0	0600 -11.2 ***** 89 091 .6 104 1.9 0	0600 -9.1 -10.5 90 103 .7 117 2.5 0	0900 -14.3 ***** 67 054 1.4 038 4.4 0	0900 -10.1 ***** 85 073 1.0 036 3.2 0	0900 -10.0 -11.1 92 091 .9 089 3.2 0	1200 -13.2 ***** 69 088 1.0 096 3.8 2	1200 -10.1 ***** 87 054 .5 069 1.9 1	1200 -9.1 -11.3 84 067 1.1 090 3.8 0	1500 -12.1 -17.1 66 084 1.1 109 3.2 0	1500 -10.9 ***** 89 064 .3 354 2.5 0	1500 -9.2 ***** 82 100 1.3 083 3.2 0
1800 -12.6 ***** 75 050 .7 105 2.5 0	1800 -10.8 ***** 90 084 .7 040 1.9 0	1800 -8.3 -11.9 75 081 1.4 073 3.8 0	2100 -12.2 ***** 83 119 .5 111 1.3 0	2100 -10.5 -11.7 91 114 .7 123 1.9 0	2100 -7.5 ***** 72 100 1.2 104 4.4 0	2400 -11.8 -14.3 82 095 .7 132 1.9 0	2400 -9.9 ***** 90 072 .5 125 2.5 0	2400 -7.7 -10.4 81 090 1.4 082 4.4 0						

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

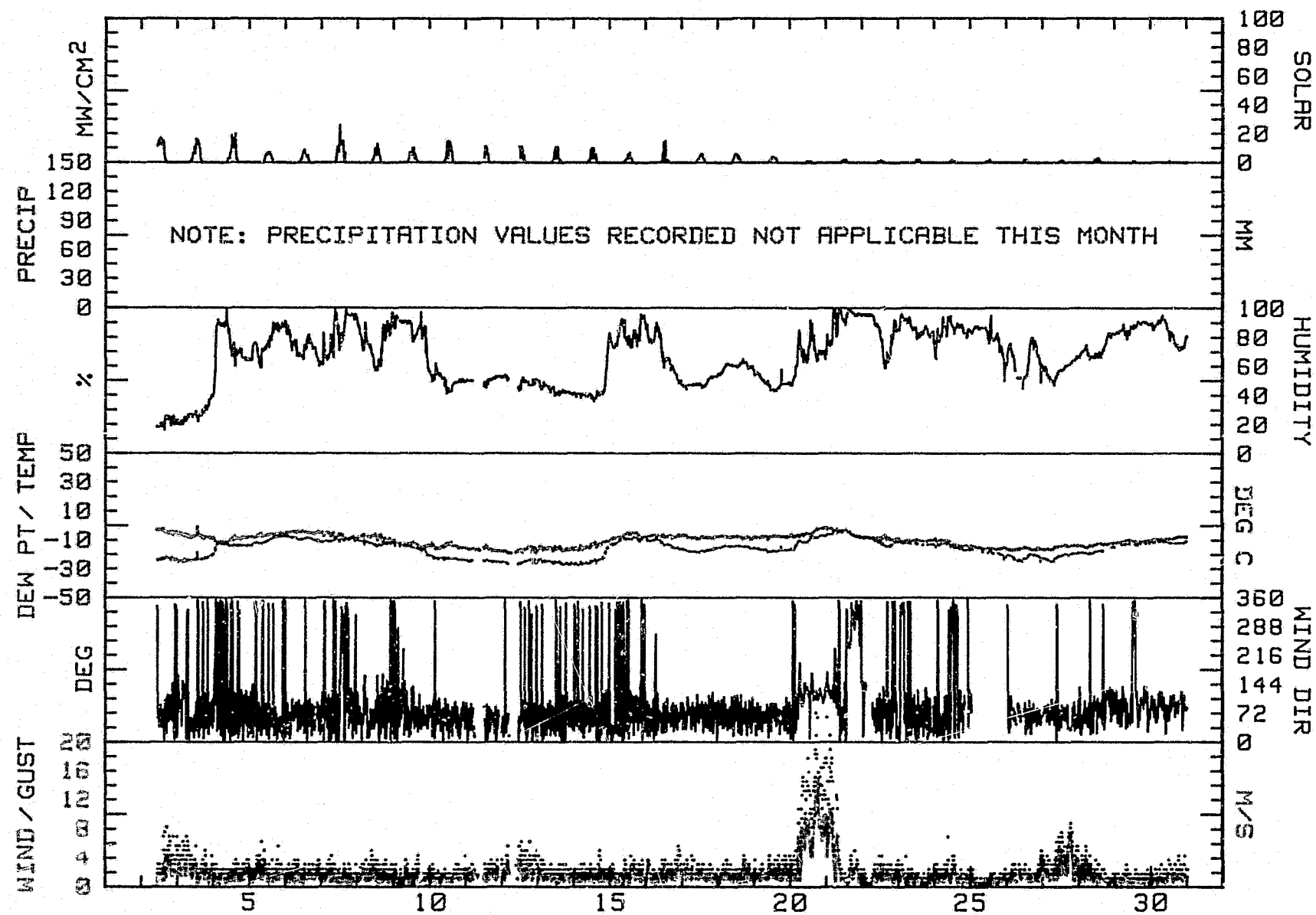
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQ	DAY
1	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	1
2	-1.9	-6.8	-4.4	073	1.5	2.0	115	8.3	NE	22	-23.0	****	1217	2
3	-6	-9.4	-5.0	063	1.3	1.8	317	7.0	NE	28	-23.0	****	620	3
4	-7.3	-11.8	-9.6	048	.8	1.3	119	3.8	NNE	74	-13.4	****	565	4
5	-5.0	-8.4	-6.7	041	1.3	1.6	027	6.3	NNE	77	-9.9	****	285	5
6	-3.5	-5.6	-4.6	064	1.3	1.5	072	3.8	E	73	-8.6	****	275	6
7	-4.2	-9.8	-7.0	051	.6	1.1	079	4.4	ESE	80	-9.7	****	630	7
8	-5.6	-11.3	-8.5	065	.9	1.3	059	5.1	NE	76	-11.6	****	355	8
9	-9.6	-15.1	-12.4	067	.8	1.0	047	4.4	ENE	83	-15.8	****	323	9
10	-11.4	-16.3	-13.9	063	1.0	1.1	036	4.4	FNE	50	-22.6	****	490	10
11	-13.6	-18.0	-15.8	046	1.4	1.6	080	3.8	NE	51	-24.5	****	249	11
12	-14.3	-19.1	-16.7	045	1.5	1.9	092	6.3	NE	49	-24.8	****	297	12
13	-13.8	-17.8	-15.8	058	1.1	1.3	050	4.4	NE	44	-25.3	****	280	13
14	-10.3	-17.5	-13.9	051	.9	1.2	014	5.1	NE	42	-24.1	****	260	14
15	-4.5	-10.1	-7.3	050	.9	1.2	051	4.4	NNE	81	-9.3	****	173	15
16	-6.0	-8.9	-7.5	061	1.3	1.5	067	5.7	FNE	65	-12.8	****	188	16
17	-6.1	-9.2	-7.7	071	1.2	1.4	048	4.4	F	48	-17.1	****	198	17
18	-6.7	-9.7	-8.2	061	1.2	1.4	049	4.4	NE	60	-14.2	****	208	18
19	-6.4	-9.8	-8.1	063	1.4	1.6	036	4.4	E	48	-16.8	****	140	19
20	-.9	-8.3	-4.6	117	5.9	6.5	120	26.0	ESE	68	-9.8	****	35	20
21	-1.2	-8.1	-4.7	115	1.5	2.9	148	23.5	ESE	90	-5.5	****	61	21
22	-6.4	-10.4	-8.4	061	1.0	1.3	122	4.4	E	83	-10.9	****	43	22
23	-8.5	-11.2	-9.9	038	.6	.9	095	4.3	NNE	87	-11.9	****	48	23
24	-8.9	-14.6	-11.8	036	.7	1.2	053	7.0	NNE	85	-13.9	****	33	24
25	-13.7	-16.8	-15.3	106	1.0	.7	***	2.5	ESE	75	-19.2	****	28	25
26	-14.6	-17.5	-16.1	063	1.4	1.5	060	5.1	ENE	63	-21.6	****	35	26
27	-13.3	-16.8	-15.1	054	2.5	2.7	035	8.9	NE	58	-21.2	****	38	27
28	-11.8	-15.4	-13.6	064	1.1	1.3	057	5.7	ENE	69	-18.2	****	65	28
29	-9.5	-11.9	-10.7	082	.6	.8	036	3.2	ESE	86	-12.4	****	20	29
30	-7.3	-10.0	-8.7	090	1.1	1.2	104	4.4	E	81	-11.3	****	5	30
MONTH	-.6	-19.1	-10.0	070	1.2	1.6	120	26.0	ENE	63	-16.0	****	7159	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 18.4
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 23.5
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 15.9
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 15.9

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
November, 1984



R & M CONSULTANTS, INC.
SUSTNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	1.76	4.72	.08	.04	0.00	0.00	0.00	6.61
NNE	3.09	9.53	.50	.08	0.00	0.00	0.00	13.21
NE	4.39	13.38	1.34	.13	0.00	0.00	0.00	19.23
ENE	5.10	14.09	.59	0.00	0.00	0.00	0.00	19.77
E	3.76	12.83	.46	.25	0.00	0.00	0.00	17.31
ESE	2.93	5.69	.29	1.46	.42	.04	0.00	10.83
SE	1.21	1.84	.33	.67	.17	0.00	0.00	4.22
SSE	.63	.59	.17	.08	0.00	0.00	0.00	1.46
S	.08	0.00	.08	0.00	0.00	0.00	0.00	.17
SSW	.04	.04	0.00	0.00	0.00	0.00	0.00	.08
SW	.13	.25	0.00	0.00	0.00	0.00	0.00	.38
WSW	.25	.21	0.00	0.00	0.00	0.00	0.00	.46
W	.08	.13	0.00	0.00	0.00	0.00	0.00	.21
WNW	.21	.25	0.00	0.00	0.00	0.00	0.00	.46
NW	.54	.88	.04	0.00	0.00	0.00	0.00	1.46
NNW	.88	2.80	.08	0.00	0.00	0.00	0.00	3.76
CALM								.38
TOTAL	25.08	67.22	3.97	2.72	.59	.04	0.00	100.00

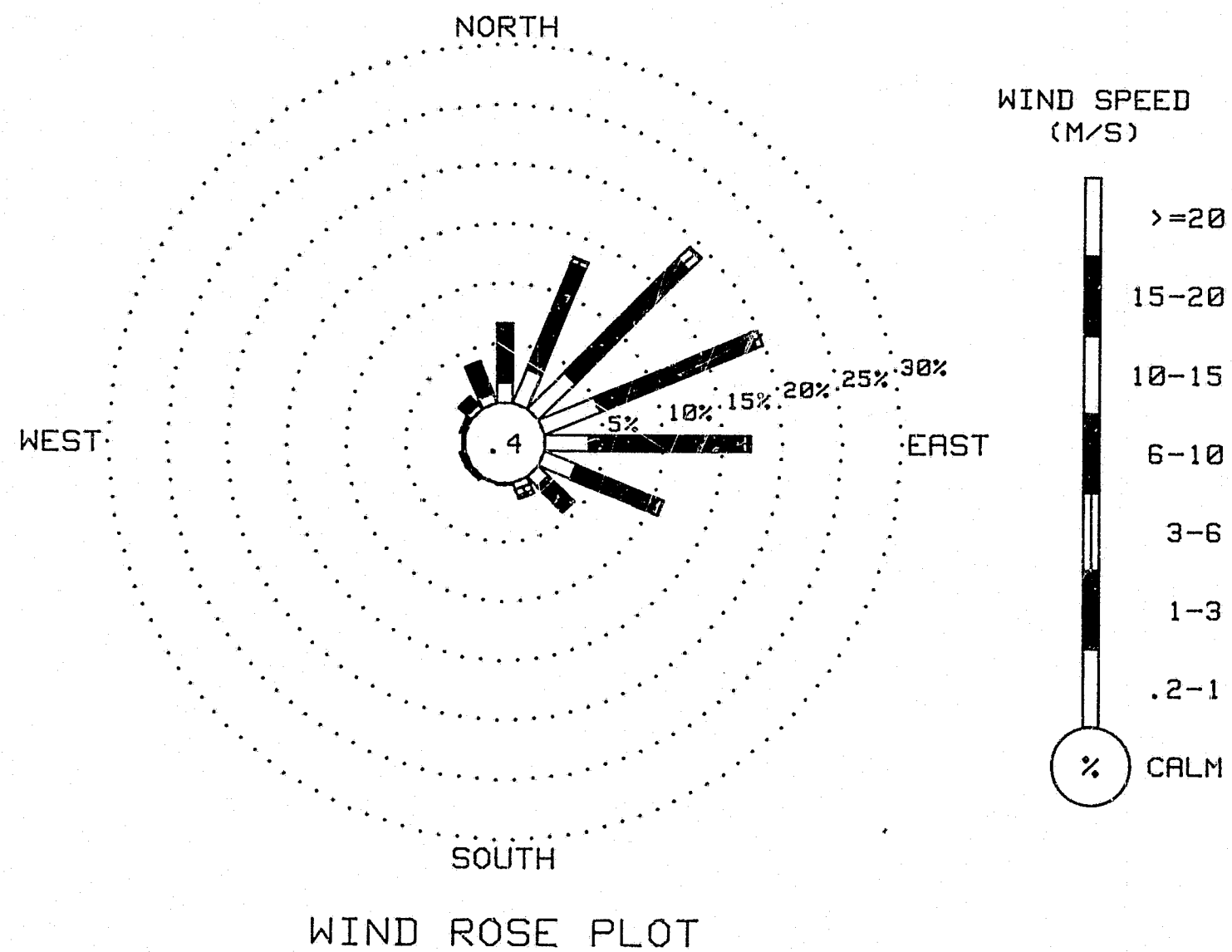
NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT

2392 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

2880 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 15 MINUTE DATA.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
November, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
2	***	***	***	***	***	***	***	***	***	***	12	15	17	14	12	3	1	0	0	0	0	0	0	0	3
3	0	0	0	0	0	0	0	0	1	2	7	9	16	15	10	2	0	0	0	0	0	0	0	0	3
4	0	0	0	0	0	0	0	0	0	3	4	11	15	12	11	2	0	0	0	0	0	0	0	0	2
5	0	0	0	0	0	0	0	0	0	1	5	6	7	6	4	1	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	0	0	1	3	7	7	5	5	1	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	3	9	15	14	13	7	2	0	0	0	0	0	0	0	0	3
8	0	0	0	0	0	0	0	0	0	1	3	9	9	9	4	1	0	0	0	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	2	6	6	9	5	4	1	0	0	0	0	0	0	0	0	1
10	0	0	0	0	0	0	0	0	0	1	3	13	12	13	7	1	0	0	0	0	0	0	0	0	2
11	0	0	0	0	0	0	0	0	0	***	***	***	8	10	5	1	0	0	0	0	0	0	0	0	1
12	0	0	0	0	0	0	0	0	0	***	***	8	8	6	3	1	0	0	0	0	0	0	0	0	1
13	0	0	0	0	0	0	0	0	0	1	3	9	7	5	2	1	0	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	0	0	0	1	3	8	6	4	4	1	0	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	1	2	4	4	4	2	0	0	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	0	1	9	5	2	1	0	0	0	0	0	0	0	0	0	1
17	0	0	0	0	0	0	0	0	0	1	2	4	6	5	3	1	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	0	1	3	6	5	4	2	0	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	0	1	3	3	3	3	1	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	1	2	3	2	1	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING November, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	2587	94
WIND SPEED	2523	92
WIND DIRECTION	2405	87
PEAK GUST	2446	89
RELATIVE HUMIDITY	1961	68
PRECIPITATION	0	0
SOLAR RADIATION	2599	94
DEW POINT	1961	68

THERE ARE 2756 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 15 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH +5 RH Points 11/2 - 11/28
 +7 11/28 - 11/30
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. No data on day 1 and half of day 2. Data tape ran out due to 5 minute recording intervals.
2. Intermittent wind speed and direction data lost due to frozen anemometer and wind vane.
3. Intermittent data for all parameters lost due to weather wizard malfunction. RH, Temperature, and Solar data estimated where possible.
4. Data recorded at 15 minute time intervals 11/2 - 11/28. Changed to 30 minutes on 11/28.

No precipitation data for December

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1984

DAY 01										DAY 02										DAY 03										
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-8.4	*****	90	066	.6	021	2.5	0		0300	-6.4	-11.3	68	071	1.2	043	4.4	0		0300	-3.8	*****	96	056	.6	058	3.2	0		
0600	-8.3	-9.4	92	048	1.0	047	2.5	0		0600	-6.8	-11.9	67	079	1.7	077	4.4	0		0600	-4.1	-5.2	92	051	1.3	024	5.7	0		
0900	-7.9	-8.7	94	081	1.0	101	3.2	0		0900	-7.1	-12.2	67	066	1.5	050	3.2	0		0900	-4.2	*****	89	055	.8	044	3.2	0		
1200	-7.1	-8.8	88	089	1.1	108	2.5	0		1200	-5.6	-14.2	51	064	1.7	030	3.8	0		1200	-4.4	-5.5	92	077	1.0	093	3.2	0		
1500	-6.2	-9.7	76	083	1.1	357	3.8	0		1500	-7.0	-9.7	81	038	1.5	029	4.4	0		1500	-3.7	*****	83	064	1.0	045	3.8	0		
1800	-6.7	*****	79	053	.9	018	2.5	0		1800	-4.5	-7.1	82	065	1.3	097	3.1	0		1800	-3.0	-5.8	81	059	1.3	088	3.2	0		
2100	-7.4	-10.4	79	009	1.1	325	3.8	0		2100	-4.1	-6.1	86	048	1.6	035	3.8	0		2100	-1.3	-5.5	73	100	2.2	111	8.3	0		
2400	-6.4	-10.9	70	064	1.4	072	3.2	0		2400	-4.2	*****	97	035	1.4	020	3.8	0		2400	1.5	-1.4	81	095	4.4	109	9.5	0		
DAY 04										DAY 05										DAY 06										
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-2.1	-4.3	85	062	1.6	054	3.8	0		0300	-3.2	-7.3	73	127	7.5	129	16.5	0		0300	-4.4	-12.1	55	074	2.2	058	5.7	0		
0600	.9	-6.4	58	073	3.8	070	12.1	0		0600	-3.6	-7.0	77	104	4.3	139	9.5	0		0600	-3.9	-13.4	48	080	1.6	074	5.1	0		
0900	0.0	-4.8	70	089	5.8	085	10.8	0		0900	-4.7	-5.3	96	088	1.2	136	5.1	0		0900	-3.3	-14.2	43	071	1.9	064	3.8	0		
1200	.8	-6.1	60	107	4.9	105	14.0	1		1200	-4.6	*****	96	014	1.0	029	2.5	0		1200	-4.1	-15.2	42	075	1.5	075	3.8	2		
1500	-1.0	-4.2	79	103	3.0	102	6.3	0		1500	-4.7	*****	93	063	.3	112	1.9	0		1500	-5.3	*****	48	057	1.1	087	3.2	0		
1800	-1.9	-2.9	93	040	1.5	091	4.4	0		1800	-4.8	-6.5	88	069	1.6	062	5.1	0		1800	-7.2	-13.4	61	039	.9	044	2.5	0		
2100	-2.5	-3.1	96	105	.9	071	4.4	0		2100	-3.8	-9.8	63	069	1.7	075	3.8	0		2100	-6.8	-9.5	81	035	1.2	046	3.2	0		
2400	-3.0	-5.8	81	115	2.9	113	10.8	0		2400	-4.9	-11.5	60	070	1.6	054	3.2	0		2400	-8.3	-9.4	92	019	1.2	019	3.2	0		
DAY 07										DAY 08										DAY 09										
HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					HOUR	DEW	WIND	WIND	GUST	MAX.					
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-9.7	-10.5	94	354	1.4	008	3.2	0		0300	-8.1	-10.8	81	034	1.9	021	5.1	0		0300	-13.4	-18.2	67	121	2.1	142	4.4	0		
0600	-10.6	*****	93	028	.8	339	3.2	0		0600	-8.3	-10.0	88	051	1.1	017	2.5	0		0600	-13.4	-17.5	71	111	3.4	098	6.7	0		
0900	-9.8	-12.2	83	052	.9	356	3.2	0		0900	-8.7	-10.2	89	064	1.3	040	3.8	0		0900	-14.1	-20.8	57	121	5.1	122	7.6	0		
1200	-5.8	-7.3	89	047	.7	060	3.2	1		1200	-9.1	*****	90	053	1.0	029	3.2	1		1200	-14.3	-21.4	55	121	2.8	122	8.6	2		
1500	-10.4	*****	89	029	.8	044	3.2	0		1500	-11.1	*****	90	180	.6	250	2.5	0		1500	-18.8	-22.9	70	077	1.8	***	5.3	0		
1800	-10.2	-15.7	64	066	2.0	055	4.2	0		1800	-11.0	-13.8	80	073	1.5	060	4.4	0		1800	-18.4	*****	**	038	1.2	000	4.4	0		
2100	-10.4	-12.7	83	073	1.7	097	4.4	0		2100	-11.3	-16.9	63	113	2.7	108	5.7	0		2100	*****	*****	**	***	***	***	***	0		
2400	-9.0	-10.6	88	058	1.2	037	4.4	0		2400	-10.4	-18.6	65	118	2.9	103	4.4	0		2400	-16.8	*****	**	***	***	***	***	0		

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1984

DAY 10								DAY 11								DAY 12								
HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	*****	*****	**	***	***	***	2.6	0	0300	-16.0	-23.4	53	072	1.5	072	3.8	0	0300	*****	*****	63	030	1.0	***
0600	*****	*****	54	050	.9	059	3.2	0	0600	-16.3	*****	56	076	1.4	083	3.8	0	0600	-19.0	-22.9	71	010	1.8	010
0900	*****	*****	**	060	1.2	***	3.4	0	0900	-14.9	-20.5	62	031	1.4	041	3.2	0	0900	-19.8	-22.9	76	***	***	***
1200	*****	*****	**	***	***	***	4.2	***	1200	-12.6	*****	56	051	1.2	048	2.5	2	1200	-18.0	-24.4	57	037	1.3	056
1500	*****	*****	**	***	***	***	*****	0	1500	-12.5	-19.5	56	056	1.0	053	3.2	0	1500	-18.4	*****	67	068	.9	080
1800	*****	*****	**	***	***	***	6.1	0	1800	-13.5	-20.4	56	052	1.2	056	3.2	0	1800	*****	*****	56	072	1.6	083
2100	*****	*****	55	***	***	***	3.8	0	2100	-16.1	-20.4	69	038	1.4	086	3.8	0	2100	*****	*****	**	079	2.1	080
2400	*****	*****	53	***	***	***	6.2	0	2400	-17.7	-24.6	55	043	1.8	046	3.8	0	2400	-17.2	-25.4	49	081	1.8	***
DAY 13								DAY 14								DAY 15								
HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-15.2	-27.0	36	072	1.8	056	4.4	0	0300	-15.7	-28.4	33	054	2.3	053	6.3	0	0300	-11.9	-28.7	23	090	1.6	078
0600	-14.5	-25.0	41	069	1.7	096	4.6	0	0600	-14.8	-27.9	32	098	2.4	117	7.0	0	0600	-14.3	*****	25	037	1.1	052
0900	-14.3	-22.0	52	072	1.8	104	3.8	0	0900	-15.2	-29.0	30	100	1.9	090	5.7	0	0900	-16.6	-29.5	32	322	1.0	295
1200	-15.0	-22.7	52	065	2.2	070	4.4	1	1200	-17.5	-30.3	32	094	1.6	063	6.7	2	1200	-14.5	-18.7	70	074	1.4	109
1500	-15.1	-21.5	58	074	1.7	089	3.8	0	1500	-15.7	-30.9	26	080	2.1	063	4.4	3	1500	-15.6	-18.1	81	073	1.9	090
1800	-15.1	-21.9	56	058	1.6	078	3.2	0	1800	-14.0	-29.8	25	076	1.9	080	4.4	0	1800	-13.9	-17.1	77	069	1.4	052
2100	-16.1	-25.4	45	046	1.4	036	3.8	0	2100	-12.7	-29.1	24	067	1.8	069	4.4	0	2100	-13.6	*****	82	047	1.0	056
2400	-15.7	-28.1	34	067	3.0	085	7.0	0	2400	-12.7	-29.1	24	064	1.6	055	4.4	0	2400	-12.4	-14.1	87	060	1.1	041
DAY 16								DAY 17								DAY 18								
HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-12.6	*****	89	095	1.6	131	3.8	0	0300	-6.4	-7.4	93	055	1.5	049	5.1	0	0300	-6.6	-7.2	96	***	***	***
0600	-12.8	*****	89	131	.8	108	3.8	0	0600	-5.8	-6.8	93	109	1.9	138	4.4	0	0600	-5.9	-6.7	94	***	***	***
0900	-11.3	*****	89	357	.5	209	2.5	0	0900	-4.9	-5.6	95	***	***	***	6.3	0	0900	-5.8	*****	95	***	***	***
1200	-11.1	*****	88	018	.7	043	2.5	0	1200	-4.2	-6.7	83	***	***	***	7.6	0	1200	-5.0	-6.6	89	***	***	***
1500	-8.8	-10.3	89	083	1.6	056	3.8	0	1500	-4.9	-6.5	89	022	1.1	354	6.3	0	1500	-5.4	*****	96	***	***	***
1800	-9.6	-10.3	95	082	1.0	134	5.1	0	1800	-5.7	*****	97	118	.7	114	2.5	0	1800	-4.9	-5.3	97	***	***	***
2100	-7.2	-8.0	94	049	1.4	074	4.4	0	2100	-6.5	-7.1	96	110	.4	050	2.5	0	2100	-4.7	-5.1	97	***	***	***
2400	-6.7	*****	95	079	1.3	051	3.8	0	2400	-6.4	*****	96	***	***	***	2.5	0	2400	-7.1	-7.7	96	***	***	***

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
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DATA TAKEN DURING December, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-8.0	-9.1	92	***	****	***	****	0	0300	-14.8	-30.5	25	044	2.3	064	6.1	0
0600	-10.1	-15.0	67	037	1.5	011	7.0	0	0600	-14.8	-30.9	24	056	2.0	054	4.4	0
0900	-11.3	-22.0	41	320	2.8	338	17.8	0	0900	-14.4	-30.2	25	067	1.2	085	2.5	0
1200	-15.6	-24.9	45	329	3.0	337	7.6	1	1200	-15.2	-30.1	27	039	1.1	056	3.2	2
1500	-18.3	-25.3	54	029	1.6	095	9.5	0	1500	-15.5	-33.9	19	041	1.1	075	3.2	1
1800	-15.6	-26.0	41	077	2.1	077	5.7	0	1800	-15.3	-29.4	29	059	1.4	059	3.8	0
2100	-14.7	-28.5	30	343	2.1	005	8.3	0	2100	-15.9	-29.9	29	048	1.4	044	3.8	0
2400	-17.8	-29.4	36	047	2.9	046	6.3	0	2400	-16.2	-28.9	33	067	1.5	081	5.1	0

DAY 22

DAY 23

DAY 24

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-13.2	-15.3	84	060	1.5	049	5.7	0	0300	-9.0	*****	93	068	.7	027	2.5	0
0600	-12.2	-13.8	88	080	1.4	035	5.1	0	0600	-8.0	-9.4	90	054	.7	035	2.5	0
0900	-11.8	-13.5	87	081	1.1	069	3.2	0	0900	-8.1	-8.9	94	076	.7	029	3.2	0
1200	-10.3	*****	85	093	1.0	077	3.8	1	1200	-5.5	-7.2	88	047	1.4	051	4.4	0
1500	-10.7	-12.6	86	056	1.0	036	3.2	0	1500	-6.3	-7.1	94	064	1.6	031	7.6	0
1800	-10.8	-13.1	83	078	1.5	070	3.8	0	1800	-9.9	-10.7	94	355	1.3	041	5.1	0
2100	-9.2	-11.7	82	083	1.2	104	3.8	0	2100	-10.3	-12.4	85	298	1.4	283	7.0	0
2400	-9.2	-10.7	89	050	1.3	058	4.4	0	2400	-12.6	-16.3	74	223	3.3	196	8.9	0

DAY 25

DAY 26

DAY 27

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-13.0	-17.5	69	049	1.7	031	3.8	0	0300	-13.8	*****	88	***	****	***	2.5	0
0600	-11.9	-16.8	67	045	1.6	038	3.8	0	0600	-14.4	*****	87	044	.7	023	3.8	0
0900	-13.8	*****	88	070	.6	353	3.2	0	0900	-14.8	-16.4	88	045	.8	021	3.8	0
1200	-12.7	-14.9	84	081	.9	081	2.5	2	1200	-15.5	-17.3	86	356	1.2	031	3.8	0
1500	-13.4	*****	85	***	****	***	2.5	0	1500	-15.1	-17.9	79	028	1.4	032	3.8	0
1800	-13.6	*****	86	***	****	***	3.8	0	1800	-16.2	-19.0	79	055	1.2	014	5.1	0
2100	-13.9	*****	88	***	****	***	3.8	0	2100	-17.3	-20.7	75	095	2.2	083	6.3	0
2400	-14.1	-15.7	88	***	****	***	3.2	0	2400	-16.6	-21.1	68	076	2.1	059	7.1	0

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DAY 28

DAY 29

DAY 30

HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.	HOUR	DEW	WIND	WIND	GUST	MAX.									
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD									
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW			
0300	-16.9	-26.1	45	058	1.6	036	3.8	0	0300	-17.9	-21.5	73	087	2.2	094	5.7	0	0300	-12.9	-15.1	84	073	3.4	078	7.6	0
0600	-17.0	-26.2	45	076	1.8	078	3.8	0	0600	-14.8	-17.5	80	020	.7	043	3.2	0	0600	-11.6	-15.5	73	075	2.6	075	7.0	0
0900	-18.1	-27.0	46	067	1.7	050	3.8	0	0900	-16.8	-19.0	83	061	1.0	028	3.8	0	0900	-10.6	-15.2	69	081	4.9	083	8.3	0
1200	-17.7	-26.8	45	071	1.9	032	3.8	1	1200	-15.0	*****	82	095	1.0	087	3.8	0	1200	-9.9	-14.8	67	085	5.4	083	8.9	1
1500	-19.2	-28.2	45	060	1.5	079	3.2	0	1500	-15.1	-17.3	83	080	1.3	125	3.8	0	1500	-9.6	-12.4	80	132	3.9	113	11.4	0
1800	-19.4	-28.4	45	039	1.4	034	3.2	0	1800	-14.7	*****	85	046	.5	076	1.9	0	1800	-8.4	-12.4	73	107	7.6	101	12.1	0
2100	-18.5	-28.1	43	068	1.6	053	3.4	0	2100	-14.3	*****	85	055	.7	076	2.5	0	2100	-8.6	-11.0	83	102	3.7	111	9.5	0
2400	-15.2	-22.6	53	062	1.5	066	5.1	0	2400	-13.8	-15.8	85	074	.9	145	3.8	0	2400	-7.7	-10.2	82	123	3.1	122	10.8	0

DAY 31

HOUR	DEW	WIND	WIND	GUST	MAX.			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-6.3	-9.5	78	045	1.8	075	5.1	0
0600	-6.4	*****	75	059	1.5	080	3.8	0
0900	-4.2	-7.5	78	061	2.4	076	8.3	0
1200	-3.8	-6.3	83	055	2.1	071	9.5	0
1500	-4.4	-5.1	95	133	1.5	130	8.3	0
1800	-2.6	-5.7	79	094	3.1	093	8.3	0
2100	-2.3	-6.5	73	103	6.6	110	12.1	0
2400	-3.2	-5.5	84	113	6.1	102	10.2	0

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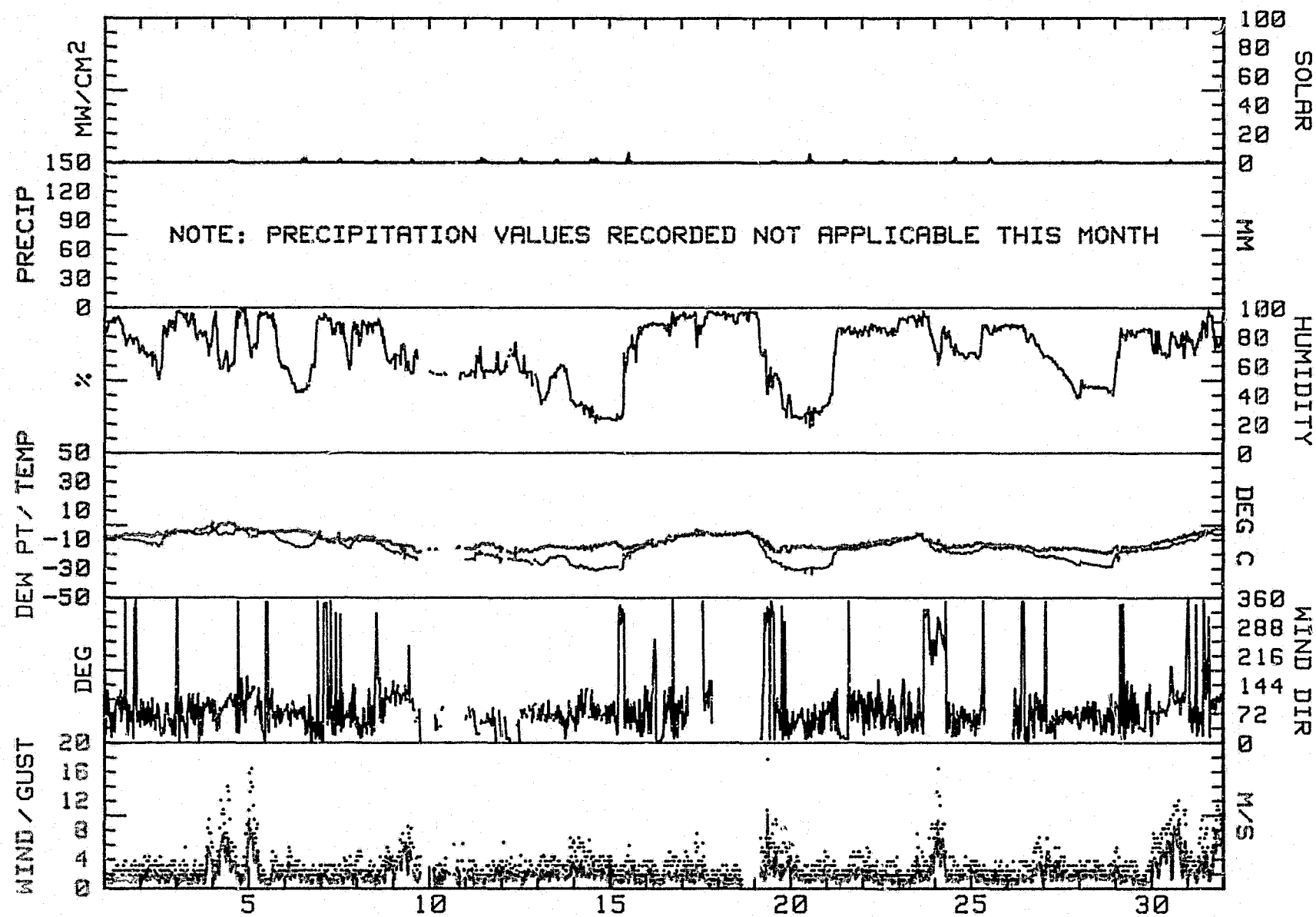
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SQM	DAY
1	-5.6	-8.4	-7.0	263	.9	1.2	357	3.8	ENE	83	-9.5	****	10	1
2	-3.4	-8.4	-5.9	058	1.4	1.6	043	4.4	NE	73	-10.4	****	10	2
3	1.5	-4.6	-1.6	080	1.5	1.7	109	9.5	E	85	-5.2	****	10	3
4	1.8	-3.3	-.8	091	2.9	3.2	105	14.0	E	76	-4.9	****	35	4
5	-2.4	-5.0	-3.7	098	2.0	2.5	129	16.5	ENE	78	-7.4	****	5	5
6	-3.3	-8.3	-5.8	061	1.3	1.5	058	5.7	ENE	56	-12.8	****	85	6
7	-5.8	-11.3	-8.6	047	1.1	1.4	097	4.4	ENE	62	-12.3	****	35	7
8	-7.3	-13.4	-10.4	085	1.3	1.8	108	5.7	NE	80	-12.7	****	25	8
9	-13.1	-19.2	-16.2	113	2.7	3.1	122	8.6	ESE	64	-20.2	****	40	9
10	-15.1	-16.8	-16.0	056	1.1	1.4	***	6.2	E	54	*****	****	0	10
11	-12.5	-18.8	-15.7	051	1.3	1.4	072	3.8	NE	58	-21.6	****	80	11
12	-15.6	-19.8	-17.7	058	1.4	1.7	***	6.4	E	59	-23.9	****	75	12
13	-14.0	-16.3	-15.2	066	1.9	2.0	085	7.0	ENE	48	-24.0	****	40	13
14	-12.7	-17.5	-15.1	079	1.9	2.1	117	7.0	E	28	-29.6	****	105	14
15	-11.4	-18.8	-15.1	061	1.1	1.5	090	6.0	E	57	-22.1	****	105	15
16	-6.5	-13.3	-9.9	074	.9	1.4	134	5.1	N	89	-10.9	****	0	16
17	-3.4	-7.1	-5.3	072	.9	1.3	***	7.6	NE	90	-6.8	****	0	17
18	-4.0	-7.3	-5.7	***	****	.9	***	3.2	***	95	-6.0	****	0	18
19	-7.3	-18.8	-13.1	006	1.7	2.9	338	17.8	N	56	-21.6	****	35	19
20	-14.3	-16.9	-15.6	052	1.5	1.6	064	6.1	ENE	27	-30.1	****	100	20
21	-12.1	-16.3	-14.2	072	1.3	1.6	059	5.1	NNE	73	-18.9	****	45	21
22	-8.4	-13.4	-10.9	073	1.2	1.4	049	5.7	ENE	85	-13.3	****	30	22
23	-5.5	-12.6	-9.1	020	.3	1.7	196	8.9	NNE	90	-10.1	****	0	23
24	-10.5	-16.0	-13.3	301	.9	2.7	311	16.5	ENE	72	-18.3	****	60	24
25	-11.8	-14.8	-13.3	052	1.3	1.3	031	3.8	NE	79	-16.2	****	60	25
26	-13.1	-17.9	-15.5	056	1.2	1.5	059	7.1	NNE	80	-18.4	****	5	26
27	-15.4	-17.7	-16.6	052	1.7	1.9	022	7.0	ENE	56	-23.2	****	5	27
28	-15.2	-20.0	-17.6	064	1.6	1.8	066	5.1	FNE	45	-27.1	****	40	28
29	-13.8	-19.5	-16.7	072	.9	1.3	094	5.7	NNE	79	-18.1	****	0	29
30	-6.7	-12.9	-9.8	098	4.1	4.6	101	12.1	F	74	-13.7	****	25	30
31	-1.9	-7.0	-4.5	092	2.8	3.5	110	12.1	ESE	81	-7.2	****	20	31
MONTH	1.8	-20.0	-11.1	072	1.4	1.9	338	17.8	ENE	68	-15.9	****	1085	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 7.0
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 10.8
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 3.8
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 7.0

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN ONE METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THE DAILY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT.

** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
December, 1984



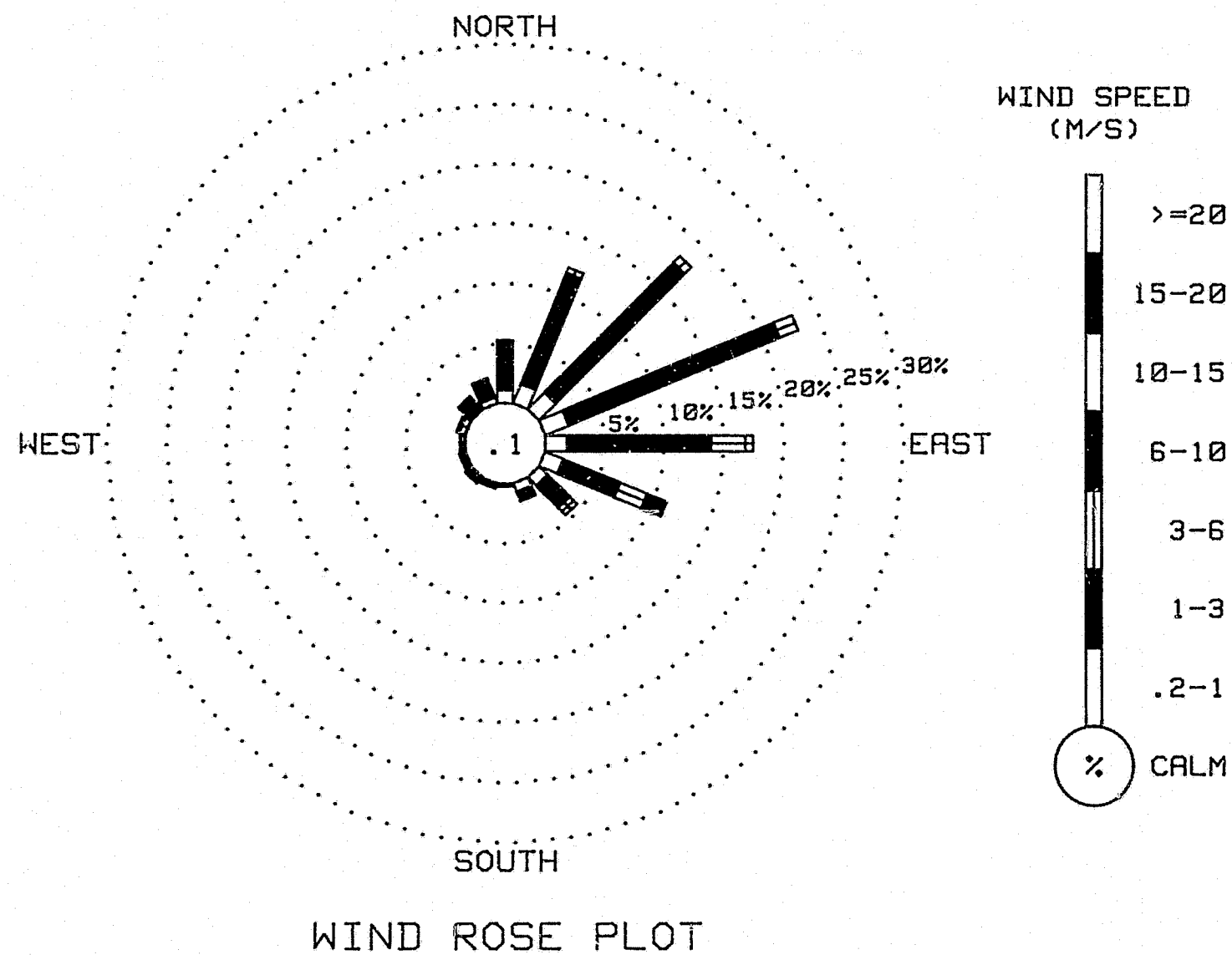
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	15.0	20.0	
	TO 1.0	TO 3.0	TO 6.0	TO 10.0	TO 15.0	TO 20.0	OR GREATER	
N	1.12	3.91	.24	0.00	0.00	0.00	0.00	5.27
NNF	1.76	9.98	.48	0.00	0.00	0.00	0.00	12.21
NE	2.00	15.24	.80	0.00	0.00	0.00	0.00	18.04
ENE	2.15	19.07	1.68	0.00	0.00	0.00	0.00	22.91
E	1.84	12.05	2.87	.64	0.00	0.00	0.00	17.40
ESE	1.68	5.11	2.47	1.76	0.00	0.00	0.00	11.01
SE	1.04	2.55	.48	.40	0.00	0.00	0.00	4.47
SSE	.80	.72	.08	0.00	0.00	0.00	0.00	1.60
S	0.00	.16	.08	0.00	0.00	0.00	0.00	.24
SSW	.08	.24	.16	0.00	0.00	0.00	0.00	.48
SW	.08	.32	.24	.08	0.00	0.00	0.00	.72
WSW	.08	.24	.16	.08	0.00	0.00	0.00	.56
W	0.00	.08	.32	.08	0.00	0.00	0.00	.48
WNW	.08	.48	.16	.08	0.00	0.00	0.00	.80
NW	.24	.88	.24	.16	0.00	0.00	0.00	1.52
NNW	.56	1.52	.08	0.00	.08	0.00	0.00	2.23
CALM								.08
TOTAL	13.49	72.55	10.53	3.27	.08	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1253 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
1488 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 30 MINUTE DATA.
** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
GLACIER WEATHER STATION
December, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1984

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOUR ENDING

DATE	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	AVG
1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	1	2	3	3	1	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	***	***	***	***	0	0	0	0	0	0	0	0	0	0	***
11	0	0	0	0	0	0	0	1	1	1	2	2	2	1	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	1	3	2	1	1	1	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	1	2	2	2	3	1	1	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	1	4	5	1	1	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
19	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	1	2	5	2	1	1	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
24	0	0	0	0	0	0	0	0	0	0	0	1	2	3	1	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	2	3	2	1	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	***
30	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0

*** SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR GLACIER WEATHER STATION
DATA TAKEN DURING December, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1416	95
WIND SPEED	1409	95
WIND DIRECTION	1263	85
PEAK GUST	1385	93
RELATIVE HUMIDITY	1212	81
PRECIPITATION	0	0
SOLAR RADIATION	1481	100
DEW POINT	1189	80

THERE ARE 1488 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER.
THE DATA RECORDING INTERVAL IS 30 MINUTES.

THE FOLLOWING ADJUSTMENTS HAVE BEEN MADE TO THIS MONTH'S DATA:

1. RH +7 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Intermittent data for all parameters lost due to weather wizard malfunction. Temperature, RH, and Solar data estimated where possible.
2. Intermittent wind speed and direction data lost due to frozen anemometer and wind vane.

6.0 REFERENCES

Coffin, J. H. 1984. Solar and longwave radiation data for south-central Alaska. In: Proceedings, Alaska Section AWRA Annual Conference, Alyeska Resort, Alaska, November 1984. Published by Institute of Water Resources, University of Alaska, Fairbanks, Alaska, as Report IWR-106.

R&M Consultants, Inc. 1984. Processed climatic data, October 1982 - September 1983, Volume I, Susitna Glacier Station (No. 0610). Prepared under contract to Harza-Ebasco Susitna Joint Venture for Alaska Power Authority. Document No. 1088. June.

APPENDIX

TABLE A.1 CONVERSION FACTORS

Multiply	by	To Obtain
millimeter (mm)	0.03937	inch (in)
centimeter (cm)	0.3937	inch (in)
square centimeter (cm ²)	0.1550	square inch (in ²)
meter (m)	3.281	foot (ft)
square meter (m ²)	10.76	square foot (ft ²)
meter per second (m/s)	3.821	foot per second (ft/s)
meter per second (m/s)	2.237	mile per hour (mph)
meter per second (m/s)	1.944	knot (kt)
degree Celsius (°C) °F= 9/5(C) +32		degree Fahrenheit (°F)
watt-hour (WH)	3.413	British Thermal Unit (BTU)
watt-hour (WH)	3600	joule (J)
milliwatt (mw)	0.003413	BTU per hour (BTU/hr)
milliwatt per square centimeter (mw/cm ²)	0.1040	BTU per hour per square foot (BTU/hr-ft ²)
watt-hour per square meter (WH/m ²)	0.3171	BTU per square foot (BTU/ft ²)
watt-hour per square meter (WH/m ²)	0.0860	langley (ly)