

**SUSITNA
HYDROELECTRIC PROJECT**

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

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

**VOLUME 5
DEVIL CANYON STATION
(No. 0660)**

PREPARED BY



UNDER CONTRACT TO

**HARZA-EBASCO
SUSITNA JOINT VENTURE**

FINAL REPORT

**JUNE 1985
DOCUMENT No. 2771**

ALASKA POWER AUTHORITY

SUSITNA HYDROELECTRIC PROJECT

PROCESSED CLIMATIC DATA
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VOLUME 5
DEVIL CANYON (No. 0660)

Report by
R&M CONSULTANTS, INC.

Under Contract to
Harza-Ebasco Susitna Joint Venture

Prepared for
Alaska Power Authority

Final Report
June 1985

ALASKA POWER AUTHORITY
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 - DEVIL CANYON STATION
OCTOBER 1983 - DECEMBER 1984

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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 Devil Canyon climate station was installed near the Devil Canyon damsite to obtain environmental data for reservoir, hydrology, and transmission line studies and design and planning of access roads and dam construction.

1.2 Station Description

The Devil Canyon station is located 1/8-mile south of the Susitna River at river mile 153. It is adjacent to the proposed Devil Canyon dam site at 62°48'50" N latitude and 149°18'50" W longitude. It lies at approximately 1500 feet above mean sea level (MSL) on a ridge within the plateau region, yet is close to the actual walls of the canyon (see Figures 1.1 and 1.2 for location).

The terrain rises gradually to the south, occasionally forming narrow benches or plateaus. Elevations increase to 2,000 feet about 1 mile south of the station and to 3,000 feet within 2 miles south of the site. These elevations or contours are maintained in an east-west direction. Shading of the station from direct solar radiation occurs throughout the day during December and January and during the remainder of the year when sun angles drop below 9° above the horizontal (see Table 1.1 for angular elevations of terrain obstructions). Some shading is also provided by the coniferous vegetation surrounding the station. The site is located on a narrow, barren ridgetop, well exposed to winds from the west, north and east. The site is well protected to the south.

1.3 Methods of Data Collection

The climatic data at Devil Canyon are collected using a Model 5100 Weather Wizard Digital Weather Station, manufactured by Meteorology Research,

nc., 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 6, 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 Devil Canyon Station was installed on July 17, 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 6 Devil Canyon Station (No. 0660) March 1982 (R&M Consultants)	July 1981 - September 1981
2. Processed Climatic Data Volume 6 Devil Canyon Station (No. 0660) December 1982 (R&M Consultants)	October 1981 - September 1982
3. Processed Climatic Data Volume V Devil Canyon Station (No. 0660) June 1984 (R&M Consultants)	October 1982 - Sept 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 DEVIL CANYON WEATHER STATION

Obstruction(1)	Azimuth(2) (True)	Angle(3)
Mountain	60°	5°
Mountain	112°	9°
Knob	166°	15°
Tree	166°	23°
Tree	202°	33°
Scattered Trees	166°-254°	18°-23°
Trees on Ridge	218°-270°	5°-10°
Mt. McKinley	290°	4°
Tree	294°	9°
Sensor Array	312°	6°
Mountain	366°	8°

NOTES:

- (1) Points used are selected mountain peaks and other features surrounding the weather station. All measurements are taken with respect to the solar sensor.
- (2) Measured azimuth angles are in degrees from magnetic north. The correction to obtain degrees from true north is 28°.
- (3) Vertical angles are measured above the horizontal with a hand level.

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
DEVIL CANYON CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

Inspection Date	Maintenance
10/6/83	Changed to 30 minute recording intervals
11/17	None
12/4	None
1/6/84	Reset date to 006
1/27	Station pulled out for inspection and maintenance
2/22	Station re-installed RH sensor calibrated
4/10	None
5/30	Reconnected precipitation gage
7/13	None
8/21	Sensor array removed for annual maintenance RH sensor replaced
8/22	Sensor array replaced RH sensor calibrated Wind sensors removed
8/24	Sensor array reconnected RH sensor calibrated Replaced solar sensor desiccant Replaced wind sensors
10/16	Replaced RH oscillator Replaced sensor array
11/2	None
11/29	RH sensor calibrated

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

TABLE 1.4. EXPLANATION OF DATA GAPS AT
DEVIL CANYON CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

Period	Approximate Number of Missing Days by Parameter							Explanation
	Temp	RH	WS	WD	Precip	Solar	Gust	
10/4 - 10/16/83			3	3			3	Frozen anemometer and wind vane (intermittent)
10/23 - 1/27/84	19.5	19	24	24		18	24	Garbled data. Weather Wizard malfunction
1/27 - 2/22/84	26	26	26	26		26	26	Weather Wizard removed for inspection and maintenance
4/1 - 5/30/84					59			Precipitation gage not connected properly
4/7 - 4/16/84				1				Frozen wind vane (intermittent)
5/5/84				0.3				Frozen wind vane
7/3 - 7/21/84		1.5						Bad RH oscillator (intermittent)
7/21 - 8/6/84		16.5						Bad RH oscillator
8/7 - 8/21/84		3						Bad RH oscillator (intermittent)
8/21 - 8/24/84	3.5	3.5	3.5	3.5			3.5	Sensor array disconnected for annual maintenance
8/22/84						0.2		Power off for 4 hours for annual maintenance
10/3 - 10/25/84			1.5	2			1.5	Frozen anemometer and wind vane (intermittent)
TOTAL	49.0	69.5	58.0	59.8	59.0	44.2	58.0	

NOTE: Precipitation data collected from April through September only. Collector is not designed for winter temperatures. See Section 4.2 of text.

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

Period	Solar Radiation Adjustment	RH Adjustment
10/1 - 10/6/83	-1 mW/cm ²	-28 RH Points
10/6 - 11/17/83	-1	-20
11/17 - 12/4/83	-1	-15
12/4 - 1/1/84	-1	-11
1/1 - 1/27/84	-1	-16
2/22 - 5/30/84	-1	
5/30 - 7/13/84	-1	-10
7/13 - 7/21/84	-1	-20
7/21 - 8/7/84	-1	
8/7 - 8/11/84	-1	-15
8/11 - 8/18/84	-1	+8
8/18 - 8/24/84	-1	
8/24 - 10/16/84	-1	-6
10/16/84	-2	-12
10/17 - 10/18/84	-4	-12
10/19 - 10/20/84	-2	-12
10/21 - 10/24/84	-1	-12
10/25 - 11/2/84	-2	-12
11/2/84	3	
11/3/84	-2	
11/4 - 11/12/84	-1	
11/13 - 11/14/84	-2	
11/15 - 12/31/84	-1	

TABLE 1.6. ESTIMATES FOR MISSING DATA
DEVIL CANYON 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>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
10/23/83	2100					62		0
	2130	-4.4				65		0
	2200					67		
	2230				2.5			
	2300				2.5			
	2330	-5.4	1.6		2.5	74		0
10/24/83	0100							0
	0130	-07.5						0
	0200							0
	0230	-8.3						0
	0300							0
	0400-0500							0
	0730				2.5	82		1
	0800	-10.0	0.8					
	0900	-8.8						
	0930	-8.5						
	2000				2.5			
	2030				2.5	65		0
2230	-10.4	0.8						
10/25/83	0630				2.5			0
	0700	-10.5	1.3		2.5	60		2
	0800	-9.0	1.4		2.5	53		
10/26/83	0130					50		0
	0800					58		2
	0900					56		4
	1330							5
	1400				04.4	50		4
	2330	-9.1						
10/27/83	0030	-9.0						11
	1030	-1.3				55		0
	1930					50		0
	2100					49		0
	2300					53		0

NOTES: 1. These data have been estimated where gaps exist in the record. Estimates were made by interpolating between valid data points preceeding and following the missing data.

2. Precipitation vaues are the amounts estimated to have fallen in the preceeding half-hour.

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON 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>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiatio (mw/cm²)</u>	
10/28/83	0530		1.6		3.2	52		0	
	1200					56		9	
	1630		0.3		1.3	91		0	
11/04/83	1830	-1.2							
	1900	-1.2							
	0000				3.2				
11/05/83	0030				3.2				
	0100				3.2				
	1230				2.5				
	1300				2.5	52		9	
	2030	-6.0	1.0						
	2200	-8.4							
2300	-9.2								
11/07/83	2230	-3.4							
	2300	-3.3							
11/08/83	1800-0000							0	
11/09/83	0430					25		0	
	0800					25		0	
11/10/83	1700	-2.0							
11/11/83	0430				2.5			0	
	0930	-5.4							
	1000					41			
	1030					41		2	
	1100	-6.5				42		3	
	1130	-6.3				42		3	
	1200	-6.2				43		4	
	1230	-6.1				43		4	
	1300	-6.0				44		5	
	1330	-5.7				44		6	
	1430	-4.5							
	1530	-1.0					42		3
	1900						44		0
	2100	-3.2							
	2200	-4.0							
	2230	-4.5							

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<u>Date</u>	<u>Time</u>	<u>Temp</u> (°C)	<u>Wind</u> <u>Speed</u> (m/s)	<u>Wind</u> <u>Dir</u> (Deg)	<u>Gust</u> (m/s)	<u>RH</u> (%)	<u>Precip</u> (mm)	<u>Solar</u> <u>Radiation</u> (mw/cm ²)
11/12/83	2100					59		0
	2300							0
11/13/83	0630	-11.2						
11/14/83	0330					74		
	0400	-10.1				74		0
	0430	-10.2				73		
	0500					72		0
	0530	-10.4				72		0
	0600	-10.3				71		0
	0630	-10.3				71		0
	0700	-10.3				70		0
	0800					69		
	0830					69		
	0930					69		1
	1000	-10.7				69		2
	1230					63		4
	1300	-8.9				61		5
11/15/83	2200					37		0
	0000					37		0
11/17/83	0500	-13.8				71		0
	0530	-13.9				71		0
	0600	-14.0				71		0
	0630	-14.0				71		0
	0700	-13.9				71		0
	0730	-14.0				71		0
	0800	-14.0				71		
	0830	-14.1				71		
	0900					71		0
	0930	-14.0				71		1
	1000	-13.9				71		1
	1030							2
	1100					68		3
	1130					67		4
	1200					66		5
	1300					65		

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<u>Date</u>	<u>Time</u> (AST)	<u>Temp</u> (°C)	<u>Wind</u> <u>Speed</u> (m/s)	<u>Wind</u> <u>Dir</u> (Deg)	<u>Gust</u> (m/s)	<u>RH</u> (%)	<u>Precip</u> (mm)	<u>Solar</u> <u>Radiatio</u> (mw/cm ²)
11/18/83	2200					73		
	2230	-15.0				73		
	2300					74		
	2330	-15.5				74		
11/19/83	0030	-16.2				74		0
	0100	-16.5				74		0
	0130	-16.6				74		
	0200	-16.7				74		
	0330					74		
	0400	-16.7						
	0530	-16.5						
	0630	-16.3						
	0730	-16.0				75		
	0830	-15.6						
0900	-15.4							
11/20/83	0130	-15.6	1.9			74		
	0200				3.2	74		
	0430	-16.1				73		0
	0500	-16.2				73		0
	0530	-16.1				73		0
	0600					73		
	0630					73		
11/25/83	1630	-9.9				64		
	1700	-10.0				64		
	1730	-10.1				64		
	1800	-10.0				64		
	1830	-10.0						
	1900					65		
	2130					64		
11/28/83	2130	+0.1				61		0
	2200	-0.1				62		0
11/30/83	0800					48		
12/01/83	1630					40		
	1730					39		
	1800	1.6						
	1830	1.8				42		

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON 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>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
12/02/83	2230 2300	-4.7 -5.0						
12/04/83	1330 1400					77 78		
12/07/83	2200 2230 2300 2330 0000	-7.2				85 83 83 82 81		0
12/08/83	0030 0130 0200 0700	-7.0 -7.2				80 75		
12/09/83	0530 1330 1400 2100 2130 2200 2230 2300 2330 0000	-16.0 -16.2 -16.2 -16.1 -16.3				40 40 41 41 41 41 42 42 41 42		
12/10/83	0500 0700					42 40		
12/11/83	1200 1230 1300 1330 1600	-8.2				59 60 59 63		2 2 2 2

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

Date	Time (AST)	Temp (°C)	Wind Speed (m/s)	Wind Dir (Deg)	Gust (m/s)	RH (%)	Precip (mm)	Solar Radiati (mw/cm ²)
12/12/83	1530							0
	1600					68		0
	1630					69		0
	1700	-12.0				70		0
	1800	-12.2						
	1900					64		0
12/14/83	0600					76		
	0630	-15.4				77		
	0700	-15.6				78		
	0730	-15.8				78		
	0830					77		
	0900					77		
	0930	-16.5				76		
	1000					76		
	1030	-16.4				75		
	1130	-16.6				75		
	1200					76		
	1530					74		
	1600					73		
	1800	-17.8						
	1830	-17.9						
	1900	-17.8						
	2030						74	
	2100	-18.0					77	
	2230	-19.0						
	2330	-19.5					76	
0000						78		
12/19/83	0030	-10.2				88		
	0100	-10.0				87		
	0400					61		
	0500					64		
	0830	-9.0						
	2330	-8.3				55		
0000	-8.2		3.2		5.1	55		0
12/20/83	0130	-7.8				55		0
	0930	-6.0				53		0
	1100					55		
	1130					54		
	1200	-5.3				54		
	2200	-4.0		2.4		4.4	61	

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<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</u> <u>Radiation</u> <u>(mw/cm²)</u>
12/21/83	0130					82		
	0400					82		0
	0430	-3.6				83		0
	2200	-5.7				74		0
	2330							0
	0000					75		
12/22/83	0030					77		0
	0100					78		0
	0200					78		
	0230					79		
	0300					80		0
	0330					81		
	0400					82		0
	0500					82		
	0530							0
	0600							0
	0630-0900					83		0
	0930					83		
	1000					83		0
	1130							1
	1200							1
	1230							3
	1300							2
	1330							2
	1400							2
1430							1	
1500							1	
1530-1930							0	
12/23/83	0030	-14.0				82		0
	0100	-13.9				82		0
	0400					81		0
	0430	-13.6				81		0
	0500	-13.2				80		0
	0530	-12.6				80		0
	0600	-12.4				80		0
	0630	-12.2				79		0

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<u>Date</u>	<u>Time</u> (AST)	<u>Temp</u> (°C)	<u>Wind</u> <u>Speed</u> (m/s)	<u>Wind</u> <u>Dir</u> (Deg)	<u>Gust</u> (m/s)	<u>RH</u> (%)	<u>Precip</u> (mm)	<u>Solar</u> <u>Radiation</u> (mw/cm ²)
12/24/83	0030	-13.0				77		
	0500					76		
	0930	-13.8				75		0
	1000	-13.6						
	1030	-13.4						
	1130					74		
	1200					74		
	1230					73		3
	2000	-12.8						
	2030					81		0
	2100	-12.7				82		0
12/26/83	1430	-10.6				60		1
	1500					60		
	1600	-10.1						
	1630	-10.0						
	2000					61		
	2030					60		
	2200					60		
	2300					60		
12/27/83	0400	-10.0						
	0430	-9.4				56		0
	0600					53		0
	1300					52		2
	1330	-10.2				51		2
	1430	-10.5				51		
	1530					51		
	1900	-12.5				55		
	2300	-16.0						
	2330					70		
	0000	-16.3				75		0
01/02/84	2100	-5.0				86		0
	2130	-5.7				90		0
	2200	-6.4				93		0
	2230	-7.0				96		0
	2300					98		0
	0000					86		0
01/03/84	0130					90		
	0200					89		0
	0230	-6.6						
	0300	-6.5				89		0
	1100					91		
	1300					90		
	1330					89		
	2230					93		
	2300					91		
	2330					92		0

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON 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>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
01/04/84	1100	-10.3				79		0
	1130						0	
	1200					70		
	1230						1	
	1400	-12.4				68		
	1530					79		0
	1600	-12.7				78		0
1700					80			
01/06/84	2330	-13.0				76		0
	0000	-12.8				77		0
01/07/84	1100	-13.2						
	1200					76		2
	1230	-12.8				76		2
	1300	-12.7				76		3
	1330							3
	1700	-13.5						
	1730					76		
	1800	-14.3				76		0
	1830	-14.6				77		0
	1900	-14.9				77		0
1930	-15.0				76		0	
01/08/84	0030-1030							0
	1100-1200							1
	1230	-12.5				73		2
	1300	-12.4				73		2
1330					73			
01/09/84	0100					53		0
	0900	-12.0						
	1200	-8.4				62		2
	1230	-8.0				63		2
	1300	-7.5				63		3
	1330	-7.2				62		2
01/13/84	2200	-2.2				94		0
01/14/84	0500					91		

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

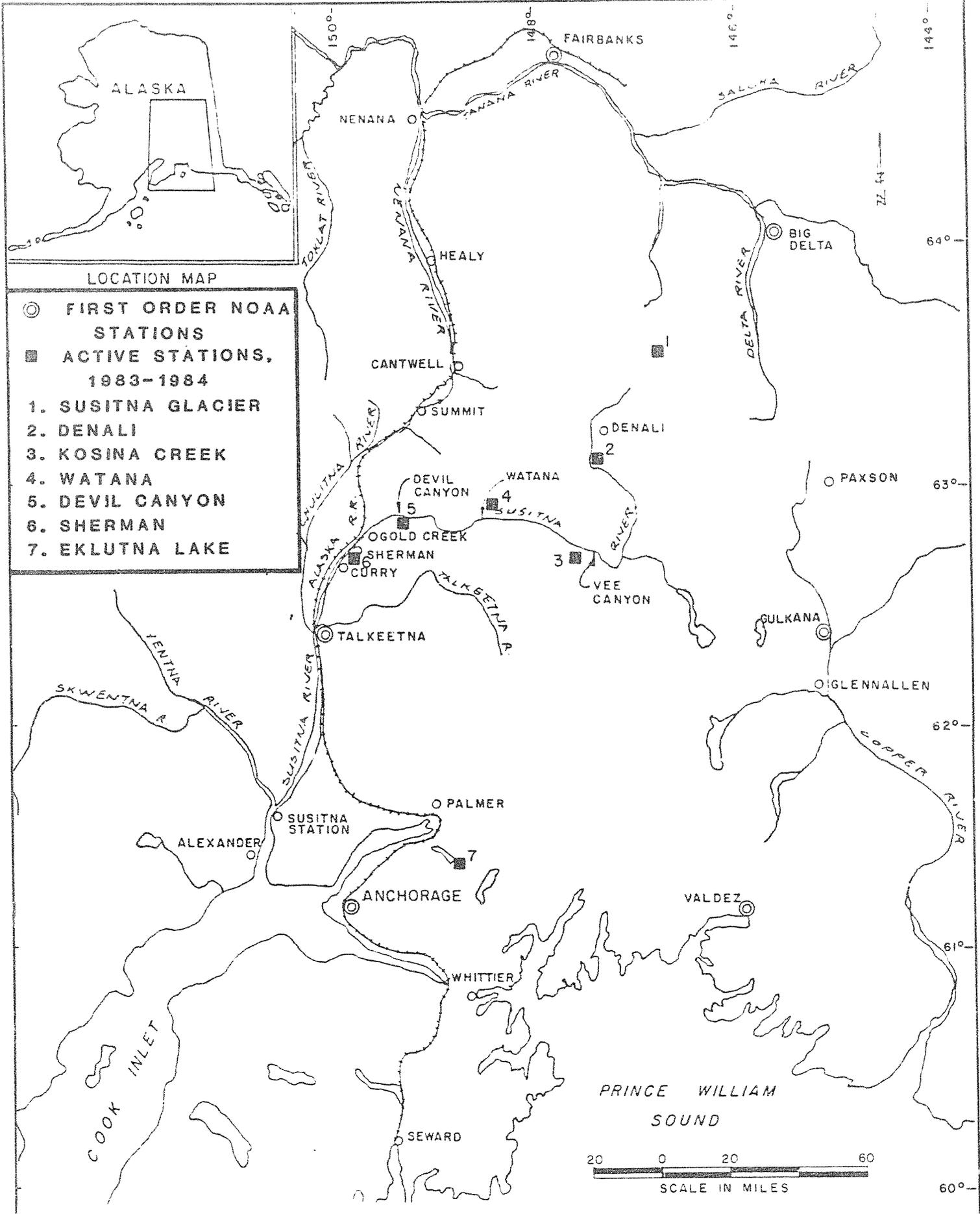
<u>Date</u>	<u>Time (AST)</u>	<u>Temp (°C)</u>	<u>Wind Speed (m/s)</u>	<u>Wind Dir (Deg)</u>	<u>Gust (m/s)</u>	<u>RH (%)</u>	<u>Precip (mm)</u>	<u>Solar Radiation (mw/cm²)</u>
01/15/84	1300							1
	1330					90		1
	1400							
	1430					91		
	1530	-6.0				91		0
	1600	-6.2						
	1630					92		0
	1700-1730							0
	1800	-8.0						0
	1830	-8.1						0
	1900							0
	1930	-8.3						0
	2000	-8.5				88		0
	2030-2200							0
	2200					87		
	2300					87		0
	2330					86		0
0000					85		0	
01/16/84	0030					86		0
	0100					87		0
	0130					87		0
	0200					87		0
	0230	-9.4				87		0
	0600	-9.4				90		0
	0900					90		
	0930					90		
	1000					89		
	01/17/84	0100						
0130		-6.8						
0400						80		0
1500		-6.2						
2030						75		
2100		-6.5						0
2130		-6.8						0

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<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</u> <u>Radiation</u> <u>(mw/cm²)</u>
01/18/84	0530					80		0
	0630	-8.2						0
	0830	-8.6				80		
	1700					82		
	1800					83		
	0000					82		
01/19/84	0030	-12.5						
	0130					81		
	0300	-13.5						
	0330	-13.6						
	0530	-13.6				78		0
	0600					78		
	0630	-13.6				77		0
	0700	-13.3				77		0
	0730					78		
	0800					78		
	1000	-12.1						
	1130					76		
	2300					65		0
	2330	-10.2				64		0
01/20/84	0030	-10.0						
	0300	-12.5				73		0
	0330	-12.6				72		0
	0430	-11.5				73		0
	0500	-12.0				74		0
	0600					69		0
	0630							0
	0700					64		0
	0800					66		0
	1330	-12.4				69		2
	1930					68		
	2100-0000							0
	08/22/84	1000						0.0
1030							0.0	
1100							0.0	
1130							0.0	
1200							0.2	
1230							0.2	

TABLE 1.6. ESTIMATES FOR MISSING DATA (CONTINUED)
 DEVIL CANYON CLIMATE STATION
 OCTOBER 1983 TO DECEMBER 1984

<u>Date</u>	<u>Time</u> (AST)	<u>Temp</u> (°C)	<u>Wind</u> <u>Speed</u> (m/s)	<u>Wind</u> <u>Dir</u> (Deg)	<u>Gust</u> (m/s)	<u>RH</u> (%)	<u>Precip</u> (mm)	<u>Solar</u> <u>Radiation</u> (mw/cm ²)
08/24/84	1300 1330	8.4					0.4 1.0	10
09/15/84	1130 1830					50 46		
09/20/84	2000 2130					62 74		
09/21/84	1300 1330					45 41		
10/16/84	0830 0900	-3.3 -3.3				75 70		1 1



- LOCATION MAP**
- FIRST ORDER NOAA STATIONS
 - ACTIVE STATIONS, 1983-1984
1. SUSITNA GLACIER
 2. DENALI
 3. KOSINA CREEK
 4. WATANA
 5. DEVIL CANYON
 6. SHERMAN
 7. EKLUTNA LAKE

LOCATION MAP: SUSITNA PROJECT METEOROLOGIC STATIONS

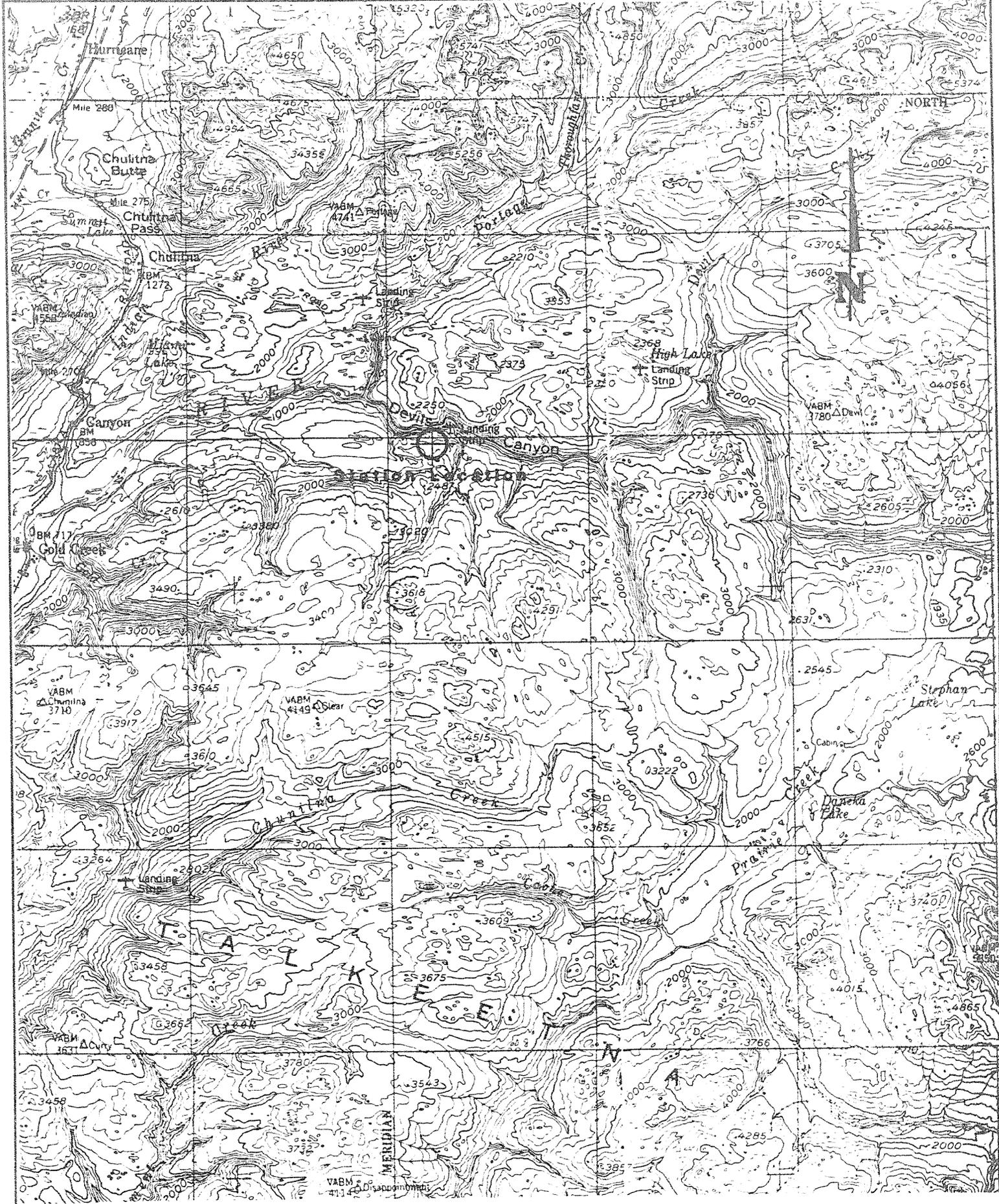
PREPARED BY:

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

FIGURE 1-1

PREPARED FOR:

HARZA-EBASCO
 SUSITNA JOINT VENTURE



USGS TALKEETNA MOUNTAINS (1954) SCALE 1:250,000 Figure 1.2

PREPARED BY:

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

DEVIL CANYON 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
DEVIL CANYON STATION (No. 0660)
OCTOBER 1983 TO DECEMBER 1984

Month	Temperature			Wind					P ¹ Val Dir (True)	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)					
October 1983	7.7M	-13.2M	-2.2M	111M	0.8M	1.2M	012M	8.3M	ESE(M)	61M	M	M	22,706
November	02.M	-10.7M	-5.3M	130M	0.8M	0.9M	152M	3.8M	ESE(M)	59M	M	M	5,643M
December	2.1M	-19.7M	-83M	M	M	M	M	M	M	69M	M	M	1,623M
January 1984	M	M	M	M	M	M	M	M	M	M	M	M	M
February	M	M	M	M	M	M	M	M	M	M	M	M	M
March	8.7	-13.2	-0.9	119	1.3	1.6M	123	7.0	ESE	68	M	M	62,400
April	10.2	-11.9	-0.3	112M	0.5M	1.5M	317M	8.9M	ESE(M)	64	M	M	112,250M
May	19.3	-3.8	5.6	015M	0.2M	1.6M	327M	8.3	SSE(M)	58	M	M	171,215
June	22.2	0.8	10.8	319	0.7	0.8	022	8.9	NW	51	M	38.0	148,780
July	22.3	3.7	11.8	308	0.7	1.3	313	8.3	NW	M	M	68.2	95,280
August	21.4M	-4.1M	10.2M	000M	0.3M	1.4M	037M	11.4M	WNW(M)	M	M	141.8	90,499M
September	17.6	-2.4	7.4	113	0.7	1.3	106	8.3	ESE	62	M	32.6	68,330
October	12.3	-13.9	-0.3	118M	1.1M	1.5M	106M	10.2M	ESE(M)	56	M	M	23,654
November	2.8	-22.3	-9.5	099	1.4	1.6	097	9.5	ESE	71	M	M	4,440
December	2.6	-24.5	-11.1	102	1.3	1.5	106	7.0	ESE	78	M	M	975
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
DEVIL CANYON CLIMATE STATION
OCTOBER 1983 TO DECEMBER 1984

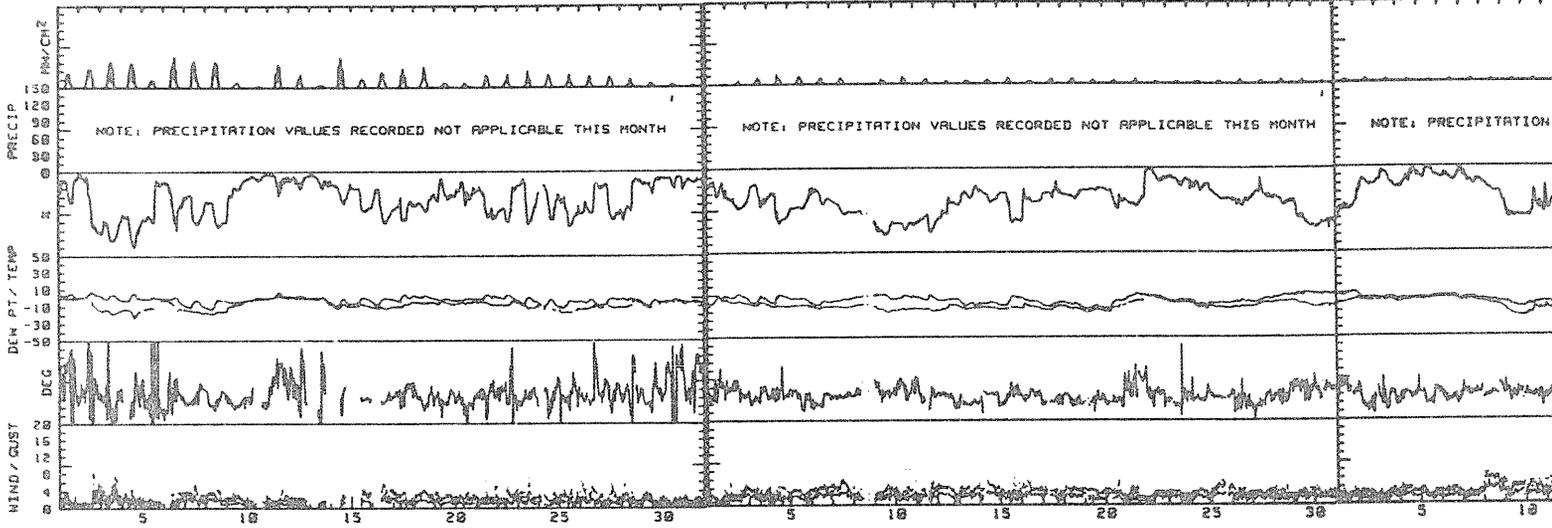
<u>Month</u>	<u>Temp</u>	<u>Wind Speed</u>	<u>Wind Direction</u>	<u>Peak Gust</u>	<u>RH</u>	<u>Precip</u>	<u>Solar Radiation</u>	<u>Dew Point</u>
October 1983	99	88	88	88	65	0	100	64
November	98	93	91	92	86	0	99	86
December	72	66	65	66	67	0	74	65
January 1984	54	48	48	46	41	0	57	40
February	25	25	25	25	21	0	25	21
March	100	100	100	100	86	0	100	86
April	100	100	97	100	81	0	100	81
May	100	100	99	100	80	5	100	80
June	100	100	100	100	72	100	100	72
July	100	100	100	100	42	100	100	42
August	90	90	90	90	44	100	100	44
September	100	100	100	100	70	100	100	70
October	100	94	93	94	76	0	100	76
November	100	100	100	100	74	0	100	74
December	100	100	100	100	75	0	100	75
Total	89	87	86	87	65	27	90	65

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).

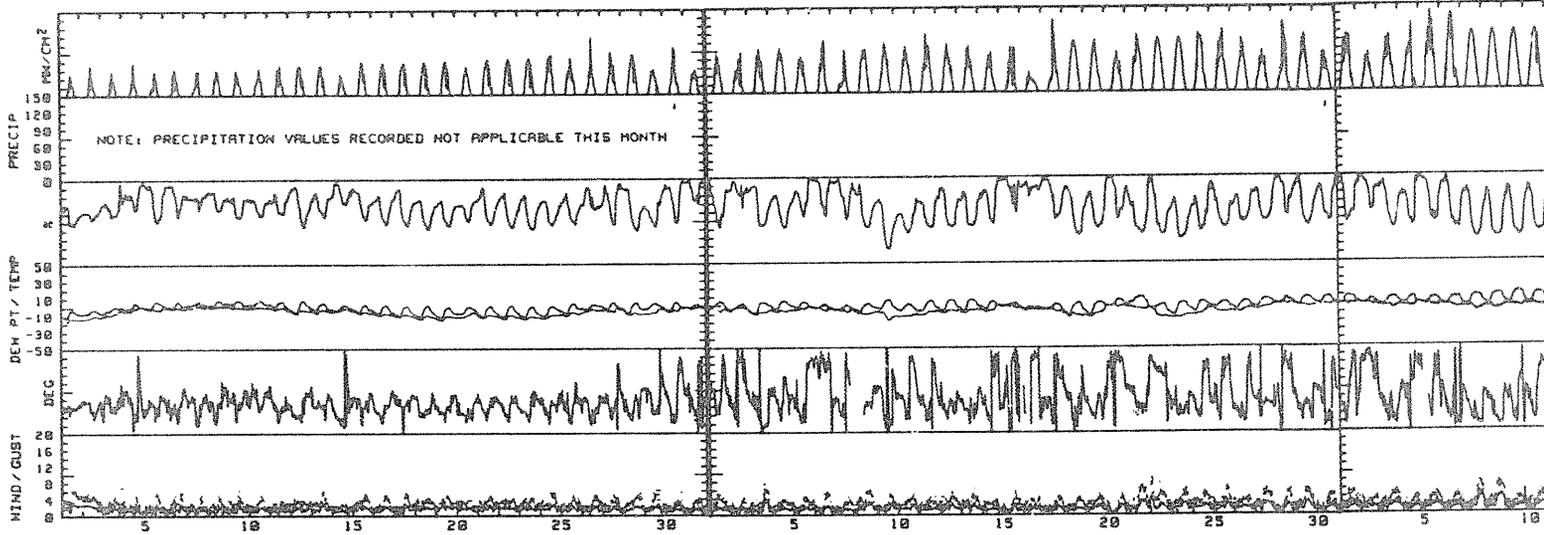
October, 1983

November, 1983



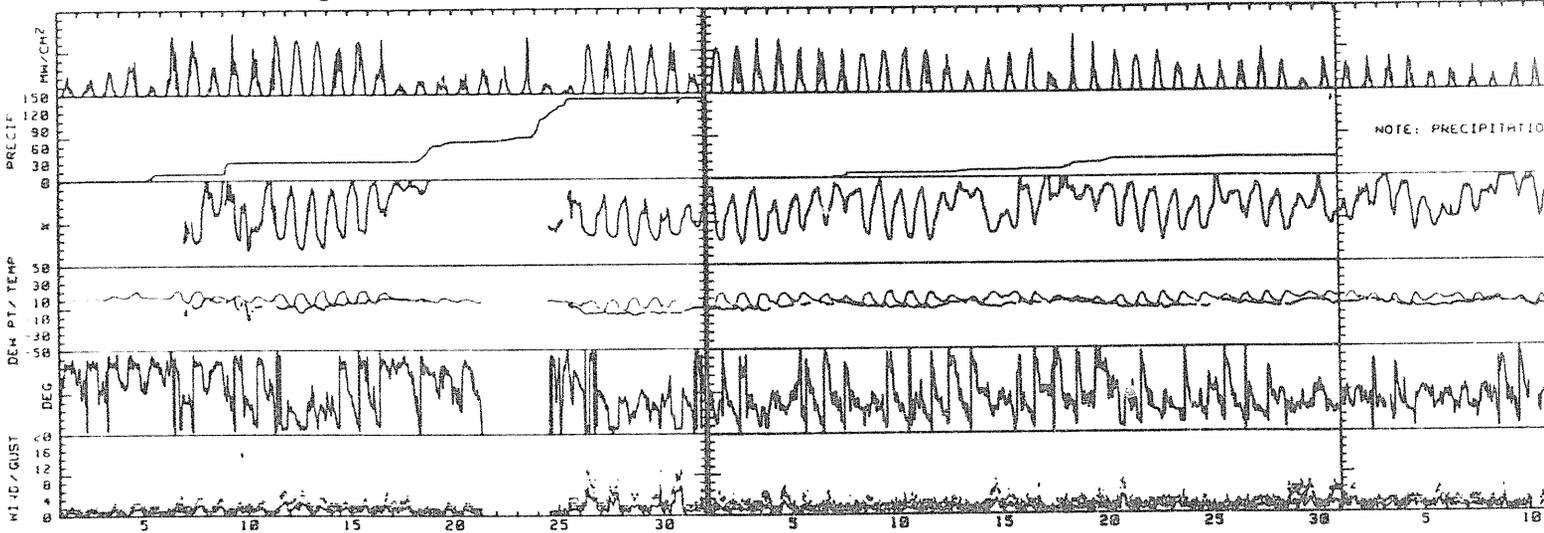
March, 1984

April, 1984



August, 1984

September, 1984



December, 1983

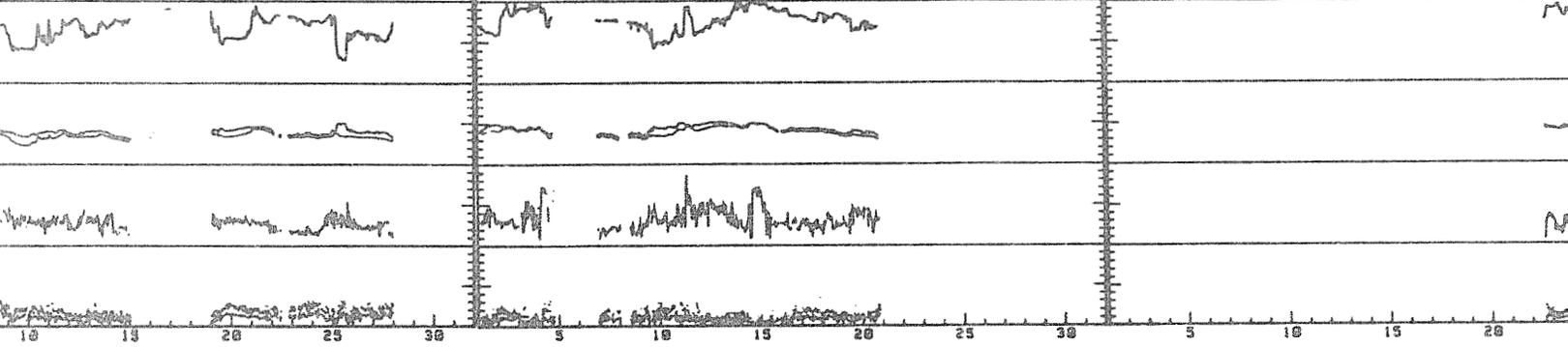
January, 1984

February, 1984

PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH

NOTE: PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH

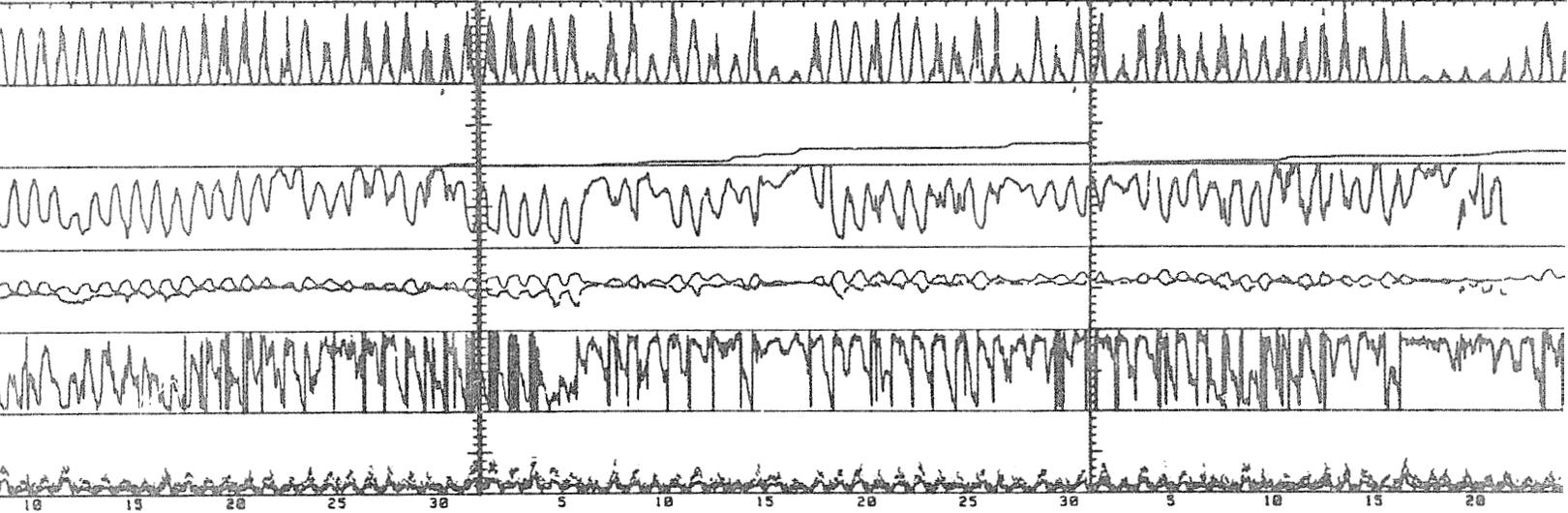
NOTE: PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH



May, 1984

June, 1984

July, 1984



October, 1984

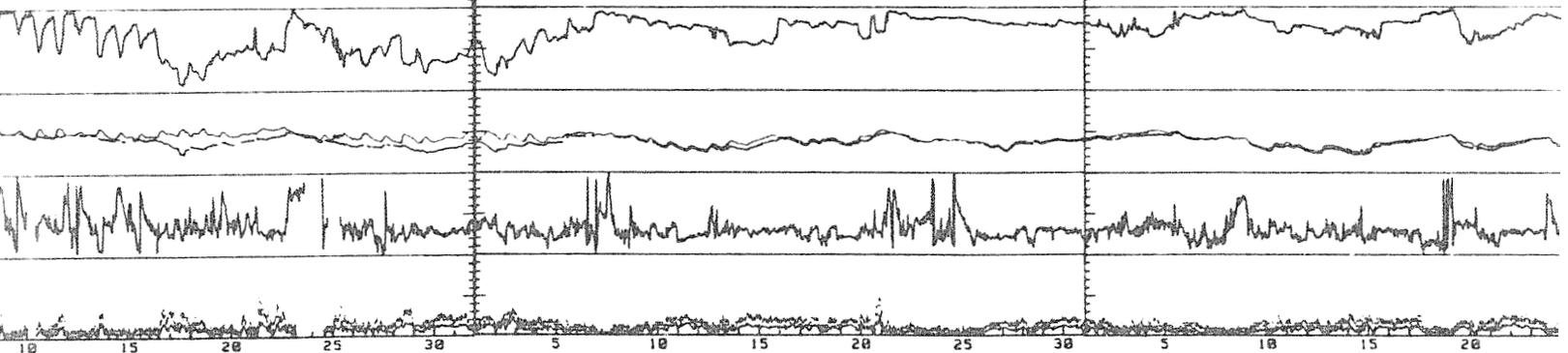
November, 1984

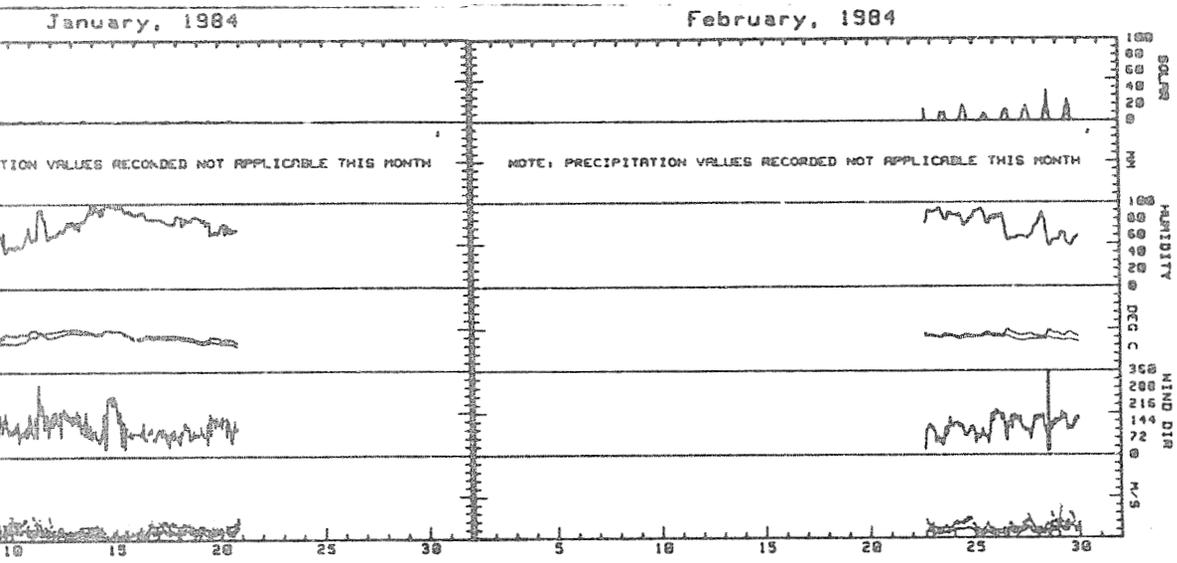
December, 1984

PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH

NOTE: PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH

NOTE: PRECIPITATION VALUES RECORDED NOT APPLICABLE THIS MONTH





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

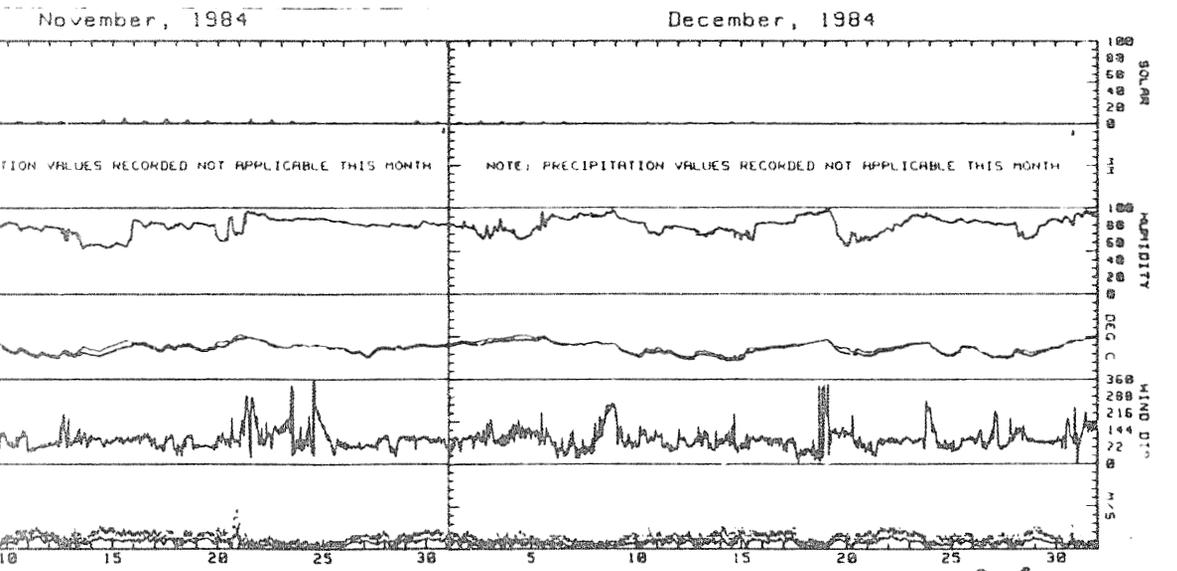
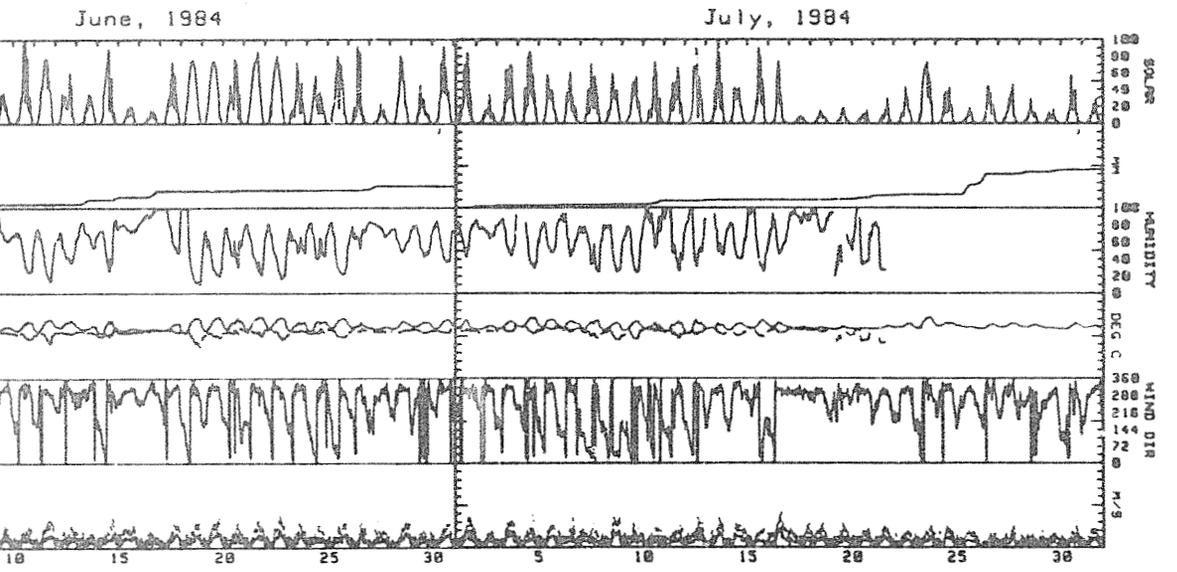


FIGURE 2.1
SEQUENTIAL PLOT
OF CLIMATIC DATA,
DEVIL CANYON
STATION,
OCTOBER 1983-
DECEMBER 1984

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.

- 4.1.6 Intermittent garbled data due to a Weather Wizard malfunction at the Devil Canyon station caused many data gaps from mid-October 1983 to the end of January 1984. It was possible to estimate temperature, relative humidity, and solar radiation data where the gaps were not more than two or three hours long. However, approximately 20 to 25 total days were lost from the record for all parameters during this period, as shown in Table 1.4. Estimated values are not considered as missing. Also, an additional 26 days were lost when the Weather Wizard was removed for inspection and maintenance from 1/27/84 to 2/22/84.

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.

4.2 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 user should exercise caution and make note of the concurrent temperatures in interpreting the precipitation records.

The tipping bucket precipitation collector was not connected properly at the Devil Canyon station in April and May 1984. As a result, precipitation was not recorded for these months until 5/30/84 when the gage was reconnected.

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 an 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 Devil Canyon relative humidity sensor was bad in July and August, 1984, which caused erratic reporting of the data in places. Unusable data were deleted from July 21 to August 7. The quality of the remaining data is suspect, but the record has been published since it generally follows the diurnal cycle typical of the summer RH. September data are good for the most part but are still erratic in places. Bad data points are

estimated where possible. The oscillator was replaced on October 16, 1984, after which the data are reliable.

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 is 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

Several measurements of wind speed, wind direction, and peak wind gusts were lost between October 1983 and April 1984 and again in October 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.

5.0 MONTHLY CLIMATIC DATA SUMMARIES
DEVIL CANYON 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).

REPORT OF CONSULTANTS, INC.

MOONSBURY, VT. - HYDROLOGICAL RECORD - PRECIPITATION

MOONSBURY, VERMONT - WINDY FLD. DEPT. CIVIL ENGR. WEATHER STATION
 DATE RANGE: 09/01/93 - 09/30/93

DAY 01

DAY 02

DAY 03

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NOV	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOV	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	****	83	214	1.0	351	3.2	0	0300	1.0	****	95	141	.5	125	1.3	0	0300	1.1	-15.1	29	110	3.2	129	5.3	0
0600	3.5	1.0	96	143	.8	144	3.8	0	0600	1.4	****	91	136	.5	106	1.9	0	0600	-1.0	****	38	111	1.0	113	3.2	0
0900	3.4	1.8	98	243	1.3	259	3.2	7	0900	2.8	****	96	168	.5	150	4.3	11	0900	1.2	-14.2	31	070	.6	018	3.2	18
1200	5.1	****	68	251	1.2	263	3.2	15	1200	6.2	****	70	331	.4	351	1.3	15	1200	3.8	-18.4	18	078	1.3	046	5.1	23
1500	5.6	****	63	320	.1	149	1.9	5	1500	6.9	-6.9	37	006	1.4	012	8.3	11	1500	4.4	-17.9	19	033	2.4	018	7.0	6
1800	3.1	****	89	338	.2	288	3.2	0	1800	4.4	-10.2	34	121	1.1	011	7.6	0	1800	1.7	-17.3	23	039	2.3	020	7.6	0
2100	.8	****	91	147	.7	171	1.3	0	2100	3.7	-13.3	28	148	1.6	128	6.3	0	2100	-1.7	-14.6	37	135	1.4	029	3.2	1
2400	.2	****	99	105	.4	120	1.3	0	2400	3.5	-14.7	27	120	1.9	117	5.7	0	2400	-3.0	-13.4	42	132	1.5	130	3.2	0

DAY 04

DAY 05

DAY 06

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NOV	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOV	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	-2.5	-12.6	46	107	1.0	126	3.2	9	0300	-1.9	****	42	103	.6	122	1.9	0	0300	-1.6	-2.5	87	***	***	***	***	0
0600	-3.1	-13.2	46	***	***	***	3.8	0	0600	-1.4	****	47	082	.7	071	1.9	0	0600	-1.6	-4.9	78	***	***	***	***	0
0900	-.6	-14.3	35	062	1.0	***	3.5	19	0900	0.0	-10.9	44	051	.9	062	2.5	8	0900	-1.8	****	73	121	.6	141	3.2	19
1200	4.9	-18.2	17	072	1.6	045	4.4	17	1200	2.2	****	38	026	.7	047	2.5	9	1200	1.5	****	49	106	1.1	101	3.2	26
1500	5.9	****	11	081	.8	033	3.2	6	1500	.1	****	84	007	.2	044	1.9	1	1500	1.4	-14.4	30	163	.6	200	3.2	6
1800	-.2	-16.2	29	196	.9	227	2.5	0	1800	0.0	****	88	079	.4	064	1.9	0	1800	-5.3	-12.0	59	136	1.1	112	3.2	1
2100	-.7	****	75	121	1.1	130	3.2	0	2100	-1.4	-3.9	83	097	.4	087	1.9	0	2100	-7.2	-13.8	59	119	2.2	121	3.2	0
2400	-1.3	****	43	158	.5	133	1.9	0	2400	-1.5	-2.4	87	***	***	***	***	0	2400	-8.3	-13.1	68	104	1.8	101	3.2	0

DAY 07

DAY 08

DAY 09

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NOV	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOV	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	-10.1	-14.2	72	086	2.0	092	4.4	0	0300	-12.1	-17.5	64	127	1.9	121	3.8	0	0300	-4.8	****	73	095	1.1	105	3.2	0
0600	-10.6	-14.5	73	087	2.2	093	3.8	0	0600	-13.0	-18.4	64	081	2.2	095	3.8	0	0600	-4.9	-9.3	71	095	1.1	113	3.2	0
0900	-8.6	-15.4	47	084	1.8	089	3.8	28	0900	-10.2	-18.2	52	074	2.2	080	3.8	23	0900	-4.8	-7.5	81	075	1.2	078	3.2	4
1200	-5.0	-14.8	40	103	2.7	101	5.7	29	1200	-3.5	-15.9	38	075	1.7	087	4.4	17	1200	-4.9	-7.4	77	103	1.3	049	3.2	7
1500	-5.1	-15.5	38	124	1.8	130	5.1	9	1500	-1.9	-15.5	35	097	2.3	101	4.4	9	1500	-3.9	-7.1	73	081	1.5	083	3.2	3
1800	-6.9	-16.9	45	160	1.1	173	3.2	0	1800	-2.9	****	39	115	1.5	113	3.8	0	1800	-3.6	-6.2	57	090	1.0	081	3.2	0
2100	-9.9	-17.6	33	60	1.7	164	3.2	0	2100	-3.3	****	41	139	1.0	140	1.9	0	2100	-3.2	****	91	097	.7	111	3.2	0
2400	-9.9	-16.2	45	147	1.0	148	3.2	0	2400	-3.3	-14.2	43	112	1.3	104	2.5	0	2400	-2.4	****	91	111	.7	116	3.2	0

EXAMPLE INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.

55 GIBBS STREET, HYDROLOGICAL ENGINEERING, PIRRIE, SOUTH AUST.

HOURLY WEATHER SUMMARY FOR DEPT. CANYON WEATHER STATION
 06/11/1983 DURING October, 1983

DAY 10

DAY 11

DAY 12

HOUR	DEW					HOUR	DEW					HOUR	DEW													
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.									
NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S									
0300	-2.7	****	94	102	.6	104	1.9	0	0300	.6	****	96	141	.6	151	2.5	0	0300	2.0	.9	93	233	1.3	232	3.2	0
0600	-1.6	****	96	122	.4	094	1.9	0	0600	.8	****	97	168	.7	161	1.9	0	0600	1.3	****	94	173	.6	147	3.5	0
0900	-1.5	****	93	***	****	***	1.3	1	0900	3.4	****	89	193	.6	188	1.9	11	0900	1.8	****	88	139	.7	102	3.5	2
1200	.9	-7.7	89	***	****	***	1.3	1	1200	7.7	****	71	215	.5	286	1.9	21	1200	3.0	****	80	090	.6	089	3.5	6
1500	.4	-1.9	91	***	****	***	****	2	1500	4.3		81	254	1.6	254	6.3	2	1500	2.4	****	86	334	.3	094	3.5	7
1800	0.0	-1.6	96	075	.4	075	1.9	0	1800	2.7		86	221	.8	260	4.4	0	1800	.8	****	93	336	.5	273	3.5	0
2100	.1	****	97	070	.2	061	1.9	0	2100	1.2	***	93	220	.8	222	3.2	0	2100	.1	-1.6	95	086	.6	087	1.9	0
2400	.4	.1	98	091	1.0	076	3.2	0	2400	2.1	****	91	127	1.1	124	3.2	0	2400	-1.2	-1.8	96	***	****	***	****	0

DAY 13

DAY 14

DAY 15

HOUR	DEW					HOUR	DEW					HOUR	DEW													
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.									
NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S									
0300	.1	-1.5	96	***	****	***	****	0	0300	-7.4	-9.7	84	***	****	***	****	0	0300	-5.7	-9.7	79	***	****	***	****	0
0600	-1.3	-11.0	95	***	****	***	****	0	0600	-9.1	-11.3	84	***	****	***	****	0	0600	-6.0	-9.0	79	***	****	***	****	0
0900	-1.2	-11.5	91	***	****	***	****	.2	0900	-9.0	-11.6	75	***	****	***	****	27	0900	-3.9	-7.5	76	***	****	***	****	5
1200	.3	****	85	015	.5	028	1.3	3	1200	-2.5	-7.8	67	057	.7	106	1.9	25	1200	.7	-7.6	54	101	1.2	025	1.4	11
1500	1.1	****	85	290	.2	302	1.9	3	1500	-1.2	-7.7	61	132	1.3	132	3.2	3	1500	.3	-8.2	53	103	1.9	103	4.4	5
1800	-1.2	-3.4	85	176	.4	134	1.9	0	1800	-4.8	-9.6	69	158	1.4	159	2.5	0	1800	-1.0	-8.9	53	110	1.7	109	3.8	0
2100	-5.0	-7.3	84	***	****	***	****	0	2100	-6.6	-9.5	80	***	****	***	****	0	2100	-2.5	-10.1	56	111	1.6	103	3.6	0
2400	-5.5	-7.2	82	***	****	***	****	0	2400	-6.7	-9.6	80	***	****	***	****	0	2400	-5.4	-11.3	63	106	.8	104	3.2	0

DAY 16

DAY 17

DAY 18

HOUR	DEW					HOUR	DEW					HOUR	DEW													
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.									
NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S									
0300	-7.9	-10.9	79	***	****	***	****	0	0300	-2.5	-9.9	57	123	2.0	112	3.8	10	0300	1.8	-4.9	61	133	1.3	139	3.3	1
0600	-7.6	-11.0	78	***	****	***	****	0	0600	-3.1	-9.8	60	125	1.6	123	3.2	0	0600	1.0	-5.2	63	139	1.8	115	3.2	1
0900	-5.7	-10.8	58	***	****	***	****	9	0900	.1	****	49	120	.9	136	3.2	15	0900	1.4	-5.5	61	105	1.9	101	2.8	1
1200	-1.4	-11.3	44	187	2.3	028	7.0	17	1200	3.8	-7.7	43	111	1.7	139	3.8	14	1200	3.1	-5.6	53	028	2.0	074	1.4	12
1500	.3	-12.5	34	092	2.5	023	5.7	5	1500	3.6	****	43	137	1.0	073	3.8	3	1500	2.6	-5.5	54	077	1.8	076	3.2	1
1800	-1.8	-11.3	45	110	1.8	101	4.4	9	1800	-1.4	-8.5	64	167	1.2	175	1.9	0	1800	.5	-1.9	67	105	1.4	073	3.2	1
2100	-1.2	-10.1	51	115	1.5	100	4.4	0	2100	2.0	****	61	166	.9	172	1.9	9	2100	0.0	-4.2	70	132	1.8	114	3.2	1
2400	-1.3	-9.8	55	111	2.4	113	4.4	0	2400	2.8	-4.6	55	144	.7	177	2.5	0	2400	-1.1	-5.2	70	100	1.0	104	3.2	1

ALL SEER INTERPRETATION NOTES AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.

MOONSBERRY HYDROELECTRIC PROJECT PERIODIC REPORT

24 HOUR SUMMARY FOR DEPTL CANYON WEATHER STATION
DATE: JAN 20 1985

DAY 19

DAY 20

DAY 21

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-1.6	-7.5	64	120	2.0	112	3.8	0	0300	-2.9	-6.4	77	106	1.1	102	2.5	0	0300	-1.0	****	79	128	1.0	133	2.5	0
0600	-2.7	****	85	114	1.1	132	3.2	0	0600	-3.0	-4.9	87	116	1.3	117	3.2	0	0600	-1.9	-4.8	75	128	1.0	132	2.5	0
0900	-1.9	-3.6	88	089	.7	059	2.5	3	0900	-2.6	****	86	098	1.0	079	2.5	3	0900	1.1	-4.1	68	131	1.2	110	2.5	3
1200	-1.8	-5.4	71	090	1.3	085	4.4	5	1200	-1.8	-6.7	64	067	1.1	058	5.1	5	1200	3.5	-6.0	50	086	1.2	098	5.3	13
1500	-1.7	-6.2	66	084	1.4	081	3.2	3	1500	-1.8	****	72	041	.9	001	3.8	1	1500	3.1	-6.9	48	118	1.0	080	2.5	5
1800	-2.7	-7.4	70	123	1.5	091	3.2	0	1800	-1.8	-5.6	70	082	1.0	085	2.5	0	1800	-1.4	-8.3	55	159	1.3	171	2.5	0
2100	-3.0	-7.9	69	135	1.3	144	2.5	0	2100	-1.0	-3.8	81	085	1.2	083	3.2	0	2100	2.7	-6.4	44	137	1.2	107	2.1	0
2400	-3.0	****	73	113	1.0	139	2.5	0	2400	-1.2	-4.7	77	112	1.4	111	3.2	0	2400	.7	-8.8	49	129	1.5	150	5.1	0

DAY 22

DAY 23

DAY 24

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	.9	-7.9	52	130	1.0	125	2.5	0	0300	-5.0	-7.3	84	091	1.4	097	3.8	0	0300	-8.5	****	**	099	2.1	074	3.2	0
0600	-1.3	-8.7	54	146	1.1	147	1.9	0	0600	-7.4	-8.5	92	090	1.6	088	3.8	0	0600	****	****	84	119	1.4	140	3.2	0
0900	-1.9	****	54	146	1.0	138	2.5	6	0900	-2.2	-8.5	62	116	1.2	109	3.8	4	0900	-8.8	****	78	144	.8	151	2.5	5
1200	3.4	-9.0	40	101	1.4	099	5.1	14	1200	.6	-12.6	37	108	1.8	113	7.0	14	1200	-3.7	****	58	082	1.4	149	2.9	14
1500	2.8	-6.6	51	100	.8	084	3.8	3	1500	.4	-11.4	41	116	1.9	112	3.7	3	1500	-2.0	****	43	089	1.6	043	1.9	5
1800	0.0	****	81	228	.5	244	3.2	0	1800	-3.5	-12.2	51	140	1.3	145	2.5	0	1800	-6.0	-14.5	51	112	1.3	175	3.2	0
2100	-1.8	-4.6	81	106	2.0	089	3.8	0	2100	-4.6	-10.8	62	133	1.0	117	2.5	0	2100	-9.4	****	67	149	1.0	129	3.2	0
2400	-3.3	-5.8	83	092	1.8	105	4.4	0	2400	-5.9	-9.6	75	085	1.4	112	2.5	0	2400	-11.1	****	73	129	.8	160	2.5	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.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	****	****	67	101	1.4	154	3.2	0	0300	-4.3	-13.2	50	118	2.1	114	6.3	0	0300	-8.4	****	81	114	.8	138	3.2	0
0600	-12.3	-16.5	71	107	1.4	112	4.4	0	0600	-5.9	-11.6	64	096	1.8	098	4.4	0	0600	-7.3	****	83	163	1.4	158	2.5	0
0900	-9.8	-16.8	54	107	1.4	110	3.2	5	0900	-5.5	-12.9	56	118	1.7	111	4.4	4	0900	-3.9	****	67	168	.7	151	2.5	6
1200	-3.6	-17.0	35	087	1.0	120	3.2	9	1200	-1.6	-10.7	50	091	1.4	088	3.8	19	1200	-1.8	-10.5	49	093	1.0	093	3.2	4
1500	-3.6	-16.2	35	135	1.7	143	4.4	4	1500	-2.2	-11.3	50	098	2.1	092	5.1	2	1500	-1.7	-11.5	44	093	1.2	091	2.5	3
1800	-5.1	****	77	142	.4	150	.3	1	1800	-4.7	-8.8	85	222	.7	099	3.8	0	1800	-3.5	-11.4	50	119	1.2	135	2.5	0
2100	-5.1	-13.5	52	131	1.2	135	3.8	0	2100	-8.4	-10.6	84	222	.5	077	3.2	0	2100	-3.6	-13.1	49	141	1.0	143	2.5	0
2400	-3.3	-13.5	49	133	1.2	158	3.8	0	2400	-2.3	-13.3	79	121	1.6	116	3.2	0	2400	-1.6	-10.2	53	127	.8	131	2.5	0

SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT

R A M CONSULTANTS, INC.

SUBSIDIARY HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEWIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 1983

DAY 28

DAY 29

DAY 30

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-5	-11.6	43	107	1.8	105	5.7	0	0300	-8.3	-10.1	87	103	1.7	147	3.2	0	0300	-5.1	*****	93	130	.7	123	1.9	0
0600	-2.5	-10.1	56	134	1.7	154	3.8	0	0600	-9.1	-11.2	85	081	1.9	077	3.8	0	0600	-4.0	*****	92	238	.8	243	2.5	0
0900	-2.1	*****	57	150	1.1	133	3.2	3	0900	-9.5	-12.0	82	081	1.6	083	3.2	2	0900	-4.2	*****	93	229	.4	242	1.9	0
1200	-1.7	-8.4	56	073	1.0	080	3.8	9	1200	-5.0	*****	76	079	.9	082	3.2	5	1200	-2.5	*****	85	006	.7	009	1.7	3
1500	-2.2	*****	88	296	.9	001	2.5	1	1500	-2.2	*****	88	203	.2	259	1.9	1	1500	-2.0	*****	85	072	.7	053	2.5	2
1800	-2.3	*****	92	174	.4	166	1.9	0	1800	-4.3	*****	92	162	.5	262	1.3	0	1800	-2.8	*****	94	272	.6	274	1.9	0
2100	-3.5	*****	89	106	.9	096	1.9	0	2100	-5.4	*****	91	142	.7	139	2.5	0	2100	-3.3	*****	94	265	.7	261	2.5	0
2400	-5.7	-7.0	87	143	1.0	146	2.5	0	2400	-5.1	*****	93	111	.3	104	1.9	0	2400	-4.4	*****	84	249	.5	234	2.5	0

DAY 31

HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	
0300	-5.0	-7.0	86	121	.9	127	3.2	0
0600	-5.5	*****	89	123	.6	131	1.9	0
0900	-5.0	*****	89	113	.5	113	1.9	0
1200	-4.0	*****	86	198	.2	201	1.3	1
1500	-3.7	*****	87	236	.3	125	2.5	1
1800	-4.9	*****	90	251	.9	260	2.5	0
2100	-5.4	-6.7	91	244	.6	250	3.2	0
2400	-8.2	-10.3	85	143	.6	105	2.5	0

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

R & M CONSULTANTS, INC.

SUBSTATIONS HYDROELECTRICITY PROJECT

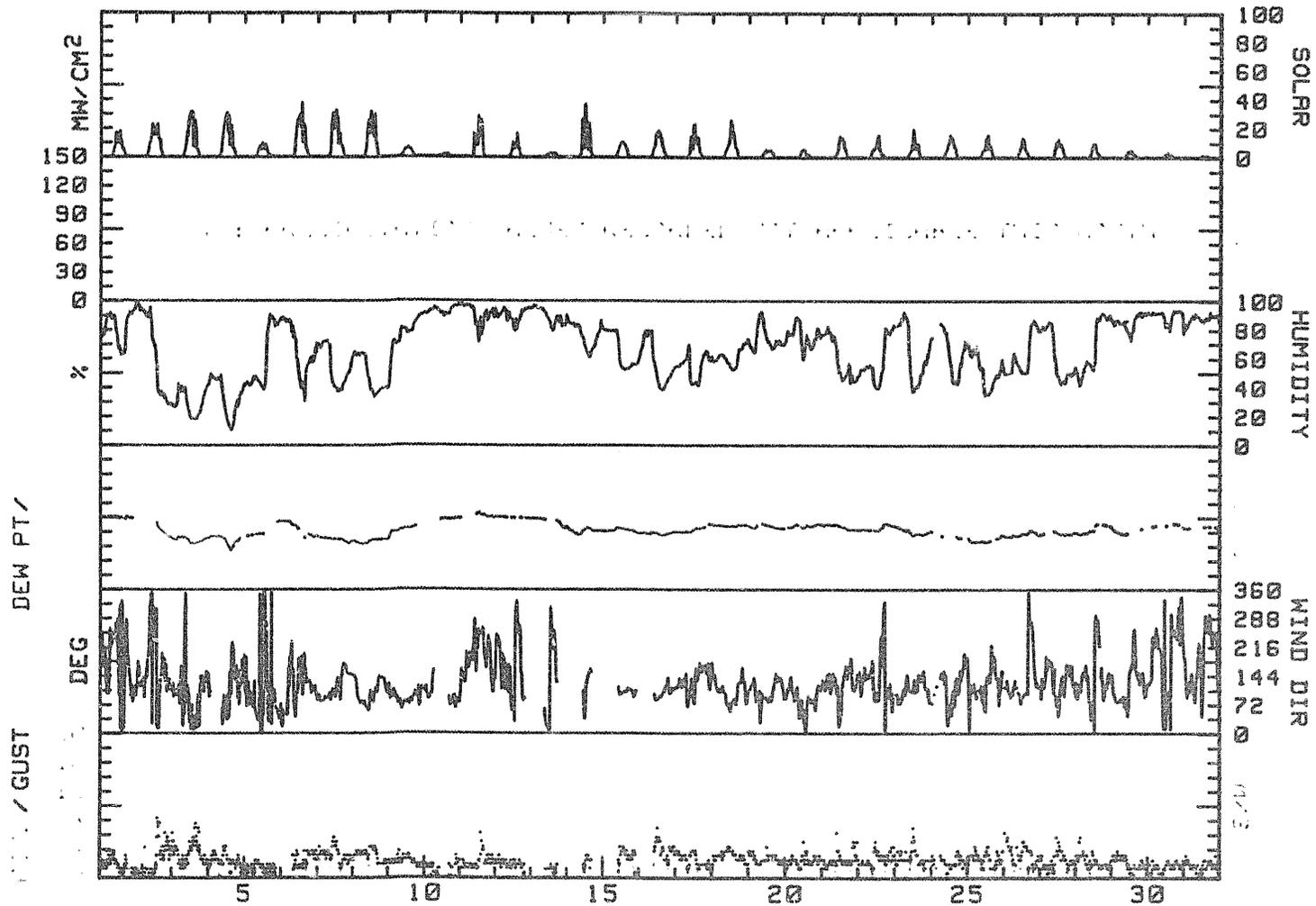
MONTHLY SUMMARY FOR DEWD CANYON WEATHER STATION
 DATA TAKEN DURING October, 1983

DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AUG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAYS SOLAR ENERGY WH/50*	DAY
1	5.9	1.2	3.0	209	1.5	1.9	144	3.8	WSW	64	1.1	****	749	1
2	7.7	1.2	4.0	118	1.6	1.1	012	8.3	SE	32	-10.8	****	1300	2
3	4.4	-3.0	1.7	063	1.2	1.8	020	7.6	ESE	29	-15.7	****	1648	3
4	6.6	-4.1	1.3	110	1.7	1.2	045	4.4	E	33	-15.5	****	1650	4
5	2.2	-1.6	1.3	066	1.5	1.7	062	2.5	NE	63	-7.3	****	400	5
6	2.2	-8.3	-3.1	119	1.2	1.4	101	3.8	SE	75	-6.4	****	1253	6
7	-2.3	-10.9	-6.6	114	1.6	1.9	101	5.7	E	55	-15.5	****	1635	7
8	-1.8	-13.2	-7.0	098	1.6	1.8	087	4.4	SE	49	-16.3	****	1550	8
9	-2.4	-5.2	-3.8	089	1.0	1.1	079	3.8	E	76	-8.0	****	390	9
10	1.0	-2.8	-1.9	094	1.6	1.5	076	3.2	E	93	-1.6	****	110	10
11	7.7	1.1	3.9	201	1.6	1.9	254	6.3	S	87	1.7	****	1100	11
12	3.8	-1.2	1.8	182	1.3	1.8	232	3.2	E	91	-1.1	****	545	12
13	1.5	-5.6	-2.1	334	1.1	1.5	302	1.9	NNE	91	-3.0	****	198	13
14	-1.3	-10.0	-5.3	131	1.0	1.3	132	3.2	SSE	77	-9.5	****	1230	14
15	1.8	-7.0	-3.1	104	1.5	1.5	095	4.4	ESE	68	-9.0	****	398	15
16	1.4	-8.9	-4.3	103	2.0	2.1	088	7.0	ESE	57	-11.0	****	933	16
17	5.1	-5.1	0.0	132	1.2	1.4	112	3.8	SE	54	-8.1	****	836	17
18	3.4	-1.1	1.2	102	1.5	1.6	074	4.4	ESE	61	-5.2	****	975	18
19	-1.7	-3.5	-2.1	110	1.2	1.3	085	4.4	E	71	-6.3	****	315	19
20	-1.5	-3.5	-2.0	091	1.0	1.1	058	5.1	E	75	-5.4	****	245	20
21	4.3	-2.0	1.2	138	1.1	1.3	098	6.3	SE	57	-6.6	****	565	21
22	3.7	-3.5	1.1	114	1.0	1.4	099	5.1	E	60	-7.1	****	535	22
23	1.9	-8.7	-3.9	110	1.4	1.5	113	7.0	ESE	64	-9.9	****	533	23
24	-1.6	-11.3	-6.4	126	1.7	1.9	123	3.8	SSE	60	-14.0	****	710	24
25	-3.3	-12.5	-7.9	118	1.1	1.3	113	4.4	ESE	52	-15.7	****	545	25
26	-1.6	-9.3	-5.5	108	1.1	1.6	114	6.3	ESE	61	-11.7	****	507	26
27	-1.2	-9.0	-4.6	123	1.8	1.0	093	5.7	ESE	50	-11.0	****	596	27
28	1.1	-5.2	-2.6	123	1.8	1.2	105	5.7	SE	63	-8.7	****	385	28
29	-2.0	-10.0	-6.0	098	1.9	1.0	077	3.8	E	65	-10.3	****	133	29
30	-1.4	-5.2	-3.3	253	1.3	1.6	243	2.5	WSW	94	-4.7	****	101	30
31	-3.5	-8.3	-5.9	162	1.3	1.7	127	3.2	WSW	67	-6.8	****	61	31
MONTH	2.7	-13.2	-3.2	111	1.6	1.2	012	9.3	ESE	61	-6.3	****	22706	

GUST VELOCITY AT MAX. GUST MINUS 2 INTERVALS 3.2
 GUST VELOCITY AT MAX. GUST MINUS 1 INTERVAL 5.1
 GUST VELOCITY AT MAX. GUST PLUS 1 INTERVAL 7.6
 GUST VELOCITY AT MAX. GUST PLUS 2 INTERVALS 9.5

*1. RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE GREATER 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
 DEVIL CANYON WEATHER STATION
 October, 1983



R & M CONSULTANTS, INC.

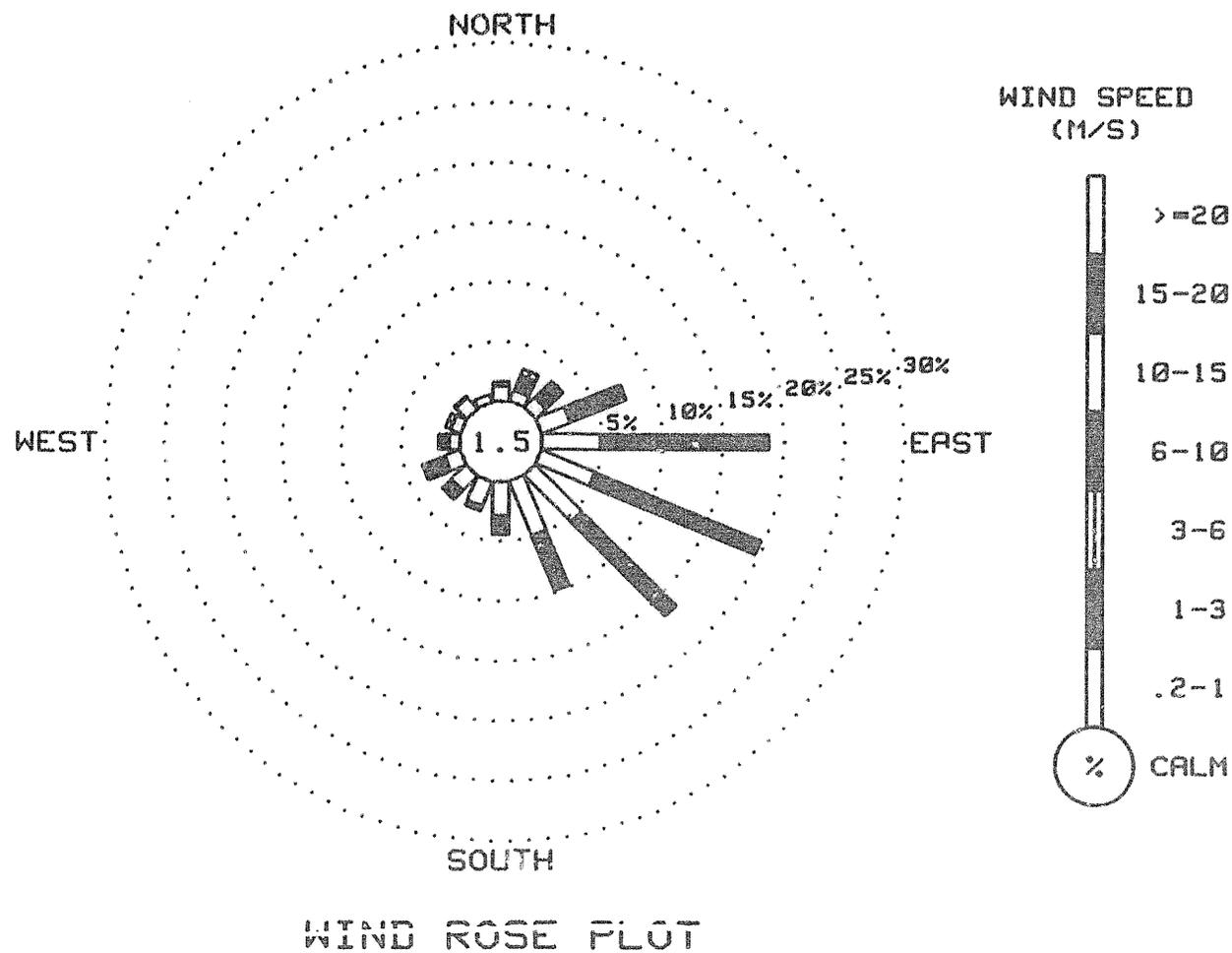
SUSTITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVT1 CANYON WEATHER STATION
 DATA TAKEN DURING October, 1993

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	1.28	.40	0.00	0.00	0.00	0.00	0.00	1.68
NE	1.01	1.34	.60	0.00	0.00	0.00	0.00	2.95
E	1.21	1.88	.07	0.00	0.00	0.00	0.00	3.16
ENE	2.55	4.97	0.00	0.00	0.00	0.00	0.00	7.52
E	4.83	13.76	.13	0.00	0.00	0.00	0.00	18.72
ESE	4.77	13.70	.13	0.00	0.00	0.00	0.00	18.60
SE	5.44	11.01	0.00	0.00	0.00	0.00	0.00	16.45
SSE	4.90	4.90	0.00	0.00	0.00	0.00	0.00	9.80
S	2.82	1.61	0.00	0.00	0.00	0.00	0.00	4.43
SSW	2.21	.47	0.00	0.00	0.00	0.00	0.00	2.68
SW	1.74	1.07	0.00	0.00	0.00	0.00	0.00	2.81
WSW	1.41	2.01	0.00	0.00	0.00	0.00	0.00	3.42
W	.94	.87	0.00	0.00	0.00	0.00	0.00	1.81
WNW	.87	.47	0.00	0.00	0.00	0.00	0.00	1.34
NW	1.38	.13	0.00	0.00	0.00	0.00	0.00	1.51
NNW	.67	0.00	0.00	0.00	0.00	0.00	0.00	0.67
CALC								
TOTAL	37.93	59.60	1.93	0.00	0.00	0.00	0.00	109.46

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 1.90 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
 2.74 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
DEVIL CANYON WEATHER STATION
October, 1983



R & M CONSULTANTS, INC.

R & M CONSULTANTS, INC.

SUSBITNA HYDROELECTRIC PROJECT

MONTHLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	AUG
1	0	0	0	0	0	0	0	1	5	11	13	12	12	11	6	3	1	0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	1	5	10	15	19	17	20	19	13	9	3	0	0	0	0	0	0	0	3
3	0	0	0	0	0	0	2	6	13	19	29	30	24	19	18	5	2	0	0	0	0	0	0	0	7
4	0	0	0	0	0	0	1	5	16	24	29	27	23	16	16	6	3	0	0	0	0	0	0	0	7
5	0	0	0	0	0	0	1	4	7	6	8	7	7	6	2	1	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	2	16	26	29	25	24	21	14	6	2	0	0	0	0	0	0	0	7
7	0	0	0	0	0	0	2	4	25	25	29	28	19	16	9	7	2	0	0	0	0	0	0	0	7
8	0	0	0	0	0	0	2	6	18	22	24	24	19	28	10	4	1	0	0	0	0	0	0	0	6
9	0	0	0	0	0	0	0	2	3	5	6	7	7	6	4	2	0	0	0	0	0	0	0	0	5
10	0	0	0	0	0	0	0	0	1	1	1	2	2	2	2	1	0	0	0	0	0	0	0	0	5
11	0	0	0	0	0	0	0	1	14	9	12	25	19	25	6	1	0	0	0	0	0	0	0	0	5
12	0	0	0	0	0	0	0	1	2	5	10	8	8	15	7	2	1	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	0	2	2	3	3	3	2	3	2	1	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	1	2	15	10	22	31	15	16	11	2	1	0	0	0	0	0	0	0	5
15	0	0	0	0	0	0	0	2	4	8	10	11	10	9	6	2	0	0	0	0	0	0	0	0	2
16	0	0	0	0	0	0	1	4	8	13	16	18	15	11	7	3	1	0	0	0	0	0	0	0	2
17	0	0	0	0	0	0	1	3	10	6	15	19	13	12	5	3	0	0	0	0	0	0	0	0	3
18	0	0	0	0	0	0	1	4	7	10	14	24	17	12	7	4	0	0	0	0	0	0	0	0	2
19	0	0	0	0	0	0	0	1	3	4	6	5	5	5	3	1	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	1	2	5	6	5	2	2	2	1	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	2	3	6	15	13	13	9	6	2	0	0	0	0	0	0	0	0	3
22	0	0	0	0	0	0	0	3	6	7	9	13	11	5	3	1	0	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	2	4	6	9	17	7	8	7	2	0	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	2	5	8	11	15	13	10	6	2	0	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	2	4	5	7	12	11	8	5	2	0	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	2	4	6	10	13	9	5	3	1	0	0	0	0	0	0	0	0	1
27	0	0	0	0	0	0	0	1	4	9	12	11	10	8	5	1	0	0	0	0	0	0	0	0	1
28	0	0	0	0	0	0	0	1	3	7	9	10	6	3	2	1	0	0	0	0	0	0	0	0	1
29	0	0	0	0	0	0	0	1	2	5	4	5	4	2	2	1	0	0	0	0	0	0	0	0	1
30	***	0	0	0	0	0	0	0	0	1	2	3	3	2	2	1	0	0	0	0	0	0	0	0	1
31	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	1

SEE FOR INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.

SUBSITINA HYDROELECTRIC PROJECT

MONTHLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 1985

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER

HOOR 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	5	11	13	12	12	11	6	3	1	0	0	0	0	0	0	0	0	3
2	0	0	0	0	0	0	1	5	10	15	19	17	20	19	13	9	3	0	0	0	0	0	0	0	0	5
3	0	0	0	0	0	0	2	6	13	19	29	30	24	19	18	5	2	0	0	0	0	0	0	0	0	7
4	0	0	0	0	0	0	1	5	16	24	29	27	23	16	16	6	3	0	0	0	0	0	0	0	0	7
5	0	0	0	0	0	0	1	4	7	6	8	7	7	6	2	1	0	0	0	0	0	0	0	0	0	3
6	0	0	0	0	0	0	0	2	16	26	29	25	24	21	14	6	2	0	0	0	0	0	0	0	0	7
7	0	0	0	0	0	0	2	4	25	25	29	28	19	16	9	7	2	0	0	0	0	0	0	0	0	7
8	0	0	0	0	0	0	2	6	18	22	24	24	19	28	10	4	1	0	0	0	0	0	0	0	0	6
9	0	0	0	0	0	0	0	2	3	5	6	7	7	6	4	2	0	0	0	0	0	0	0	0	0	5
10	0	0	0	0	0	0	0	0	1	1	1	2	2	2	2	1	0	0	0	0	0	0	0	0	0	5
11	0	0	0	0	0	0	0	1	14	9	12	25	19	25	6	1	0	0	0	0	0	0	0	0	0	5
12	0	0	0	0	0	0	0	1	2	5	10	8	8	15	7	2	1	0	0	0	0	0	0	0	0	2
13	0	0	0	0	0	0	0	0	2	2	3	3	3	2	3	2	1	0	0	0	0	0	0	0	0	1
14	0	0	0	0	0	0	1	2	15	10	22	31	15	16	11	2	1	0	0	0	0	0	0	0	0	5
15	0	0	0	0	0	0	0	2	4	8	10	11	10	9	6	2	0	0	0	0	0	0	0	0	0	2
16	0	0	0	0	0	0	1	4	8	13	16	18	15	11	7	3	1	0	0	0	0	0	0	0	0	4
17	0	0	0	0	0	0	1	3	10	6	15	19	13	12	5	3	0	0	0	0	0	0	0	0	0	3
18	0	0	0	0	0	0	1	4	7	10	14	24	17	12	7	4	0	0	0	0	0	0	0	0	0	4
19	0	0	0	0	0	0	0	1	3	4	6	5	5	5	3	1	0	0	0	0	0	0	0	0	0	1
20	0	0	0	0	0	0	0	1	2	5	6	5	2	2	2	1	0	0	0	0	0	0	0	0	0	1
21	0	0	0	0	0	0	0	2	3	6	15	13	13	9	6	2	0	0	0	0	0	0	0	0	0	3
22	0	0	0	0	0	0	0	3	6	7	9	13	11	5	3	1	0	0	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	2	4	6	9	17	7	8	7	2	0	0	0	0	0	0	0	0	0	3
24	0	0	0	0	0	0	0	2	5	8	11	15	13	10	6	2	0	0	0	0	0	0	0	0	0	2
25	0	0	0	0	0	0	0	2	4	6	7	12	11	8	5	2	0	0	0	0	0	0	0	0	0	2
26	0	0	0	0	0	0	0	2	4	6	10	13	9	5	3	1	0	0	0	0	0	0	0	0	0	2
27	0	0	0	0	0	0	0	1	4	9	12	11	10	8	5	1	0	0	0	0	0	0	0	0	0	2
28	0	0	0	0	0	0	0	1	3	7	9	10	6	3	2	1	0	0	0	0	0	0	0	0	0	2
29	0	0	0	0	0	0	0	1	2	5	4	5	4	2	2	1	0	0	0	0	0	0	0	0	0	1
30	***	0	0	0	0	0	0	0	6	1	2	3	3	2	2	1	0	0	0	0	0	0	0	0	0	1
31	0	0	0	0	0	0	0	0	0	1	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0	1

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

R A M CONSULTANTS, INC.
 SUSIYNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 1983

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1732	99
WIND SPEED	1535	88
WIND DIRECTION	1533	88
PEAK GUST	1533	88
RELATIVE HUMIDITY	1125	65
PRECIPITATION	0	0
SOLAR RADIATION	1738	100
DEW POINT	1122	64

THERE ARE 1742 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 -28 RH Points 10/1 -10/6
 -20 10/6 -10/31
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Recording time interval was changed on 10/6 from 15 minutes to 30 minutes.
2. 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.
3. Intermittent wind speed and direction data lost due to frozen anemometer and wind vane.
4. Malfunction in weather wizard (problem with recorder) caused data to be lost intermittently for all parameters.

No precipitation data for November

(See INTERPRETATION OF DATA).

P E A K CONSULTANTS, INC.
 3515 BENTLEY HYDROELECTRIC PROJECT PROJECT

24 HOUR SUMMARY FOR DESEL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1963

DAY 01

DAY 02

DAY 03

- HOUR	DEW				WIND				GUST MAX.	RAD	- HOUR	DEW				WIND				GUST MAX.	RAD							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.				TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-10.3	****	82	112	1.5	115	3.2	0	0300	-2.7	-8.3	65	136	1.9	130	5.4	0	0300	-7.8	-11.0	78	091	1.8	127	3.8	0		
0600	-10.3	****	82	102	.9	096	3.5	0	0600	-1.9	-8.4	61	147	1.2	150	2.5	0	0600	-9.5	-12.2	81	085	2.4	088	3.8	0		
0900	-7.9	****	82	106	.4	088	1.9	0	0900	-1.6	-9.0	57	153	1.3	141	2.5	0	0900	-9.0	-11.8	86	100	1.9	101	1.4	1		
1200	-3.5	****	86	117	.5	107	1.9	0	1200	1.5	-7.3	52	165	1.2	159	2.5	1	1200	-4.8	-9.4	79	094	1.6	097	3.8	6		
1500	-1.8	****	89	174	.3	145	1.3	0	1500	1.6	-7.2	52	136	1.2	124	3.8	5	1500	.4	-8.1	55	134	1.2	140	3.8	6		
1800	-2.5	****	85	155	.8	166	1.9	0	1800	-1.1	-9.2	54	115	2.1	112	3.8	0	1800	-4.2	-9.6	66	139	1.3	152	2.5	0		
2100	.2	-5.6	85	145	1.2	152	3.8	0	2100	-2.0	-9.2	58	105	2.3	115	5.1	0	2100	-5.2	-10.7	65	132	1.7	112	3.8	0		
2400	- .9	-6.2	67	144	1.1	134	3.2	0	2400	-4.6	-10.2	65	116	2.7	104	4.4	0	2400	-6.9	-12.2	68	098	1.8	090	3.4	0		

DAY 04

DAY 05

DAY 06

- HOUR	DEW				WIND				GUST MAX.	RAD	- HOUR	DEW				WIND				GUST MAX.	RAD							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.				TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-8.5	-13.0	70	110	1.2	108	3.2	0	0300	-4.2	-12.6	52	124	2.0	131	3.8	0	0300	-11.3	-14.0	75	069	1.7	070	3.8	0		
0600	-9.3	-14.1	68	104	1.0	093	3.2	0	0600	-3.9	-12.3	52	131	2.1	129	3.8	0	0600	-11.8	-15.5	70	071	1.9	078	1.4	0		
0900	-1.2	-12.6	42	134	1.3	142	4.4	1	0900	-4.3	-12.2	54	117	2.0	124	3.8	1	0900	-11.9	-15.8	71	070	2.7	073	1.4	1		
1200	.9	-13.0	35	121	1.7	094	5.7	8	1200	-4.2	-12.1	54	104	1.7	118	3.8	9	1200	-8.4	-14.4	62	066	2.5	062	1.4	6		
1500	.3	****	39	151	.9	135	4.4	5	1500	-3.0	-11.3	53	050	1.3	067	2.5	6	1500	-6.7	-13.8	37	129	2.1	130	3.1	5		
1800	-1.2	-13.2	40	104	1.7	110	4.4	0	1800	-4.7	-11.9	57	096	1.0	114	3.2	0	1800	-7.6	-13.4	63	118	2.4	123	1.4	0		
2100	-2.2	-13.5	42	110	1.3	107	3.2	0	2100	-6.6	-12.5	63	099	.5	087	3.2	0	2100	-8.7	-14.1	63	115	2.7	114	3.7	0		
2400	-3.9	-13.1	49	132	1.3	142	3.2	0	2400	-9.3	-12.9	75	089	1.4	126	3.8	0	2400	-8.2	-14.0	63	106	2.3	111	3.1	0		

DAY 07

DAY 08

DAY 09

- HOUR	DEW				WIND				GUST MAX.	RAD	- HOUR	DEW				WIND				GUST MAX.	RAD							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.				TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	MAX.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		NDNG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-6.9	-13.6	59	102	2.4	108	5.1	0	0300	-2.5	-12.3	47	111	1.5	103	4.4	0	0300	.8	-13.6	37	163	1.4	175	3.7	1		
0600	-5.7	-13.6	58	099	3.2	112	4.4	0	0600	-1.8	-11.4	49	126	1.2	132	3.2	0	0600	- .6	-16.2	30	128	1.4	163	3.2	0		
0900	-5.7	-14.0	56	106	2.5	115	5.1	1	0900	-2.3	-11.6	49	127	1.2	127	3.8	0	0900	.6	-16.8	24	113	1.2	113	3.3	1		
1200	-5.6	-14.7	49	111	2.9	097	5.3	7	1200	-1.2	-10.8	45	187	1.8	***	****	***	1200	1.0	-17.8	23	113	1.7	101	3.2	1		
1500	-4.3	-14.5	45	112	2.9	096	5.7	4	1500	****	****	**	***	****	***	****	***	1500	0.0	-17.8	21	124	2.2	132	3.1	3		
1800	-5.0	-14.6	47	111	2.3	103	5.1	0	1800	****	****	**	127	1.2	127	2.5	0	1800	-3.3	-20.8	35	113	1.5	110	1.4	0		
2100	-4.9	-14.2	49	118	1.9	114	3.9	0	2100	****	****	**	***	****	***	****	0	2100	-4.9	-18.5	31	118	2.2	119	4.4	0		
2400	-3.1	-13.9	47	105	2.3	105	4.4	0	2400	****	****	**	***	****	***	****	0	2400	-4.5	-18.1	34	123	1.9	112	3.8	0		

*** WIND DIRECTION NOTED AT END OF MONTHLY REPORT ***

R & M CONSULTANTS, INC.

GLASS BUTTE HYDROELECTRIC PROJECT

THIRTY HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATE TAKEN DURING November, 1983

DAY 10

DAY 11

DAY 12

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	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	
	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	-5.0	-18.2	35	135	1.5	103	4.4	0	0300	-1.9	-15.8	34	157	1.0	177	2.5	0	0300	-6.7	-18.2	40	114	2.7	121	5.1	0						
0600	-3.7	-17.1	35	166	1.3	147	3.2	0	0600	-4.8	-16.3	40	095	1.4	092	3.8	0	0600	-6.7	-17.9	41	116	2.6	115	4.4	0						
0900	-1.8	-16.1	33	165	1.6	154	3.2	0	0900	-5.2	-17.1	39	086	2.1	075	3.8	0	0900	-6.5	-16.0	47	112	2.3	107	4.4	0						
1200	-1.3	-16.7	28	127	1.3	121	8.4	5	1200	-6.2	-16.8	43	082	1.8	082	2.5	4	1200	-5.5	-15.6	45	112	2.5	118	4.4	2						
1500	-1.8	-16.8	29	132	1.6	135	4.4	3	1500	-3.9	****	39	052	.8	056	3.2	5	1500	-5.2	-16.7	65	100	2.0	092	4.4	2						
1800	-2.8	-16.3	35	122	1.9	103	8.4	0	1800	-1.2	-18.4	24	118	1.7	092	5.1	0	1800	-4.6	-11.6	68	104	1.7	120	3.8	0						
2100	-1.8	-15.7	34	157	1.3	155	3.8	0	2100	-3.2	-18.8	29	113	2.0	114	5.7	0	2100	-4.9	-11.7	59	067	1.0	063	2.5	0						
2400	-2.3	-16.5	33	150	1.5	117	5.7	0	2400	-4.8	-17.4	37	106	2.0	102	4.4	0	2400	-5.2	-12.4	57	065	1.0	066	2.5	0						

DAY 13

DAY 14

DAY 15

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	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	
	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	-8.0	-14.8	58	106	2.2	114	4.4	0	0300	-11.1	-14.8	74	089	1.6	085	3.8	0	0300	-13.2	-17.3	71	068	2.3	067	3.8	0						
0600	-11.3	-15.7	69	079	2.1	106	3.8	0	0600	-10.3	-14.5	71	030	2.2	030	3.8	0	0600	-12.8	-17.1	70	077	1.4	073	3.2	0						
0900	-13.0	-16.8	73	074	1.9	065	3.8	0	0900	-10.9	-15.4	69	113	2.9	111	5.7	0	0900	-11.2	-15.6	70	099	1.7	094	3.2	0						
1200	-12.1	-16.8	68	070	2.4	068	4.4	4	1200	-9.5	-14.8	65	116	2.5	117	4.8	4	1200	-7.4	****	61	122	1.0	114	3.2	7						
1500	-10.1	-15.6	64	066	1.7	062	3.2	2	1500	-8.9	-15.2	60	118	2.7	118	4.8	2	1500	-1.1	-15.1	34	116	2.5	107	6.3	3						
1800	-10.5	-15.2	68	092	2.1	081	3.8	0	1800	-9.7	-15.6	62	112	2.4	114	4.4	0	1800	-2.9	****	39	109	1.3	125	4.4	0						
2100	-12.6	-15.6	78	078	2.5	078	4.4	0	2100	-10.9	-16.5	63	120	2.3	127	4.4	0	2100	-2.7	-15.2	38	126	1.7	104	5.1	0						
2400	-12.1	-15.5	76	076	2.3	082	5.1	0	2400	-12.5	-17.2	68	073	1.6	105	3.8	0	2400	-3.5	-16.2	67	121	1.6	133	3.2	0						

DAY 16

DAY 17

DAY 18

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	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	
	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	-4.2	-15.9	40	098	2.1	090	5.1	0	0300	-13.4	-17.7	70	069	2.1	071	4.4	0	0300	-6.9	-13.7	68	115	2.1	121	1.4	0						
0600	-6.7	-11.5	67	098	2.1	103	5.7	0	0600	-14.0	-18.1	71	030	2.5	084	3.8	0	0600	-10.9	-15.6	68	109	2.1	114	5.1	0						
0900	-7.1	-12.9	63	099	2.7	097	5.1	1	0900	-14.1	-18.2	71	077	2.1	***	3.2	0	0900	-11.8	-16.7	67	097	1.6	091	3.2	0						
1200	-8.1	-13.9	67	133	2.3	134	5.7	3	1200	-12.3	-17.3	66	091	2.1	076	3.2	5	1200	-11.8	-16.6	66	073	2.2	089	1.0	5						
1500	-7.5	-13.9	60	120	2.3	133	3.2	2	1500	-10.4	-14.1	74	083	1.8	093	3.8	3	1500	-8.9	-15.4	64	073	1.8	066	3.2	3						
1800	-8.5	-14.7	60	112	2.3	098	3.2	0	1800	-9.5	-13.1	74	094	1.0	103	3.2	0	1800	-12.3	-17.5	66	095	1.9	075	3.2	0						
2100	-8.7	-15.5	60	116	2.2	119	3.2	0	2100	-9.8	-12.9	73	100	1.2	110	3.2	0	2100	-14.6	-18.2	74	072	1.9	108	3.2	0						
2400	-11.5	-17.1	63	089	2.0	115	4.4	0	2400	-3.8	-13.4	69	089	1.4	100	3.2	0	2400	-16.0	-19.5	74	078	2.6	072	3.2	0						

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

P & M CONSULTANTS, INC.
 BUSBYNA HYDROELECTRIC PROJECT

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

DAY 19

DAY 20

DAY 21

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.		
	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	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	-16.8	-20.3	74	***	***	***	3.2	0	0300	-16.2	-19.9	73	070	2.1	082	3.8	0	0300	-2.3	-9.2	59	154	.7	160	2.5	0			
0600	-16.4	-19.9	74	075	1.6	093	3.8	0	0600	-16.3	-20.0	73	076	2.6	073	3.8	0	0600	-1.2	-8.6	57	106	1.1	094	2.4	0			
0900	-15.4	-18.8	75	086	1.3	***	3.8	0	0900	-10.0	-14.9	67	091	1.3	082	3.2	0	0900	-.5	-7.7	58	147	1.1	109	2.4	0			
1200	-13.8	-17.4	74	076	1.3	035	3.5	4	1200	-7.3	-14.1	58	089	1.4	082	3.8	3	1200	1.7	-6.6	54	129	.9	094	2.4	2			
1500	-13.0	*****	75	108	1.1	106	3.2	2	1500	-8.6	-14.9	52	086	2.2	093	5.7	1	1500	.9	-6.4	58	199	.8	***	3.8	1			
1800	-14.6	-.7	77	091	1.4	100	3.5	0	1800	-7.2	*****	63	087	1.2	101	3.2	0	1800	.1	*****	63	176	.9	179	1.9	0			
2100	-15.5	-18.9	76	100	1.3	086	3.2	0	2100	-5.9	-12.4	60	101	.7	150	2.5	0	2100	-.1	*****	67	189	.8	175	1.9	0			
2400	-16.7	-20.1	75	090	1.2	094	3.9	0	2400	-4.6	*****	62	157	.6	204	1.9	0	2400	-.6	*****	97	191	.3	232	1.9	0			

DAY 22

DAY 23

DAY 24

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.		
	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	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	*****	98	117	.7	119	1.9	0	0300	-7.6	-9.0	90	090	2.0	087	3.6	0	0300	-7.5	*****	83	119	.8	126	3.2	0			
0600	-1.1	*****	98	103	.7	069	2.5	0	0600	-7.4	-9.1	88	075	2.0	086	3.2	0	0600	-8.0	-11.6	76	088	1.3	092	3.2	0			
0900	-1.3	-2.6	91	117	1.1	128	3.2	0	0900	-7.4	-9.1	88	068	1.8	072	3.2	0	0900	-11.8	-14.1	83	101	1.9	094	3.2	3			
1200	-1.6	-3.5	87	129	2.0	129	3.2	3	1200	-6.4	-8.8	83	064	1.9	069	3.2	2	1200	-12.1	-15.1	78	089	2.0	095	3.3	2			
1500	-1.9	-4.3	84	120	1.8	120	3.2	1	1500	-5.6	-8.3	81	052	.9	054	2.5	1	1500	-11.0	-14.4	76	099	1.7	098	3.3	1			
1800	-3.4	-5.6	85	124	1.3	131	3.2	0	1800	-5.7	*****	84	115	1.0	135	2.5	0	1800	-12.5	-15.2	80	089	1.6	099	3.2	0			
2100	-5.1	-6.7	89	082	1.7	083	3.2	0	2100	-6.4	*****	88	106	.7	103	2.5	0	2100	-13.4	-16.3	79	125	1.3	111	3.2	0			
2400	-6.7	-8.1	90	095	1.6	089	3.2	0	2400	-6.1	*****	84	114	.8	125	2.5	0	2400	-9.2	-13.1	73	122	.9	115	3.9	0			

DAY 25

DAY 26

DAY 27

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.		
	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		NDWG	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	-9.9	-13.8	73	104	1.6	092	3.2	0	0300	-9.4	*****	65	118	1.6	130	3.8	0	0300	-8.3	-13.1	68	071	1.4	067	3.2	0			
0600	-9.8	-14.6	68	101	3.2	106	4.4	0	0600	-8.5	*****	63	064	1.0	056	2.5	0	0600	-8.2	-12.2	67	057	1.5	044	3.2	0			
0900	-10.0	-14.8	68	099	3.5	101	5.1	0	0900	-9.2	-15.1	62	099	1.6	116	3.8	0	0900	-8.4	-13.6	71	069	1.7	063	3.2	0			
1200	-9.2	-14.7	64	098	2.3	091	5.7	3	1200	-5.8	*****	56	068	.9	065	3.5	4	1200	-6.3	-9.3	79	070	1.2	069	3.2	5			
1500	-9.9	-14.8	63	093	2.3	088	5.7	1	1500	-6.7	-4.1	56	108	1.8	094	3.6	1	1500	-3.8	-8.8	68	078	1.3	062	3.2	1			
1800	-10.0	-15.5	64	097	2.7	091	5.1	0	1800	-8.0	*****	64	061	1.0	072	2.5	0	1800	-3.5	-8.2	66	111	1.6	111	3.2	0			
2100	-10.1	-15.5	64	098	2.1	106	4.4	0	2100	-7.8	*****	63	091	1.3	112	3.2	0	2100	-4.6	*****	71	125	1.6	124	3.2	0			
2400	-10.0	-15.5	64	117	3.6	115	4.8	0	2400	-8.4	-13.8	65	073	1.5	078	3.2	0	2400	-3.9	-9.7	64	094	1.5	111	3.2	0			

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

R & M CONSULTANTS, INC.
 SUEBETHA HYDROELECTRIC PROJECT

24-HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1983

DAY 28										DAY 29										DAY 30																				
HR	DEW			WIND			WIND GUST			MAX.			HR	DEW			WIND			WIND GUST			MAX.			HR	DEW			WIND			WIND GUST			MAX.				
NOVG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOVG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOVG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOVG	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	-2.6	-7.7	68	102	1.5	102	4.4	0	0300	.9	-6.9	56	161	1.1	165	2.5	0	0300	1.9	-14.8	28	154	1.5	133	1.4	0														
0500	-2.1	-7.8	65	114	1.2	112	3.2	0	0500	2.1	-9.6	42	161	1.4	150	3.2	0	0500	1.1	-13.9	32	130	1.6	139	3.3	0														
0900	-1.4	-7.3	64	108	1.0	132	3.2	0	0900	2.0	-10.3	40	142	1.7	137	3.2	0	0900	.1	-14.1	34	099	1.7	099	4.4	1														
1200	-.2	-7.7	57	090	1.3	062	3.8	5	1200	2.3	-10.4	39	154	1.5	150	3.8	2	1200	2.0	-12.4	34	146	1.4	141	3.2	2														
1500	.9	-6.9	56	091	1.2	114	4.4	2	1500	2.1	-11.2	37	134	1.2	163	3.8	1	1500	2.0	-11.7	36	145	1.4	139	3.5	1														
1800	-1.1	-6.9	60	100	1.2	074	4.4	0	1800	2.9	-11.9	33	135	1.3	113	3.8	0	1800	1.2	-12.0	37	145	1.4	159	3.3	0														
2100	.5	-6.6	59	133	1.2	162	3.5	0	2100	2.6	-13.0	31	131	1.8	113	3.8	0	2100	.5	-12.7	37	140	1.4	147	3.2	0														
2400	.2	-6.6	60	147	1.0	157	3.5	0	2400	.2	-14.7	32	148	1.6	123	3.8	0	2400	1.3	-12.3	36	137	1.3	140	3.3	0														

* SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT *

R & M CONSULTANTS, INC.

SUBSTAINA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVEL. CANYON WEATHER STATION
 DATA TAKEN DURING November, 1983

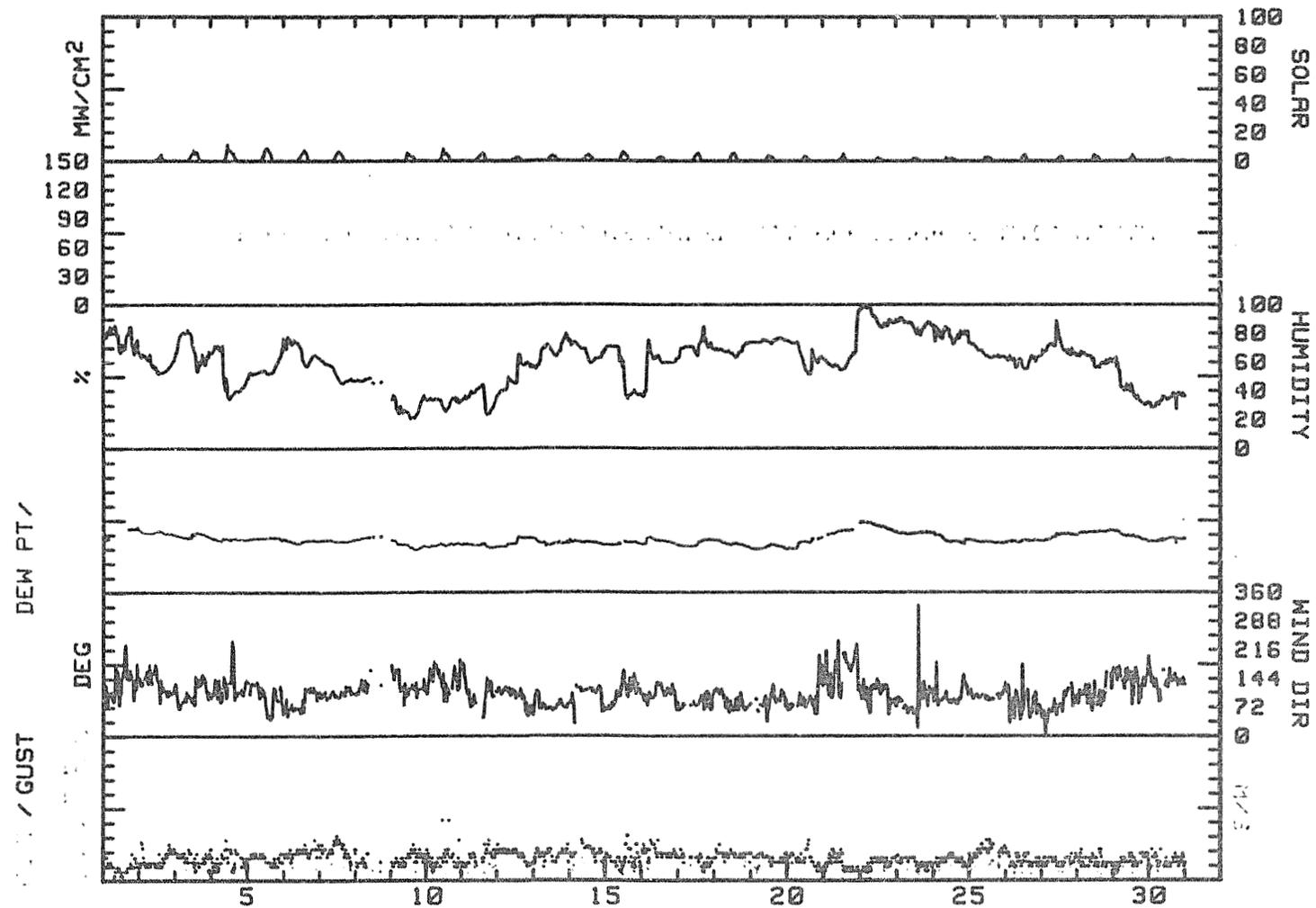
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAILY SOLAR ENERGY WH/SCM	DAY
1	2	-10.7	-5.3	130	.8	.9	152	3.8	ESE	75	-8.8	****	0	1
2	1.8	-4.6	-1.4	127	1.7	1.8	130	5.4	ESE	59	-8.4	****	130	2
3	4	-10.3	-5.0	104	1.6	1.7	104	4.4	E	70	-10.5	****	340	3
4	9	-9.8	-4.5	119	1.3	1.4	094	5.7	SE	49	-13.0	****	425	4
5	-3.0	-9.4	-6.2	106	1.4	1.6	131	3.8	ESE	56	-12.5	****	425	5
6	-6.7	-12.3	-9.5	090	2.1	2.3	114	5.7	ENE	67	-14.4	****	335	6
7	-3.1	-7.8	-5.5	106	2.4	2.5	097	6.3	ESE	52	-14.0	****	330	7
8	1	-3.0	-1.5	124	1.4	1.5	102	4.4	ESE	47	-11.7	****	0	8
9	2.2	-5.3	-1.6	125	1.6	1.7	122	5.1	ESE	28	-17.6	****	240	9
10	2	-5.4	-3.6	144	1.4	1.5	121	3.4	SSE	32	-16.8	****	305	10
11	5	-6.7	-3.1	104	1.6	1.7	114	5.7	ESE	35	-17.3	****	250	11
12	-4.5	-7.2	-5.9	106	2.0	2.0	121	5.1	ESE	50	-14.8	****	175	12
13	-5.0	-14.6	-9.8	080	2.1	2.2	082	5.1	ENE	68	-15.6	****	160	13
14	-8.4	-12.6	-10.5	105	2.1	2.3	111	5.7	ESE	67	-15.3	****	235	14
15	-1.1	-13.3	-7.2	105	1.6	1.7	102	6.3	ESE	54	-16.0	****	260	15
16	-3.4	-11.5	-7.5	108	2.2	2.3	102	5.7	ESE	60	-14.2	****	150	16
17	-8.3	-14.1	-11.2	083	1.6	1.7	071	4.4	ENE	71	-15.9	****	270	17
18	-8.6	-16.0	-12.3	087	1.9	2.1	104	5.1	ENE	68	-16.2	****	225	18
19	-12.4	-17.3	-14.9	090	1.3	1.3	094	3.9	E	75	-18.7	****	165	19
20	-4.6	-16.6	-10.6	088	1.3	1.5	093	5.7	E	65	-16.3	****	131	20
21	1.9	-4.4	-1.5	154	.7	1.0	094	4.4	S	58	-7.5	****	135	21
22	-2	-6.7	-5.5	110	1.3	1.4	128	3.2	ESE	89	-4.4	****	75	22
23	-4.6	-7.9	-6.3	081	1.3	1.4	087	3.6	ENE	66	-8.8	****	65	23
24	-5.6	-13.5	-9.6	099	1.4	1.5	085	3.8	E	79	-13.5	****	115	24
25	-9.0	-10.2	-9.6	101	2.2	2.3	091	5.7	E	66	-14.8	****	140	25
26	-5.5	-9.4	-7.5	089	1.2	1.4	130	3.8	ENE	61	-14.1	****	150	26
27	-3.3	-9.2	-6.3	090	1.4	1.6	134	3.8	ENE	70	-10.5	****	105	27
28	9	-4.5	-1.8	106	1.2	1.3	102	4.4	ESE	62	-7.5	****	155	28
29	3.5	-1.4	1.1	145	1.4	1.6	150	3.8	SSE	41	-10.7	****	115	29
30	2.8	-1.2	.8	138	1.4	1.5	133	4.4	SE	34	-13.1	****	110	30
NOV	3.5	-17.3	-6.0	106	1.5	1.7	121	5.7	ESE	59	-13.0	****	5645	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 3.1
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 2.5
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 3.1

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
DEVIL CANYON WEATHER STATION
November, 1983



R & M CONSULTANTS, INC.

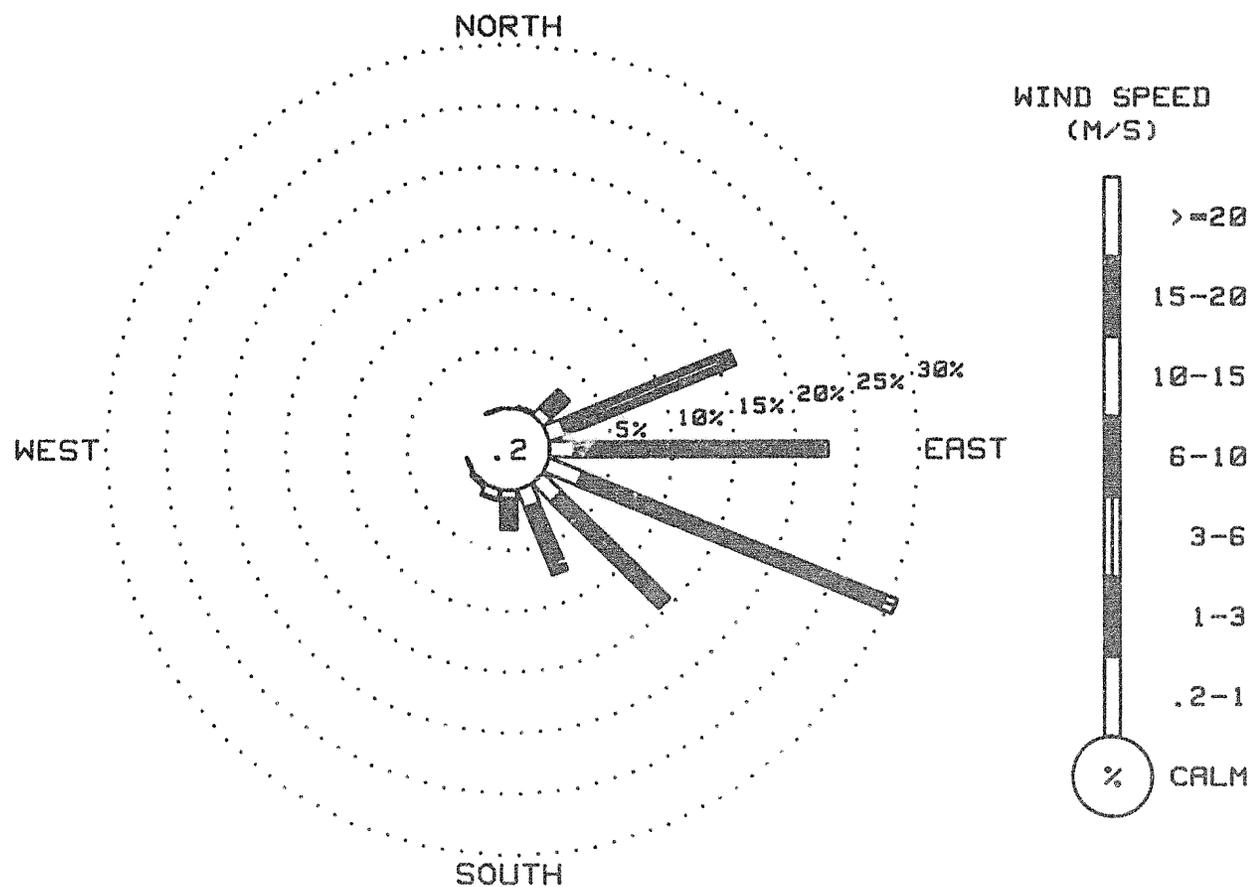
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING November, 1985

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	0.00	.08	0.00	0.00	0.00	0.00	0.00	.08
NNE	.15	.15	0.00	0.00	0.00	0.00	0.00	.30
NE	.93	2.08	0.00	0.00	0.00	0.00	0.00	3.01
ENE	1.46	14.73	.15	0.00	0.00	0.00	0.00	16.34
E	2.00	20.13	.46	0.00	0.00	0.00	0.00	22.59
ESE	3.93	26.52	1.08	0.00	0.00	0.00	0.00	30.53
SE	2.16	12.34	0.00	0.00	0.00	0.00	0.00	14.50
SSE	1.62	5.94	0.00	0.00	0.00	0.00	0.00	7.56
S	.69	2.54	0.00	0.00	0.00	0.00	0.00	3.23
SSW	.85	.15	0.00	0.00	0.00	0.00	0.00	1.00
SW	.59	0.00	0.00	0.00	0.00	0.00	0.00	.59
WSW	.08	.08	0.00	0.00	0.00	0.00	0.00	.16
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WNW	.05	0.00	0.00	0.00	0.00	0.00	0.00	.05
CalM	-----	-----	-----	-----	-----	-----	-----	-----
TOTAL	15.34	64.73	1.70	0.00	0.00	0.00	0.00	81.77

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

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



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUSIYNA HYDROELECTRIC PROJECT

MONTHLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1985

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	0	0	0	0	0	0	0	0	0	0	0	0	0	***	
2	0	0	0	0	0	0	0	0	0	1	1	1	1	3	5	2	1	0	0	0	0	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	1	3	5	6	7	5	6	3	1	0	0	0	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	0	1	3	10	8	7	7	5	3	1	0	0	0	0	0	0	0	0	2
5	0	0	0	0	0	0	0	0	0	1	3	5	9	9	8	6	3	0	0	0	0	0	0	0	0	0	2
6	0	0	0	0	0	0	0	0	0	1	3	4	6	7	8	6	2	0	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	3	5	7	7	6	5	2	0	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	0	***	***	***	***	***	***	0	0	0	0	0	0	0	0	0	***	
9	0	0	0	0	0	0	0	0	0	0	2	6	5	4	3	3	2	0	0	0	0	0	0	0	0	1	
10	0	0	0	0	0	0	0	0	0	0	2	5	7	5	6	4	2	0	0	0	0	0	0	0	0	1	
11	0	0	0	0	0	0	0	0	0	0	2	3	4	5	6	6	2	0	0	0	0	0	0	0	0	1	
12	0	0	0	0	0	0	0	0	0	0	1	2	2	3	3	3	1	0	0	0	0	0	0	0	0	1	
13	0	0	0	0	0	0	0	0	0	0	2	3	4	4	5	5	1	0	0	0	0	0	0	0	0	1	
14	0	0	0	0	0	0	0	0	0	0	2	3	4	5	4	3	2	0	0	0	0	0	0	0	0	1	
15	0	0	0	0	0	0	0	0	0	0	2	4	7	6	5	3	1	0	0	0	0	0	0	0	0	1	
16	0	0	0	0	0	0	0	0	0	0	1	3	3	3	3	2	1	0	0	0	0	0	0	0	0	1	
17	0	0	0	0	0	0	0	0	0	0	1	3	5	5	6	4	1	0	0	0	0	0	0	0	0	1	
18	0	0	0	0	0	0	0	0	0	0	1	3	5	6	6	3	1	0	0	0	0	0	0	0	0	1	
19	0	0	0	0	0	0	0	0	0	0	1	3	4	4	3	3	1	0	0	0	0	0	0	0	0	1	
20	1	0	0	0	0	0	0	0	0	0	1	2	3	4	3	1	0	0	0	0	0	0	0	0	0	1	
21	0	0	0	0	0	0	0	0	0	0	1	2	2	3	3	2	1	0	0	0	0	0	0	0	0	1	
22	0	0	0	0	0	0	0	0	0	0	1	3	2	1	1	0	0	0	0	0	0	0	0	0	0	1	
23	0	0	0	0	0	0	0	0	0	0	0	2	2	3	2	1	0	0	0	0	0	0	0	0	0	1	
24	0	0	0	0	0	0	0	0	0	0	1	3	3	3	3	2	1	0	0	0	0	0	0	0	0	1	
25	0	0	0	0	0	0	0	0	0	0	0	2	4	4	4	2	0	0	0	0	0	0	0	0	0	1	
26	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	2	0	0	0	0	0	0	0	0	0	1	
27	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	2	0	0	0	0	0	0	0	0	0	1	
28	0	0	0	0	0	0	0	0	0	0	0	2	5	5	4	3	0	0	0	0	0	0	0	0	0	1	
29	0	0	0	0	0	0	0	0	0	0	0	1	2	3	4	2	0	0	0	0	0	0	0	0	0	1	
30	0	0	0	0	0	0	0	0	0	1	1	2	3	3	3	1	0	0	0	0	0	0	0	0	0	1	

* SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT *

R & M CONSULTANTS, INC.,
 SUSITNA HYDROELECTRIC PROJECT

DATA ACQUISITION SUMMARY FOR DEVEL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1985

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1414	98
WIND SPEED	1344	93
WIND DIRECTION	1310	91
PEAK GUST	1323	92
RELATIVE HUMIDITY	1238	86
PRECIPITATION	0	0
SOLAR RADIATION	1426	99
DEW POINT	1236	86

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 -20 RH Points 11/1 - 11/17
 -15 11/17 - 11/30
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Malfunction in weather wizard (problem with recorder) caused data to be lost intermittantly for all parameters.

No precipitation data for December

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

SUBSTATION HYDROELECTRIC PROJECT

THREE-HOUR SUMMARY FOR DEPTL. CANYON WEATHER STATION
 DATA TAKEN DURING December, 1983

DAY 01

DAY 02

DAY 03

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-1.2	-11.4	43	122	1.2	141	2.5	0	0300	-2.4	-6.0	76	143	1.3	138	2.5	0	0300	-5.3	*****	84	102	1.9	097	3.2	0
0600	-1.8	-10.6	51	157	1.1	152	2.5	0	0600	-5.2	*****	86	093	1.2	097	3.2	0	0600	-6.1	*****	94	103	1.4	101	1.9	0
0900	-1.7	-9.8	54	153	1.3	137	3.2	0	0900	-5.5	*****	85	067	1.4	069	3.2	0	0900	-6.3	*****	93	082	1.7	040	2.5	0
1200	-1.2	*****	53	165	1.9	182	1.9	2	1200	-4.4	-7.2	81	052	1.1	048	3.2	3	1200	-4.5	-6.1	89	057	1.9	040	3.2	3
1500	1.3	*****	51	129	1.7	142	2.5	1	1500	-4.1	-7.5	77	065	1.0	072	3.2	1	1500	-3.7	-6.5	81	117	1.6	120	3.2	1
1800	1.6	-7.0	53	139	1.4	143	2.5	0	1800	-4.2	-7.1	80	061	1.0	062	3.2	0	1800	-4.8	-7.7	80	118	1.9	121	3.2	0
2100	1.8	-6.3	55	111	1.5	100	3.8	0	2100	-4.4	*****	80	074	1.6	077	2.5	0	2100	-6.2	-9.7	76	096	1.2	125	3.2	0
2400	1.0	-5.7	61	122	1.4	135	4.9	0	2400	-5.1	*****	85	145	1.8	146	1.9	0	2400	-6.7	-10.4	75	072	1.7	075	3.2	0

DAY 04

DAY 05

DAY 06

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-5.6	-9.3	75	102	1.9	118	4.4	0	0300	-4.6	-6.6	86	116	2.2	117	3.8	0	0300	-2.5	-4.4	87	111	1.5	125	3.2	0
0600	-5.4	-8.1	81	110	1.6	120	3.8	0	0600	-5.0	-6.3	91	107	1.7	109	3.8	0	0600	-2.7	-4.1	90	095	1.2	083	3.2	0
0900	-5.8	-7.5	88	119	2.0	118	3.8	0	0900	-5.5	-5.9	97	068	1.2	065	2.5	0	0900	-2.6	-4.5	87	086	1.5	085	3.8	0
1200	-5.7	-7.6	83	115	2.0	115	3.8	2	1200	-5.0	*****	96	072	1.1	070	1.9	1	1200	-2.5	-4.7	85	086	1.5	090	3.8	2
1500	-5.2	-5.8	96	100	1.7	110	3.8	0	1500	-3.4	-4.1	95	068	1.9	075	1.9	0	1500	-2.1	-4.6	83	096	1.8	097	3.8	1
1800	-5.2	-5.9	95	105	1.5	106	3.2	0	1800	-3.0	-4.6	89	123	1.3	122	3.2	0	1800	-3.2	-5.1	87	093	1.6	102	3.8	0
2100	-4.9	-6.3	90	114	1.4	103	3.5	0	2100	-2.8	-4.5	88	131	1.6	123	3.2	0	2100	-7.0	-7.3	98	079	1.6	066	3.2	0
2400	-4.8	-6.2	90	129	1.4	121	3.2	0	2400	-2.9	-4.5	88	123	1.6	125	3.2	0	2400	-8.1	-8.6	95	094	1.4	077	3.8	0

DAY 07

DAY 08

DAY 09

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-6.7	-6.4	88	131	1.0	119	1.9	0	0300	-7.3	-10.2	80	096	3.7	088	7.0	0	0300	-10.9	-13.1	51	136	2.2	102	3.2	0
0600	-6.8	*****	88	119	1.9	119	2.5	0	0600	-7.8	-11.1	76	103	1.0	101	7.0	0	0600	-11.1	-21.7	41	125	1.1	115	3.8	0
0900	-6.8	-6.5	84	115	1.3	100	3.2	0	0900	-8.6	-12.4	74	104	3.7	106	6.3	0	0900	-13.3	-23.6	47	125	1.4	073	4.4	0
1200	-6.4	-7.3	81	110	1.3	105	2.5	2	1200	-8.2	-13.1	71	116	3.5	104	5.7	2	1200	-14.7	-25.1	41	112	2.5	079	1.4	0
1500	-6.7	-7.8	79	117	1.4	119	2.5	1	1500	-8.5	-13.0	70	114	4.1	122	6.3	1	1500	-13.4	-25.5	42	95	3.0	101	1.4	1
1800	-6.8	-9.2	84	113	1.4	109	2.5	0	1800	-9.6	-14.0	70	108	3.8	110	6.3	0	1800	-15.3	-26.3	42	129	3.4	119	1.4	0
2100	-7.4	-9.7	84	117	2.0	119	2.5	0	2100	-10.5	-15.1	69	151	2.7	149	5.1	0	2100	-16.1	-26.4	41	109	3.9	101	1.4	0
2400	-6.9	-9.8	81	130	2.3	125	4.4	0	2400	-10.5	-17.0	59	131	2.7	133	5.7	0	2400	-16.3	-26.8	42	124	1.3	113	1.4	0

SEE INTERFERENTIAL NOTES AT END OF MONTHLY REPORT

R A M CONSULTANTS, INC.
SUSBITNA HYDROELECTRIC PROJECT

HOURLY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING December, 1953

DAY 10

DAY 11

DAY 12

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-14.3	-24.8	41	112	1.7	118	3.8	0	0300	-9.5	-16.9	55	101	1.8	099	5.1	0	0300	-12.7	-16.2	75	089	1.4	101	3.2	0
0600	-13.4	-23.4	43	104	2.2	100	5.1	0	0600	-10.5	-18.5	52	119	2.3	100	5.7	0	0600	-13.4	-16.6	77	074	1.5	073	2.5	0
0900	-13.6	-23.1	45	103	2.4	106	5.1	0	0900	-11.4	*****	62	111	1.3	120	3.8	0	0900	-14.3	-17.3	78	077	1.6	066	3.2	0
1200	-12.0	-15.8	73	105	1.9	099	4.4	1	1200	-8.6	-15.0	60	127	2.2	133	4.4	2	1200	-13.2	-16.7	75	090	1.0	081	2.5	2
1500	-11.2	-18.3	56	106	2.1	105	5.1	1	1500	-7.2	-13.8	59	101	1.9	108	4.4	0	1500	-10.3	-15.8	64	108	.9	094	3.2	1
1800	-10.5	-17.0	59	107	2.0	084	4.4	0	1800	-7.5	-11.3	74	106	1.8	100	4.4	0	1800	-12.2	*****	71	141	.7	139	2.5	0
2100	-9.8	-18.3	50	092	1.2	110	3.2	0	2100	-9.2	-13.8	69	130	1.8	138	3.2	0	2100	-8.9	-16.3	55	102	1.3	104	3.2	0
2400	-9.1	-17.7	50	107	1.9	087	5.1	0	2400	-11.1	-15.3	71	115	1.3	142	3.2	0	2400	-9.5	-16.7	56	118	1.8	132	4.4	0

DAY 13

DAY 14

DAY 15

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-9.3	-15.8	59	125	1.8	121	3.2	0	0300	-14.2	-18.3	71	132	1.9	131	3.8	0	0300	*****	*****	**	***	*****	***	*****	***
0600	-9.4	-15.7	60	111	1.8	123	5.1	0	0600	-15.2	-18.5	76	091	1.3	136	3.8	0	0600	*****	*****	**	***	*****	***	*****	***
0900	-9.3	-15.8	59	107	1.8	101	5.7	0	0900	-16.4	-19.5	77	056	1.7	063	3.2	0	0900	*****	*****	**	***	*****	***	*****	***
1200	-9.2	*****	72	120	1.3	120	3.2	0	1200	-16.7	-19.9	76	070	1.3	059	3.8	0	1200	*****	*****	**	***	*****	***	*****	***
1500	-9.0	*****	69	081	.9	084	3.2	0	1500	-16.8	*****	74	085	1.5	089	3.8	0	1500	*****	*****	**	***	*****	***	*****	***
1800	-10.0	-14.2	71	092	1.4	101	3.8	0	1800	-17.8	-21.0	76	***	*****	***	2.5	0	1800	*****	*****	**	***	*****	***	*****	***
2100	-10.5	-15.6	66	118	1.4	112	3.8	0	2100	-18.0	-21.0	77	069	1.4	069	3.2	0	2100	*****	*****	**	***	*****	***	*****	***
2400	-11.8	-16.7	67	120	1.4	126	3.2	0	2400	-19.7	-22.5	78	050	1.5	049	2.5	0	2400	*****	*****	**	***	*****	***	*****	***

DAY 16

DAY 17

DAY 18

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	*****	*****	**	***	*****	***	*****	***	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.

SUBSTATION HYDROELECTRICITY PROJECT

WIND HOUR SUMMARY FOR DEWTL CANYON WEATHER STATION

DATA TAKEN DURING December, 1983

DAY 19

DAY 20

DAY 21

HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD	HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD							
	TEMP.	POINT	RH	%								TEMP.	POINT	RH	%							TEMP.	POINT	RH	%			
NDWG	DEG C	DEG C	DEG	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM
0300	-10.0	****	78	118	.8	145	3.2	0	0300	-7.5	-15.2	54	106	3.1	115	5.1	0	0300	-3.6	-5.6	86	112	2.4	110	4.4	1		
0600	-7.3	-12.9	64	113	1.7	140	3.8	0	0600	-6.8	-14.6	54	116	2.8	115	5.1	0	0600	-4.1	-4.8	95	102	2.3	107	3.4	0		
0900	-10.3	-14.7	70	110	2.0	115	3.8	0	0900	-6.2	-14.0	54	112	2.7	109	4.4	0	0900	-3.6	-5.9	84	104	2.3	105	3.4	0		
1200	-5.4	-14.2	50	089	1.4	074	3.8	2	1200	-5.3	-13.2	54	111	2.7	112	5.1	2	1200	-3.2	-6.3	79	097	1.8	105	3.2	2		
1500	-6.6	-15.9	48	113	2.5	116	4.4	0	1500	-5.0	-12.4	56	107	2.5	114	5.1	0	1500	-3.0	-6.6	76	101	2.0	093	3.8	1		
1800	-8.5	-16.2	54	103	2.9	101	5.1	0	1800	-4.1	-11.8	55	119	2.4	108	5.1	0	1800	-4.7	-8.4	75	099	1.9	095	5.1	0		
2100	-8.5	-15.9	55	120	3.2	129	5.7	0	2100	-3.9	-9.9	63	108	2.1	118	4.4	0	2100	-5.7	-9.7	73	102	1.8	107	5.1	0		
2400	-8.2	-15.7	55	115	2.9	111	5.7	0	2400	-4.3	-9.3	68	098	2.5	094	4.4	0	2400	-6.6	-10.3	75	109	2.2	057	4.4	0		

DAY 22

DAY 23

DAY 24

HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD	HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD							
	TEMP.	POINT	RH	%								TEMP.	POINT	RH	%							TEMP.	POINT	RH	%			
NDWG	DEG C	DEG C	DEG	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM
0300	****	****	80	062	2.7	062	5.1	0	0300	-14.3	-16.8	81	064	2.2	066	5.1	0	0300	-13.3	-16.6	76	052	3.5	***	6.3	0		
0600	****	****	83	076	2.5	092	4.8	0	0600	-12.4	-15.1	80	063	2.8	068	4.4	0	0600	-14.5	-17.8	76	059	3.0	067	5.7	0		
0900	****	****	83	***	****	***	3.2	0	0900	-14.0	-16.8	79	061	2.4	050	5.1	0	0900	-14.1	-17.4	76	058	2.9	055	5.7	0		
1200	****	****	**	069	2.3	068	3.8	1	1200	-13.5	-16.5	78	058	2.5	068	5.4	1	1200	-12.6	-16.4	73	088	2.4	080	3.4	3		
1500	****	****	**	***	****	***	****	1	1500	-12.3	-16.1	73	056	3.1	060	5.7	1	1500	-12.9	-16.1	77	100	1.8	096	3.8	1		
1800	****	****	**	***	****	***	****	0	1800	-9.9	-14.1	71	068	2.3	053	5.7	0	1800	-13.3	-16.2	79	110	1.6	115	5.1	0		
2100	-14.3	-16.8	81	068	3.0	***	3.8	0	2100	-10.9	-15.1	71	076	3.1	087	6.3	0	2100	-12.7	-15.1	89	135	1.4	159	4.4	0		
2400	-14.4	-17.2	79	057	2.3	056	5.1	0	2400	-12.6	-16.1	75	058	2.8	056	5.7	0	2400	-6.8	-11.3	70	130	1.6	101	4.4	0		

DAY 25

DAY 26

DAY 27

HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD	HOUR	DEW				WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST	MAX. GUST	RAD							
	TEMP.	POINT	RH	%								TEMP.	POINT	RH	%							TEMP.	POINT	RH	%			
NDWG	DEG C	DEG C	DEG	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM	NDWG	TEMP.	POINT	RH	%	DEG	M/S	DEG	M/S	MM
0300	-12.3	****	83	101	1.3	095	4.4	0	0300	-8.4	-15.4	57	095	2.1	075	5.1	0	0300	-11.3	-17.9	59	083	1.9	090	3.8	0		
0600	-3.7	-12.5	79	130	.9	116	3.8	0	0600	-10.6	-16.4	63	089	2.0	105	4.4	0	0600	-9.1	-17.0	55	082	2.7	079	3.5	0		
0900	.9	-14.5	81	109	3.3	096	5.1	0	0900	-11.8	-16.9	63	084	1.5	075	3.2	0	0900	-10.9	-16.0	56	093	2.0	086	5.1	0		
1200	.4	-15.3	80	113	2.5	135	4.5	2	1200	-10.8	-16.7	62	078	2.7	082	5.1	2	1200	-10.1	-18.1	59	087	2.4	134	5.1	3		
1500	.9	-15.7	84	136	3.2	132	6.3	1	1500	-10.7	-16.9	60	088	2.9	083	4.4	1	1500	-10.7	-18.5	51	109	3.0	090	5.7	1		
1800	-5.9	****	57	107	1.0	082	3.2	0	1800	-9.7	-16.1	55	082	2.7	079	5.4	0	1800	-11.6	-19.5	53	116	2.7	109	5.1	0		
2100	-5.9	-15.2	60	115	1.1	089	3.3	0	2100	-10.1	-16.3	59	081	2.7	069	5.3	0	2100	-14.7	-20.0	60	122	2.0	061	4.4	0		
2400	-9.5	-16.6	59	093	1.6	076	4.4	0	2400	-10.6	-16.9	60	077	2.6	072	4.8	0	2400	-16.3	-19.0	75	082	3.4	053	3.4	0		

FOR MORE INFORMATION CONTACT THE OFFICE OF MONTHLY REPORTING

R & M CONSULTANTS, INC.
 BUSBYTNY HYDROELECTRIC PROJECT

HOURLY HOUR SUMMARY FOR DEUIL CANYON WEATHER STATION
 DATA TAKEN DURING December, 1983

DAY 28

DAY 29

DAY 30

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST			
NOHG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	NOHG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM	NOHG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MM
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						
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
NOHG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	*****	*****	**	***	****	***	****
0600	*****	*****	**	***	****	***	****
0900	*****	*****	**	***	****	***	****
1200	*****	*****	**	***	****	***	****
1500	*****	*****	**	***	****	***	****
1800	*****	*****	**	***	****	***	****
2100	*****	*****	**	***	****	***	****
2400	*****	*****	**	***	****	***	****

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

R & M CONSULTANTS, INC.

SUBMITTING HYDROELECTRIC PROJECT

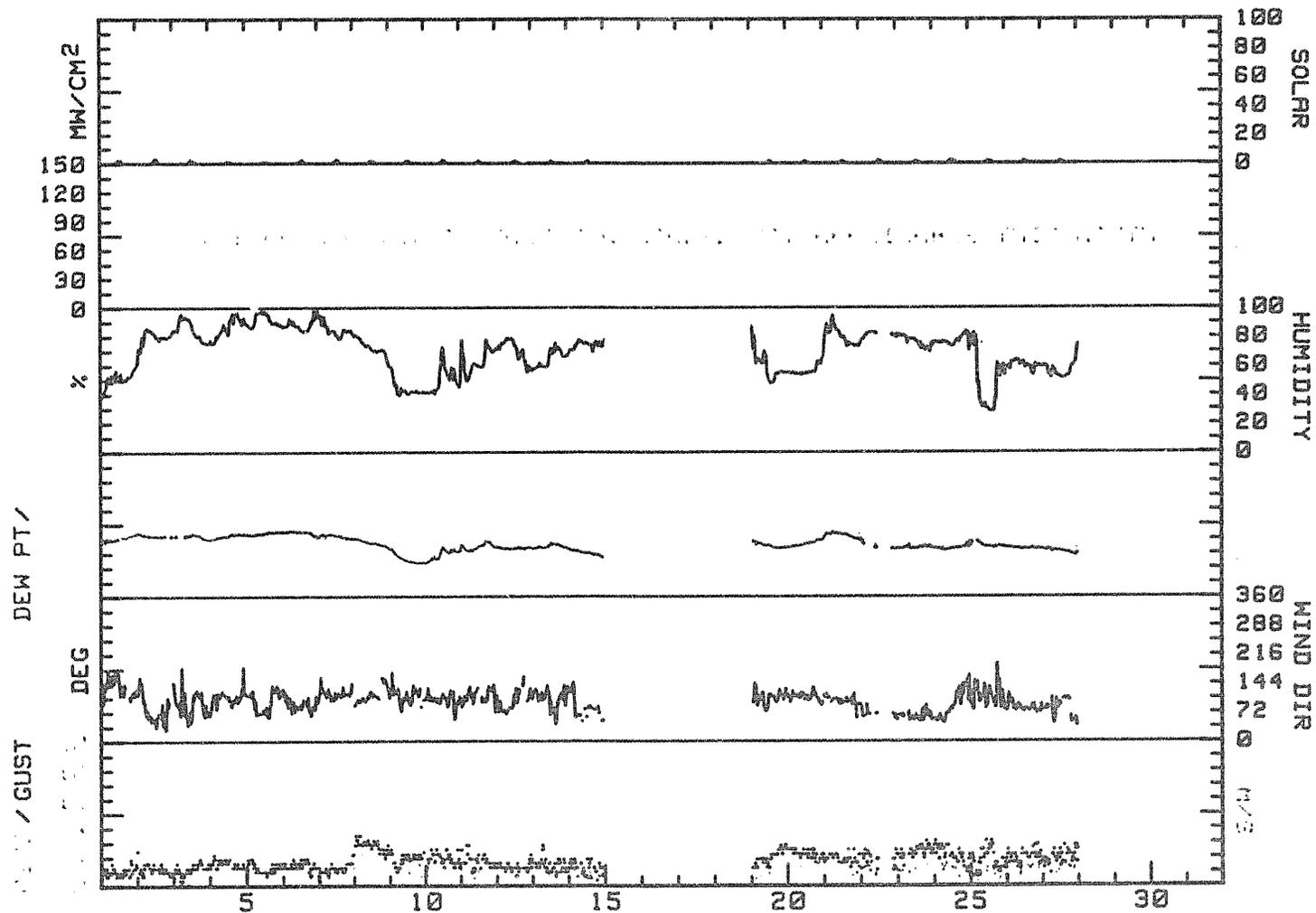
MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING December, 1983

DAY	MAX.	MIN.	MEAN	RES.	RES.	AUG.	MAX.	MAX.	DIR.	RH	MEAN	PRECIP	DAYS	
	TEMP.	TEMP.	TEMP.	WIND	WIND	WIND	GUST	GUST					TEMP	WIND
	DEG C	DEG C	DEG C	DEG	SPD.	SPD.	SPD.	SPD.	DIR.	%	DEG C	mm	W/50m	
1	2.1	-2.6	-3.3	135	1.1	1.2	135	4.9	SE	51	-8.7	****	95	1
2	7	-5.5	-2.4	081	1.9	1.1	097	3.2	ENE	80	-6.9	****	110	2
3	-3.1	-6.7	-4.9	095	1.1	1.2	121	3.8	ENE	82	-7.7	****	95	3
4	-4.7	-6.7	-5.7	111	1.7	1.7	118	4.4	ESE	87	-7.3	****	75	4
5	-2.5	-5.5	-4.0	106	1.3	1.5	117	3.8	ENE	91	-5.4	****	40	5
6	-2.1	-8.4	-5.3	093	1.5	1.6	085	3.8	E	89	-5.2	****	80	6
7	-3.8	-7.5	-5.7	119	1.4	1.5	145	4.4	ESE	84	-8.0	****	45	7
8	-6.9	-10.5	-8.7	113	3.4	3.5	088	7.0	ESF	72	-12.8	****	80	8
9	-19.0	-16.8	-13.4	116	1.9	2.1	132	5.1	ESE	44	-23.9	****	50	9
10	-8.8	-16.3	-12.6	104	1.9	2.0	100	5.1	ESE	50	-20.5	****	80	10
11	-7.1	-11.8	-9.5	115	1.8	1.8	100	5.7	ESE	64	-14.9	****	60	11
12	-8.9	-14.3	-11.6	095	1.3	1.3	132	4.4	E	70	-16.4	****	70	12
13	-8.5	-11.8	-10.2	111	1.4	1.5	101	5.7	ESE	64	-15.3	****	40	13
14	-12.4	-19.7	-16.1	094	1.4	1.6	131	3.8	E	74	-19.8	****	40	14
15	****	****	****	***	****	****	***	****	***	**	****	****	****	15
16	****	****	****	***	****	****	***	****	***	**	****	****	****	16
17	****	****	****	***	****	****	***	****	***	**	****	****	****	17
18	****	****	****	***	****	****	***	****	***	**	****	****	****	18
19	-5.5	-10.6	-8.0	110	2.2	2.3	129	5.7	ESE	59	-14.6	****	65	19
20	-3.8	-8.0	-5.9	110	2.6	2.6	115	5.1	ESE	57	-12.9	****	55	20
21	-2.9	-6.6	-4.8	102	2.1	2.1	095	5.1	E	80	-7.7	****	60	21
22	-9.0	-14.4	-11.7	067	2.5	2.4	062	5.1	ENE	81	-16.1	****	65	22
23	-9.6	-14.5	-12.0	063	2.7	2.7	067	6.3	ENE	76	-15.8	****	60	23
24	-6.8	-14.8	-10.8	079	2.0	2.3	***	6.3	NE	77	-16.2	****	107	24
25	1.3	-12.2	-5.5	113	1.7	1.9	135	6.3	E	43	-14.6	****	60	25
26	-8.2	-11.7	-10.0	083	2.3	2.4	049	5.8	E	60	-16.5	****	65	26
27	-8.9	-16.3	-12.6	082	2.3	2.5	053	5.7	E	56	-18.6	****	60	27
28	****	****	****	***	****	****	***	****	***	**	****	****	****	28
29	****	****	****	***	****	****	***	****	***	**	****	****	****	29
30	****	****	****	***	****	****	***	****	***	**	****	****	****	30
31	****	****	****	***	****	****	***	****	***	**	****	****	****	31
month	2.1	-19.7	-8.3	101	1.7	1.9	086	7.0	ESE	69	-13.3	****	625	

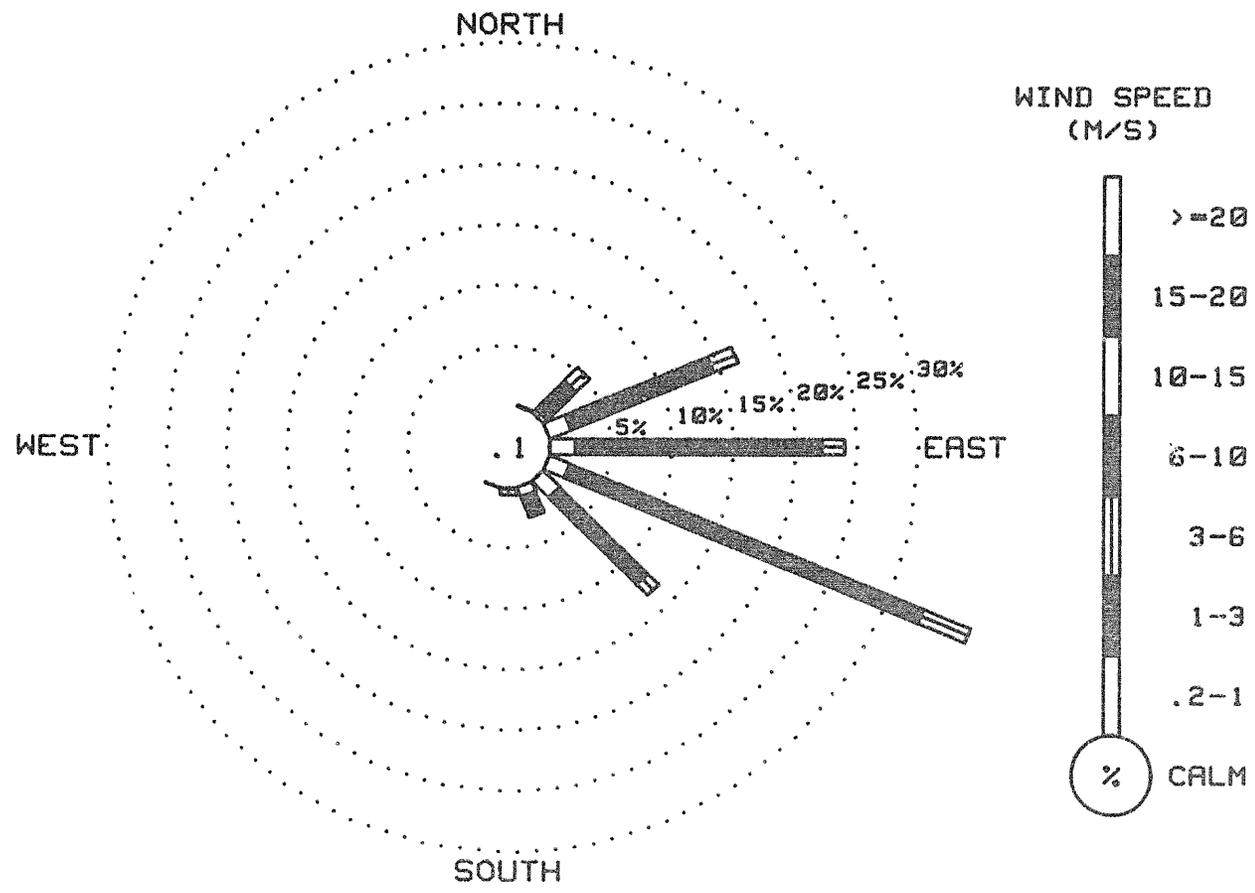
GUST MEAN AT MAX. GUST MINUS 2 INTERVALS 4.1
 GUST MEAN AT MAX. GUST MINUS 1 INTERVAL 5.1
 GUST MEAN AT MAX. GUST PLUS 1 INTERVAL 6.3
 GUST MEAN AT MAX. GUST PLUS 2 INTERVALS 6.3

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 FOR

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



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



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUBSTANA HYDROELECTRIC PROJECT

MONTHLY SOLAR RADIATION SUMMARY FOR DEVI CANYON WEATHER STATION
 (TA TAKEN DURING December, 1933)

SOLAR RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER
 HOUR ENDING

HR	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	2	2	3	2	2	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	1	3	4	3	1	0	0	0	0	0	0	0	0	0	0	0
3	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
4	0	0	0	0	0	0	0	0	0	0	1	2	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	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	1	2	2	3	1	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	1	2	3	3	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	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	0
10	0	0	0	0	0	0	0	0	0	0	1	1	3	2	2	0	0	0	0	0	0	0	0	0	0	0
11	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
12	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
13	0	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
14	0	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
15	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
16	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
17	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
18	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
19	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
20	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	0
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	0	1	3	2	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	2	1	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	1	3	2	2	2	0	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	1	1	0	0	0	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	0
27	0	0	0	0	0	0	0	0	0	0	1	1	2	2	1	0	0	0	0	0	0	0	0	0	0	0
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
31	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

FOR FULL INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OPERATION SUMMARY FOR BEVIL CANYON WEATHER STATION
DATA TAKEN DURING December, 1985

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1072	72
WIND SPEED	988	66
WIND DIRECTION	962	65
PEAK GUST	982	66
RELATIVE HUMIDITY	990	67
PRECIPITATION	0	0
SOLAR RADIATION	1105	74
DEW POINT	974	65

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 -15 RH Points 12/1 - 12/4
 -11 12/4 - 12/31
2. Solar -1mW/CM²

Additional comments on this month's data:

1. Malfunction in weather wizard (problem with recorder) caused data to be lost intermittantly for all parameters. Completely unusable data from 12/15 - 12/19 and 12/28 - 12/31.

No precipitation data for January

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

STATION DATA - HYDROLOGICAL CONTROL PERIOD SUMMARY

24-HOUR SUMMARY FOR DEWETI CANYON WEATHER STATION
DATE: 14 Dec 1984

DAY 01											DAY 02											DAY 03													
HR	DEW			WIND			GUST			MAX.	HR	DEW			WIND			GUST			MAX.	HR	DEW			WIND			GUST			MAX.			
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	0300	-1.5	-8.5	59	110	2.0	112	4.4	0	0300	-6.5	-8.0	89	***	****	***	****	0	0300	-6.5	-8.0	89	***	****	***	****	0
0600	-4.5	-12.0	65	096	1.6	094	2.5	0	0600	-3.1	-5.6	83	095	2.2	102	5.1	0	0600	-7.2	****	92	117	1.6	098	2.3	0	0600	-7.2	****	92	117	1.6	098	2.3	0
0900	-5.3	-10.6	66	121	1.9	105	2.5	0	0900	-3.4	-5.1	88	106	2.1	108	4.4	0	0900	-6.9	****	92	153	1.4	155	2.9	0	0900	-6.9	****	92	153	1.4	155	2.9	0
1200	-2.2	****	82	143	1.1	158	3.2	2	1200	-3.4	-4.7	91	106	1.9	104	3.8	1	1200	-5.7	****	91	140	1.5	122	2.5	3	1200	-5.7	****	91	140	1.5	122	2.5	3
1500	-1.6	****	83	124	1.6	115	1.9	0	1500	-2.3	-4.1	91	108	1.7	100	3.2	1	1500	-4.0	-5.3	91	161	1.5	163	1.9	0	1500	-4.0	-5.3	91	161	1.5	163	1.9	0
1800	-1.8	-7.4	61	141	1.2	137	4.4	0	1800	-2.8	-5.5	82	117	1.8	106	3.8	0	1800	-4.1	****	95	125	1.5	111	2.5	0	1800	-4.1	****	95	125	1.5	111	2.5	0
2100	-1.9	-7.9	59	135	1.4	145	3.2	0	2100	-5.0	-7.0	86	096	2.5	090	4.4	0	2100	-5.7	-6.4	95	164	1.9	091	3.2	0	2100	-5.7	-6.4	95	164	1.9	091	3.2	0
2400	-1.3	-8.3	59	106	1.9	102	4.4	0	2400	-7.7	-9.7	86	089	2.5	089	3.2	0	2400	-3.2	****	92	137	1.6	127	1.9	1	2400	-3.2	****	92	137	1.6	127	1.9	1
DAY 04											DAY 05											DAY 06													
0300	-3.6	****	99	108	1.2	092	1.3	0	0300	****	****	**	***	****	***	****	***	0300	****	****	**	***	****	***	****	***	0300	****	****	**	***	****	***	****	***
0600	-2.5	-6.6	92	051	1.8	243	4.4	0	0600	****	****	**	***	****	***	****	***	0600	****	****	**	***	****	***	****	***	0600	****	****	**	***	****	***	****	***
0900	-10.0	-11.1	92	246	2.2	253	5.7	0	0900	****	****	**	***	****	***	****	***	0900	****	****	**	***	****	***	****	***	0900	****	****	**	***	****	***	****	***
1200	-11.8	-16.1	70	193	1.1	111	5.4	1	1200	****	****	**	***	****	***	****	***	1200	****	****	**	***	****	***	****	***	1200	****	****	**	***	****	***	****	***
1500	-12.6	****	76	***	****	***	6.3	1	1500	****	****	**	***	****	***	****	***	1500	****	****	**	***	****	***	****	***	1500	****	****	**	***	****	***	****	***
1800	****	****	81	227	1.6	245	2.5	0	1800	****	****	**	***	****	***	****	***	1800	****	****	**	***	****	***	****	***	1800	****	****	**	***	****	***	****	***
2100	****	****	**	***	****	***	****	**	2100	****	****	**	***	****	***	****	***	2100	****	****	**	***	****	***	****	***	2100	****	****	**	***	****	***	****	***
2400	****	****	**	***	****	***	****	**	2400	****	****	**	***	****	***	****	***	2400	****	****	**	***	****	***	****	***	2400	-12.8	-18.0	67	075	1.5	***	****	***
DAY 07											DAY 08											DAY 09													
0300	-11.8	-15.3	75	059	1.3	053	3.2	0	0300	****	****	**	***	****	096	1.9	0	0300	-13.4	-17.5	71	095	1.4	105	1.9	0	0300	-13.4	-17.5	71	095	1.4	105	1.9	0
0600	-11.9	-15.3	76	175	1.6	071	3.8	0	0600	****	****	**	***	****	***	****	0	0600	-13.9	-18.3	69	094	2.0	093	1.4	0	0600	-13.9	-18.3	69	094	2.0	093	1.4	0
0900	-13.5	-15.8	77	057	1.6	066	3.9	0	0900	****	****	**	***	****	***	****	0	0900	-12.0	-17.0	68	094	1.9	100	5.0	0	0900	-12.0	-17.0	68	094	1.9	100	5.0	0
1200	-13.0	-15.3	78	060	2.3	077	4.4	3	1200	-13.6	-16.4	73	082	1.6	***	****	1	1200	-8.4	-14.4	67	132	1.6	111	2.9	3	1200	-8.4	-14.4	67	132	1.6	111	2.9	3
1500	-13.9	-16.1	78	185	1.6	093	3.7	3	1500	-11.8	-15.5	74	065	1.0	046	3.2	1	1500	-5.6	****	81	091	1.4	107	2.9	1	1500	-5.6	****	81	091	1.4	107	2.9	1
1800	-14.3	-17.5	78	094	1.7	082	3.7	0	1800	-12.2	-15.9	74	077	1.3	108	3.8	0	1800	-3.5	-14.1	44	133	1.4	15	5.0	0	1800	-3.5	-14.1	44	133	1.4	15	5.0	0
2100	-14.9	-18.2	78	075	2.0	082	3.8	0	2100	-12.0	-16.4	72	052	1.3	054	3.8	0	2100	-5.0	-15.3	43	133	2.0	107	5.0	0	2100	-5.0	-15.3	43	133	2.0	107	5.0	0
2400	-16.0	****	78	072	1.4	062	3.9	0	2400	-11.7	****	70	071	1.7	169	2.9	0	2400	-5.2	-14.0	58	119	3.1	105	5.0	1	2400	-5.2	-14.0	58	119	3.1	105	5.0	1

ALL DATA FROM 24-HOUR SUMMARY REPORTS ARE SUBJECT TO REVISIONS.

R & M CONSULTANTS, INC.
 8505 DEWEY AVE. HYDROLOGICAL CENTER BLDG. PARK RIDGE, ILL.

HOURLY WEATHER SUMMARY FOR DEWITT CANYON WEATHER STATION
 DATA TAKEN DURING January, 1984

DAY 10											DAY 11											DAY 12										
HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.			
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-5.3	-14.7	48	110	2.3	111	5.7	0	0300	.1	-7.2	58	117	1.7	115	5.7	0	0300	-1.8	****	63	157	.8	134	3.5	0						
0600	-5.0	-14.9	46	115	1.8	102	4.4	0	0600	-1.3	-7.1	60	126	1.5	135	4.4	0	0600	.5	-5.9	62	150	1.0	134	3.5	0						
0900	-5.9	-14.2	52	116	1.7	060	4.4	0	0900	-2.2	****	93	264	1.4	273	5.1	0	0900	.2	-5.2	67	158	1.1	136	3.2	0						
1200	-3.6	-13.1	48	093	1.7	091	3.8	2	1200	-2.6	-4.0	90	208	1.2	221	2.5	2	1200	1.2	-4.2	67	187	1.2	127	3.2	1						
1500	-4.2	-12.9	51	100	2.4	092	5.1	1	1500	-2.6	-5.4	81	141	1.3	118	3.2	1	1500	1.0	****	71	139	.6	199	1.9	1						
1800	-5.3	-11.5	61	109	1.9	099	5.1	0	1800	-2.2	-7.9	65	156	1.1	126	2.5	0	1800	.9	-3.0	75	170	.9	196	1.9	0						
2100	-4.2	-8.5	72	138	1.1	129	3.8	0	2100	-2.2	-8.7	61	121	1.4	112	3.7	0	2100	1.4	-2.5	75	160	.8	155	2.5	0						
2400	.5	-6.8	58	139	1.5	104	5.7	0	2400	-1.3	-7.8	61	153	1.1	130	3.8	0	2400	1.3	****	79	155	.9	135	1.9	0						
DAY 13											DAY 14											DAY 15										
0300	1.6	****	73	162	.9	147	3.5	0	0300	-4.9	-5.2	98	080	1.5	081	3.8	0	0300	-1.1	****	95	186	.3	128	1.5	0						
0600	.7	-3.6	73	158	1.0	164	3.2	0	0600	-4.1	-5.2	92	069	1.2	080	2.5	0	0600	-1.2	****	96	176	.1	137	1.3	0						
0900	-1.6	-4.0	78	125	1.1	115	3.2	0	0900	-3.5	-4.9	93	098	1.1	074	3.2	0	0900	-3.4	****	94	132	.4	108	1.3	0						
1200	.5	****	79	131	.7	089	3.2	3	1200	-1.4	****	94	138	.3	134	1.9	1	1200	-5.1	****	89	097	.6	101	2.5	1						
1500	-1.9	-3.6	82	148	.8	098	3.2	2	1500	.1	****	97	098	.0	131	1.3	0	1500	-5.8	-7.1	91	133	1.6	123	3.5	0						
1800	-2.1	-3.4	91	091	1.1	083	3.2	0	1800	.1	****	98	243	.1	234	.6	0	1800	-8.0	-9.8	87	095	1.2	091	1.9	0						
2100	-3.2	-3.3	99	093	1.0	076	3.2	0	2100	-1.4	****	97	244	.7	250	2.5	0	2100	-9.9	-11.8	86	098	1.5	***	***	0						
2400	-3.7	****	95	108	1.2	105	3.2	0	2400	-1.8	****	96	243	.7	244	1.9	0	2400	****	****	85	197	2.1	***	***	0						
DAY 16											DAY 17											DAY 18										
0300	-5.8	-11.6	87	098	1.6	097	3.5	0	0300	-7.3	-10.0	81	103	2.1	104	3.8	0	0300	-7.9	-10.1	84	086	1.4	128	3.5	1						
0600	-8.0	-10.8	90	094	1.8	027	3.2	0	0600	-7.1	-10.0	83	109	2.3	114	4.4	0	0600	-8.1	-10.3	81	109	1.8	081	3.8	1						
0900	-6.5	****	90	088	.4	145	3.5	0	0900	-6.9	-10.1	78	104	2.1	100	4.4	0	0900	-8.7	-11.2	87	131	2.4	116	3.5	0						
1200	-6.2	-9.6	93	169	.9	067	3.5	1	1200	-6.7	-10.2	76	082	1.5	069	3.8	1	1200	-3.8	-11.7	73	113	1.1	101	2.5	0						
1500	-6.5	-9.2	8	108	2.1	111	3.2	1	1500	-6.2	-10.1	74	082	1.4	097	3.8	1	1500	****	****	72	176	1.6	121	3.5	1						
1800	-6.7	-9.4	81	116	2.2	124	4.8	0	1800	-6.5	-10.4	74	098	1.8	095	4.4	0	1800	-10.6	-12.9	87	182	1.3	075	3.0	0						
2100	-7.5	-10.4	86	073	1.7	074	3.2	0	2100	-6.5	-10.0	76	099	1.6	097	6.8	0	2100	-12.3	-11.8	84	091	1.4	091	2.5	1						
2400	-5.5	-9.2	81	097	1.7	108	4.4	0	2400	-7.5	-9.6	85	077	1.1	084	3.2	0	2400	-12.1	-14.6	83	089	1.6	082	3.2	0						

NO WIND DIRECTION REPORTED AT END OF MONTHLY REPORT. **

R & M CONSULTANTS, INC.

SUBSIDIARY HYDROELECTRIC PROJECT PROJECT

WEATHER SUMMARY FOR DEVI CANYON WEATHER STATION
DATA TAKEN DURING January, 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.									
NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	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	-13.5	-16.4	79	112	1.6	120	3.2	0	0300	-12.5	-16.3	73	149	1.1	140	2.5	0	0300	*****	*****	**	***	****	***	****	***
0600	-13.8	-16.8	78	093	1.6	101	3.2	0	0600	-12.7	-17.2	69	***	****	157	1.9	0	0600	*****	*****	**	***	****	***	****	***
0900	-12.7	*****	77	194	.6	***	2.5	0	0900	-13.0	*****	74	138	1.5	118	3.2	0	0900	*****	*****	**	***	****	***	****	***
1200	-11.0	*****	76	121	.7	142	2.5	2	1200	-12.7	-17.4	68	115	1.4	114	3.2	2	1200	*****	*****	**	***	****	***	****	***
1500	-8.5	-14.3	63	147	.8	161	4.9	1	1500	-11.8	-17.2	64	100	1.2	113	3.8	1	1500	*****	*****	**	***	****	***	****	***
1800	-8.5	-14.5	62	143	1.3	153	2.5	0	1800	-14.1	-19.0	66	122	2.1	106	5.1	0	1800	*****	*****	**	***	****	***	****	***
2100	-9.9	-15.2	65	155	1.6	148	3.2	0	2100	*****	*****	**	119	2.6	121	5.1	0	2100	*****	*****	**	***	****	***	****	***
2400	-10.2	-15.5	65	138	1.7	130	3.6	0	2400	*****	*****	**	***	****	***	****	0	2400	*****	*****	**	***	****	***	****	***

DAY 22

DAY 23

DAY 24

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	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 25

DAY 26

DAY 27

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NOBG	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	*****	*****	**	***	****	***	****	***

PLEASE REFER TO ATTACHED NOTES AT END OF MONTHLY REPORT FOR

P & M CONSULTANTS, INC.

SUBSIDIARY HYDROELECTRIC PROJECT

HOURLY WEATHER SUMMARY FOR DEWIL CANYON 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.									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	DIR.		SPD.	DIR.	GUST	RAD	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.		
	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.

SUBSTATION HYDROELECTRIC PROJECT

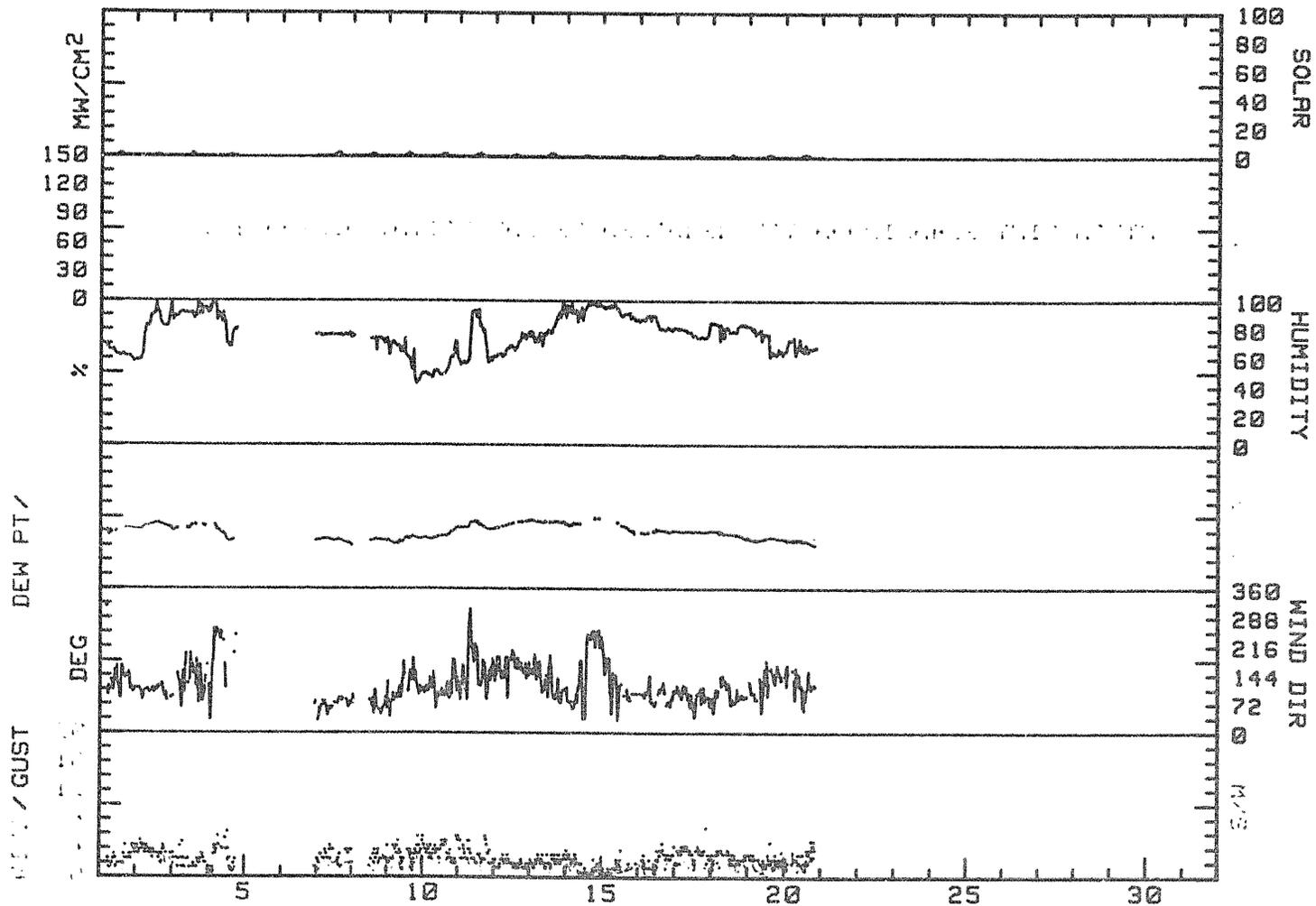
DATA FOR ANALYSIS FOR DEVEL CANYON WEATHER STATION
 DATA TAKEN DURING January, 1981

DAY	MAX TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES.	RES.	AVG.	MAX.	MAX.	P'VAL	MEAN	MEAN	PRECIP MM	DAY'S	DAY
				WIND DIR. DEG	WIND SPD. M/S	WIND SPD. M/S	GUST DIR. DEG	GUST SPD. M/S		RH %	DP DEG C		SOLAR ENERGY KWH/50*	
1	-1.8	-9.0	-4.9	125	1.1	1.2	137	4.4	ESE	82	-8.9	****	80	1
2	-1.3	-7.9	-4.6	104	2.0	2.0	102	5.1	ESE	82	-6.2	****	35	2
3	-2.5	-8.1	-5.3	127	.6	.7	155	4.9	SE	91	-7.5	****	30	3
4	-2.7	-12.9	-7.8	241	1.2	1.4	***	6.3	WSW	82	-12.3	****	47	4
5	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	5
6	-12.8	-13.5	-13.2	075	1.5	1.5	***	****	ENE	76	-16.4	****	0	6
7	-11.5	-16.6	-14.1	070	1.5	1.6	057	4.7	ENE	76	-16.6	****	105	7
8	-9.6	-13.0	-11.3	068	1.2	1.3	108	3.8	FNE	73	-16.0	****	85	8
9	-3.3	-14.6	-9.0	113	1.6	1.8	107	5.7	E	59	-15.9	****	40	9
10	.5	-7.1	-3.3	113	1.7	1.9	111	5.7	ESE	54	-12.3	****	75	10
11	1.1	-4.0	-1.5	150	.9	1.5	115	5.7	SE	70	-6.3	****	95	11
12	2.1	-1.3	.4	165	.9	1.0	136	3.2	SSE	69	-4.6	****	51	12
13	1.9	-3.7	-.9	125	.9	1.0	164	3.2	E	82	-3.4	****	102	13
14	.6	-5.6	-2.5	097	.3	.7	081	3.8	WSW	93	-4.5	****	33	14
15	-1.8	-9.9	-5.4	114	.5	.7	123	3.8	E	89	-8.2	****	40	15
16	-5.5	-10.4	-8.0	096	1.4	1.5	124	4.8	E	83	-9.8	****	50	16
17	-6.1	-7.5	-6.8	096	1.7	1.8	***	6.8	E	78	-10.0	****	35	17
18	-7.0	-13.3	-10.2	099	1.6	1.7	090	3.8	E	81	-12.1	****	55	18
19	-7.4	-13.8	-10.6	131	1.2	1.3	161	4.9	SSE	71	-15.3	****	75	19
20	-9.2	-15.1	-13.2	122	1.6	1.8	106	5.1	ESE	63	-17.1	****	97	20
21	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	21
22	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	22
23	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	23
24	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	24
25	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	25
26	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	26
27	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	27
28	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	28
29	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	29
30	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	30
31	*****	*****	*****	***	****	****	***	****	***	**	*****	****	*****	31
MEAN	3.1	-16.6	-6.9	113	1.1	1.4	***	6.8	E	74	-10.7	****	194	

GUST VELOCITY AT MAX. GUST MINUTE 2 5 INTERVALS 5.9
 GUST VELOCITY AT MAX. GUST MINUTE 1 5 INTERVALS 5.7
 GUST VELOCITY AT MAX. GUST HOUR 1 INTERVAL 1.9
 GUST VELOCITY AT MAX. GUST HOUR 2 INTERVALS 3.1

RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE LESS THAN 1 METER PER SECOND. SUCH READINGS HAVE NOT BEEN INCLUDED IN THIS DATA SET. MEAN FOR RELATIVE HUMIDITY AND DEW POINT CALCULATION IS 68.0. INTERPRETATION NOTES AT END OF MONTHLY REPORTS.

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



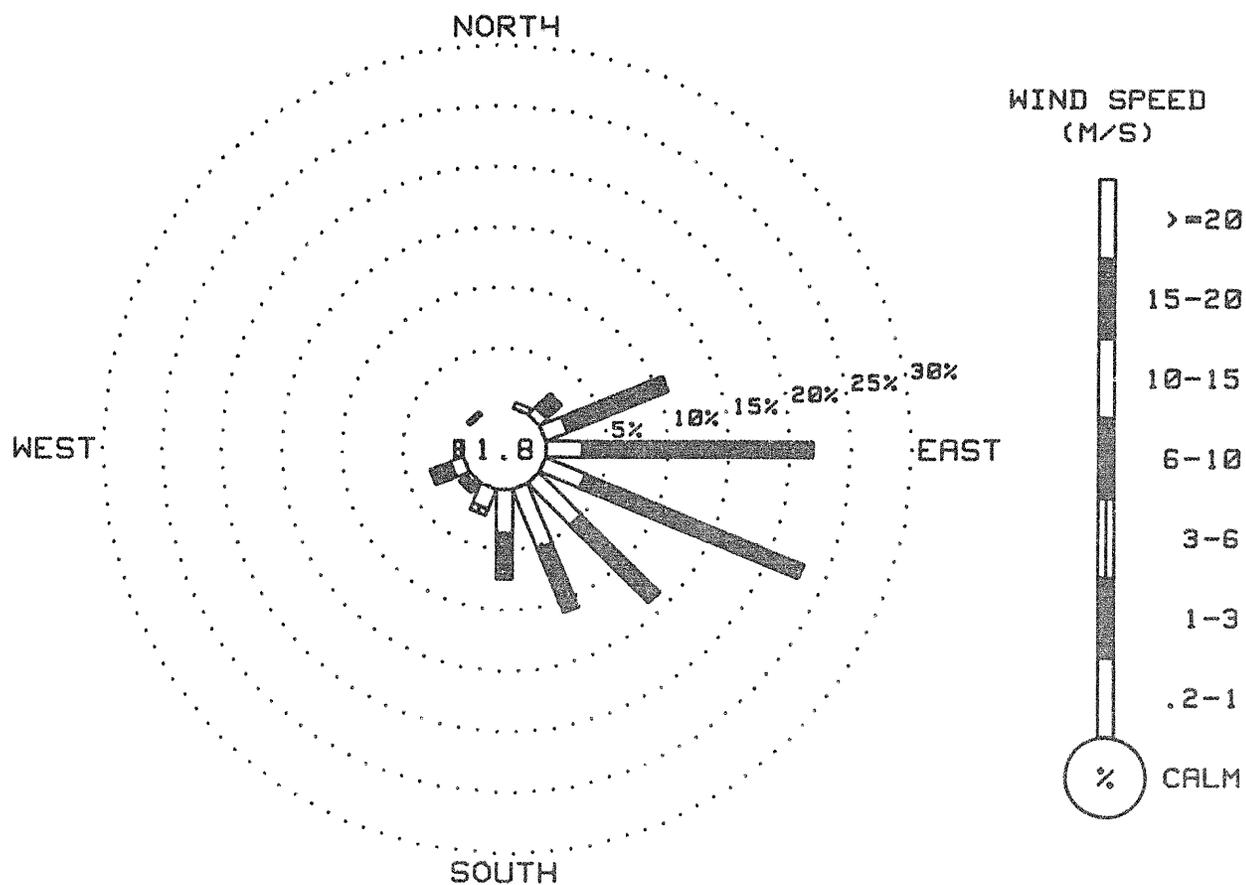
R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

WIND VELOCITY SUMMARY FOR DEED CANYON WEATHER STATION
 DATA TAKEN DURING January, 1984

DIRECTION	VELOCITY (M/S)							TOTAL
	0.2	1.0	3.0	6.0	10.0	25.0	50.0	
	TO	TO	TO	TO	TO	TO	OR	
	6.0	3.0	6.0	10.0	15.0	20.0	GREATER	
N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NNE	.59	0.00	0.00	0.00	0.00	0.00	0.00	1.84
NE	.86	1.62	0.00	0.00	0.00	0.00	0.00	3.21
NNE	1.93	8.85	0.00	0.00	0.00	0.00	0.00	10.77
E	2.95	16.88	0.00	0.00	0.00	0.00	0.00	20.33
ESE	3.54	19.32	0.00	0.00	0.00	0.00	0.00	22.86
SE	4.87	9.00	0.00	0.00	0.00	0.00	0.00	13.87
SSE	5.31	5.86	.15	0.00	0.00	0.00	0.00	11.81
S	3.54	3.83	0.00	0.00	0.00	0.00	0.00	7.37
SSW	1.77	.59	0.00	0.00	0.00	0.00	0.00	2.36
SW	.44	.74	0.00	0.00	0.00	0.00	0.00	1.18
WSW	1.16	1.77	0.00	0.00	0.00	0.00	0.00	2.93
W	.15	.59	0.00	0.00	0.00	0.00	0.00	.74
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
W	.15	.15	0.00	0.00	0.00	0.00	0.00	.30
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	27.39	70.85	.15	0.00	0.00	0.00	0.00	100.00

ALL WIND VELOCITIES ARE EXPRESSED IN METERS PER SECOND WITH OBSERVATIONS USED TO DEVELOP THESE VELOCITIES ARE AND WIND DIRECTION WOULD HAVE BEEN CORRECT FOR WINDMILLS BUT WIND DIRECTION OBSERVATIONS NOT USED IN THIS REPORT.

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



WIND ROSE PLOT

R & M CONSULTANTS, INC.

BLISS MOUNTAIN HYDROELECTRIC PROJECT

GLOBAL SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TABLE DURING January, 1964

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	2	2	2	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	1	1	0	0	0	0	0	0	0	0	0	0
3	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
4	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	***	***	***	***	***	***	***
5	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
6	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
7	0	0	0	0	0	0	0	0	0	0	1	2	3	3	2	1	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	1	1	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	2	2	1	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	1	2	3	2	2	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	2	2	2	3	1	1	0	0	0	0	0	0	0	0	0
12	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
13	0	0	0	0	0	0	0	0	0	0	1	3	2	3	2	1	0	0	0	0	0	0	0	0	0
14	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
15	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
16	0	0	0	0	0	0	0	0	0	0	0	1	2	1	1	1	0	0	0	0	0	0	0	0	0
17	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
18	0	0	0	0	0	0	0	0	0	0	1	2	2	0	1	1	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	1	2	2	2	1	1	0	0	0	0	0	0	0	0	0
20	0	0	0	***	0	0	0	0	0	0	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0
21	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
22	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
23	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
25	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
26	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
31	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

PLEASE REFER TO INTERPRETATION NOTES AT END OF MONTHLY REPORT FOR

R & M CONSULTANTS, INC.,
SUSITNA HYDROELECTRIC PROJECT

REVISION SUMMARY FOR DEVEL. CANTON WEATHER STATION
DATA TAPE# DURING January, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	803	54
WIND SPEED	716	48
WIND DIRECTION	715	48
FON FUST	684	46
RELATIVE HUMIDITY	613	41
PRECIPITATION	0	0
SOLAR RADIATION	853	57
DEW POINT	599	41

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 -16 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Weather wizard removed from site for inspection and maintenance on 1/27.
No data following this date.
2. Data lost intermittantly prior to 1/27 for all parameters due to malfunction in weather wizard (problem with recorder). No usable data from 1/20 - 1/27.

No precipitation data for February

(See INTERPRETATION OF DATA).

R. & M. CONSULTANTS, INC.

SAJASITONG HYDROELECTRIC PROJECT PARADISE COUNTY

HOURLY WEATHER SUMMARY FOR DEWU CANYON WEATHER STATION
 DATA TAKEN DURING February, 1984

DAY 01

DAY 02

DAY 03

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

DAY 04

DAY 05

DAY 06

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

DAY 07

DAY 08

DAY 09

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

P & M CONSULTANTS, INC.

SUBMITTING HYDROELECTRIC PROJECT

HOURLY WEATHER SUMMARY FOR DEVAL CANYON WEATHER STATION
 ON THE TRACON DAM SITE, February, 1989

DAY 10

DAY 11

DAY 12

HOUR	DEW					HOUR	DEW					HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.			
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	
0500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0600	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0900	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1200	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1800	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2100	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2400	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***

DAY 13

DAY 14

DAY 15

HOUR	DEW					HOUR	DEW					HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.			
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	
0500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0600	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0900	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1200	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1800	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2100	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2400	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***

DAY 16

DAY 17

DAY 18

HOUR	DEW					HOUR	DEW					HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.		TEMP.	POINT	RH	DIR.	SPD.			
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	
0500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0600	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
0900	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1200	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1500	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
1800	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2100	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***
2400	*****	*****	**	***	****	***	****	**	***	****	***	****	*****	*****	**	***	****	***	****	***

ALL DATA ARE UNCORRECTED AND WEATHER AT WIND OFF POINT IS A REFERENCE ONLY

R & M CONSULTANTS, INC.

MISSISSIPPI HYDROELECTRIC PROJECT REPORT

WIND SPEED SUMMARY FOR DEWIL CANYON WEATHER STATION
 DURING PERIOD FROM 03/01/84 TO 03/31/84

DAY 19

DAY 20

DAY 21

HOUR	DEW						HOUR	DEW						HOUR	DEW					
	TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.
NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.
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						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.						
NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.						
0300	*****	*****	**	***	****	***	0300	-8.2	-9.7	89	108	1.2	126	2.5	0	0300	-9.2	-11.4	81	135	3.2	174	3.4	0		
0600	*****	*****	**	***	****	***	0600	-8.8	*****	90	068	1.0	054	1.9	0	0600	-9.7	-12.1	83	134	2.2	127	3.8	0		
0900	*****	*****	**	***	****	***	0900	-10.0	-10.9	93	063	1.0	083	2.5	1	0900	-9.8	-11.9	85	125	2.2	117	3.8	0		
1200	*****	*****	**	***	****	***	1200	-8.1	-10.0	86	055	1.3	055	2.5	7	1200	-6.9	-10.6	75	116	2.1	130	3.4	15		
1500	*****	*****	**	***	****	***	1500	-5.1	-8.2	79	096	1.2	077	3.2	7	1500	-6.2	-9.7	74	093	2.4	090	3.1	01		
1800	-8.5	-9.4	80	103	1.5	025	4.4	0	1800	-6.4	-8.7	84	103	1.3	111	2.5	0	1800	-7.0	-10.3	77	104	2.3	090	3.1	0
2100	-7.7	-8.6	90	128	1.6	125	3.2	0	2100	-6.7	-8.8	85	146	1.6	117	2.5	0	2100	-7.8	-10.2	83	116	2.0	117	3.1	0
2400	-7.4	-9.1	88	117	1.6	119	3.8	0	2400	-7.9	-9.9	86	127	1.9	117	3.8	0	2400	-8.4	-10.2	87	120	1.6	135	3.8	0

DAY 25

DAY 26

DAY 27

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.						
NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.	NOVG	DEG C	DEG C	%	DEG.	M/S	DEG.						
0300	-8.3	*****	80	176	1.8	103	2.5	0	0300	-6.7	-9.3	82	188	1.9	199	1.9	0	0300	-7.2	-13.8	84	154	1.9	147	3.8	0
0600	-8.6	*****	81	177	1.9	090	2.5	0	0600	-6.5	*****	81	179	1.9	125	1.9	0	0600	-7.5	-13.1	83	127	1.7	134	3.8	0
0900	-7.4	*****	89	190	1.8	117	1.9	1	0900	-8.8	*****	86	164	1.0	162	2.5	3	0900	-7.6	-14.1	84	127	1.7	107	3.4	0
1200	-6.0	-8.5	87	196	1.8	059	3.2	6	1200	-4.0	*****	70	145	1.4	164	2.5	18	1200	-6.0	-13.8	87	116	2.8	093	3.1	12
1500	-6.7	-7.1	75	180	1.6	05	3.2	7	1500	1.1	-7.2	65	116	1.2	137	3.8	10	1500	-5.6	-7.3	67	117	1.6	136	3.7	11
1800	-6.6	-8.1	87	191	1.6	05	3.5	0	1800	-5.3	-10.6	87	152	1.7	134	3.8	6	1800	-5.9	-12.2	80	113	1.3	117	3.8	0
2100	-6.4	-8.0	84	181	1.3	149	3.5	0	2100	-6.4	-11.9	86	140	1.0	111	3.2	3	2100	-7.2	-13.8	88	114	1.8	103	3.2	0
2400	-6.2	*****	82	174	1.8	104	1.9	0	2400	-5.8	-13.3	87	169	1.3	124	3.8	0	2400	-8.1	-12.2	81	123	1.2	128	3.8	0

WIND SPEED SUMMARY FOR DEWIL CANYON WEATHER STATION DURING PERIOD FROM 03/01/84 TO 03/31/84

P & M CONSULTANTS, INC.,
 SUSQUEHANNA HYDROELECTRIC PROJECT

HOURLY WEATHER SUMMARY FOR PEMA CANYON WEATHER STATION
 DATA TAKEN DURING February, 1984

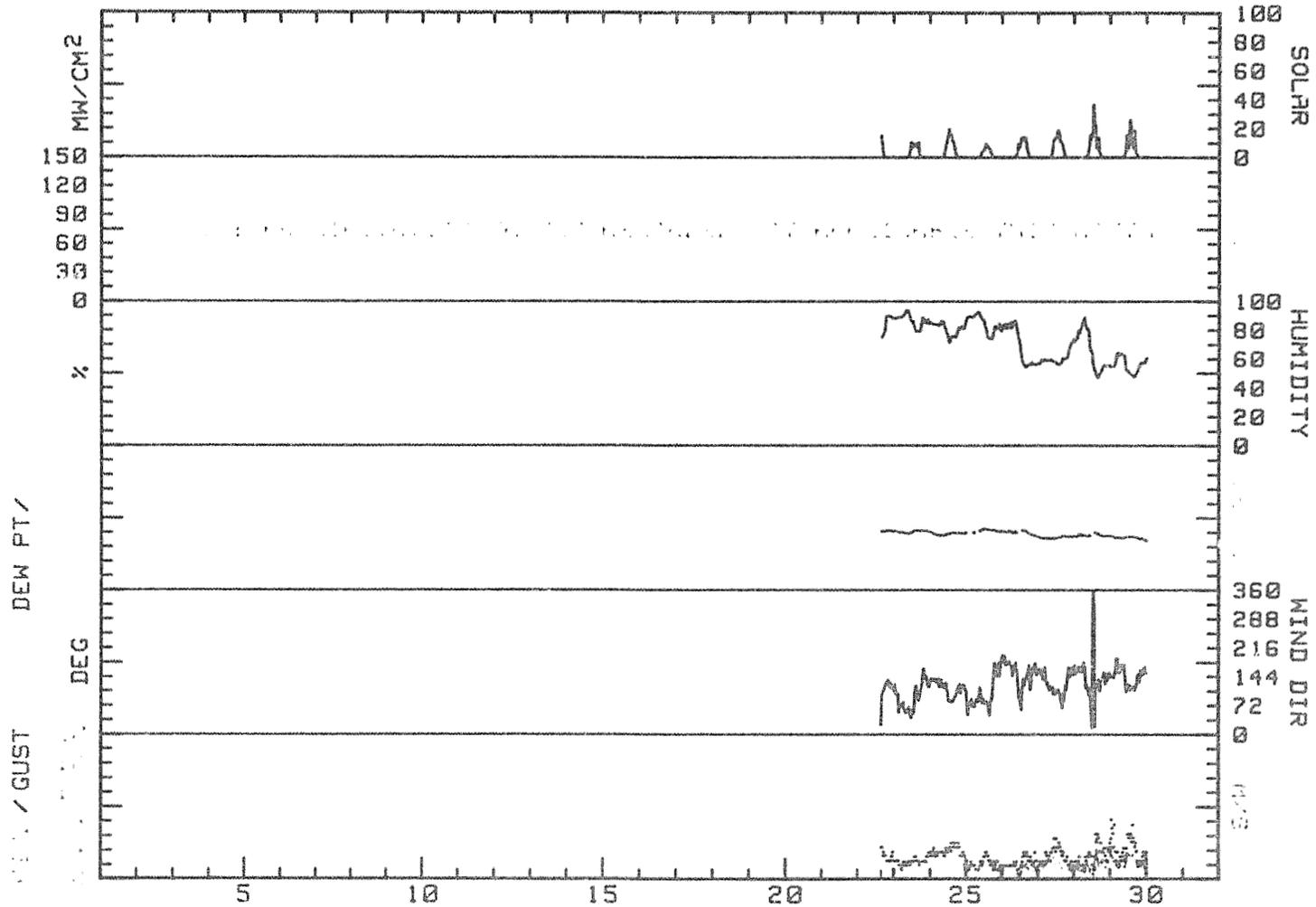
DAY 28

DAY 29

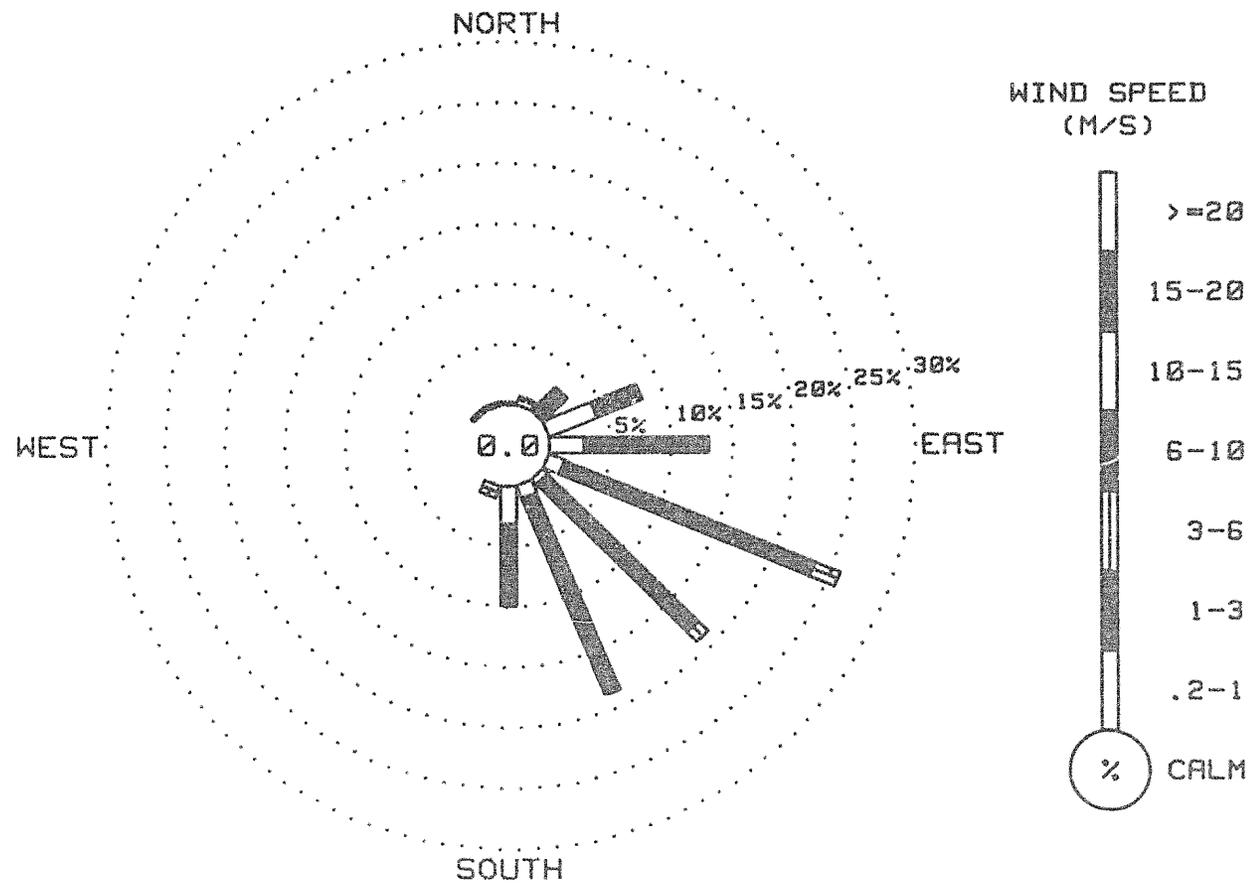
HOUR	DEW		WIND RH	WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST MAX.	-OUR	DEW		WIND RH	WIND DIR.	WIND SPD.	WIND DIR.	WIND GUST MAX.	RAI	
	TEMP.	POINT							TEMP.	POINT							
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-8.0	-11.0	79	165	1.6	174	2.5	0	0300	-6.0	-13.1	57	146	3.2	141	8.3	0
0600	-9.7	****	88	161	1.2	159	3.2	0	0600	-7.9	-13.7	63	171	1.8	151	3.8	0
0900	-9.4	-12.2	80	135	1.3	169	3.2	3	0900	-7.6	-13.6	62	165	1.9	166	4.4	3
1200	-6.2	****	61	097	1.2	098	3.8	16	1200	-4.2	-12.9	51	126	2.3	121	6.3	10
1500	-1.2	-9.9	48	090	.7	118	6.3	5	1500	-3.3	-12.8	48	119	3.1	118	7.6	6
1800	-3.5	-12.0	52	126	2.5	135	6.3	1	1800	-5.4	-13.7	52	120	2.7	120	5.7	1
2100	-4.3	-12.0	55	145	1.8	158	4.4	0	2100	-7.1	-14.2	57	150	1.5	152	2.5	0
2400	-4.3	-12.0	55	144	2.2	146	5.1	0	2400	-9.8	-15.9	61	158	2.1	165	3.8	0

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

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



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



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUBSISTING HYDROELECTRIC PROJECT

MONTHLY WEATHER RADIATION SUMMARY FOR DEWIL CANYON WEATHER STATION
 DEWIL CANYON, IDAHO February, 1934

WEATHER 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	0	0	0	0	0	0	0	0	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
3	0	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	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

RECORD OF WEATHER RADIATION MEASUREMENTS AT DEWIL CANYON WEATHER STATION, IDAHO

R & M CONSULTANTS, INC.

SHASTA HYDROELECTRIC PROJECT

MONTHLY GLOBAL RADIATION SUMMARY FOR DEATH CANYON WEATHER STATION
 (MOUNTAIN DEPOT) February, 1984

GLOBAL RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER (MWH/CM²)

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	0	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	0	0	0	0	0	0	0	0	0	0	0	0	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	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	0	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
23	0	0	0	0	0	0	0	0	0	1	2	9	7	9	9	10	7	1	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	1	6	11	15	16	16	15	10	5	1	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	1	5	5	6	9	9	7	6	5	1	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	1	4	9	7	14	15	13	12	5	1	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	2	10	13	14	19	15	11	10	6	1	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	3	8	14	15	35	25	7	11	1	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	2	4	13	6	26	19	6	16	0	0	0	0	0	0	0	0	0

GLOBAL RADIATION VALUES MEASURED IN MILLIWATTS PER SQUARE CENTIMETER (MWH/CM²)

R & M CONSULTANTS, INC.
BUSBYNS HYDROELECTRIC PROJECT

DATA COLLECTION SUMMARY FOR PTOL CANYON WEATHER STATION
FOR THE MONTH OF FEBRUARY, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	354	25
WIND SPEED	354	25
WIND DIRECTION	354	25
WIND GUST	354	25
RELATIVE HUMIDITY	299	21
PRECIPITATION	0	0
SOLAR RADIATION	324	23
DEW POINT	299	21

THERE ARE 1392 POSSIBLE OBSERVATIONS THIS MONTH FOR EACH PARAMETER IF
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. Weather wizard reinstalled on 2/22. No data prior to this date.

No precipitation data for March

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.

SUBSTATION HYDROELECTRIC PROJECT PROJECT

24 HOUR SUMMARY FOR BEVEL CANYON WEATHER STATION
 DATA TAKEN DURING March, 1984

DAY 01

DAY 02

DAY 03

HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.					
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW										
0300	-10.5	-15.6	66	098	1.8	093	3.8	0	0300	-7.1	-13.1	62	138	2.7	142	5.1	0	0300	-6.0	-9.7	75	138	1.9	135	2.5	0															
0600	-10.8	-15.5	67	110	3.1	126	3.9	0	0600	-6.3	-12.6	61	135	2.8	142	5.1	0	0600	-2.5	-7.8	67	156	1.3	154	3.8	0															
0900	-11.9	-16.4	69	108	2.0	115	3.8	3	0900	-6.5	-12.8	61	135	2.7	133	5.7	2	0900	-4.1	-9.3	67	144	1.9	142	3.8	3															
1200	-3.0	-13.2	47	107	1.7	110	6.3	10	1200	-3.8	-11.1	53	102	2.4	093	5.1	36	1200	-4	-7.6	58	105	1.6	102	4.4	23															
1500	-2.7	-13.8	46	108	3.1	102	6.3	11	1500	-2.4	-9.8	57	087	2.2	097	5.1	12	1500	1.3	-6.0	58	107	2.0	120	5.1	17															
1800	-3.3	-13.8	52	108	2.6	109	6.3	1	1800	-3.2	-10.1	59	093	1.8	084	4.4	1	1800	.3	****	64	128	1.3	126	5.8	1															
2100	-7.2	-14.1	58	118	2.6	110	5.1	9	2100	-5.8	-11.3	65	128	1.9	117	3.8	0	2100	-1.3	-2.3	93	129	1.4	133	7.0	9															
2400	-2.7	-13.9	61	124	2.6	128	5.1	8	2400	-6.8	****	71	116	1.1	143	3.2	0	2400	.3	-3.5	75	144	2.1	130	7.0	0															

DAY 04

DAY 05

DAY 06

HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.					
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	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	-4.8	85	182	1.5	184	2.5	0	0300	.4	****	91	092	1.8	087	2.5	0	0300	1.0	-1.0	93	123	1.8	133	1.9	0															
0600	-1.1	-3.6	77	160	1.2	129	2.5	0	0600	-1.3	-2.0	95	118	1.3	152	3.2	0	0600	.1	****	94	108	1.0	092	3.2	0															
0900	-1.2	-3.9	82	141	1.5	132	3.8	3	0900	-1.3	****	88	135	1.8	137	2.5	7	0900	-1.4	-1.3	94	093	1.5	086	4.4	4															
1200	2.4	****	72	094	1.6	138	2.5	17	1200	4.3	****	63	120	1.0	129	5.1	9	1200	2.2	-1.6	82	118	1.8	119	5.1	31															
1500	1.7	-1.9	67	073	1.7	067	5.1	11	1500	7.3	-2.5	50	105	2.3	112	5.7	20	1500	6.3	-1.6	61	071	1.4	075	7.2	17															
1800	3.4	****	86	356	1.5	337	3.2	1	1800	5.7	-2.6	55	109	1.3	096	4.4	1	1800	5.0	-1.6	67	131	2.1	121	5.1	2															
2100	1.1	****	94	176	1.6	233	1.3	9	2100	4.0	-2	74	152	1.3	165	2.5	0	2100	1.8	-1.4	79	156	1.6	133	5.7	0															
2400	.8	****	96	094	1.6	109	1.9	0	2400	2.0	.2	88	143	1.1	148	2.5	0	2400	2.0	-1.4	78	193	1.4	193	2.5	0															

DAY 07

DAY 08

DAY 09

HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.	HOUR	DEW				WIND				GUST				MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			SPD.	DIR.	TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.	SPD.	DIR.			TEMP.	POINT	RH	DIR.	SPD.	DIR.	SPD.	DIR.					
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	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	****	78	141	1.0	144	2.5	0	0300	1.6	-1.4	67	109	1.8	102	2.5	0	0300	5.3	1.3	75	152	1.3	154	3.9	0															
0600	3.8	-1.5	76	139	1.5	133	3.2	0	0600	2.7	.2	84	129	1.3	129	3.2	0	0600	2.7	-1.6	79	143	1.1	151	3.2	0															
0900	3.9	****	78	151	1.2	143	3.2	3	0900	1.5	****	86	106	1.8	140	3.2	4	0900	5.5	1.8	71	143	1.2	170	2.5	7															
1200	1.4	****	80	194	1.3	138	1.9	13	1200	6.8	1.6	69	083	1.1	132	5.1	24	1200	8.1	-1.0	51	114	2.6	114	5.3	11															
1500	3.8	1.8	75	155	1.2	078	4.4	13	1500	8.1	1.7	64	119	2.2	130	4.4	19	1500	7.6	-1.8	56	112	2.3	131	6.3	13															
1800	3.1	1.9	74	111	1.8	188	5.1	2	1800	6.8	1.6	69	134	1.3	135	3.2	3	1800	4.4	****	65	132	1.3	111	3.2	0															
2100	3.4	1.3	70	139	1.5	114	2.5	0	2100	4.4	1.9	78	183	1.3	176	2.5	0	2100	2.7	-1.9	70	175	1.4	169	2.5	0															
2400	2.5	****	84	153	1.1	132	2.5	0	2400	5.1	****	77	169	1.1	146	3.8	0	2400	2.7	-1.1	75	155	1.1	121	2.5	0															

*** WIND DIRECTION REPORTED AS 000 IF FROM 0 TO 90 DEGREES

P. A. M. CONSULTANTS, INC.
 SUSTAINA HYDROELECTRIC PROJECT

24-HOUR SUMMARY FOR DEWET CANYON WEATHER STATION
 DATA TAKEN DURING March, 1984

DAY 10

DAY 11

DAY 12

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	2.2	****	77	134	1.0	109	3.8	0	0300	4.1	-5.72	165	1.1	156	2.5	0	0300	-3.2	-4.0	89	096	1.2	105	3.2	0	
0600	3.7	-1.1	76	188	1.2	159	3.2	0	0600	.9	-2.3	79	131	1.5	138	3.2	0	0600	-5.3	-6.7	99	082	1.8	087	4.4	0
0900	4.6	.0	72	157	1.2	153	3.2	7	0900	1.5	****	77	109	1.0	096	3.2	8	0900	-5.2	-7.0	87	073	2.0	071	3.8	13
1200	7.1	.4	62	130	1.1	114	3.8	19	1200	5.8	-1.9	62	071	1.1	084	3.8	15	1200	1.7	-3.9	66	073	2.0	074	3.0	34
1500	8.0	.0	57	107	2.1	111	5.1	17	1500	6.9	-1.3	60	103	1.6	119	3.8	18	1500	7.7	-2.7	48	106	1.4	145	3.8	19
1800	6.2	-1.3	63	131	1.7	120	3.8	2	1800	6.0	-1.5	63	103	1.2	117	3.2	3	1800	6.0	-3.7	50	144	1.3	154	3.2	3
2100	3.9	-3.7	74	176	1.4	160	1.9	0	2100	.8	-2.8	77	137	1.4	163	3.2	0	2100	2.8	-3.7	62	168	1.8	189	3.2	0
2400	3.4	-1.4	76	166	1.3	157	2.5	0	2400	-1.7	-3.9	85	118	1.8	134	3.2	0	2400	.3	-4.7	69	122	2.3	174	3.2	0

DAY 13

DAY 14

DAY 15

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-1.4	-4.9	77	138	1.3	157	3.2	0	0300	-3.0	-4.7	88	106	1.3	128	2.5	0	0300	-3.2	-5.2	86	176	1.5	142	3.2	0
0600	-3.0	-6.0	80	112	1.4	111	3.8	0	0600	-3.8	-4.2	97	075	1.0	087	2.5	0	0600	-3.8	-6.0	85	142	1.7	156	3.2	0
0900	-4.1	-7.5	77	127	1.3	115	3.2	11	0900	-2.8	-3.8	93	066	1.1	074	2.5	4	0900	-4.9	-7.5	82	142	2.4	137	3.8	9
1200	3.4	-2.7	64	117	2.1	114	5.7	33	1200	.9	-3.2	80	046	1.3	067	3.2	25	1200	.1	-5.9	64	065	1.5	110	1.4	37
1500	4.8	-2.7	58	113	2.8	126	6.3	21	1500	3.1	****	74	038	1.1	042	2.5	16	1500	2.6	-5.8	51	113	2.3	117	5.7	36
1800	2.5	-3.6	64	097	1.6	069	4.4	3	1800	2.0	****	73	059	.3	107	3.2	3	1800	.9	-6.4	58	119	1.9	117	5.1	3
2100	-1.1	-4.4	78	153	1.5	145	3.2	0	2100	-1.2	-3.9	82	134	.7	088	2.5	0	2100	-2.6	-7.3	70	155	1.5	120	3.2	0
2400	-3.4	-5.4	80	147	1.6	148	2.5	0	2400	-1.6	-3.4	88	136	1.3	133	2.5	0	2400	-2.6	-6.9	73	139	1.0	120	3.2	4

DAY 16

DAY 17

DAY 18

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-4.9	-8.5	76	102	1.1	094	2.5	0	0300	-8.7	****	86	140	1.1	125	2.5	0	0300	-9.2	-13.1	73	151	2.2	140	3.2	0
0600	-6.5	-9.5	79	091	1.2	099	2.5	0	0600	-9.2	****	88	139	.7	119	2.5	0	0600	-11.1	-14.3	77	099	1.4	133	3.2	0
0900	-5.8	-10.4	70	076	1.7	082	3.2	13	0900	-7.5	****	71	126	.9	118	3.5	19	0900	-9.6	-14.6	66	142	1.9	077	3.8	14
1200	-1.7	-9.1	55	043	1.5	075	7.8	35	1200	-1.7	-9.1	53	091	1.1	115	5.1	35	1200	-3.0	-10.8	51	165	1.6	077	3.2	37
1500	2.1	-7.8	49	019	3.3	134	5.1	30	1500	1.3	-8.3	49	122	2.7	117	5.7	35	1500	1.6	-9.6	49	191	2.0	092	4.4	14
1800	.8	-9.2	51	113	2.1	120	5.1	5	1800	.2	-9.6	48	130	1.7	114	5.1	6	1800	.7	-10.6	43	132	1.9	097	4.4	9
2100	-3.4	-8.1	65	143	1.3	121	3.2	0	2100	-5.0	-10.5	65	152	1.6	134	2.5	0	2100	-5.2	-11.7	60	151	1.8	083	3.2	0
2400	-5.7	-9.2	76	173	1.2	189	2.5	0	2400	-7.5	-11.5	73	157	1.8	168	3.2	0	2400	-3.0	-12.7	69	132	1.3	153	3.2	6

* ALL TEMPERATURES IN NOTES AT END OF MONTHLY REPORT *

R & M CONSULTANTS, INC.

MISSISSIPPI HYDROELECTRIC PROJECT

24-HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING March, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-9.9	-14.3	70	110	1.3	117	3.2	0	0300	-7.0	-11.7	69	093	1.5	095	3.8	0	0300	-8.4	-11.4	79	141	1.1	137	3.8	0
0600	-11.8	-15.5	74	084	2.1	091	3.2	0	0600	-7.1	-11.8	69	084	1.6	089	3.8	0	0600	-11.2	-12.7	89	116	1.2	137	3.2	0
0900	-10.9	-15.6	68	088	2.7	083	4.4	14	0900	-6.8	-11.9	67	080	1.8	083	3.2	7	0900	-9.8	-12.9	78	097	2.0	087	3.8	21
1200	-3.0	-11.5	52	079	1.8	107	5.1	37	1200	-1.8	-9.7	55	063	1.6	082	3.8	26	1200	-1.6	-9.5	55	079	1.7	080	3.8	35
1500	-1.2	-10.5	46	108	2.4	117	5.1	34	1500	.3	-9.0	50	087	1.9	105	3.8	21	1500	.9	-8.9	48	121	2.4	127	5.1	35
1800	-1.9	-11.1	46	121	1.7	103	3.8	9	1800	-1.8	-5.9	68	085	1.7	103	3.8	5	1800	-1.2	-9.4	50	128	1.7	124	4.4	11
2100	-5.8	-11.7	63	147	2.0	152	3.2	0	2100	-2.5	-6.3	75	122	1.3	120	2.5	0	2100	-5.1	-10.6	65	149	1.9	156	3.8	0
2400	-7.7	-12.4	69	161	2.1	162	3.8	0	2400	-4.9	-8.5	76	143	1.1	149	2.5	0	2400	-7.5	-11.7	72	140	1.9	143	3.2	0

DAY 22

DAY 23

DAY 24

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-9.8	-12.8	79	127	2.0	125	3.2	0	0300	-9.9	-13.3	76	097	1.5	099	3.2	0	0300	-10.0	-13.9	75	148	2.1	150	3.8	0
0600	-11.3	-14.2	79	113	2.0	128	3.8	0	0600	-11.5	-14.4	79	091	2.0	089	3.8	0	0600	-10.4	-14.0	75	102	1.5	119	3.5	0
0900	-10.3	-14.4	72	079	2.0	075	4.4	16	0900	-10.3	-15.2	67	084	2.0	089	4.4	18	0900	-7.9	-12.7	68	088	1.6	093	3.2	15
1200	-3.2	-10.3	54	062	1.8	078	3.8	39	1200	-2.1	-12.0	47	067	1.7	070	3.8	41	1200	-1.9	-10.3	49	095	1.6	117	5.7	42
1500	1.5	-9.5	44	131	1.8	103	3.8	37	1500	.5	-11.4	41	139	1.7	083	4.4	38	1500	1.8	-9.0	45	129	2.5	117	5.7	47
1800	1.2	-9.8	44	139	1.8	140	4.4	11	1800	0.0	-11.5	42	134	1.3	104	4.4	11	1800	-1.4	-9.3	51	118	2.4	113	5.7	5
2100	-4.2	-11.9	55	147	1.4	127	3.2	0	2100	-5.8	-12.1	61	151	1.7	147	3.2	0	2100	-2.7	-9.4	60	135	1.1	095	2.2	0
2400	-6.8	-12.6	63	110	1.5	112	3.5	0	2400	-8.2	-13.0	69	134	1.7	128	3.2	0	2400	-4.0	-8.8	69	154	1.1	100	2.4	1

DAY 25

DAY 26

DAY 27

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-5.3	-9.3	73	142	1.2	111	3.2	0	0300	-1.6	-6.3	70	135	1.0	138	2.5	0	0300	-1.4	-5.3	81	139	1.4	139	3.8	1
0600	-7.0	-10.3	80	121	1.4	131	3.5	0	0600	-2.6	-4.5	87	141	1.2	154	2.5	0	0600	-2.4	*****	86	143	1.1	151	3.5	1
0900	-5.2	-10.3	70	104	1.8	108	3.2	12	0900	-2.2	*****	90	113	1.9	132	2.5	7	0900	-1.9	-4.9	71	133	1.4	114	3.4	17
1200	1.7	-7.1	56	156	1.6	075	3.2	38	1200	1.4	-3.8	69	063	1.2	104	3.8	28	1200	3.9	-4.8	54	096	1.2	111	5.1	48
1500	3.5	-6.1	50	110	2.0	119	5.1	38	1500	2.9	-2.6	67	069	2.1	086	5.1	21	1500	4.3	-5.8	44	117	2.0	104	5.1	13
1800	3.0	-8.9	46	137	1.2	141	3.8	11	1800	1.9	-3.9	65	102	2.0	111	5.1	6	1800	1.1	-1.2	85	054	1.4	141	4.4	1
2100	-1.2	-8.1	62	139	1.5	149	4.4	0	2100	1.1	-4.1	68	118	1.0	149	3.8	0	2100	-1.4	-2.1	85	036	1.8	247	3.8	0
2400	-3.8	-7.3	71	156	1.4	149	3.2	0	2400	.9	-4.1	69	141	1.5	161	3.2	0	2400	-1.6	-3.4	88	153	1.8	172	1.9	0

ALL DATA INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.
 SUBBITA HYDROELECTRIC PROJECT

WIND HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAILED DURING March, 1984

DAY 28

DAY 29

DAY 30

-HOUR	DEW							-HOUR	DEW							-HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW				
0300	-3.9	-5.8	87	114	1.2	098	3.2	0	0300	-1.9	-7.4	66	179	1.1	189	1.9	0	0300	-3.3	-4.9	89	162	.8	141	2.5	0
0600	-7.5	-9.0	89	098	1.3	076	3.2	0	0600	-2.5	-8.6	63	182	1.0	187	1.9	0	0600	-4.3	-6.0	88	130	1.0	120	3.5	0
0900	-5.8	-10.0	72	073	1.7	079	3.8	21	0900	1.1	-6.9	55	143	1.0	116	3.8	12	0900	-2.3	-5.4	79	072	.9	112	1.9	12
1200	1.5	-7.8	50	077	1.8	102	3.8	46	1200	3.6	-6.4	48	094	2.0	125	5.7	25	1200	3.6	-3.0	82	056	1.5	061	5.2	39
1500	3.5	-7.4	42	148	2.2	141	5.1	40	1500	4.3	-7.0	44	090	2.3	093	6.3	19	1500	5.0	-4.6	50	132	.6	082	3.8	24
1800	5.8	-8.4	41	115	1.8	120	5.1	14	1800	2.3	****	69	094	2.0	097	6.3	12	1800	1.7	-1.7	78	305	1.6	324	5.7	7
2100	-2.5	-8.9	62	144	1.6	109	5.7	0	2100	.4	-2.6	60	257	.8	250	3.2	0	2100	-1.4	****	96	298	1.0	312	3.2	0
2400	-3.3	-8.5	67	188	1.4	192	2.5	0	2400	-1.2	-3.0	88	206	.9	240	1.9	0	2400	-1.3	****	96	176	.7	162	1.9	0

DAY 31

-HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	
0300	-1.9	****	94	185	.6	161	1.9	0
0600	-2.5	****	97	138	.5	142	1.9	0
0900	.1	-2.1	85	126	1.5	131	3.2	15
1200	1.9	-2.0	75	078	1.6	072	3.8	19
1500	3.0	-1.5	72	339	.7	286	4.4	16
1800	.1	-1.5	96	076	1.3	045	3.8	5
2100	-1.4	-1.8	97	127	.5	125	2.5	0
2400	-2.5	-3.4	94	138	1.1	126	2.5	0

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

R & M CONSULTANTS, INC.

SUSUTNA HYDROELECTRIC PROJECT

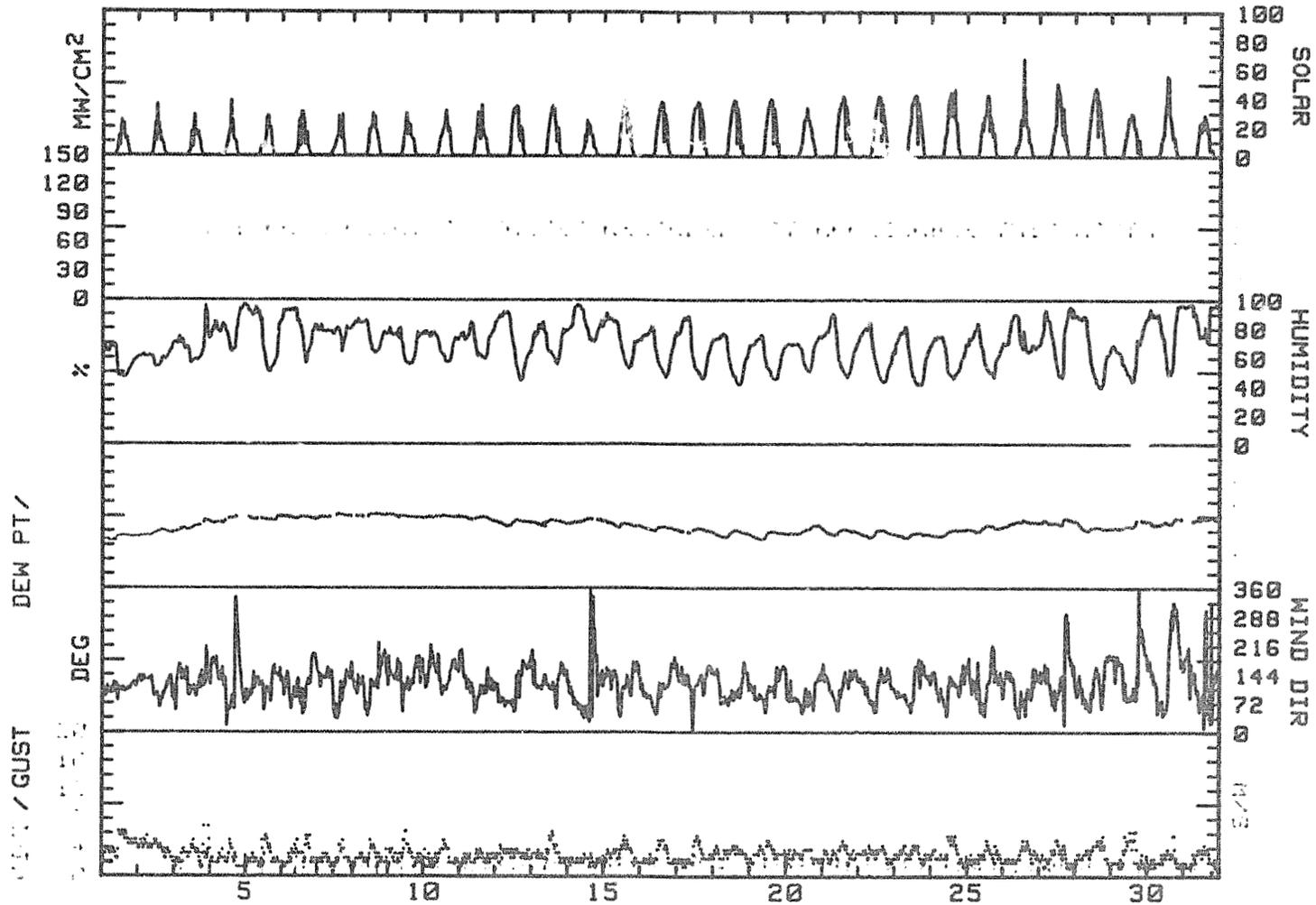
MONTHLY SUMMARY FOR DEWEY CANYON WEATHER STATION
 DATA TAKEN DURING March, 1984

DAY	MAX.	MIN.	MEAN	RES.	RES.	AVG.	MAX.	MAX.	DIR.	RH	MEAN	MEAN	PRECIP	DAYS
	TEMP.	TEMP.	TEMP.	WIND	WIND	WIND	GUST	GUST						
	DEG C	DEG C	DEG C	DEG	M/S	M/S	DEG	M/S		%	DEG C	MM	WH/50m	DAY
1	-3.5	-12.7	-7.6	111	2.3	2.3	110	6.3	ESE	58	-14.5	****	1115	1
2	-3.1	-7.7	-4.9	119	2.1	2.2	133	5.7	SE	60	-11.6	****	1131	2
3	1.3	-6.7	-2.7	130	1.5	1.7	123	7.0	ESE	68	-6.6	****	1115	3
4	5.5	-2.8	1.4	129	.7	1.2	067	5.1	S	77	-2.8	****	1310	4
5	7.3	-1.3	3.0	121	1.2	1.3	112	5.7	ESE	71	-1.7	****	1210	5
6	7.3	-1.6	3.4	122	1.2	1.6	121	5.7	ESE	80	-.8	****	1450	6
7	7.7	1.0	4.4	127	1.0	1.2	108	5.1	SE	77	.4	****	1180	7
8	8.5	1.4	5.0	130	1.0	1.3	132	5.1	ESE	75	.9	****	1490	8
9	8.3	1.7	5.0	138	1.4	1.6	116	6.3	SE	69	-.2	****	1415	9
10	8.7	1.4	5.1	145	1.7	1.4	111	5.1	SE	68	-.2	****	1600	10
11	7.0	-1.7	2.7	117	1.2	1.4	081	3.8	ESE	72	-1.6	****	1565	11
12	3.5	-6.1	1.2	113	1.3	1.8	087	4.4	ESE	70	-4.7	****	2170	12
13	5.3	-5.0	.2	125	1.6	1.8	126	6.3	ESE	72	-1.3	****	2100	13
14	3.1	-3.8	-.4	083	.8	1.2	067	3.2	ESE	85	-3.4	****	1310	14
15	3.3	-5.4	-1.1	130	1.6	1.8	107	5.7	SE	72	-6.2	****	2355	15
16	3.1	-7.4	-2.2	108	1.3	1.6	124	5.1	E	65	-8.6	****	2330	16
17	1.8	-10.3	-4.3	133	1.4	1.5	117	5.7	SE	63	-9.9	****	2535	17
18	2.1	-11.4	-4.7	112	1.6	1.8	160	4.4	E	60	-12.1	****	2025	18
19	.5	-13.1	-6.3	111	1.8	2.1	107	5.1	E	61	-12.2	****	2520	19
20	.4	-8.0	-3.8	091	1.5	1.6	095	3.8	E	66	-9.6	****	1870	20
21	1.4	-11.8	-5.2	121	1.7	1.9	127	5.1	SE	67	-10.8	****	2095	21
22	2.1	-13.2	-5.6	113	1.6	1.8	075	4.4	ESE	63	-12.0	****	2655	22
23	.9	-12.9	-6.0	112	1.5	1.8	089	4.4	E	61	-12.2	****	2495	23
24	1.8	-10.4	-4.3	119	1.6	1.8	117	5.7	ESE	62	-11.3	****	2275	24
25	4.1	-8.4	-2.2	123	1.1	1.5	119	5.1	SE	63	-3.0	****	2040	25
26	3.1	-3.0	.1	107	1.2	1.4	086	5.1	SE	73	-4.2	****	2100	26
27	5.4	-2.7	1.4	119	.9	1.5	101	5.1	SE	73	-3.8	****	2450	27
28	5.3	-7.9	-1.3	119	1.3	1.8	109	5.7	ESE	64	-2.0	****	2360	28
29	1.3	-3.4	.5	127	.9	1.5	093	6.3	E	60	-6.5	****	2045	29
30	5.7	-5.1	.3	091	.2	1.2	324	5.7	ESE	73	-1.2	****	2545	30
31	3.1	-2.5	.3	106	.7	1.2	286	4.4	E	63	-2.0	****	1410	31
MONTH	5.7	-13.2	-.9	119	1.3	1.6	123	7.0	SE	68	-6.3	****	2740	

GUST MEAN AT MAX. GUST MINUS 2 INTERVALS 3.2
 GUST MEAN AT MAX. GUST MINUS 1 INTERVAL 4.4
 GUST MEAN AT MAX. GUST PLUS 1 INTERVAL 3.2
 GUST MEAN AT MAX. GUST PLUS 2 INTERVALS 2.0

NOTE: RELATIVE HUMIDITY READINGS ARE UNRELIABLE WHEN WIND SPEEDS ARE GREATER THAN ONE METER PER SECOND. SOME READINGS HAVE NOT BEEN INCLUDED IN THE SUMMARY OR MONTHLY MEAN FOR RELATIVE HUMIDITY AND DEW POINT. ** ARE INTERPRETATION NOTES AT END OF MONTHLY REPORTS.

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
DEVIL CANYON WEATHER STATION
March, 1984



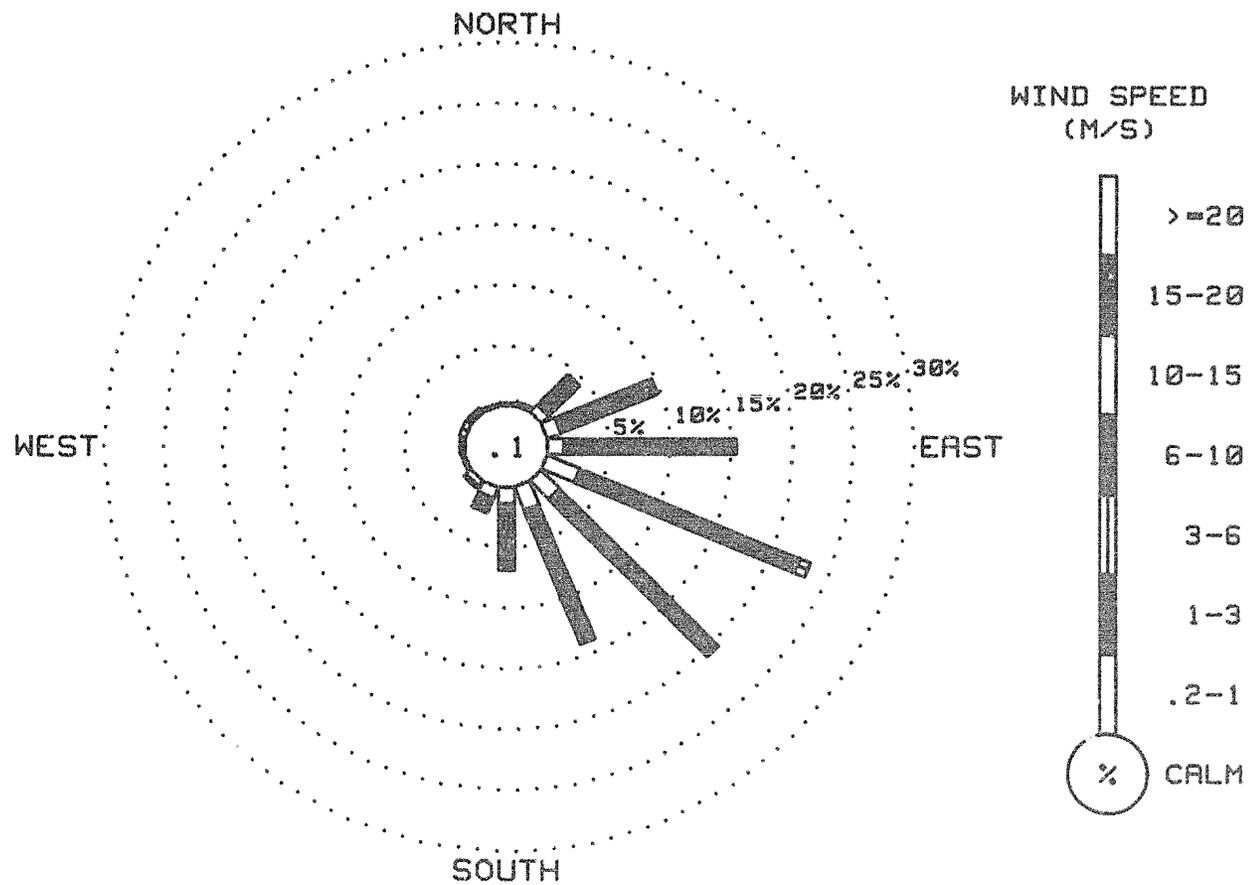
P & M CONSULTANTS, INC.
 SUBITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING March, 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	OR GREATER	
N	.20	.07	0.00	0.00	0.00	0.00	0.00	.27
NNE	.13	.34	0.00	0.00	0.00	0.00	0.00	.47
NE	.87	3.56	0.00	0.00	0.00	0.00	0.00	4.43
NNE	1.21	8.40	.07	0.00	0.00	0.00	0.00	9.68
E	1.34	13.91	.13	0.00	0.00	0.00	0.00	15.38
ESE	2.89	19.35	.94	0.00	0.00	0.00	0.00	23.18
SE	2.15	17.94	.34	0.00	0.00	0.00	0.00	20.43
SSE	2.08	11.90	0.00	0.00	0.00	0.00	0.00	13.98
S	1.34	5.51	0.00	0.00	0.00	0.00	0.00	6.85
SSW	1.01	1.34	0.00	0.00	0.00	0.00	0.00	2.35
SW	.60	.27	0.00	0.00	0.00	0.00	0.00	.87
WSW	.13	.20	0.00	0.00	0.00	0.00	0.00	.33
W	.27	.20	0.00	0.00	0.00	0.00	0.00	.47
WNW	0.00	.54	0.00	0.00	0.00	0.00	0.00	.54
W	.07	.34	.07	0.00	0.00	0.00	0.00	.48
WNW	.07	.13	0.00	0.00	0.00	0.00	0.00	.20
Calcl								
TOTAL	14.38	84.01	1.55	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 *** VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY ***
 *** 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
DEVIL CANYON WEATHER STATION
March, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.
 SUBSIDIARY HYDROELECTRIC PROJECT

MONTHLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING March, 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	AVE	
1	0	0	0	0	0	0	0	0	2	4	13	13	23	22	13	13	8	2	0	0	0	0	0	0	0	5
2	0	0	0	0	0	0	0	0	2	8	20	23	20	16	11	9	4	3	0	0	0	0	0	0	0	5
3	0	0	0	0	0	0	0	0	3	5	14	15	24	15	17	12	7	2	0	0	0	0	0	0	0	5
4	0	0	0	0	0	0	0	1	3	6	10	17	30	24	13	11	7	2	0	0	0	0	0	0	0	5
5	0	0	0	0	0	0	0	0	5	7	9	8	22	27	20	18	7	2	0	0	0	0	0	0	0	5
6	0	0	0	0	0	0	0	1	3	9	25	19	31	23	13	14	7	3	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	0	1	3	5	7	12	14	26	17	21	12	3	0	0	0	0	0	0	0	5
8	0	0	0	0	0	0	0	1	3	14	18	22	25	25	19	14	8	3	0	0	0	0	0	0	0	6
9	0	0	0	0	0	0	0	1	5	14	21	25	19	20	14	12	9	2	1	0	0	0	0	0	0	6
10	0	0	0	0	0	0	0	1	6	12	15	19	22	31	21	19	13	3	1	0	0	0	0	0	0	7
11	0	0	0	0	0	0	0	1	6	14	23	23	12	29	19	14	12	5	1	0	0	0	0	0	0	7
12	0	0	0	0	0	0	0	2	8	24	32	32	35	35	16	16	17	1	1	0	0	0	0	0	0	7
13	0	0	0	0	0	0	0	2	7	17	25	31	35	35	23	15	18	4	1	0	0	0	0	0	0	9
14	0	0	0	0	0	0	0	1	3	7	12	21	19	21	16	12	6	4	1	0	0	0	0	0	0	8
15	0	0	0	0	0	0	0	2	7	18	27	36	39	32	21	26	15	4	1	0	0	0	0	0	0	9
16	0	0	0	0	0	0	0	2	9	19	27	34	38	38	28	27	16	4	2	0	0	0	0	0	0	10
17	0	0	0	0	0	0	0	2	12	27	34	35	38	38	23	27	14	6	2	0	0	0	0	0	0	11
18	0	0	0	0	0	0	0	2	9	21	29	36	39	39	22	28	14	8	2	0	0	0	0	0	0	11
19	0	0	0	0	0	0	0	2	9	21	30	36	40	40	22	29	16	8	2	0	0	0	0	0	0	11
20	0	0	0	0	0	0	0	2	6	13	22	26	31	27	23	19	12	7	2	0	0	0	0	0	0	10
21	0	0	0	0	0	0	1	3	16	28	34	38	41	41	24	29	16	10	2	0	0	0	0	0	0	12
22	0	0	0	0	0	0	1	3	14	23	32	36	42	42	24	31	23	13	2	0	0	0	0	0	0	12
23	0	0	0	0	0	0	1	4	17	23	36	40	45	45	24	32	23	14	3	0	0	0	0	0	0	13
24	0	0	0	0	0	0	1	4	14	20	37	41	37	31	38	25	21	6	3	0	0	0	0	0	0	11
25	0	0	0	0	0	0	1	5	17	21	25	29	40	41	23	22	15	14	3	0	0	0	0	0	0	11
26	0	0	0	0	0	0	1	5	6	10	20	26	45	38	23	26	10	8	2	0	0	0	0	0	0	10
27	0	0	0	0	0	0	1	7	14	19	33	50	44	35	20	29	14	8	4	0	0	0	0	0	0	11
28	0	0	0	0	0	0	1	7	19	29	37	43	46	47	27	35	26	16	6	1	0	0	0	0	0	12
29	0	0	0	0	0	0	1	5	11	17	24	26	29	29	21	18	7	11	4	1	0	0	0	0	0	10
30	0	0	0	0	0	0	1	4	11	15	25	37	53	42	26	17	13	10	5	1	0	0	0	0	0	11
31	0	0	0	0	0	0	1	4	13	21	21	22	24	26	20	18	7	5	3	0	0	0	0	0	0	8

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

REPORT SUMMARY FOR DEVI. CANYON WEATHER STATION
TAKEN DURING March, 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	1273	86
PRECIPITATION	0	0
SOLAR RADIATION	1488	100
DEW POINT	1273	86

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 $-1 \mu\text{W}/\text{CM}^2$

P & M CONSULTANTS, INC.

RESIDENTIAL HYDROELECTRICITY PROJECT

PRECIPITATION SUMMARY FOR PEUL CANYON WEATHER STATION
 DATA TAKEN DURING April, 1984

PRECIPITATION VALUES ARE IN MILLIMETERS

DATE	HOUR ENDING																								DATE
	000	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	30

WEATHER INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.

BLISS MOUNTAIN HYDROELECTRIC PROJECT

MONTHLY WEATHER SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING APRIL, 1984

DAY 01

DAY 02

DAY 03

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-3.1	93	168	1.0	136	2.5	0	0300	-4.3	-6.3	86	120	1.1	114	3.2	0	0300	-7.8	-9.3	89	136	1.4	126	3.2	0
0600	-7	-3.9	99	176	1.6	175	3.2	0	0600	-3.6	*****	95	098	.6	102	1.9	0	0600	-8.8	-10.0	91	122	1.2	105	3.8	0
0900	1.2	-4.6	65	120	1.4	110	5.1	8	0900	-1.1	*****	88	356	.0	326	1.9	18	0900	-5.8	-9.2	77	084	1.1	063	3.2	24
1200	4.3	-2.5	49	093	1.8	090	5.1	38	1200	.8	-2.1	81	311	1.2	296	3.2	25	1200	3.1	-7.8	45	034	.9	038	3.2	37
1500	4.4	-7.2	43	136	1.3	123	3.8	28	1500	.2	-1.0	92	319	1.8	349	4.4	9	1500	3.5	-7.4	45	026	3.3	031	7.6	34
1800	3.6	-4.1	57	307	1.6	279	4.2	14	1800	.9	*****	83	244	.6	229	3.2	6	1800	2.9	-7.4	47	031	3.6	030	8.3	6
2100	-2.1	-4.5	84	229	.7	285	3.8	0	2100	-2.7	-4.3	89	186	.8	173	1.9	0	2100	1.3	-5.6	60	059	1.1	047	5.7	6
2400	-4.1	*****	85	155	.9	164	2.5	0	2400	-5.0	-7.1	85	139	1.6	128	3.2	0	2400	-3.5	*****	72	164	1.0	149	1.9	0

DAY 04

DAY 05

DAY 06

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-3.2	*****	77	166	1.0	163	2.5	0	0300	-9	*****	77	130	.8	142	1.9	0	0300	-2.3	*****	98	299	.9	287	2.5	0
0600	-4.7	-7.9	79	140	1.3	134	3.2	0	0600	-2.1	*****	83	113	.7	117	1.9	0	0600	-2.8	*****	96	295	.9	309	3.2	0
0900	-3.0	-6.5	71	139	1.4	141	3.2	24	0900	-1.6	-4.1	77	066	1.1	090	2.5	17	0900	-1.6	*****	89	303	.3	326	1.9	7
1200	3.5	-4.7	55	093	1.5	131	5.1	49	1200	3.5	-3.1	62	074	1.7	062	4.4	40	1200	.3	-4.7	69	304	1.4	302	5.1	31
1500	5.4	-6.3	43	235	1.1	117	3.8	46	1500	3.9	-3.8	57	084	1.5	060	4.4	20	1500	1	-5.5	66	274	2.0	294	5.7	36
1800	5.3	-6.4	43	230	1.5	211	3.2	19	1800	3.0	-1.5	72	264	1.1	294	3.8	9	1800	-1.2	-3.9	62	292	1.7	266	5.1	6
2100	1.3	-4.9	63	137	1.2	173	3.2	0	2100	-1.0	-1.6	96	297	1.5	296	3.2	0	2100	-3.1	*****	96	311	.5	300	3.5	0
2400	-1.4	-5.0	71	151	1.7	139	3.2	0	2400	-1.7	-3.1	97	314	1.7	318	3.8	0	2400	-3.5	*****	95	123	.8	113	1.9	0

DAY 07

DAY 08

DAY 09

HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	-4.5	*****	95	137	1.0	123	2.5	0	0300	-5.3	-8.4	79	***	***	***	4.4	0	0300	-3.3	-7.4	73	189	1.2	200	2.5	0
0600	-5.0	*****	97	118	.6	113	1.9	0	0600	-6.9	-8.3	90	***	***	***	4.4	0	0600	-3.9	-8.4	71	166	1.1	165	1.9	1
0900	-3.9	-6.7	83	075	.8	095	3.2	8	0900	-4.1	-9.5	66	075	1.5	***	3.2	21	0900	-1.2	*****	68	117	.6	101	3.5	28
1200	-1.4	-4.9	77	090	1.5	123	3.2	11	1200	.2	-9.9	47	109	2.4	163	5.7	51	1200	5.1	-12.0	22	027	1.1	359	3.2	37
1500	1.0	-7.3	54	336	1.0	293	4.2	51	1500	1.8	-8.9	42	121	2.9	120	7.0	52	1500	6.3	-17.7	16	103	1.7	044	5.1	46
1800	-1.3	-7.2	61	240	1.1	253	3.2	7	1800	1.6	-9.4	44	116	2.6	115	6.3	12	1800	5.1	-15.5	21	034	2.5	049	4.4	23
2100	-5.0	*****	86	***	***	***	3.2	0	2100	-1.6	-7.9	62	148	1.3	135	4.4	0	2100	-1.8	-13.3	11	236	1.6	263	3.1	1
2400	-1.2	-6.2	86	***	***	***	3.2	0	2400	-3.5	-7.4	69	183	1.3	192	2.5	0	2400	-3.7	-12.2	50	161	1.3	215	2.1	0

SEE THE INTER-RETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.
 SULLSBURY HYDROELECTRICITY PROJECT

24-HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING April, 1964

DAY 10

DAY 11

DAY 12

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	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	-5.8	-13.0	57	153	1.4	169	3.5	0	0300	-6.2	-10.4	72	136	1.5	151	3.2	0	0300	-4.7	****	85	143	1.1	131	4.4	0						
0600	-5.8	-13.0	57	147	1.5	149	2.5	1	0600	-6.2	-10.6	71	133	1.3	124	2.5	1	0600	-6.5	-8.6	85	136	1.8	103	4.4	1						
0900	-3.2	-12.2	50	127	1.6	136	3.2	19	0900	-1.9	-10.0	54	091	1.1	101	3.2	31	0900	-1.3	-7.4	63	078	1.7	093	3.2	29						
1200	1.2	-12.3	39	087	1.6	054	3.8	51	1200	3.9	-7.3	44	074	1.5	072	3.8	70	1200	6.0	-5.1	45	111	1.9	119	4.4	58						
1500	1.5	-12.5	35	044	1.3	307	4.4	37	1500	5.2	-6.5	43	116	1.5	126	4.4	42	1500	6.8	-5.0	43	123	2.6	114	5.7	40						
1800	-1.2	-11.4	43	310	2.3	325	5.1	18	1800	4.7	-6.6	44	306	1.6	283	4.4	17	1800	5.6	-5.8	44	089	1.7	082	4.4	16						
2100	-3.4	****	59	287	1.5	301	3.8	0	2100	-1.8	-6.2	72	248	1.2	284	3.2	0	2100	1.1	-5.9	64	133	1.2	092	3.2	0						
2400	-5.8	-9.8	73	178	1.0	161	2.5	0	2400	-3.0	-6.6	76	142	1.1	136	3.2	0	2400	-2.9	-6.9	74	143	1.2	149	2.5	0						

DAY 13

DAY 14

DAY 15

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	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	-4.2	-8.1	74	129	2.1	120	3.8	0	0300	-1.7	-5.2	77	124	1.6	132	3.2	0	0300	-1.9	****	96	129	1.6	095	1.9	0						
0600	-3.8	-8.7	80	097	1.8	095	3.2	1	0600	-5.0	-7.3	84	113	1.1	121	3.2	1	0600	-1.9	****	97	194	1.3	185	1.3	0						
0900	-1.4	****	61	092	1.7	090	3.8	26	0900	-3.0	-6.8	75	063	1.2	078	3.2	20	0900	1.1	-1.5	89	055	1.6	048	2.5	7						
1200	6.4	-4.7	45	107	1.1	114	4.4	40	1200	3.1	-6.1	51	032	1.3	045	3.2	43	1200	1.9	-1.0	87	350	1.1	291	5.8	37						
1500	6.3	-4.8	45	086	2.3	052	6.3	38	1500	4.9	-5.8	46	303	1.5	310	3.8	34	1500	-1.5	-1.8	91	317	2.0	337	5.7	7						
1800	5.2	-5.0	48	085	1.8	081	4.4	12	1800	1.2	-1.1	85	286	1.1	326	3.8	7	1800	1.1	-3.7	70	352	1.8	350	3.8	12						
2100	1.4	-4.0	72	132	1.2	090	4.4	0	2100	1.1	****	95	324	1.2	299	1.9	0	2100	-1.9	****	93	336	1.5	040	3.8	0						
2400	-2.2	-5.0	81	179	1.2	169	1.9	0	2400	-1.3	-1.0	95	105	1.0	106	1.9	0	2400	-3.5	****	89	***	***	***	2.5	0						

DAY 16

DAY 17

DAY 18

HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.	HOUR	DEW			WIND			GUST			MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	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	-4.9	-6.2	91	108	1.1	193	3.2	0	0300	-4.6	****	96	120	1.7	147	1.9	0	0300	-10.0	-11.8	67	150	1.0	152	2.5	1						
0600	-3.3	-5.2	87	***	****	***	3.2	1	0600	-4.9	****	95	134	1.9	131	2.5	1	0600	-11.7	-14.3	61	147	1.0	194	2.5	1						
0900	-3.7	-4.9	85	028	1.8	107	3.8	9	0900	-3.2	-3.7	83	079	1.6	065	1.9	12	0900	-4.4	-9.2	69	067	1.9	140	2.5	35						
1200	-3.2	-5.1	87	313	1.6	076	3.8	16	1200	-1.9	-5.8	69	022	1.2	151	3.2	18	1200	-1.4	-11.0	45	170	1.3	062	3.8	58						
1500	-3.3	-5.0	88	326	1.4	310	3.8	13	1500	1.5	-7.3	56	321	1.7	311	4.4	50	1500	2.3	-11.4	36	092	1.1	175	4.4	57						
1800	-3.3	****	84	316	1.6	027	4.4	6	1800	1.5	-7.3	56	258	1.6	293	4.4	25	1800	2.6	-11.1	36	122	1.3	131	3.8	33						
2100	-3.9	****	89	075	1.7	056	1.9	0	2100	-3.8	****	70	244	1.0	244	3.8	0	2100	-6.7	****	56	332	1.9	178	3.2	1						
2400	-4.4	-5.0	94	121	1.0	129	2.5	0	2400	-7.2	****	85	193	1.9	187	1.9	0	2400	-6.9	-12.0	67	129	1.3	132	2.5	0						

SEE APPENDIX FOR INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.

SUSBYNNA HYDROELECTRIC PROJECT

24-HOUR SUMMARY FOR DEVEL CANYON WEATHER STATION
DATA TAKEN DURING APRIL, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			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	-9.6	-13.0	76	118	1.3	114	3.2	0	0300	-1.8	****	97	281	.5	297	1.9	0	0300	3.0	-1.9	70	180	1.2	184	1.9	0			
0600	-11.4	-14.0	81	085	1.4	089	3.2	2	0600	-1.4	****	97	265	.1	290	.6	0	0600	2.1	-3.0	69	169	1.5	152	3.8	2			
0900	-5.2	-11.7	66	068	1.7	078	3.2	33	0900	.9	****	89	016	.2	042	1.3	11	0900	7.4	-3.8	45	127	.9	102	4.4	37			
1200	1.8	-9.6	43	085	1.7	065	3.8	53	1200	5.2	-2.6	57	310	1.2	298	3.2	37	1200	8.2	-4.7	40	191	2.3	111	6.3	35			
1500	3.2	-8.9	41	138	2.2	129	5.1	36	1500	5.7	-1.4	60	308	1.8	298	5.1	34	1500	9.5	-4.6	37	106	3.4	113	7.0	54			
1800	2.9	-8.0	45	101	1.3	128	4.4	15	1800	6.0	-.9	61	305	2.2	306	4.4	18	1800	8.9	-5.5	36	102	2.9	108	6.3	25			
2100	1.6	****	59	109	.7	050	2.5	0	2100	1.6	-1.5	80	244	.9	280	3.2	0	2100	5.5	-5.0	47	111	1.8	106	6.3	0			
2400	-1.4	****	95	167	.6	177	3.2	0	2400	-.2	-2.7	83	182	1.2	182	3.2	0	2400	-2.2	-2.8	96	214	1.1	220	7.0	0			

DAY 22

DAY 23

DAY 24

HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			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	-4.2	-4.8	96	317	3.9	317	8.9	0	0300	-10.1	-14.9	68	108	1.3	104	3.2	0	0300	-6.2	-11.5	66	141	1.9	145	3.8	0			
0600	-4.3	-7.1	82	286	1.5	293	3.8	2	0600	-11.6	****	73	118	1.2	107	3.2	4	0600	-8.1	-11.9	74	095	1.6	090	3.8	2			
0900	-3.3	-10.2	59	362	1.4	250	4.4	35	0900	-4.9	-13.3	52	070	1.5	068	3.2	35	0900	-1.6	-10.2	52	067	1.6	085	3.2	33			
1200	-1.3	-12.3	44	359	2.3	262	7.6	62	1200	1.4	-15.3	28	093	1.8	088	4.4	62	1200	3.1	-10.3	37	106	1.6	083	5.1	66			
1500	-.2	-14.3	34	349	2.3	250	5.1	55	1500	2.7	-13.3	30	072	2.8	076	5.7	56	1500	3.6	-8.2	42	254	1.9	293	6.7	56			
1800	.7	-13.5	34	232	1.8	231	5.1	25	1800	2.2	-12.2	34	105	2.5	102	6.3	17	1800	2.1	-5.8	56	278	2.1	263	5.1	18			
2100	-4.9	****	52	292	.3	288	3.2	0	2100	-2.5	-11.3	51	109	1.0	109	3.2	0	2100	-.8	****	88	272	.7	293	3.8	0			
2400	-8.6	-14.6	62	155	1.5	172	3.2	0	2400	-4.7	-10.6	63	151	1.9	143	3.2	0	2400	-2.8	-3.8	93	129	1.6	125	3.8	0			

DAY 25

DAY 26

DAY 27

HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.	HOUR	DEW				WIND				GUST MAX.
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD			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	-9.2	****	83	142	1.0	129	3.2	0	0300	-4.4	-8.5	73	100	1.5	116	3.2	0	0300	-2.9	-5.2	84	154	1.6	122	3.2	0			
0600	-5.3	-7.4	73	131	.8	112	2.5	3	0600	-5.6	-9.0	77	086	1.3	099	3.2	3	0600	-3.6	-5.9	84	134	1.5	123	3.2	4			
0900	-.1	-8.1	53	061	1.5	041	3.5	35	0900	-.4	-9.1	56	063	1.3	091	3.2	25	0900	3.1	-3.2	60	066	1.9	091	3.2	33			
1200	2.9	-9.6	43	271	1.8	173	3.8	62	1200	3.1	-6.9	48	067	1.7	117	3.8	44	1200	6.4	-3.3	51	102	2.8	115	5.7	37			
1500	3.1	-9.0	41	368	1.9	296	7.0	71	1500	4.9	-5.2	48	053	1.7	054	5.1	56	1500	6.9	-2.3	50	125	2.8	115	6.3	32			
1800	3.0	-8.5	43	289	2.5	283	6.3	31	1800	3.7	-4.3	56	247	1.1	277	4.4	12	1800	6.9	-2.3	52	112	2.5	122	5.1	12			
2100	-.8	****	68	300	1.0	324	3.8	0	2100	-.2	****	70	303	.8	311	3.2	0	2100	5.1	-2.0	60	114	1.9	113	3.2	0			
2400	-2.5	-8.0	66	127	1.2	109	3.8	0	2400	-1.8	-4.8	80	152	1.2	143	2.5	0	2400	2.7	****	86	121	.9	113	2.5	0			

* WIND INTERPRETATION NOTES AT END OF MONTHLY REPORT *

R & M CONSULTANTS, INC.
 SUBSITNA HYDROELECTRIC PROJECT

ONE-HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING APRIL, 1984

DAY 28

DAY 29

DAY 30

HOUR	DAY 28							DAY 29							DAY 30								
	DRG	TEMP.	POINT	RH	DIR.	SPD.	GUST	DRG	TEMP.	POINT	RH	DIR.	SPD.	GUST	DRG	TEMP.	POINT	RH	DIR.	SPD.	GUST		
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	%	DEG.	M/S	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S		
0300	1.4	****	96	140	.9	147	1.9	0	0300	.3	-1.9	92	122	1.4	0300	.9	****	94	178	.6	187	1.9	0
0600	.3	****	97	160	.4	185	1.9	2	0600	-1.3	-1.8	90	097	1.5	0600	1.8	-1.3	86	153	.8	177	3.5	3
0900	2.2	****	96	027	.7	036	1.9	17	0900	5.5	-1.7	64	081	1.3	0900	4.8	****	77	194	.3	189	1.9	31
1200	4.0	2.0	87	294	1.5	317	3.8	25	1200	7.7	-2.1	50	113	2.7	1200	8.3	.1	56	048	1.3	048	3.8	34
1500	7.3	.1	60	303	2.2	302	5.7	65	1500	8.9	-2.8	44	120	2.9	1500	9.2	-1.2	52	048	2.1	041	5.1	31
1800	5.5	1.6	76	275	2.4	273	6.3	14	1800	7.7	-2.7	48	093	1.9	1800	9.0	-1.9	53	040	1.4	076	5.1	18
2100	4.3	****	77	267	.5	290	2.5	0	2100	4.9	-2.2	60	078	.6	2100	4.0	1.9	86	299	1.8	306	5.1	0
2400	1.3	-1.0	91	165	1.2	153	2.5	0	2400	2.7	****	75	190	1.1	2400	.9	.2	95	186	1.0	260	1.9	0

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

R & M CONSULTANTS, INC.

SUBSISTING HYDROELECTRIC PROJECT

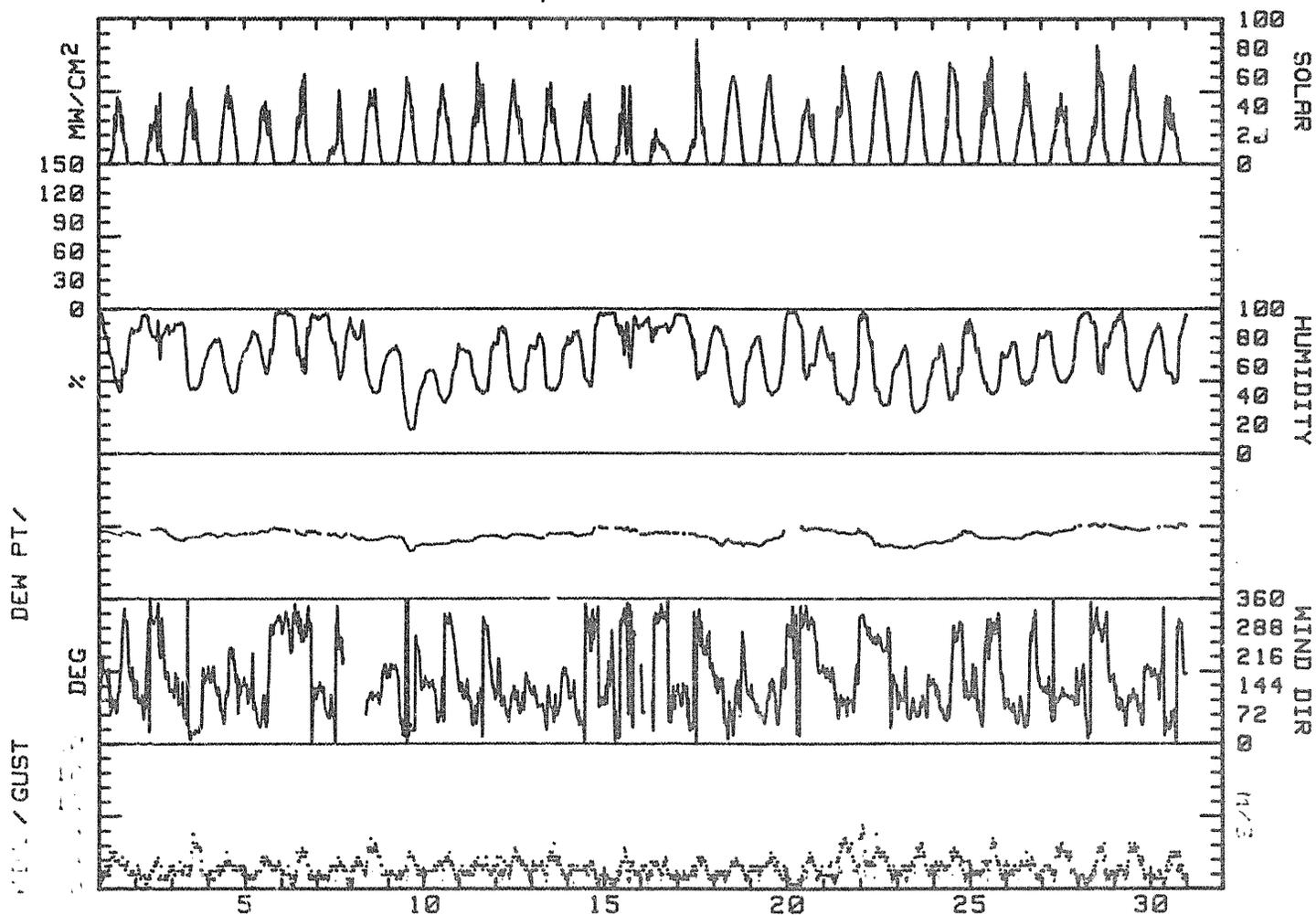
MONTHLY SUMMARY FOR DEVI CANYON WEATHER STATION
 DATA TAKEN DURING APRIL, 1984

DAY	MAX.	MIN.	MEAN	RES.	RFS.	AVG.	MAX.	MAX.	DIRECTION	MEAN	MEAN	PRECIP	DAYS	
	TEMP.	TEMP.	TEMP.	WIND	WIND	WIND	GUST	GUST		RH	DP		SO. AM	DAY
	DEG C	DEG C	DEG C	DEG	M/S	M/S	DEG	M/S	%	DEG C	MM	W/SGH		
1	5.9	-4.1	.9	153	.7	1.5	110	5.1	S	68	-4.5	****	2615	1
2	3.5	-5.0	-1.8	193	.1	1.1	349	4.4	NW	84	-4.2	****	3275	2
3	3.9	-9.4	-2.8	059	1.2	1.8	031	7.5	NNE	65	-7.6	****	3280	3
4	5.6	-4.8	.4	148	1.1	1.5	131	5.1	SSE	62	-3.9	****	3935	4
5	4.8	-2.4	1.2	042	.3	1.4	062	4.4	WNW	77	-2.8	****	2620	5
6	2.0	-3.5	-1.8	290	.8	1.2	284	5.7	WNW	73	-4.3	****	3875	6
7	1.5	-5.2	-1.9	119	.3	1.1	298	4.4	SE	74	-6.2	****	1915	7
8	2.3	-6.9	-2.3	126	1.9	2.0	120	7.0	ESE	63	-8.8	****	3755	8
9	6.8	-4.2	1.3	087	.2	1.5	044	5.1	NNE	44	-11.8	****	3385	9
10	1.8	-6.0	-2.1	143	.3	1.6	325	5.1	SE	50	-12.0	****	3675	10
11	5.8	-6.5	-1.4	122	.6	1.5	126	4.4	ESE	59	-8.3	****	4080	11
12	6.8	-6.9	-1.1	113	1.5	1.8	114	5.7	E	61	-6.7	****	3985	12
13	7.3	-8.4	.5	108	1.5	1.8	052	6.3	E	63	-6.2	****	2405	13
14	5.2	-5.5	-1.1	062	.4	1.2	310	3.8	ESE	70	-5.1	****	2980	14
15	3.3	-3.5	-1.1	338	.5	1.1	337	5.7	NW	83	-2.1	****	2760	15
16	-1.5	-5.3	-3.4	348	.5	1.3	327	4.4	NW	88	-5.1	****	1545	16
17	2.0	-7.2	-2.6	265	.2	1.2	311	4.4	SE	69	-6.9	****	3590	17
18	3.4	-11.7	-4.2	117	.8	1.3	136	4.4	SE	56	-11.6	****	5130	18
19	3.6	-11.4	-3.9	104	1.2	1.5	129	5.1	ENE	60	-10.4	****	4345	19
20	6.8	-1.9	2.5	288	.7	1.1	298	5.1	WNW	68	-1.5	****	3095	20
21	10.2	-2.2	4.0	123	1.5	2.1	113	7.0	ESE	52	-3.9	****	4650	21
22	1.3	-8.6	-3.7	267	1.4	2.0	317	8.9	WSW	60	-10.6	****	5375	22
23	2.9	-11.9	-4.5	101	1.6	1.8	102	6.3	ESE	48	-13.4	****	5450	23
24	4.3	-8.4	-2.1	135	.4	1.8	293	5.7	E	60	-8.7	****	5080	24
25	3.5	-3.3	.1	258	.3	1.6	296	7.0	NW	57	-7.8	****	4985	25
26	4.9	-5.8	-1.5	086	.7	1.5	054	5.1	ENE	62	-6.9	****	4285	26
27	7.6	-3.7	2.0	118	1.8	1.9	115	6.3	ESE	63	-3.6	****	3140	27
28	8.4	.3	4.4	275	.6	1.3	273	6.3	WNW	78	.9	****	4360	28
29	9.0	-1.5	3.8	111	1.5	1.8	121	6.3	ESE	62	-1.7	****	4980	29
30	10.2	.6	5.4	049	.3	1.3	041	5.1	S	62	.2	****	3240	30
MONTH	10.2	-11.9	-3.5	112	.5	1.5	312	3.9	ESE	64	-6.3	****	3335	

GUST VELOCITY AT MAX. GUST MINUS 2 INTERVALS 7.6
 GUST VELOCITY AT MAX. GUST MINUS 1 INTERVAL 7.0
 GUST VELOCITY AT MAX. GUST PLUS 1 INTERVAL 8.3
 GUST VELOCITY AT MAX. GUST PLUS 2 INTERVALS 8.9

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

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
DEVIL CANYON WEATHER STATION
April, 1984



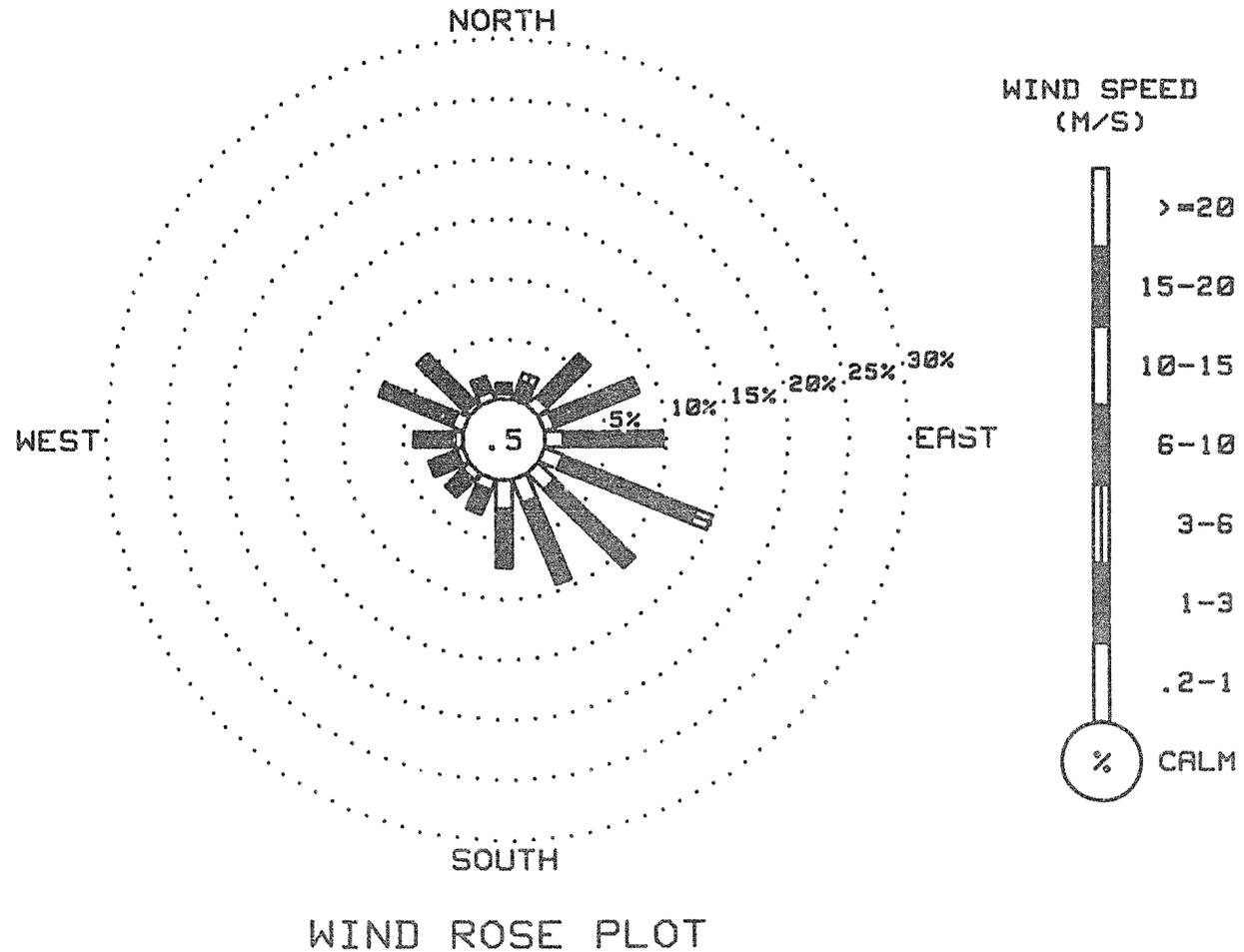
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING APRIL, 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	.50	.86	0.00	0.00	0.00	0.00	0.00	1.36
NNE	.43	1.22	.79	0.00	0.00	0.00	0.00	2.44
NNE	1.08	4.88	.07	0.00	0.00	0.00	0.00	6.03
NNE	.93	7.39	.07	0.00	0.00	0.00	0.00	8.39
E	1.51	8.11	.07	0.00	0.00	0.00	0.00	9.69
ESE	1.65	11.76	1.43	0.00	0.00	0.00	0.00	13.84
SE	1.94	9.04	.14	0.00	0.00	0.00	0.00	11.12
SE	2.15	7.25	0.00	0.00	0.00	0.00	0.00	9.40
S	2.44	4.88	0.00	0.00	0.00	0.00	0.00	7.32
SSW	1.00	2.15	0.00	0.00	0.00	0.00	0.00	3.15
SW	.77	1.94	.07	0.00	0.00	0.00	0.00	2.78
WSW	.57	2.51	0.00	0.00	0.00	0.00	0.00	3.08
W	.65	3.44	0.00	0.00	0.00	0.00	0.00	4.09
WNW	1.00	6.04	.14	0.00	0.00	0.00	0.00	7.14
WNW	.50	5.16	.43	0.00	0.00	0.00	0.00	6.09
WNW	.79	1.39	0.00	0.00	0.00	0.00	0.00	2.18
CALM								0
TOTAL	17.53	78.34	3.33	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 1394 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY
 1400 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
DEVIL CANYON WEATHER STATION
April, 1984



R & M CONSULTANTS, INC.

SUBSISTING HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING APRIL, 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	0	0	0	0	0	0	1	3	7	10	30	30	41	40	35	28	19	14	6	1	0	0	0	0	11
2	0	0	0	0	0	0	2	6	17	21	20	26	26	34	15	20	30	8	5	1	0	0	0	0	9
3	0	0	0	0	0	0	2	7	19	28	43	36	50	44	26	38	24	12	4	1	0	0	0	0	14
4	0	0	0	0	0	0	2	10	21	32	41	48	53	42	47	40	50	21	10	1	0	0	0	0	16
5	0	0	0	0	0	0	2	7	15	22	38	39	34	41	23	31	22	12	6	1	0	0	0	0	12
6	0	0	0	0	0	0	1	2	5	15	32	27	41	43	47	60	22	10	4	1	0	0	0	0	13
7	0	0	0	0	0	0	0	4	9	8	11	9	12	14	44	43	23	12	5	1	0	0	0	0	8
8	0	0	0	0	0	0	2	9	19	34	39	47	41	46	46	43	26	16	7	1	0	0	0	0	16
9	0	0	0	0	0	1	4	10	18	24	36	45	58	53	49	36	31	17	8	2	1	1	0	0	16
10	0	0	0	0	0	1	5	10	18	32	36	45	54	45	41	31	28	17	9	2	0	0	0	0	15
11	0	0	0	0	0	1	4	13	27	32	34	54	44	42	42	52	32	21	13	2	0	0	0	0	17
12	0	0	0	0	0	1	6	14	26	37	46	55	52	40	36	32	26	18	11	3	0	0	0	0	17
13	0	0	0	0	0	1	5	10	22	27	50	43	51	30	35	28	18	15	8	2	0	0	0	0	14
14	0	0	0	0	0	1	4	11	18	27	36	43	36	33	41	19	15	9	6	2	0	0	0	0	12
15	0	0	0	0	0	0	1	4	10	9	28	26	48	41	11	19	46	30	5	1	0	0	0	0	12
16	0	0	0	0	0	1	5	16	9	20	17	16	14	14	12	12	9	8	4	2	0	0	0	0	6
17	0	0	0	0	0	1	2	5	10	12	17	15	45	76	60	48	26	25	15	5	1	0	0	0	15
18	0	0	0	0	0	2	10	20	32	42	50	57	61	59	55	47	37	26	14	5	1	0	0	0	21
19	0	0	0	0	0	2	8	17	30	41	50	55	61	55	42	29	21	16	8	2	0	0	0	0	18
20	0	0	0	0	0	0	2	5	10	19	32	34	38	44	39	27	21	27	11	3	0	0	0	0	13
21	0	0	0	0	0	2	7	14	29	37	33	37	64	58	58	51	44	33	15	6	1	0	0	0	20
22	0	0	0	0	0	2	8	15	32	44	54	61	64	62	57	50	39	38	17	4	1	0	0	0	21
23	0	0	0	0	1	3	12	21	33	45	54	61	64	63	58	50	40	25	11	8	1	0	0	0	23
24	0	0	0	0	0	2	7	12	27	37	63	66	66	65	59	54	22	19	10	3	1	0	0	0	21
25	0	0	0	0	0	2	8	18	31	43	44	52	52	63	73	37	34	23	16	6	1	0	0	0	21
26	0	0	0	0	0	3	7	16	22	27	33	40	56	51	48	44	35	23	17	9	1	0	0	0	16
27	0	0	0	0	1	3	12	16	21	29	34	36	42	36	34	29	28	15	9	2	1	0	0	0	14
28	0	0	0	0	0	1	4	12	14	22	21	29	56	72	60	61	54	28	9	3	1	0	0	0	18
29	0	0	0	0	1	5	12	21	34	37	50	62	58	67	48	39	31	18	10	5	0	0	0	0	21
30	0	0	0	0	0	5	6	11	19	37	47	32	36	24	26	29	25	19	9	6	1	0	0	0	17

SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING April, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1440	100
WIND SPEED	1440	100
WIND DIRECTION	1394	97
PEAK GUST	1440	100
RELATIVE HUMIDITY	1166	81
PRECIPITATION	0	0
SOLAR RADIATION	1440	100
DEW POINT	1166	81

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. Solar -1 mW/CM²

Additional comments on this month's data:

1. Precipitation gage not connected properly. No precipitation data.
2. Intermittent wind direction data lost due to frozen wind vane.

R A M CONSULTANTS, INC.
 SUBSIDIARY HYDROELECTRIC PROJECT

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

PRECIPITATION VALUES ARE IN MILLIMETERS

DATE	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	
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	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	23
24	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	24
25	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	25
26	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	26
27	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	27
28	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	28
29	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	29
30	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***	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.

SUBBITA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

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	-1.2	****	87	135	.7	126	3.2	0	0300	.4	-3.7	74	153	1.7	147	3.2	0	0300	-2.8	-13.7	43	158	1.8	144	3.8	0
0600	.4	****	78	098	.8	117	3.2	11	0600	1.2	-3.4	71	142	1.2	147	2.5	6	0600	-2.1	****	44	148	1.0	172	2.5	11
0900	7.0	-1.7	54	048	1.5	051	2.5	42	0900	3.7	-7.2	45	117	1.7	116	4.4	30	0900	3.4	-13.1	29	065	1.3	059	3.8	43
1200	10.2	-3.6	38	166	1.1	179	4.4	68	1200	5.1	-10.8	31	040	3.0	041	6.3	67	1200	7.1	-14.4	20	123	1.9	087	4.4	68
1500	11.0	-4.8	33	256	1.9	272	5.7	65	1500	5.5	-11.7	28	030	4.1	028	7.6	63	1500	9.1	-10.5	24	123	.9	107	3.8	63
1800	10.4	-4.2	36	290	2.1	265	5.1	40	1800	5.0	-13.0	26	033	3.9	034	7.6	33	1800	8.7	-10.3	25	257	1.6	272	3.8	33
2100	7.4	****	43	276	1.5	292	3.8	2	2100	2.8	-13.6	29	046	2.7	029	7.0	3	2100	6.7	-10.7	28	278	1.5	263	3.2	4
2400	2.5	-3.4	65	178	1.2	140	3.2	0	2400	-1.3	-13.0	41	157	1.5	146	3.8	0	2400	.8	-6.5	58	164	.9	098	3.2	0

DAY 13

DAY 14

DAY 15

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	-1.3	****	69	103	.9	145	3.2	0	0300	-.1	-3.8	76	122	.8	111	2.5	0	0300	-.4	-3.1	82	145	1.0	124	2.5	0
0600	-.3	-5.7	67	052	1.0	050	3.8	8	0600	-.4	-4.1	76	094	1.2	095	3.2	10	0600	.7	****	62	140	.7	116	2.5	8
0900	6.7	-5.1	43	045	1.4	042	2.5	44	0900	6.8	-2.7	51	052	1.4	056	3.2	43	0900	6.2	-.5	62	039	.9	065	1.9	28
1200	8.4	-5.6	37	132	.9	094	5.7	67	1200	10.4	-3.8	37	126	1.4	145	3.8	58	1200	10.9	-3.4	37	091	.7	057	3.2	76
1500	9.8	-5.9	33	272	1.8	276	5.1	63	1500	12.2	-5.0	30	162	1.2	117	4.4	63	1500	12.7	-5.5	28	236	1.8	238	4.4	49
1800	11.1	-5.5	31	252	1.6	285	5.7	32	1800	12.9	-12.4	16	189	1.3	156	3.8	34	1800	13.2	****	22	194	1.2	230	3.2	34
2100	7.9	-6.8	35	282	1.3	327	3.8	3	2100	9.4	-5.4	35	277	1.5	288	3.8	4	2100	9.0	****	33	095	.8	162	2.5	3
2400	.6	****	69	175	1.0	154	2.5	0	2400	2.5	-3.2	66	169	1.1	175	2.5	0	2400	2.4	-4.1	62	167	1.2	156	2.5	0

DAY 16

DAY 17

DAY 18

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	-.3	****	78	156	.9	149	3.2	0	0300	-.6	****	74	115	1.0	112	3.2	0	0300	3.7	.4	79	206	1.1	247	2.5	0
0600	-.7	-3.4	82	129	.7	105	2.5	9	0600	1.2	-4.4	66	101	1.1	119	3.2	11	0600	4.0	****	79	155	.7	130	1.9	5
0900	8.1	-2.3	48	057	1.5	061	3.2	43	0900	9.4	-1.1	48	042	1.4	043	2.5	46	0900	6.0	****	79	322	.4	296	2.5	14
1200	12.2	-4.6	31	105	2.0	116	5.1	70	1200	15.5	-4.5	25	038	1.2	023	3.2	70	1200	8.6	2.9	67	047	1.0	068	3.3	53
1500	13.1	-13.0	15	029	3.7	023	7.0	66	1500	16.8	-5.7	21	023	2.4	030	5.7	57	1500	12.5	1.5	47	032	1.5	047	4.4	5
1800	13.5	-8.5	21	029	3.1	034	5.7	40	1800	16.9	-6.9	19	033	3.3	033	5.7	38	1800	13.2	-.9	38	241	1.7	266	3.8	37
2100	10.1	****	33	030	1.3	022	5.1	4	2100	12.1	-.5	42	044	.5	032	5.1	1	2100	11.9	-.4	43	302	1.6	323	3.8	6
2400	3.5	-4.4	56	164	1.1	153	2.5	0	2400	6.9	.6	64	247	1.3	266	4.4	0	2400	4.4	-.4	71	184	1.0	193	2.5	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

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

DAY 19

DAY 20

DAY 21

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	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	3.4	****	78	164	.8	151	2.5	0	0300	1.4	****	93	143	1.2	136	3.2	0	0300	4.1	****	88	145	.7	144	1.9	0
0600	3.4	****	83	161	.4	162	2.5	11	0600	2.7	.6	86	094	.7	105	2.5	14	0600	4.4	****	89	187	.4	185	1.9	6
0900	9.2	3.9	69	328	1.5	318	4.4	47	0900	11.2	4.2	62	041	1.4	054	2.5	47	0900	9.9	3.7	65	336	1.0	321	3.8	33
1200	11.9	2.4	52	299	1.4	331	4.4	23	1200	15.9	.7	36	026	1.3	062	4.4	26	1200	13.4	3.8	52	331	2.3	332	4.4	81
1500	14.7	.8	39	327	1.7	016	5.7	42	1500	19.3	1.2	30	008	1.8	044	5.7	79	1500	14.3	3.1	47	231	1.7	219	4.4	33
1800	13.6	-.2	39	016	1.1	014	5.1	17	1800	14.1	.6	40	272	1.7	239	6.3	33	1800	8.8	4.1	72	274	2.0	297	6.3	4
2100	12.2	.6	45	155	1.2	156	3.2	2	2100	10.2	4.2	66	315	1.6	314	4.4	6	2100	5.8	3.8	87	300	1.7	303	5.1	2
2400	5.5	.9	72	151	1.4	143	3.2	0	2400	5.8	****	79	171	.9	233	1.9	0	2400	5.1	3.4	89	153	.4	291	3.2	0

DAY 22

DAY 23

DAY 24

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	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	3.9	****	95	170	.6	141	1.9	0	0300	-.1	-.4	98	159	1.0	146	2.5	0	0300	5.8	****	81	182	.9	191	1.9	0
0600	3.1	****	97	162	.5	139	1.9	2	0600	-.1	****	97	121	.8	169	2.5	7	0600	6.8	****	77	238	.6	183	1.9	4
0900	4.3	2.8	90	084	.9	095	2.5	33	0900	8.3	4.0	74	043	1.3	054	3.2	55	0900	7.7	2.6	70	295	1.3	296	3.8	16
1200	5.3	3.6	89	324	1.0	054	3.2	8	1200	13.1	3.5	52	332	1.4	291	3.8	71	1200	9.9	2.3	59	319	1.5	338	3.8	25
1500	7.9	4.7	80	291	.9	337	2.5	34	1500	15.5	1.1	38	287	1.9	278	5.7	42	1500	12.2	.2	44	290	2.2	300	5.7	41
1800	8.2	3.9	74	314	1.9	325	4.4	19	1800	13.1	2.0	47	139	1.4	167	7.0	41	1800	12.7	-.7	40	280	2.2	242	5.7	38
2100	8.2	4.1	75	308	2.3	312	5.7	7	2100	10.2	2.8	60	143	1.3	161	4.4	2	2100	9.9	-.1	50	312	1.1	276	5.1	6
2400	1.5	****	95	199	.9	272	2.5	0	2400	7.1	****	71	146	1.0	168	3.8	0	2400	7.7	.9	62	307	1.0	281	5.1	0

DAY 25

DAY 26

DAY 27

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	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	5.9	.9	70	284	1.6	283	5.7	0	0300	2.6	****	97	210	.5	183	1.9	0	0300	1.8	1.2	96	154	.6	133	1.9	0
0600	4.7	****	79	274	1.0	289	3.8	4	0600	2.7	****	96	221	.4	286	1.9	5	0600	2.2	****	95	174	.3	142	1.9	14
0900	5.7	1.5	74	316	1.2	330	3.2	19	0900	4.8	2.3	84	324	1.0	298	3.2	32	0900	4.5	1.9	83	345	.8	285	2.5	23
1200	8.5	.2	56	289	1.9	322	4.4	43	1200	6.1	1.7	73	309	1.6	273	5.7	17	1200	5.8	.2	67	319	1.9	313	6.3	56
1500	10.7	-.1	44	274	2.1	271	5.1	86	1500	6.2	2.3	76	302	2.1	313	7.0	29	1500	7.0	.5	63	320	3.0	327	6.3	71
1800	7.8	-.4	56	277	2.1	292	6.3	19	1800	7.5	1.4	65	282	2.0	296	7.0	48	1800	6.1	.7	68	316	2.7	310	7.0	26
2100	4.6	2.6	87	292	1.6	308	5.7	2	2100	5.1	1.8	79	274	1.5	351	5.1	1	2100	6.9	.8	65	321	1.4	304	3.2	9
2400	2.8	****	96	267	.5	318	3.8	0	2400	2.2	****	96	305	1.5	303	4.4	0	2400	2.3	.3	87	246	.5	157	2.5	0

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

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

DAY 28

DAY 29

DAY 30

DAY 28								DAY 29								DAY 30							
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	-3	****	94	138	1.5	150	3.2	0	0300	-3	-3.5	79	135	.8	105	3.2	0						
0600	.8	-.8	89	089	1.3	080	3.8	16	0600	2.6	-1.7	73	092	1.0	114	3.2	17						
0900	6.0	1.8	74	058	1.9	073	3.8	48	0900	7.9	-1.1	53	003	.9	003	2.5	43						
1200	10.0	-2.4	42	002	1.2	045	3.2	86	1200	5.8	2.6	80	321	2.0	315	5.7	4						
1500	10.7	-4.7	34	290	1.9	325	5.7	19	1500	8.9	2.3	63	231	1.2	180	4.4	39						
1800	12.1	-5.5	29	269	1.8	305	5.7	33	1800	4.8	3.4	91	159	.7	224	5.1	15						
2100	9.8	-5.1	35	271	1.5	268	5.1	5	2100	2.9	1.9	93	311	.6	015	4.4	4						
2400	1.3	-4.3	66	187	1.1	221	2.5	0	2400	2.3	1.7	96	127	1.1	142	2.5	0						

DAY 31

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	.3	****	80	170	.8	159	1.9	0									
0600	1.7	-1.2	81	109	.7	110	3.2	7									
0900	8.3	.8	59	057	1.5	053	3.8	49									
1200	11.8	-3.3	35	322	1.4	298	5.1	67									
1500	13.3	-8.0	22	006	1.9	026	7.0	70									
1800	13.7	-8.3	21	016	3.1	013	7.6	26									
2100	11.4	-5.3	31	022	3.1	028	7.6	6									
2400	5.4	****	59	163	.8	071	2.5	0									

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING May, 1984

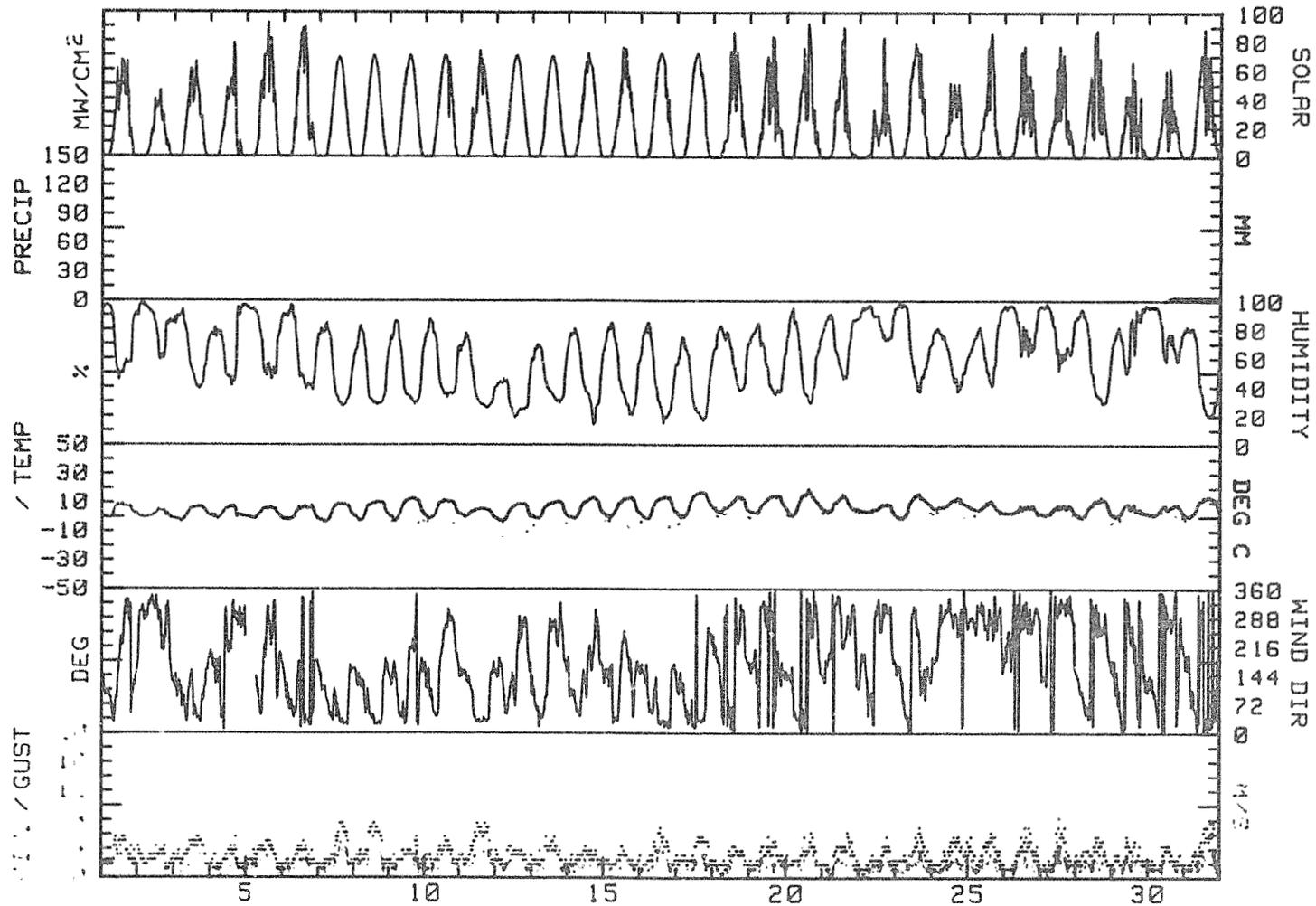
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P/VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SCM	DAY
1	9.2	-5	4.4	109	.3	1.6	086	5.7	E	71	-4	****	5470	1
2	5.3	-1.1	2.1	292	.8	1.3	251	4.4	NW	83	-1.1	****	3100	2
3	7.5	-2.8	2.4	092	1.4	1.9	036	5.7	ESE	65	-3.7	****	5195	3
4	7.9	-1.0	3.5	255	.5	1.2	281	5.7	WNW	64	-3.1	****	4400	4
5	7.0	-1.2	2.9	213	.3	1.7	266	5.1	W	72	-2.2	****	6725	5
6	7.9	-1.8	3.1	064	.7	1.4	045	5.1	NE	62	-4.1	****	6425	6
7	9.2	-3.7	2.8	052	1.6	2.1	032	7.6	NNE	48	-6.7	****	6375	7
8	10.8	-2.8	4.0	059	1.5	2.2	041	7.6	NNE	49	-6.1	****	6415	8
9	12.9	-2.2	5.4	101	.3	1.4	024	5.7	NE	47	-3.8	****	6520	9
10	11.7	-1.3	5.2	242	.4	1.5	272	5.7	W	51	-3.3	****	6585	10
11	5.7	-1.3	2.2	062	1.7	2.6	028	7.6	NNE	45	-9.0	****	5775	11
12	9.4	-3.8	2.8	156	.6	1.5	087	4.4	S	34	-11.6	****	6610	12
13	11.1	-1.3	4.9	249	.2	1.5	094	5.7	W	44	-5.7	****	6475	13
14	13.3	-1.4	6.0	142	.6	1.4	117	4.4	S	46	-5.1	****	6475	14
15	13.2	-.8	6.2	160	.6	1.2	228	4.4	SSE	46	-4.2	****	5960	15
16	14.0	-1.1	6.5	059	1.2	1.9	023	7.0	NNE	41	-5.5	****	6595	16
17	17.5	-.6	8.5	042	1.0	1.7	030	5.7	NNE	41	-3.9	****	6680	17
18	14.0	3.0	8.5	262	.3	1.2	067	4.4	S	58	.9	****	5485	18
19	15.0	2.6	8.8	309	.2	1.4	016	5.7	SSE	51	1.2	****	5760	19
20	19.3	.8	10.1	009	.4	1.5	239	6.3	NE	58	1.6	****	6120	20
21	16.0	3.7	9.9	285	.7	1.5	297	6.3	WNW	67	3.6	****	4660	21
22	9.4	1.5	5.5	298	.5	1.3	312	5.7	NW	82	3.8	****	3120	22
23	16.3	-1.2	7.6	131	.3	1.6	167	7.0	SSE	67	1.9	****	6465	23
24	13.5	5.5	9.5	289	1.1	1.5	300	5.7	WNW	57	1.1	****	3955	24
25	11.6	2.8	7.2	284	1.5	1.7	292	6.3	W	65	.8	****	4800	25
26	7.9	2.2	5.1	292	1.2	1.5	313	7.0	WNW	77	1.9	****	4715	26
27	8.5	1.1	4.8	317	1.1	1.6	327	8.3	NW	72	.9	****	4915	27
28	13.6	-.5	6.6	297	.2	1.7	325	5.7	W	57	-2.7	****	5725	28
29	8.9	-.3	4.3	002	.0	1.3	315	5.7	ESE	79	.9	****	3545	29
30	8.5	1.4	5.0	307	.4	1.2	352	4.4	N	73	1.3	3.6	3740	30
31	14.5	.1	7.3	025	1.1	1.9	013	7.6	NNE	41	-4.5	0.0	6430	31
MONTH	19.3	-3.8	5.6	015	.2	1.6	327	8.3	SSE	58	-2.2	3.6	171215	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 4.4
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 7.0
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 5.7
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 4.4

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
DEVIL CANYON WEATHER STATION
May, 1984



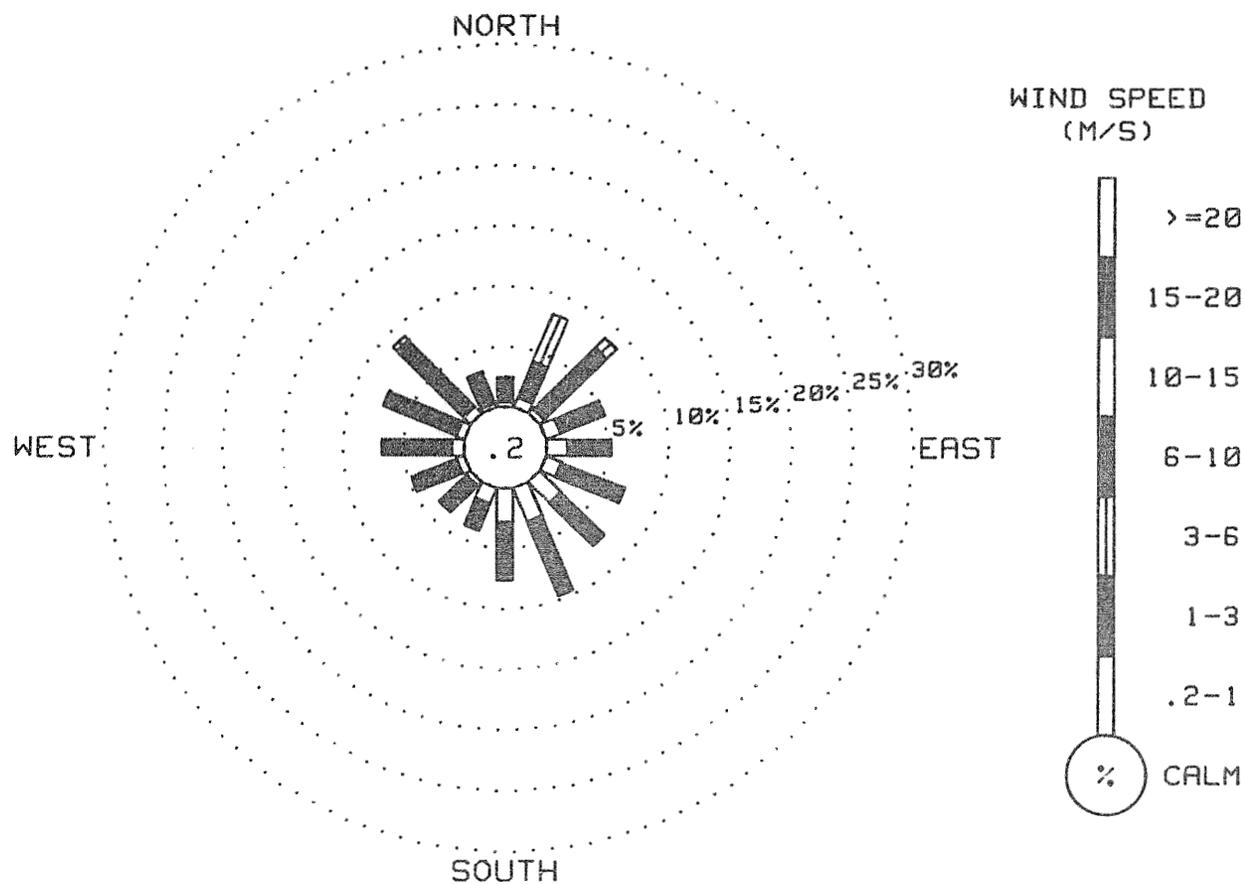
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING May, 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	.41	1.97	.14	0.00	0.00	0.00	0.00	2.51
NNE	.88	3.19	4.27	0.00	0.00	0.00	0.00	8.34
NE	.54	7.12	1.15	0.00	0.00	0.00	0.00	8.81
ENE	1.29	3.80	.07	0.00	0.00	0.00	0.00	5.15
E	1.76	3.46	.07	0.00	0.00	0.00	0.00	5.29
ESE	1.36	5.49	.07	0.00	0.00	0.00	0.00	6.92
SE	2.44	5.02	0.00	0.00	0.00	0.00	0.00	7.46
SSE	2.98	6.64	0.00	0.00	0.00	0.00	0.00	9.63
S	2.78	4.81	0.00	0.00	0.00	0.00	0.00	7.59
SSW	1.42	2.37	0.00	0.00	0.00	0.00	0.00	3.80
SW	.47	3.12	0.00	0.00	0.00	0.00	0.00	3.59
WSW	.68	4.00	0.00	0.00	0.00	0.00	0.00	4.68
W	1.02	5.69	0.00	0.00	0.00	0.00	0.00	6.71
WNW	.75	6.31	.14	0.00	0.00	0.00	0.00	7.19
NW	.81	7.66	.47	0.00	0.00	0.00	0.00	8.95
NNW	.34	2.71	.14	0.00	0.00	0.00	0.00	3.19
CALM								1.21
TOTAL	19.93	73.36	6.51	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1475 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
DEVIL CANYON WEATHER STATION
May, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUBITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING May, 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	1	4	13	22	32	56	42	44	59	62	51	53	55	30	16	11	1	0	0	0	23
2	0	0	0	0	0	2	4	8	17	18	33	34	35	37	39	27	25	15	9	8	2	0	0	0	13
3	0	0	0	0	1	7	18	27	39	44	61	49	45	58	52	44	28	27	16	7	2	0	0	0	22
4	0	0	0	0	1	5	12	18	25	36	47	42	50	54	61	62	13	2	9	6	1	0	0	0	18
5	0	0	0	0	1	4	10	24	46	52	55	71	74	69	69	74	50	43	25	10	2	0	0	0	28
6	0	0	0	0	1	4	19	19	42	61	72	83	73	77	80	48	13	15	21	15	4	0	0	0	27
7	0	0	0	0	2	8	16	26	39	50	59	66	69	68	64	56	45	34	22	12	4	1	0	0	27
8	0	0	0	0	2	8	16	27	39	51	60	67	70	68	63	56	45	33	22	12	4	1	0	0	27
9	0	0	0	0	2	7	17	28	42	52	60	64	70	70	65	57	46	35	23	13	4	1	0	0	27
10	0	0	0	0	2	9	17	27	38	51	60	67	70	70	66	47	54	42	26	11	5	1	0	0	27
11	0	0	0	0	1	5	12	27	27	30	44	64	67	56	64	57	47	36	24	15	5	1	1	1	24
12	0	0	0	1	2	9	17	28	40	52	61	67	70	69	65	57	46	36	24	14	6	1	0	0	28
13	0	0	0	0	2	7	13	26	41	52	60	66	70	69	65	57	47	35	23	13	5	1	0	0	27
14	0	0	0	0	3	8	17	25	38	46	61	62	71	67	64	59	48	37	25	14	6	1	0	0	27
15	0	0	0	0	4	7	15	21	27	39	48	71	61	74	58	54	44	33	23	15	6	1	0	0	25
16	0	0	0	1	3	6	18	30	41	53	63	69	72	71	67	52	44	33	20	15	5	1	0	0	27
17	0	0	0	1	4	9	19	31	43	55	63	69	72	71	62	58	50	41	15	8	2	1	0	0	28
18	0	0	0	0	2	5	11	12	13	31	59	47	66	53	53	64	52	40	20	17	7	2	0	0	23
19	0	0	0	0	3	9	17	24	38	56	65	47	49	41	63	47	42	32	21	19	7	1	0	0	24
20	0	0	0	1	5	11	21	28	44	53	61	49	29	62	85	71	30	30	11	18	6	1	0	0	26
21	0	0	0	0	2	5	12	35	37	40	55	70	64	54	45	17	22	5	2	3	2	1	0	0	19
22	0	0	0	0	1	2	2	6	26	20	19	11	17	19	30	51	21	56	27	17	9	2	0	0	10
23	0	0	0	1	2	7	13	18	42	55	64	70	78	74	56	62	42	37	16	11	3	1	0	0	27
24	0	0	0	0	2	4	6	9	16	16	25	39	36	44	45	36	42	41	19	13	6	1	0	0	16
25	0	0	0	0	2	4	6	14	20	24	32	37	65	54	83	67	42	18	8	4	4	1	0	0	20
26	0	0	0	1	3	4	10	18	29	30	63	26	60	41	43	27	36	33	26	21	3	2	0	0	20
27	0	0	0	1	3	10	13	20	25	35	50	41	52	41	67	60	17	21	11	17	11	2	0	0	20
28	0	0	0	1	6	14	22	33	45	55	18	50	84	73	21	43	19	42	26	16	7	2	0	0	24
29	0	0	0	1	3	13	15	21	40	32	38	12	45	19	47	6	15	20	26	2	5	1	0	0	15
30	0	0	0	1	2	5	13	18	29	37	31	39	9	36	49	22	26	24	20	11	5	2	0	0	16
31	0	0	0	1	3	6	21	33	46	57	68	64	64	43	46	44	61	42	18	18	6	4	1	0	27

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING May, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1488	100
WIND SPEED	1488	100
WIND DIRECTION	1475	99
PEAK GUST	1488	100
RELATIVE HUMIDITY	1191	80
PRECIPITATION	77	5
SOLAR RADIATION	1488	100
DEW POINT	1191	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 -10 RH Points 5/30 - 5/31
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Precipitation gage not connected properly. Reconnected on 5/30. No data prior to this date.
2. Wind direction data lost on 5/5 due to frozen wind vane.

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING June, 1989

PRECIPITATION VALUES ARE IN MILLIMETERS

DATE	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	
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.2	.6	.2	0.0	0.0	0.0	0.0	.2	0.0	.2	.2	.4	6
7	.4	0.0	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	0.0	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	1.6	1.0	0.0	0.0	0.0	8
9	0.0	0.0	0.0	0.0	0.0	.8	0.0	.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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	.2	.6	.2	0.0	.8	1.4	1.4	.4	1.6	.6	.4	0.0	.2	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	2.0	.4	.2	0.0	1.8	.2	14
15	.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	15
16	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	.2	.2	.2	.6	.8	1.0	1.6	.8	.6	3.0	.6	.2	0.0	0.0	.2	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	.2	0.0	0.0	0.0	0.0	0.0	.4	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	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	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	0.0	0.0	.2	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	1.0	.4	0.0	0.0	0.0	0.0	0.0	0.0	26
27	.8	.4	1.4	.6	.4	1.2	.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	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	0.0	30

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

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

DAY 01

DAY 02

DAY 03

HOUR	DEW								HOUR	DEW								HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	2.6	-1.5	74	156	1.1	169	2.5	0	0300	1.8	-3.1	70	157	.8	167	2.5	0	0300	3.5	-3.3	61	133	1.3	122	3.8	0
0600	3.7	-1.2	70	104	1.1	091	3.2	15	0600	2.7	-3.0	66	080	1.2	049	3.2	15	0600	4.8	-2.1	61	084	1.2	087	3.8	16
0900	12.8	-5.9	27	059	1.4	072	3.8	52	0900	13.3	-3.6	31	045	1.5	060	3.2	49	0900	13.6	-2.9	32	048	1.7	044	3.2	58
1200	13.1	-6.6	25	010	3.0	357	7.6	62	1200	14.9	-8.6	19	339	2.2	325	6.3	90	1200	16.5	-7.3	19	018	1.7	035	7.0	70
1500	14.4	-7.7	21	012	3.1	033	8.3	51	1500	16.2	-9.7	16	026	1.7	349	5.7	29	1500	16.1	-10.6	15	012	3.9	022	8.9	65
1800	14.5	-7.6	21	353	3.0	335	7.6	38	1800	17.0	-11.7	13	013	2.4	026	6.3	40	1800	14.5	-7.6	21	012	3.7	020	8.9	14
2100	14.4	-9.0	19	355	2.2	354	7.0	10	2100	15.8	-10.8	15	008	2.5	002	6.3	8	2100	12.6	-5.1	29	336	1.1	008	5.1	2
2400	5.4	-2.9	55	213	.3	348	3.2	0	2400	6.6	-3.4	49	190	.8	305	2.5	0	2400	6.7	-2.5	52	143	1.3	123	4.4	0

DAY 04

DAY 05

DAY 06

HOUR	DEW								HOUR	DEW								HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	2.6	-2.3	70	131	1.4	137	3.8	0	0300	4.0	-4.0	56	126	1.2	109	3.2	0	0300	8.2	.2	57	213	1.1	208	3.5	0
0600	4.0	-1.9	65	094	1.1	125	3.2	15	0600	5.1	-2.5	58	109	1.4	120	3.8	13	0600	8.3	****	66	188	.6	167	1.9	3
0900	14.1	-4.3	28	041	1.3	060	2.5	49	0900	14.5	-4.9	26	060	1.6	072	4.4	44	0900	7.7	3.4	74	291	1.6	291	3.8	10
1200	15.8	-11.7	14	044	2.7	044	6.3	80	1200	18.7	-12.5	11	109	1.9	105	5.1	84	1200	7.2	****	80	308	1.5	302	4.4	7
1500	17.6	-17.3	8	067	2.9	062	6.3	59	1500	19.2	-17.6	7	090	1.9	082	4.4	82	1500	7.2	4.3	82	305	.9	301	3.2	14
1800	17.9	-20.3	6	065	2.6	061	6.3	42	1800	18.3	-20.0	6	119	1.5	053	5.7	15	1800	6.6	3.7	82	292	1.4	290	3.2	2
2100	16.5	-16.7	9	061	1.9	055	5.7	10	2100	17.7	****	10	317	.9	331	3.2	7	2100	6.2	****	84	263	.7	282	3.5	2
2400	7.7	-5.9	38	143	1.1	129	2.5	0	2400	10.2	-1.0	46	233	1.2	243	3.8	0	2400	5.7	****	85	260	.6	255	1.3	0

DAY 07

DAY 08

DAY 09

HOUR	DEW								HOUR	DEW								HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD
NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	5.0	****	84	187	.5	226	1.3	0	0300	4.5	****	83	189	.9	190	1.9	0	0300	4.0	1.9	86	166	1.1	159	2.5	0
0600	6.8	****	79	167	.6	137	2.5	27	0600	8.1	****	74	178	.5	178	1.9	19	0600	5.7	****	91	160	.3	187	1.9	6
0900	10.0	2.6	60	014	1.2	316	3.2	28	0900	9.4	4.7	72	324	1.0	321	2.5	25	0900	7.4	3.3	75	283	.6	227	1.9	20
1200	11.7	2.7	54	328	2.2	321	5.1	80	1200	13.7	1.6	44	322	2.0	317	5.1	43	1200	9.6	4.7	71	308	1.6	308	3.2	27
1500	11.9	2.1	51	323	3.3	322	7.6	37	1500	15.2	1.6	40	324	2.3	320	5.7	51	1500	10.4	3.7	65	322	2.3	328	5.1	24
1800	11.5	3.1	56	281	.3	310	8.3	38	1800	13.6	.2	40	312	2.6	277	5.7	5	1800	10.2	3.3	62	326	1.6	309	4.4	6
2100	11.1	2.4	55	296	1.2	355	5.1	8	2100	9.0	****	80	126	1.0	050	7.0	6	2100	9.2	****	65	305	.8	308	2.5	1
2400	7.7	****	73	216	.8	243	2.5	9	2400	6.7	3.8	82	181	.5	164	1.9	0	2400	7.1	****	68	201	.8	218	1.3	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

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	5.9	****	72	153	.7	138	1.9	0	0300	4.7	****	75	170	.9	169	2.5	1	0300	10.1	****	65	233	1.0	239	2.5	0
0600	6.9	****	71	151	.3	184	1.9	6	0600	6.3	****	73	214	.3	180	1.3	12	0600	9.9	****	70	246	.5	239	1.9	11
0900	10.2	3.1	61	315	1.1	315	3.2	31	0900	12.0	3.0	54	336	1.1	313	3.8	47	0900	12.7	3.4	53	301	1.5	306	3.8	26
1200	13.4	-0.0	40	324	1.6	322	3.8	94	1200	16.1	-0.3	33	317	2.1	320	4.4	72	1200	15.5	2.2	41	342	1.3	337	3.2	19
1500	14.8	-2.3	31	315	1.6	342	3.8	29	1500	18.0	-6.0	19	309	2.5	309	6.3	42	1500	16.2	3.2	42	329	1.2	321	3.2	27
1800	16.1	-4.0	25	320	2.0	317	5.1	15	1800	19.0	-9.2	14	297	2.5	305	6.3	41	1800	17.6	2.2	36	314	1.9	313	5.1	40
2100	15.5	-3.1	28	299	1.8	311	4.4	7	2100	14.6	1.1	40	287	2.5	285	5.7	5	2100	15.0	3.7	47	292	1.8	305	5.1	5
2400	7.8	.8	61	189	.8	267	1.9	0	2400	11.1	3.7	60	250	1.1	267	3.8	0	2400	11.1	4.4	63	278	1.6	304	3.8	0

DAY 13

DAY 14

DAY 15

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	9.5	****	73	269	.8	261	3.2	0	0300	3.1	-1.2	73	154	.9	154	3.2	0	0300	6.5	****	80	266	1.1	281	3.2	0
0600	7.8	4.9	82	266	.9	303	3.2	1	0600	3.4	-0.9	73	101	1.0	129	2.5	9	0600	6.1	2.9	80	300	1.8	304	4.4	1
0900	7.7	****	76	313	1.0	313	3.8	4	0900	12.2	2.4	51	039	1.3	040	3.2	50	0900	6.6	2.7	76	307	2.1	313	5.1	8
1200	8.6	3.7	71	299	.8	268	2.5	23	1200	15.8	-1.0	32	335	1.5	305	3.8	63	1200	7.8	3.5	74	308	2.0	307	4.4	12
1500	9.5	3.5	66	310	1.2	329	3.2	23	1500	16.8	1.1	35	295	1.5	309	5.1	24	1500	8.5	4.2	74	320	2.1	327	5.1	15
1800	11.8	****	55	330	1.2	312	3.2	23	1800	12.4	6.5	67	279	2.0	252	7.0	7	1800	8.5	3.8	72	315	2.3	318	5.1	5
2100	11.6	****	54	344	1.0	348	3.2	8	2100	9.5	****	87	277	1.3	299	5.1	2	2100	8.0	4.1	76	291	1.2	316	3.8	1
2400	5.1	****	69	190	.8	189	1.9	0	2400	7.2	3.5	77	260	1.2	262	3.2	0	2400	7.3	4.3	81	263	.7	236	1.9	0

DAY 16

DAY 17

DAY 18

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	6.7	****	85	261	.9	260	2.5	0	0300	6.4	****	99	245	.4	272	1.9	0	0300	3.2	****	99	163	1.0	160	1.9	0
0600	6.3	****	87	267	.5	281	1.9	1	0600	6.8	****	99	208	.3	167	1.3	4	0600	4.4	4.2	99	091	1.0	122	3.2	17
0900	6.8	5.7	93	297	1.0	309	3.2	4	0900	8.6	6.7	88	332	.8	019	1.9	25	0900	13.4	4.0	53	029	1.2	037	2.3	51
1200	7.1	5.9	92	316	1.4	326	3.8	7	1200	11.5	7.1	74	293	1.6	296	3.8	52	1200	17.4	-2.9	25	318	1.4	330	3.8	74
1500	7.5	6.7	95	328	1.1	321	3.2	10	1500	12.7	4.9	59	311	2.3	320	5.7	61	1500	20.3	-6.1	14	333	2.0	355	5.1	70
1800	7.3	6.8	97	311	1.1	305	2.5	11	1800	13.3	4.2	54	320	3.0	326	5.1	15	1800	20.1	-9.3	13	309	2.5	328	5.7	40
2100	6.9	6.7	99	399	1.2	299	2.5	2	2100	14.6	4.0	49	330	2.5	330	5.1	11	2100	19.5	-13.1	10	297	2.0	288	5.7	12
2400	6.5	6.3	99	277	.8	297	1.9	0	2400	6.4	6.2	99	206	.7	300	1.9	0	2400	9.1	-2.3	45	193	.8	278	1.9	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON 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.	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	5.1	3.7	71	171	.9	182	2.5	0	0300	7.8	*****	75	182	.8	179	2.5	0	0300	7.0	3.8	60	174	.9	165	2.5	0												
0600	8.5	*****	58	216	.3	167	1.9	15	0600	9.6	*****	65	141	.4	157	1.9	24	0600	9.4	*****	69	141	.4	178	1.3	16												
0900	12.4	3.1	53	311	1.5	309	3.8	49	0900	15.1	2.9	44	349	1.3	332	4.4	34	0900	14.3	4.9	53	332	1.1	326	3.8	49												
1200	18.2	-.2	29	332	2.3	329	5.7	72	1200	15.6	3.3	44	321	1.5	316	4.4	16	1200	18.7	4.7	40	332	2.0	344	4.4	72												
1500	20.7	-.7	24	316	2.7	310	5.7	69	1500	18.9	4.9	40	302	1.9	288	5.7	71	1500	21.6	2.2	28	312	2.5	324	6.3	76												
1800	21.5	-1.8	21	325	3.1	322	7.0	42	1800	16.0	8.8	62	296	1.6	320	5.7	9	1800	21.7	-.4	23	306	2.1	316	6.3	42												
2100	18.2	-1.7	26	297	1.9	329	5.7	6	2100	16.1	7.6	57	116	1.3	144	3.2	3	2100	20.0	3.1	33	299	2.1	295	5.1	7												
2400	11.7	3.5	57	196	1.0	186	2.5	0	2400	10.2	6.0	75	162	.9	159	2.5	0	2400	13.1	7.4	68	248	.9	293	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.	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	8.2	*****	81	223	.7	249	3.2	0	0300	6.0	*****	72	140	1.1	128	3.2	0	0300	5.4	*****	79	134	1.0	148	2.5	0												
0600	10.0	*****	71	152	.5	176	1.3	19	0600	7.4	*****	68	131	.5	161	2.5	7	0600	8.0	3.1	71	087	1.0	108	3.8	16												
0900	14.2	4.5	52	352	1.2	343	4.4	48	0900	11.5	*****	62	310	.8	303	3.2	14	0900	14.8	4.5	50	039	1.6	049	3.2	48												
1200	17.7	4.9	43	334	2.2	327	4.4	74	1200	13.5	4.9	56	317	1.3	310	3.8	29	1200	16.0	2.7	41	317	1.6	319	5.1	16												
1500	20.1	-.6	25	324	3.3	325	7.6	68	1500	15.1	5.6	53	326	2.8	345	5.7	38	1500	14.9	8.5	65	301	1.6	309	5.1	38												
1800	21.0	-5.8	16	299	2.9	326	7.0	43	1800	14.6	5.7	55	325	2.2	313	5.1	49	1800	16.1	4.8	47	325	1.5	317	3.8	19												
2100	19.6	-4.0	20	296	2.0	293	5.1	11	2100	14.8	4.5	50	307	1.5	304	3.8	11	2100	15.9	*****	52	346	.6	314	1.9	6												
2400	10.2	-1.0	46	209	.7	278	2.5	0	2400	7.3	3.0	74	205	.7	160	2.5	0	2400	11.4	7.0	74	284	.7	238	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.	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	8.4	*****	83	220	.7	260	2.5	0	0300	9.2	*****	73	213	.8	217	2.5	0	0300	8.4	*****	83	171	.7	172	1.9	0												
0600	10.8	5.2	68	078	.8	106	2.5	20	0600	9.0	*****	66	184	.6	203	1.9	15	0600	7.7	4.7	81	257	.9	294	4.4	2												
0900	14.8	1.6	41	062	1.2	070	2.5	49	0900	10.9	*****	66	357	.4	323	1.9	9	0900	7.5	4.1	79	271	1.4	279	5.3	4												
1200	17.5	-.9	29	052	1.7	062	5.1	81	1200	11.6	5.1	64	318	1.9	327	6.3	31	1200	8.0	4.6	79	277	1.3	279	3.8	9												
1500	19.5	-1.7	24	328	1.3	296	4.4	71	1500	14.2	8.5	68	328	2.3	338	8.3	22	1500	9.3	5.1	75	310	1.7	321	3.8	14												
1800	20.4	-1.5	23	308	2.6	304	7.6	44	1800	11.4	7.0	74	271	1.4	294	4.4	9	1800	10.3	4.3	66	314	1.5	317	3.8	10												
2100	18.5	*****	30	297	1.8	310	5.7	10	2100	9.9	*****	78	251	.8	285	3.2	1	2100	10.2	*****	68	307	.6	319	3.2	3												
2400	12.5	4.3	57	247	.9	280	3.2	0	2400	8.9	*****	84	193	.5	194	1.9	0	2400	8.6	*****	74	253	.5	309	2.5	0												

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON 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.	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	8.1	*****	75	219	.7	236	1.9	0	0300	11.1	*****	79	163	.7	120	2.5	0	0300	8.8	*****	79	239	1.0	236	3.2	0
0600	9.1	*****	75	219	.2	207	1.3	7	0600	11.1	*****	79	261	.8	242	2.5	3	0600	9.0	*****	79	226	.6	227	1.9	5
0900	11.0	3.8	61	287	.7	249	1.9	28	0900	11.8	*****	69	310	.7	310	3.2	12	0900	11.4	5.3	66	330	1.0	328	2.5	30
1200	14.8	4.8	51	326	1.8	341	4.4	81	1200	14.7	4.7	51	356	1.3	355	3.2	23	1200	15.7	5.3	50	319	1.7	322	4.4	64
1500	16.9	6.4	50	316	2.2	335	4.4	51	1500	15.1	3.5	46	016	1.2	046	3.8	14	1500	17.7	3.5	39	317	2.3	314	4.4	36
1800	14.9	6.8	58	315	3.0	329	5.7	20	1800	15.3	4.0	47	325	.7	320	3.2	11	1800	18.5	3.8	38	316	2.7	306	5.7	30
2100	13.7	6.4	61	313	2.7	326	5.7	2	2100	14.2	4.8	53	333	.6	321	3.8	4	2100	15.8	7.6	58	333	2.2	325	5.7	7
2400	11.1	*****	75	215	.5	313	3.2	0	2400	10.5	5.5	71	263	1.2	281	3.2	0	2400	12.7	*****	72	316	.1	030	3.2	0

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING June, 1984

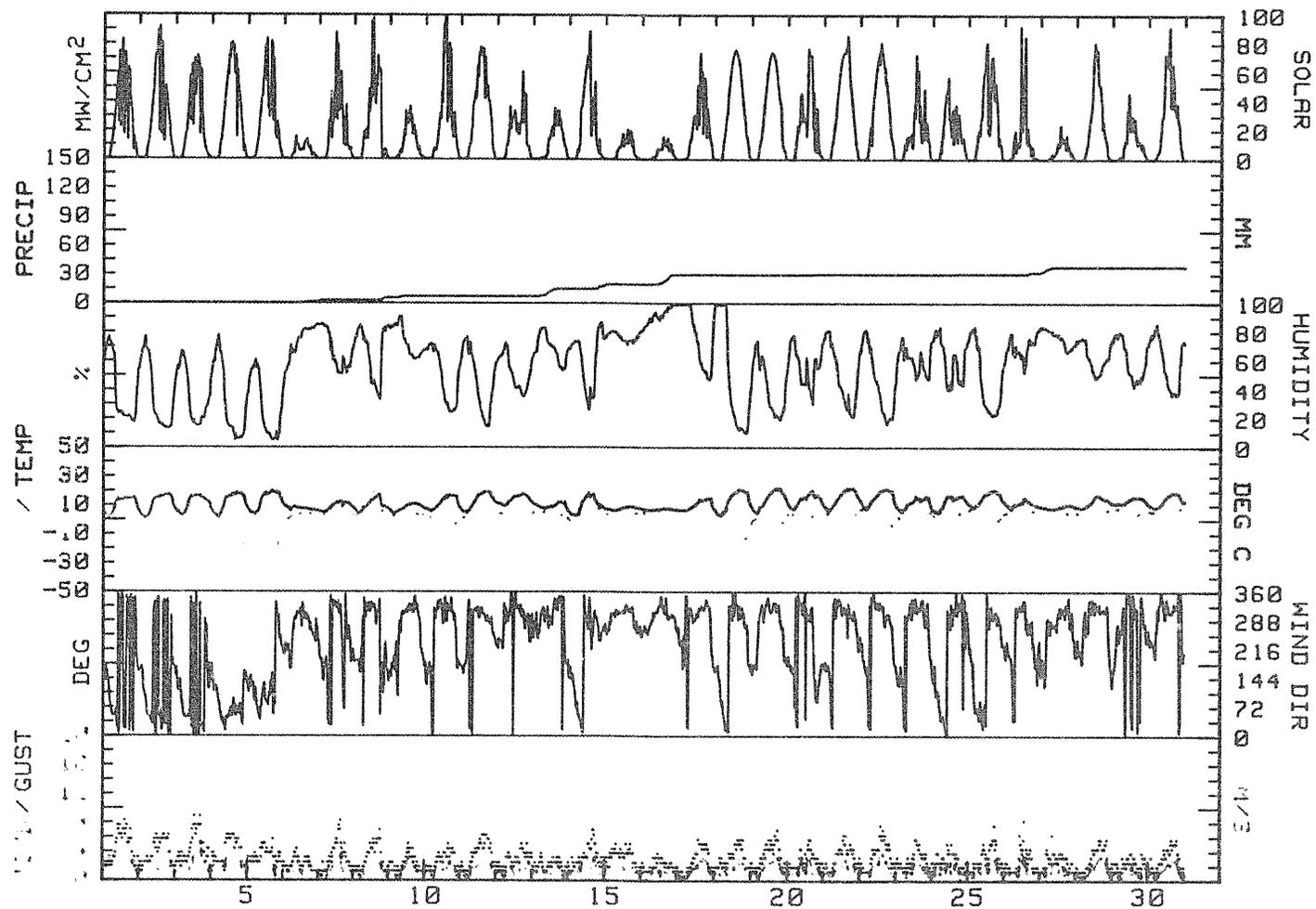
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/50H	DAY
1	15.2	1.4	8.3	017	1.3	2.1	033	8.3	NNW	40	-5.1	0.0	6065	1
2	17.0	.8	8.9	022	1.1	1.8	325	6.3	NE	34	-6.9	0.0	6530	2
3	16.8	2.9	9.9	031	1.4	2.2	022	8.9	NE	35	-5.5	0.0	5645	3
4	18.6	1.1	9.9	071	1.6	1.9	044	6.3	NE	32	-9.4	0.0	7450	4
5	20.1	3.3	11.7	104	.9	1.6	053	5.7	E	27	-9.8	0.0	6310	5
6	9.1	5.7	7.4	277	.8	1.1	302	4.4	WNW	72	2.8	2.2	1185	6
7	12.4	4.7	8.6	314	.8	1.6	310	8.3	NW	60	2.6	.6	4955	7
8	17.0	4.2	10.6	308	.7	1.5	050	7.0	NW	55	2.6	2.6	5715	8
9	10.7	4.0	7.4	298	.7	1.2	328	5.1	NW	69	3.4	1.6	2615	9
10	17.1	5.1	11.1	306	.8	1.3	317	5.1	NW	42	-1.9	0.0	6150	10
11	19.5	4.0	11.8	295	1.3	1.7	309	6.3	NW	39	-1.9	0.0	7290	11
12	17.7	9.2	13.5	299	1.2	1.4	313	5.1	NW	49	3.4	0.0	3940	12
13	11.9	5.1	8.5	301	.8	1.0	313	3.8	NW	69	3.8	7.8	2635	13
14	18.3	2.6	10.5	299	.6	1.5	252	7.0	W	58	1.9	4.6	5370	14
15	8.8	6.1	7.5	303	1.6	1.7	313	5.1	NW	76	3.6	.2	1499	15
16	7.8	6.3	7.1	299	.9	1.0	326	3.8	NW	93	6.1	10.2	1075	16
17	14.6	6.3	10.5	310	1.2	1.5	320	5.7	NW	67	5.4	0.0	4640	17
18	21.1	2.6	11.9	320	.8	1.6	328	5.7	WNW	43	-2.9	0.0	7820	18
19	22.0	4.3	13.2	308	1.3	1.8	322	7.0	NW	37	.5	0.0	7615	19
20	20.3	7.1	13.7	301	.4	1.4	288	5.7	S	52	5.3	.6	5365	20
21	22.2	6.3	14.3	305	1.1	1.6	324	6.3	NW	43	3.4	0.0	7995	21
22	21.3	7.4	14.4	308	1.3	1.8	325	7.6	NW	35	1.0	0.0	7595	22
23	16.3	5.4	10.9	314	.8	1.5	345	5.7	NW	58	4.6	0.0	4120	23
24	16.7	4.9	10.8	344	.6	1.3	319	5.1	NW	60	4.5	.4	4235	24
25	20.4	8.4	14.4	329	.6	1.5	304	7.6	ENE	42	1.1	0.0	6400	25
26	15.5	7.2	11.4	288	.7	1.2	338	8.3	SSW	66	6.0	2.0	2900	26
27	10.3	7.5	8.9	284	.9	1.2	279	6.3	NW	77	4.6	5.2	1320	27
28	16.9	8.1	12.5	307	1.3	1.6	329	5.7	NW	56	5.6	0.0	5465	28
29	15.6	10.5	13.1	319	.5	1.1	046	3.8	N	59	5.1	0.0	2610	29
30	19.0	8.1	13.6	313	1.3	1.6	306	5.7	NW	51	4.6	0.0	6280	30
MONTH	22.2	.8	10.8	319	.7	.8	022	8.9	NW	51	1.4	38.0	148750	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 7.6
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 7.6
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 8.6

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
DEVIL CANYON WEATHER STATION
June, 1984



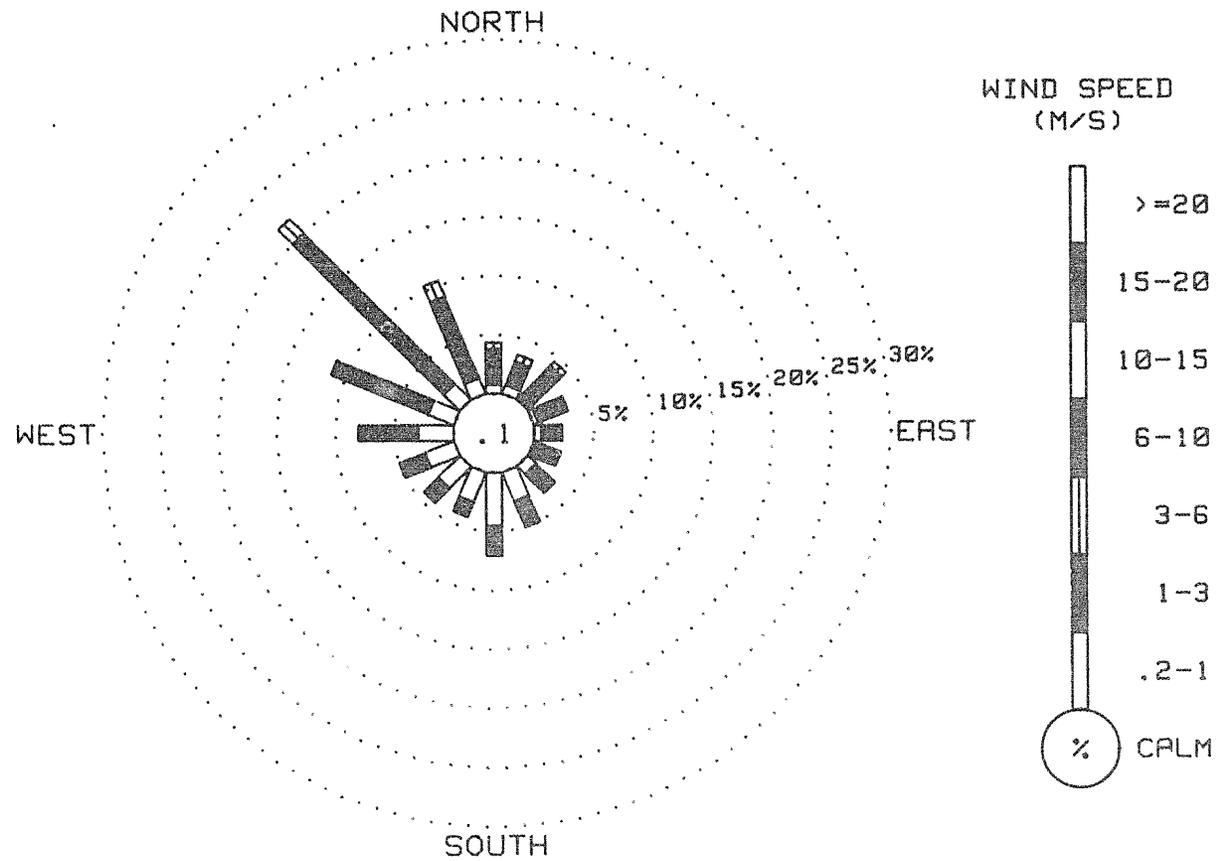
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON 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	
R	.76	2.99	.56	0.00	0.00	0.00	0.00	4.31
NNE	.83	2.08	.63	0.00	0.00	0.00	0.00	3.54
NE	.21	3.82	.49	0.00	0.00	0.00	0.00	4.51
ENE	.42	2.57	.14	0.00	0.00	0.00	0.00	3.13
E	.63	1.67	.07	0.00	0.00	0.00	0.00	2.36
ESE	.28	2.15	0.00	0.00	0.00	0.00	0.00	2.43
SE	.97	2.22	0.00	0.00	0.00	0.00	0.00	3.19
SSE	2.64	2.36	0.00	0.00	0.00	0.00	0.00	5.00
S	4.51	2.50	0.00	0.00	0.00	0.00	0.00	7.01
SSW	2.71	1.32	0.00	0.00	0.00	0.00	0.00	4.03
SW	2.57	1.74	0.00	0.00	0.00	0.00	0.00	4.31
WSW	2.64	2.29	0.00	0.00	0.00	0.00	0.00	4.93
W	2.99	5.00	0.00	0.00	0.00	0.00	0.00	7.99
WNW	2.36	8.61	.21	0.00	0.00	0.00	0.00	11.18
W	1.94	17.92	1.74	0.00	0.00	0.00	0.00	20.60
WNW	1.46	7.43	1.46	0.00	0.00	0.00	0.00	10.35
CALL								1.12
TOTAL	27.92	66.67	5.28	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1340 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
DEVIL CANYON WEATHER STATION
June, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	1	7	13	23	34	48	43	53	42	59	25	63	38	63	42	31	11	11	4	1	0	25
2	0	0	0	1	7	13	23	34	46	67	75	85	56	21	55	13	50	43	31	30	10	4	1	0	27
3	0	0	0	2	7	14	20	32	51	36	45	59	50	67	67	27	48	21	10	7	3	2	1	0	24
4	0	0	0	1	6	14	23	34	46	58	65	75	79	78	59	44	57	44	33	20	8	5	1	0	31
5	0	0	0	2	5	12	21	34	44	58	73	69	39	34	58	53	63	16	20	21	9	4	1	0	26
6	0	0	0	0	2	4	8	13	10	7	6	7	8	12	14	9	8	5	3	4	2	1	0	0	5
7	0	0	0	1	5	19	25	31	26	38	80	54	38	39	49	20	14	30	13	7	8	3	1	0	21
8	0	0	0	1	4	15	15	19	20	41	42	70	71	48	51	68	62	33	1	5	7	2	1	0	24
9	0	0	0	1	3	4	5	9	17	25	31	26	35	29	21	21	16	9	8	3	2	2	1	0	11
10	0	0	0	1	7	7	8	15	27	31	43	86	90	63	54	55	49	20	29	21	19	4	1	0	26
11	0	0	1	1	8	12	22	39	44	48	61	73	75	73	60	61	48	41	34	24	7	3	0	0	30
12	0	0	0	1	3	9	15	30	24	30	32	26	22	18	24	32	43	43	28	9	7	2	0	0	16
13	0	0	0	0	1	1	2	2	4	14	16	21	17	33	25	29	31	26	20	13	9	4	1	0	11
14	0	0	0	1	5	7	23	38	47	58	66	68	86	16	34	29	36	10	6	9	3	1	0	0	22
15	0	0	0	0	1	1	4	7	9	10	17	11	12	19	13	18	14	10	3	2	1	1	0	0	6
16	0	0	0	0	0	1	2	2	3	7	7	7	9	14	12	11	11	9	8	5	3	1	0	0	4
17	0	0	0	1	1	3	11	15	23	30	29	37	26	69	52	24	41	33	34	21	13	5	1	0	19
18	0	0	0	1	6	15	24	32	48	59	67	73	76	75	71	65	55	44	33	21	14	6	1	0	33
19	0	0	0	2	8	14	23	34	46	57	65	71	74	74	70	64	55	45	38	14	7	4	1	0	32
20	0	0	0	1	9	20	22	34	40	27	28	23	36	75	72	64	35	8	21	17	5	5	1	0	21
21	0	0	0	1	8	14	23	34	46	57	65	71	74	74	77	82	59	46	34	23	10	5	1	0	33
22	0	0	0	2	5	15	17	34	46	57	65	72	71	78	71	64	53	46	34	18	13	5	1	0	32
23	0	0	0	1	7	10	14	16	15	13	24	34	68	51	32	17	16	37	20	23	13	4	1	0	17
24	0	0	0	1	6	15	26	40	47	52	30	19	30	14	37	19	29	23	13	15	8	3	1	0	18
25	0	0	0	2	9	17	18	27	40	59	64	79	20	20	68	67	44	49	32	13	10	5	1	0	27
26	0	0	0	2	3	14	13	12	9	13	61	26	44	51	17	11	7	8	2	1	1	0	0	0	12
27	0	0	0	0	0	2	3	3	4	6	10	10	19	14	15	14	12	9	7	4	4	2	0	0	6
28	0	0	0	1	2	6	10	18	27	34	52	76	75	69	52	47	30	23	15	11	3	1	0	0	23
29	0	0	0	1	2	3	6	12	13	33	40	22	27	22	21	13	12	12	9	19	5	2	1	0	11
30	0	0	0	1	3	5	8	17	29	39	72	65	71	64	46	61	43	33	34	25	11	5	1	0	26

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING June, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1440	100
WIND SPEED	1440	100
WIND DIRECTION	1440	100
PEAK GUST	1440	100
RELATIVE HUMIDITY	1036	72
PRECIPITATION	1440	100
SOLAR RADIATION	1440	100
DEW POINT	1036	72

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 -10 RH Points
2. Solar -1 mW/CM²

R A M CONSULTANTS, INC.
 SUSTAINABLE HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING JULY, 1984

PRECIPITATION VALUES ARE IN MILLIMETERS

DATE	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	
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	0.4	0.0	0.0	0.0	0.0	1.2	.4	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	.2	1.2	0.0	.2	2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	3
4	0.0	0.0	0.0	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	0.0	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	.2	0.0	.8	.4	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	.2	0.0	0.0	0.0	0.0	0.0	0.0	.2	.4	.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	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	.2	1.6	.2	0.0	0.0	0.0	.2	1.2	.6	1.6	.2	0.0	.6	0.0	.2	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.4	.2	0.0	12
13	.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	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	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	.2	0.0	.2	0.0	18
19	.2	.2	0.0	0.0	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	.2	0.0	.2	0.0	0.0	19
20	.2	.2	0.0	.2	0.0	.4	.4	0.0	0.0	0.0	0.0	.2	.2	0.0	.2	.2	0.0	.4	.4	.2	.8	.6	.2	0.0	20
21	0.0	0.0	0.0	.2	.2	0.0	.2	0.0	.2	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	21
22	0.0	0.0	0.0	0.0	.2	.2	.4	.4	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	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	.2	.6	1.4	2.8	2.8	2.4	2.6	2.4	1.6	.6	.8	.2	.2	0.0	0.0	.2	.2	.2	1.6	25
26	.2	.6	1.0	1.6	2.4	2.8	2.4	2.0	2.2	.8	.2	.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	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	1.0	27
28	.2	0.0	.2	.6	0.0	1.8	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	28
29	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	.2	.4	.4	.6	.4	.4	.2	.2	0.0	.2	.2	0.0	29
30	0.0	0.0	.2	0.0	.2	0.0	0.0	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	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.

SUBSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING JULY, 1984

DAY 01

DAY 02

DAY 03

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.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW
0300	8.8	****	82	204	.5	208	1.3	0	0300	7.8	****	77	267	.6	324	1.9	0	0300	8.6	****	84	184	.6	200	1.9	0
0600	9.5	****	73	218	.5	205	1.9	16	0600	8.1	****	77	239	.5	249	1.9	4	0600	9.4	****	86	148	.4	170	1.9	6
0900	12.7	5.9	63	348	.8	353	2.5	25	0900	9.0	****	76	029	.4	010	1.3	7	0900	11.3	7.1	75	293	.5	256	1.9	29
1200	18.4	6.5	46	310	1.5	303	3.8	63	1200	10.3	****	71	326	.6	318	1.9	16	1200	15.5	6.3	54	319	2.2	317	5.7	33
1500	17.4	7.8	53	313	3.0	316	7.9	65	1500	11.9	6.2	68	322	1.4	323	3.2	34	1500	17.0	5.6	47	324	3.0	321	5.7	70
1800	10.2	6.0	75	301	2.8	309	7.0	5	1800	11.4	6.0	69	316	1.6	301	3.2	11	1800	16.4	6.3	51	318	3.3	317	6.3	20
2100	9.4	6.1	80	317	2.0	308	5.7	0	2100	11.2	****	70	310	1.3	319	3.8	1	2100	14.9	8.5	65	306	2.1	305	5.7	1
2400	8.3	****	85	293	1.3	316	4.4	0	2400	9.0	****	80	181	.6	221	1.9	0	2400	12.4	****	**	345	1.3	255	2.5	0

DAY 04

DAY 05

DAY 06

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.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW
0300	11.3	****	**	242	1.0	250	2.5	0	0300	11.2	7.0	75	148	1.0	134	2.5	0	0300	10.1	****	89	134	1.0	168	3.2	0
0600	10.4	****	**	209	.3	251	1.9	2	0600	10.6	****	83	095	.8	106	1.9	6	0600	9.2	****	92	132	1.1	135	2.5	9
0900	13.7	10.9	83	302	.3	281	2.5	27	0900	15.6	9.4	66	007	.6	350	1.9	38	0900	15.3	8.6	64	003	.9	371	2.5	31
1200	17.3	8.5	56	349	1.2	303	3.8	79	1200	18.2	8.8	54	312	1.8	337	3.8	37	1200	17.1	4.4	43	325	1.6	348	4.4	61
1500	21.2	4.6	34	317	1.5	308	4.4	60	1500	19.1	7.8	48	333	2.3	332	5.1	28	1500	16.5	5.7	49	320	1.9	329	7.0	14
1800	20.0	3.1	33	323	1.9	323	7.6	24	1800	17.9	8.2	53	328	2.6	333	5.1	12	1800	14.6	****	63	314	1.7	307	6.3	10
2100	20.0	4.4	36	350	.9	064	3.8	6	2100	14.5	****	79	267	.9	280	2.5	2	2100	13.9	****	74	063	.2	112	2.5	1
2400	14.1	6.3	59	177	.8	151	3.8	0	2400	11.8	9.5	86	145	1.3	131	3.8	0	2400	12.8	7.9	72	169	.8	184	3.8	0

DAY 07

DAY 08

DAY 09

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.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW		DEG C	DEG C	% DEG.	DEG.	M/S	DEG.	M/S	MW
0300	9.3	4.2	70	122	1.8	114	4.4	0	0300	8.0	****	76	159	.9	149	3.2	0	0300	6.9	1.5	88	146	1.2	143	3.2	0
0600	8.7	4.0	72	108	1.4	128	3.2	11	0600	8.4	****	76	124	.8	119	2.5	6	0600	7.7	****	78	127	.6	121	2.5	5
0900	12.8	5.3	60	053	1.5	048	3.2	11	0900	9.8	****	75	043	.6	038	2.5	16	0900	10.1	5.7	74	057	.6	049	2.5	11
1200	16.1	-1.3	33	053	1.1	045	3.2	71	1200	12.5	4.8	59	341	.8	350	3.8	38	1200	14.8	.1	37	008	1.1	007	3.8	42
1500	13.9	3.3	49	342	1.0	282	5.7	17	1500	14.3	-1.1	35	025	2.9	035	7.0	34	1500	16.1	-3.5	26	014	1.8	025	5.7	40
1800	17.6	-1.2	28	011	1.0	012	3.8	40	1800	15.4	-4.6	25	037	2.7	115	6.3	24	1800	16.5	-3.2	26	352	1.0	023	3.2	24
2100	17.8	****	26	314	1.3	308	3.2	16	2100	13.5	-4.8	28	029	3.6	035	7.0	4	2100	13.2	6.4	63	297	1.4	302	4.4	1
2400	8.5	2.1	84	179	.7	177	1.9	0	2400	7.3	.1	60	141	1.1	079	5.7	0	2400	9.9	6.8	81	287	1.2	312	3.2	0

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

R & M CONSULTANTS, INC.
 SUBSTANA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING JULY, 1984

DAY 10

DAY 11

DAY 12

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	NDNG	TEMP.	POINT	RH	DIR.	SPD.		DIR.	GUST	RAD	NDNG	TEMP.	POINT		RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.
	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	****	99	200	.7	243	1.9	0	0300	6.3	****	98	133	1.1	131	2.5	0	0300	4.2	****	84	160	.9	142	2.5	0
0600	10.2	****	86	171	.3	157	1.9	16	0600	6.0	****	99	142	.6	132	1.9	7	0600	4.3	****	98	117	1.0	145	3.2	6
0900	10.6	****	84	308	.8	287	2.5	6	0900	12.9	3.0	51	040	1.1	048	2.5	29	0900	9.1	5.7	79	054	1.2	057	3.2	30
1200	13.4	****	70	065	1.0	061	3.2	37	1200	12.0	2.5	52	238	.7	292	3.2	25	1200	17.1	2.2	37	333	1.4	319	3.8	73
1500	15.3	7.1	58	324	1.2	330	4.4	61	1500	15.3	.6	37	281	1.1	187	3.8	53	1500	14.0	3.7	50	355	2.0	009	7.0	14
1800	10.3	****	98	284	1.6	287	4.4	7	1800	13.9	.8	41	318	1.6	332	5.1	11	1800	14.0	4.3	52	335	2.0	338	6.3	24
2100	9.4	****	92	319	.5	014	3.8	5	2100	14.3	2.1	44	316	1.6	340	5.1	8	2100	12.6	6.0	64	312	2.4	321	5.7	1
2400	5.6	5.1	97	164	.9	166	2.5	0	2400	7.1	3.2	76	196	.8	270	1.9	0	2400	9.5	****	**	237	.5	307	2.5	0

DAY 13

DAY 14

DAY 15

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	NDNG	TEMP.	POINT	RH	DIR.	SPD.		DIR.	GUST	RAD	NDNG	TEMP.	POINT		RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.
	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	8.7	****	**	177	.4	165	1.3	0	0300	6.9	****	82	167	.7	169	1.9	0	0300	9.7	****	94	271	1.0	285	2.5	0
0600	9.4	****	**	251	.5	259	1.9	3	0600	8.1	****	81	189	.4	181	1.9	9	0600	9.1	****	99	247	.7	257	2.5	3
0900	9.6	****	**	312	1.3	319	3.8	12	0900	12.1	2.8	53	324	1.1	343	3.2	42	0900	9.8	6.4	79	291	.6	289	2.5	16
1200	12.7	8.2	74	313	1.3	314	2.5	48	1200	13.7	1.3	43	333	2.5	317	5.7	31	1200	12.8	2.0	48	302	1.3	313	3.2	51
1500	13.9	3.9	51	312	2.6	330	7.0	44	1500	14.4	1.2	41	339	2.5	333	5.1	20	1500	16.9	-1.5	31	358	1.0	034	3.8	91
1800	13.5	2.4	47	317	3.0	314	6.3	48	1800	14.3	2.8	46	314	1.8	322	5.1	10	1800	19.0	-1.0	26	056	1.2	078	3.8	44
2100	11.3	2.1	53	307	1.8	315	5.7	2	2100	11.2	4.5	63	304	1.8	303	4.4	1	2100	15.8	****	45	142	.8	114	4.4	3
2400	7.7	****	74	193	.9	209	1.9	0	2400	10.2	****	99	299	1.0	309	3.8	0	2400	13.0	6.0	62	159	.8	156	3.2	0

DAY 16

DAY 17

DAY 18

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	NDNG	TEMP.	POINT	RH	DIR.	SPD.		DIR.	GUST	RAD	NDNG	TEMP.	POINT		RH	DIR.	SPD.	DIR.	GUST	RAD	NDNG	TEMP.	POINT	RH	DIR.	SPD.
	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	10.7	6.1	73	145	.9	151	3.2	0	0300	9.5	8.2	92	300	1.8	310	4.4	0	0300	8.4	7.5	94	292	1.4	310	3.8	0
0600	10.7	****	84	103	.9	113	3.2	4	0600	9.1	8.6	97	308	1.3	308	3.2	1	0600	8.3	7.8	97	278	1.1	311	3.2	1
0900	12.7	7.8	72	337	.7	301	3.8	34	0900	9.4	7.8	90	305	1.1	302	3.2	3	0900	9.0	6.9	87	315	1.9	323	3.8	6
1200	15.3	4.0	47	316	3.3	318	6.3	24	1200	10.0	****	86	311	1.0	309	2.5	8	1200	10.2	5.2	71	306	1.7	311	4.4	13
1500	14.4	4.1	50	315	4.3	313	8.3	26	1500	10.3	7.9	85	300	1.1	299	2.5	5	1500	9.8	5.0	72	308	2.2	294	5.7	6
1800	12.5	4.5	58	300	2.3	305	5.7	3	1800	10.3	8.9	91	300	.9	315	3.2	2	1800	8.8	6.1	83	295	1.3	296	3.8	5
2100	11.1	6.3	72	302	1.8	294	4.4	0	2100	8.9	7.6	92	302	2.0	302	5.1	0	2100	8.5	****	89	242	.6	261	2.5	1
2400	10.3	6.4	88	309	1.5	308	3.8	0	2400	9.1	6.9	86	284	1.8	303	5.7	0	2400	8.4	****	94	193	.6	191	1.9	0

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

R & M CONSULTANTS, INC.,
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING JULY, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	8.0	****	**	247	.7	263	2.5	0	0300	8.4	****	74	305	1.0	312	2.5	0	0300	8.6	****	85	222	.5	255	2.5	0												
0600	7.7	****	35	252	.6	306	2.5	1	0600	8.1	****	**	323	.8	325	2.5	1	0600	8.9	****	78	249	.6	254	2.5	1												
0900	8.6	.1	55	279	.7	262	2.5	2	0900	8.6	****	87	310	.6	313	2.5	7	0900	9.3	-8.9	27	287	1.1	270	2.5	3												
1200	10.1	****	36	283	1.3	300	3.8	11	1200	8.7	-5.7	36	309	1.2	319	3.2	10	1200	9.8	-8.4	27	307	1.6	322	4.4	5												
1500	10.2	****	**	284	1.7	292	5.7	12	1500	9.3	-4.8	37	308	1.6	317	3.8	4	1500	11.0	****	**	307	2.4	307	5.1	17												
1800	9.5	3.9	62	289	1.6	283	4.4	4	1800	9.3	-4.4	38	306	1.6	297	3.8	3	1800	12.5	****	**	297	1.8	292	4.4	15												
2100	9.1	****	59	302	1.2	313	3.2	1	2100	8.6	****	66	301	1.6	306	4.4	1	2100	11.1	****	**	271	.9	271	3.2	0												
2400	8.7	****	50	266	.8	266	1.9	0	2400	8.5	****	80	258	.3	293	1.9	0	2400	10.0	****	**	203	.6	244	1.9	0												

DAY 22

DAY 23

DAY 24

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	9.9	****	**	195	.7	172	3.2	0	0300	9.4	****	**	153	.9	137	2.5	0	0300	12.6	****	**	208	.7	233	1.9	0												
0600	9.9	****	**	196	.4	190	1.3	1	0600	10.1	****	**	126	.4	124	2.5	7	0600	11.7	****	**	284	1.0	312	3.6	3												
0900	10.4	****	**	297	.6	300	2.5	10	0900	14.8	****	**	025	.6	056	1.9	44	0900	13.2	****	**	354	.4	257	1.5	9												
1200	11.7	****	**	308	1.2	314	3.2	25	1200	19.2	****	**	350	1.3	324	3.2	67	1200	15.8	****	**	321	1.6	320	4.4	37												
1500	13.8	****	**	314	1.7	322	3.8	33	1500	20.8	****	**	318	1.5	311	3.8	30	1500	13.8	****	**	318	2.1	320	5.1	21												
1800	14.2	****	**	316	1.7	330	3.8	15	1800	21.8	****	**	307	1.8	316	5.1	45	1800	15.4	****	**	318	1.9	317	4.4	21												
2100	14.0	****	**	291	.9	289	3.2	5	2100	18.9	****	**	303	1.9	316	5.1	3	2100	13.7	****	**	300	1.3	317	3.8	1												
2400	10.1	****	**	183	.7	148	3.2	0	2400	13.7	****	**	265	1.1	273	3.2	0	2400	13.1	****	**	195	.5	147	1.9	0												

DAY 25

DAY 26

DAY 27

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	11.7	****	**	194	.5	193	1.9	0	0300	8.5	****	**	232	.4	251	1.9	0	0300	9.8	****	**	205	.4	190	1.5	0												
0600	11.2	****	**	259	.8	271	2.5	1	0600	8.5	****	**	180	.2	182	1.3	1	0600	10.5	****	**	251	.4	215	1.9	1												
0900	10.4	****	**	250	.7	249	1.9	4	0900	9.0	****	**	222	.1	150	1.3	7	0900	11.1	****	**	314	.9	327	3.2	17												
1200	10.2	****	**	304	1.3	305	3.2	6	1200	11.6	****	**	341	.5	302	1.3	45	1200	13.2	****	**	310	.9	303	1.9	29												
1500	10.6	****	**	315	1.6	317	3.8	19	1500	13.5	****	**	309	1.2	299	3.2	36	1500	14.9	****	**	316	1.4	322	3.8	25												
1800	10.5	****	**	313	1.4	318	3.2	7	1800	13.9	****	**	311	.8	319	2.5	22	1800	14.3	****	**	322	2.2	355	5.1	9												
2100	9.4	****	**	298	1.4	310	3.8	1	2100	12.4	****	**	317	1.2	358	3.2	3	2100	13.6	****	**	271	.6	294	3.2	2												
2400	9.0	****	**	255	1.0	267	2.5	0	2400	10.2	****	**	233	.6	279	1.9	0	2400	11.8	****	**	199	.6	215	1.5	0												

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING JULY, 1984

DAY 19

DAY 20

DAY 21

HOUR	DEW						HOUR	DEW						HOUR	DEW													
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST								
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S								
0300	8.0	****	**	247	.7	263	2.5	0	0300	8.4	****	**	74	305	1.0	312	2.5	0	0300	8.6	****	**	85	232	.5	255	2.5	0
0600	7.7	****	**	35	252	.6	306	2.5	1	0600	8.1	****	**	323	.8	325	2.5	1	0600	8.9	****	**	78	249	.6	254	2.5	1
0900	8.6	.1	35	279	.7	262	2.5	2	0900	8.6	****	**	87	310	.6	313	2.5	7	0900	9.3	-8.9	27	287	1.1	270	2.5	3	
1200	10.1	****	**	36	283	1.3	300	3.8	11	1200	8.7	-5.7	36	309	1.2	319	3.2	10	1200	9.8	-8.4	27	307	1.6	322	4.4	5	
1500	10.2	****	**	284	1.7	292	5.7	12	1500	9.3	-4.8	37	308	1.6	317	3.8	4	1500	11.0	****	**	307	2.4	307	5.1	17		
1800	9.5	3.9	68	289	1.6	293	4.4	4	1800	9.3	-4.4	38	306	1.6	297	3.8	3	1800	12.5	****	**	297	1.8	292	4.4	15		
2100	9.1	****	**	59	302	1.2	313	3.2	1	2100	8.6	****	**	66	301	1.6	306	4.4	1	2100	11.1	****	**	271	.9	271	3.2	0
2400	8.7	****	**	50	266	.8	266	1.9	0	2400	8.5	****	**	80	258	.3	293	1.9	0	2400	10.0	****	**	203	.6	244	1.9	0

DAY 22

DAY 23

DAY 24

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST						
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S						
0300	9.9	****	**	195	.7	172	3.2	0	0300	9.4	****	**	153	.9	137	2.5	0	0300	12.6	****	**	208	.7	233	1.9	0
0600	9.9	****	**	196	.4	190	1.3	1	0600	10.1	****	**	126	.4	124	2.5	7	0600	11.7	****	**	284	1.0	312	3.8	3
0900	10.4	****	**	297	.6	300	2.5	10	0900	14.8	****	**	025	.6	056	1.9	44	0900	13.2	****	**	354	.4	257	1.3	9
1200	11.7	****	**	308	1.2	314	3.2	25	1200	19.2	****	**	350	1.3	324	3.2	67	1200	15.8	****	**	321	1.6	320	4.4	37
1500	13.8	****	**	314	1.7	322	3.8	33	1500	20.8	****	**	318	1.5	311	3.8	30	1500	13.8	****	**	318	2.1	320	5.1	21
1800	14.2	****	**	316	1.7	330	3.8	15	1800	21.8	****	**	307	1.8	316	5.1	45	1800	15.4	****	**	318	1.9	317	4.4	21
2100	14.0	****	**	291	.9	289	3.2	5	2100	18.9	****	**	303	1.9	316	5.1	3	2100	13.7	****	**	300	1.3	317	3.8	1
2400	10.1	****	**	183	.7	148	3.2	0	2400	13.7	****	**	265	1.1	273	3.2	0	2400	13.1	****	**	195	.5	147	1.9	0

DAY 25

DAY 26

DAY 27

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST						
NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	DEG. M/S						
0300	11.7	****	**	194	.5	193	1.9	0	0300	8.5	****	**	232	.4	251	1.9	0	0300	9.8	****	**	205	.4	190	1.3	0
0600	11.2	****	**	259	.8	271	2.5	1	0600	8.5	****	**	180	.2	182	1.3	1	0600	10.5	****	**	251	.4	215	1.9	0
0900	10.4	****	**	250	.7	249	1.9	4	0900	9.0	****	**	222	.1	150	1.3	7	0900	11.1	****	**	314	.9	327	3.2	12
1200	10.2	****	**	304	1.3	305	3.2	6	1200	11.6	****	**	341	.5	002	1.3	45	1200	13.2	****	**	310	.9	303	1.9	29
1500	10.6	****	**	315	1.6	317	3.8	19	1500	13.5	****	**	309	1.2	399	3.2	36	1500	14.9	****	**	316	1.4	322	3.8	25
1800	10.5	****	**	313	1.4	318	3.2	7	1800	13.9	****	**	311	.8	319	2.5	22	1800	14.3	****	**	327	2.2	355	5.1	9
2100	9.4	****	**	298	1.4	310	3.8	1	2100	12.4	****	**	317	1.2	358	3.2	7	2100	13.6	****	**	271	.6	294	3.2	2
2400	9.0	****	**	255	1.0	267	2.5	0	2400	10.2	****	**	233	.6	279	1.9	0	2400	11.8	****	**	199	.6	215	1.3	0

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

R & M CONSULTANTS, INC.
 SUSUTNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING JULY, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.		TEMP.	POINT	RH	DIR.	SPD.	DIR.						
	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	11.0	*****	**	275	1.0	306	3.2	0	0300	10.2	*****	**	232	.8	243	3.8	0	0300	8.1	*****	**	125	.8	134	1.9	0
0600	10.3	*****	**	250	.7	254	2.5	1	0600	9.3	*****	**	266	.6	270	1.9	3	0600	8.0	*****	**	093	.4	088	1.9	1
0900	9.7	*****	**	266	1.0	287	3.2	6	0900	9.5	*****	**	264	.7	270	1.9	5	0900	9.6	*****	**	037	.6	057	1.9	14
1200	11.1	*****	**	283	.8	266	2.5	13	1200	9.3	*****	**	283	1.0	290	2.5	5	1200	11.9	*****	**	303	1.4	293	3.8	26
1500	12.1	*****	**	326	.9	313	3.2	11	1500	9.4	*****	**	303	1.2	296	3.2	17	1500	14.0	*****	**	275	.9	291	3.8	23
1800	12.9	*****	**	344	.3	275	1.9	10	1800	8.7	*****	**	307	1.1	307	3.2	3	1800	14.5	*****	**	316	1.7	327	6.3	12
2100	12.0	*****	**	014	.1	035	1.9	3	2100	8.4	*****	**	276	.7	315	2.5	0	2100	12.5	*****	**	285	.8	302	3.2	2
2400	10.8	*****	**	187	.7	216	2.5	0	2400	8.2	*****	**	116	.5	120	1.9	0	2400	10.6	*****	**	167	.6	122	3.8	0

DAY 31

HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.		
	DEG C	DEG C	%	DEG.	M/S	DEG. M/S		
0300	9.8	*****	**	185	.6	194	1.9	0
0600	9.8	*****	**	262	.5	298	2.5	1
0900	10.5	*****	**	282	1.0	282	2.5	9
1200	11.2	*****	**	307	2.0	316	4.4	20
1500	12.2	*****	**	314	2.0	317	4.4	28
1800	11.8	*****	**	323	1.3	327	3.2	4
2100	11.0	*****	**	319	.7	315	2.5	0
2400	9.8	*****	**	212	.3	252	1.3	0

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

R & M CONSULTANTS, INC.

SUBSITNA HYDROELECTRIC PROJECT

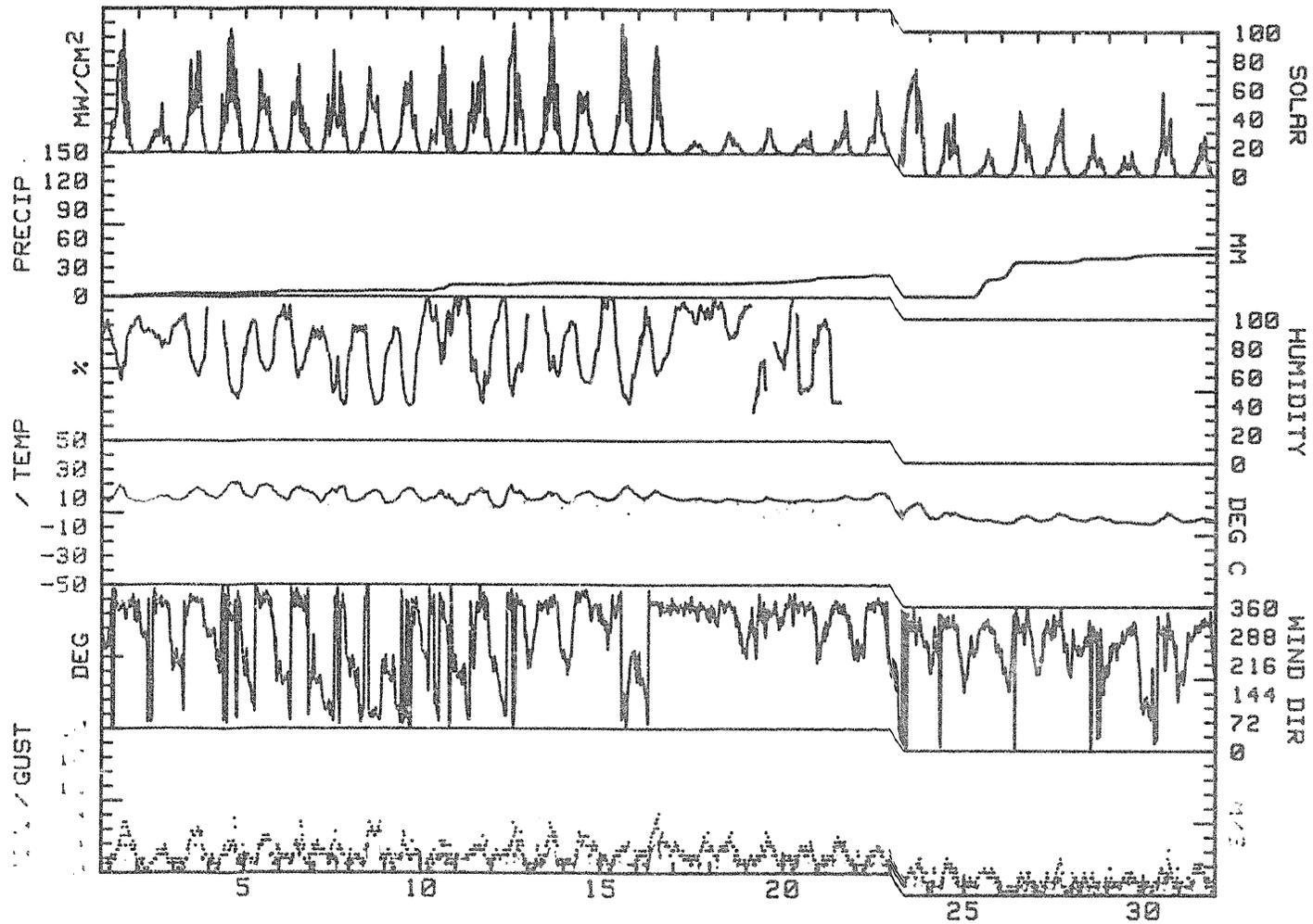
MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING JULY, 1984

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	PAY'S SOLAR ENERGY DAY WH/SQ-M
1	19.6	7.8	13.7	305	1.4	1.6	316	7.0	NW	65	6.4	2.0	4745
2	12.1	7.8	10.0	307	.6	.9	319	3.8	NW	69	5.6	1.6	1750
3	17.6	8.6	13.1	307	1.3	1.7	317	6.3	NW	59	6.6	.2	4735
4	21.8	10.2	16.0	312	.6	1.2	323	7.6	NW	47	6.2	.2	5890
5	19.5	10.2	14.9	327	.6	1.5	332	5.1	NNW	62	8.4	1.4	3680
6	17.7	8.7	13.2	334	.4	1.3	329	7.0	SE	65	7.3	0.0	3225
7	18.1	6.8	12.5	059	.6	1.4	282	5.7	NE	53	2.6	0.0	4290
8	15.9	7.3	11.6	042	1.2	1.8	035	7.0	NNE	46	-1.3	1.0	3770
9	17.5	6.3	11.9	355	.5	1.2	025	5.7	NNE	50	1.3	0.0	3975
10	15.3	5.6	10.5	292	.3	1.0	330	4.4	S	78	7.2	6.6	5425
11	17.1	5.5	11.3	294	.3	1.3	332	5.1	S	55	2.6	0.0	4765
12	19.4	3.7	11.6	343	.7	1.6	009	7.0	NW	64	4.2	.8	5755
13	15.0	7.7	11.4	304	1.2	1.5	330	7.0	NW	60	4.3	.8	4500
14	15.0	6.7	10.9	319	1.2	1.5	317	5.7	NNW	49	2.5	0.0	3540
15	19.0	8.9	14.0	302	.2	1.1	114	4.4	WNW	54	3.2	0.0	4620
16	16.1	9.6	12.9	312	1.5	2.0	313	8.3	NW	64	5.7	0.0	5750
17	10.5	8.9	9.7	300	1.3	1.4	303	5.7	WNW	90	8.0	0.0	635
18	10.2	8.1	9.2	294	1.2	1.4	294	5.7	NW	84	6.5	.6	1050
19	11.2	7.7	9.5	280	1.0	1.1	292	5.7	W	56	.4	1.0	1000
20	9.5	8.1	8.8	306	1.1	1.1	306	4.4	NW	49	-2.0	4.8	610
21	12.5	8.3	10.4	287	1.0	1.2	307	5.1	WNW	29	-7.8	1.2	1350
22	14.5	9.8	12.2	292	.7	1.0	322	3.8	NW	**	*****	1.4	2415
23	22.3	8.8	15.6	311	.7	1.3	316	5.1	NW	**	*****	0.0	6410
24	15.8	11.3	13.6	304	1.0	1.3	320	5.1	NW	**	*****	0.0	2785
25	12.5	9.0	10.8	288	.9	1.1	317	3.8	NW	**	*****	20.2	990
26	13.9	8.4	11.2	297	.5	.7	299	3.2	WNW	**	*****	16.4	2760
27	15.6	9.7	12.7	302	.7	1.0	355	5.1	NW	**	*****	1.0	3535
28	13.2	9.7	11.5	277	.5	.8	306	3.2	W	**	*****	3.0	1470
29	11.2	8.2	9.7	279	.6	.9	243	3.8	W	**	*****	3.4	960
30	16.1	7.8	12.0	305	.4	1.0	327	6.3	WNW	**	*****	.6	2735
31	12.6	9.5	11.1	301	.9	1.1	316	4.4	NW	**	*****	0.0	1550
MONTH	22.3	3.7	11.8	308	.7	1.3	313	8.3	NW	61	3.8	68.2	95280

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 7.6
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 6.3
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 4.4
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 4.4

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
 DEVIL CANYON WEATHER STATION
 July, 1984



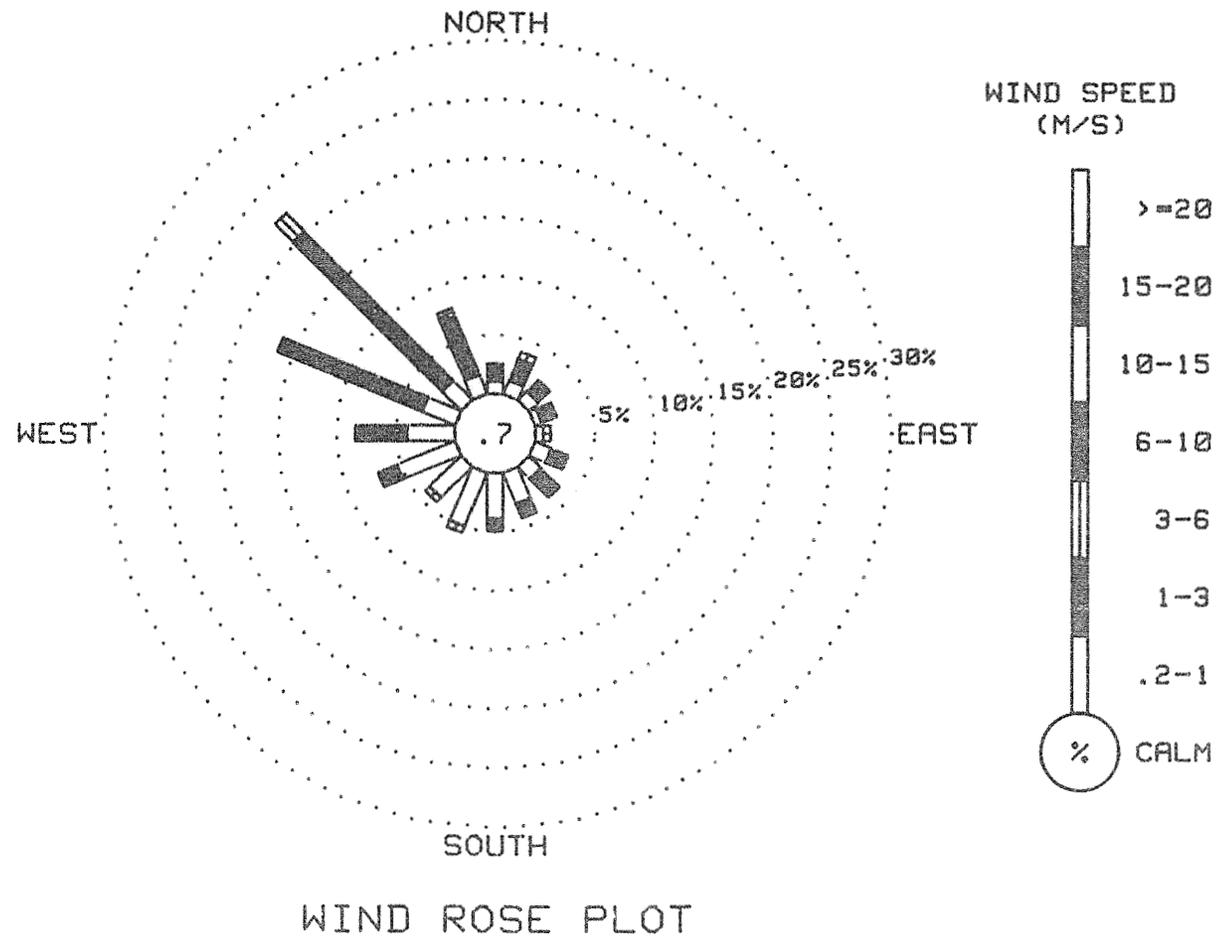
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING July, 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	1.08	1.41	.07	0.00	0.00	0.00	0.00	2.56
NNE	1.28	1.95	.67	0.00	0.00	0.00	0.00	3.90
NE	1.08	1.21	.13	0.00	0.00	0.00	0.00	2.42
ENE	.60	1.34	0.00	0.00	0.00	0.00	0.00	1.95
E	.67	.60	0.00	0.00	0.00	0.00	0.00	1.26
ESE	1.48	1.55	0.00	0.00	0.00	0.00	0.00	3.03
SE	1.41	2.22	0.00	0.00	0.00	0.00	0.00	3.63
SSE	2.82	1.28	0.00	0.00	0.00	0.00	0.00	4.10
S	3.83	1.08	0.00	0.00	0.00	0.00	0.00	4.91
SSW	4.91	.60	0.00	0.00	0.00	0.00	0.00	5.51
Sk	3.70	.54	0.00	0.00	0.00	0.00	0.00	4.23
WSW	5.31	1.68	0.00	0.00	0.00	0.00	0.00	6.99
W	4.03	4.37	0.00	0.00	0.00	0.00	0.00	8.40
WNW	3.02	13.24	0.00	0.00	0.00	0.00	0.00	16.26
W	2.28	17.81	2.22	0.00	0.00	0.00	0.00	22.31
NNW	1.75	5.65	.40	0.00	0.00	0.00	0.00	7.80
CALM								1.74
TOTAL	39.25	56.53	3.49	0.00	0.00	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 **

R&M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT
DEVIL CANYON WEATHER STATION
July, 1984



R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING JULY, 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	1	4	14	20	18	24	46	62	67	56	60	43	15	26	13	6	4	1	0	0	0	20
2	0	0	0	1	1	3	3	8	9	12	13	16	13	15	28	15	8	10	10	8	1	1	0	0	7
3	0	0	0	0	2	6	6	11	27	41	51	30	36	48	51	50	60	30	14	11	3	1	0	0	20
4	0	0	0	1	1	3	11	29	21	32	32	78	58	83	71	36	45	28	35	16	12	2	0	0	25
5	0	0	0	1	2	5	9	15	30	44	47	34	39	32	30	34	16	15	12	5	4	0	0	0	15
6	0	0	0	1	2	7	18	36	29	29	43	47	27	15	23	12	14	8	11	3	2	1	0	0	13
7	0	0	0	1	6	9	22	35	17	16	29	57	31	21	21	28	38	43	23	20	12	4	1	0	18
8	0	0	0	0	2	4	11	8	14	18	24	43	58	37	32	30	32	32	16	13	6	2	0	0	16
9	0	0	0	1	3	5	8	9	11	23	30	44	46	34	44	53	26	21	26	11	6	3	1	0	17
10	0	0	0	0	4	13	11	11	10	18	31	46	37	44	51	18	4	5	29	10	4	3	0	0	14
11	0	0	0	1	3	5	21	23	30	32	19	23	45	39	41	67	53	24	18	21	10	4	1	0	20
12	0	0	0	1	3	6	8	13	28	62	65	70	85	52	10	56	49	26	29	13	3	1	0	0	24
13	0	0	0	1	3	3	4	10	10	30	18	44	53	68	67	50	21	34	21	13	3	3	1	0	19
14	0	0	0	1	3	7	11	32	43	36	34	30	36	38	26	23	16	11	6	4	2	0	0	0	15
15	0	0	0	0	1	3	4	9	15	23	21	45	90	45	76	25	47	33	20	7	2	1	0	0	19
16	0	0	0	0	1	3	4	10	22	53	63	50	48	33	23	7	6	3	2	2	1	0	0	0	14
17	0	0	0	0	0	1	2	3	4	5	5	7	8	6	5	7	5	3	3	2	1	0	0	0	3
18	0	0	0	0	1	1	2	5	6	11	14	14	10	9	8	7	7	6	3	2	1	0	0	0	4
19	0	0	0	0	0	1	2	3	3	3	8	10	17	17	15	10	6	5	2	2	2	0	0	0	4
20	0	0	0	0	0	1	2	4	6	6	6	9	7	10	5	6	10	7	4	1	1	0	0	0	3
21	0	0	0	0	0	1	2	2	4	8	7	6	9	12	17	16	25	18	4	4	1	1	0	0	6
22	0	0	0	0	0	1	4	7	11	11	12	17	27	39	31	28	16	15	13	8	5	2	0	0	10
23	0	0	0	0	2	9	8	20	41	53	59	65	70	69	52	49	52	49	24	18	4	1	0	0	27
24	0	0	0	0	2	3	5	9	11	26	33	31	19	22	18	39	20	19	18	6	2	1	0	0	12
25	0	0	0	0	1	1	2	2	3	5	5	7	8	14	16	12	11	10	4	2	1	0	0	0	4
26	0	0	0	0	0	1	2	5	6	16	24	40	39	28	34	15	19	21	14	11	4	1	0	0	12
27	0	0	0	0	0	4	8	5	10	13	16	26	23	32	29	32	34	10	6	6	2	1	0	0	10
28	0	0	0	0	1	1	3	2	6	8	13	13	23	19	12	9	9	12	9	6	4	0	0	0	6
29	0	0	0	0	1	3	4	5	7	12	8	6	9	7	12	10	6	5	3	2	1	0	0	0	4
30	0	0	0	0	0	1	6	9	13	18	34	42	23	17	26	37	26	11	10	3	2	1	0	0	11
31	0	0	0	0	0	1	3	3	6	8	13	15	20	17	22	26	10	6	7	3	0	0	0	0	6

* SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT *

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING JULY, 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	630	42
PRECIPITATION	1488	100
SOLAR RADIATION	1488	100
DEW POINT	630	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:

- RH -10 RH Points 7/1 - 7/13
 -20 7/13 - 7/21
- Solar -1 mW/CM²

Additional comments on this month's data:

- Problems with RH oscillator. Data lost intermittently from 7/3 to 7/21.
Erratic RH data unusable from 7/21 to 7/31.

R & M CONSULTANTS, INC.

SUBSIDIARY HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 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	.2	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	1
2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	2
3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	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	0.0	4
5	0.0	0.0	0.0	0.0	0.0	.6	1.0	.8	0.0	.6	.6	1.4	2.2	1.6	1.0	.4	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	0.0	5
6	.2	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	0.0	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	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	0.0	8
9	10.2	5.6	1.2	1.2	.6	.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	.4	0.0	9
10	0.0	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	0.0	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	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	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	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	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	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	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	0.0	17
18	0.0	.2	0.0	.2	0.0	0.0	.2	1.0	1.0	1.0	1.2	1.0	1.0	1.8	1.6	.8	1.4	1.8	2.6	2.2	3.4	2.2	1.4	1.2	0.0	18
19	1.0	.8	.4	0.0	0.0	0.0	0.0	.2	0.0	0.0	0.0	1.0	1.4	.6	.2	.2	.6	.4	0.0	0.0	1.0	.2	.2	.2	.2	19
20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	20
21	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	.2	0.0	0.0	0.0	0.0	21
22	0.0	.2	.2	.2	.4	.2	.2	.2	0.0	.2	0.0	.2	.2	0.0	.2	.2	.9	.2	.2	.2	.2	.2	0.0	.4	.6	22
23	.8	.2	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	.2	0.0	2.2	1.4	1.6	2.4	3.2	0.0	23
24	1.8	7.0	3.4	4.4	3.8	1.4	0.0	.2	.8	.8	.8	1.2	1.4	1.2	1.4	2.2	1.8	.6	.8	1.6	.4	.8	.2	.6	0.0	24
25	2.4	2.2	.8	.2	.6	.2	.2	.4	1.0	2.8	4.0	2.4	.2	.4	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	.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	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	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	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	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	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	0.0	31

SEE INTERPRETATION NOTES AT END OF MONTHLY REPORT **

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING August, 1984

DAY 01

DAY 02

DAY 03

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	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	9.5	****	**	210	.2	203	1.3	0	0300	10.3	****	**	169	.2	168	1.3	0	0300	11.4	****	**	203	.2	189	1.3	0
0600	9.6	****	**	236	.1	238	1.3	2	0600	10.6	****	**	184	.2	219	1.3	0	0600	11.1	****	**	172	.2	158	1.3	2
0900	10.2	****	**	300	.6	314	1.9	8	0900	11.3	****	**	309	.4	286	1.9	5	0900	12.3	****	**	008	.3	146	1.3	8
1200	11.0	****	**	300	1.1	306	1.9	22	1200	12.3	****	**	300	1.0	275	2.5	14	1200	14.1	****	**	306	.8	297	2.5	24
1500	11.1	****	**	303	1.1	307	2.5	19	1500	13.0	****	**	307	1.0	302	2.5	20	1500	15.6	****	**	301	1.4	300	3.2	29
1800	11.6	****	**	301	.9	333	2.5	6	1800	13.1	****	**	297	1.2	293	3.2	7	1800	15.3	****	**	305	1.0	312	3.2	7
2100	11.3	****	**	245	.5	297	1.9	0	2100	12.8	****	**	314	.5	311	2.5	1	2100	14.6	****	**	269	.5	256	1.9	1
2400	10.7	****	**	277	.6	275	2.5	0	2400	11.9	****	**	195	.5	185	1.3	0	2400	13.1	****	**	231	.6	238	1.9	0

DAY 04

DAY 05

DAY 06

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	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	12.6	****	**	223	.2	221	1.3	0	0300	13.9	****	**	211	.4	185	1.9	0	0300	12.6	****	**	269	.4	306	1.9	0
0600	12.9	****	**	208	.2	217	.6	2	0600	13.9	****	**	229	.4	264	1.9	1	0600	12.3	****	**	295	1.0	329	3.2	4
0900	14.4	****	**	317	.4	340	2.5	11	0900	13.0	****	**	290	1.0	271	2.5	2	0900	13.5	****	**	323	.5	297	1.9	15
1200	16.6	****	**	322	1.2	312	3.2	30	1200	13.1	****	**	317	.9	321	2.5	14	1200	16.4	****	**	344	.9	004	3.2	62
1500	18.6	****	**	307	1.4	315	3.2	33	1500	13.1	****	**	305	.9	294	2.5	12	1500	19.8	****	**	310	1.3	308	3.8	30
1800	20.9	****	**	305	1.6	306	3.8	26	1800	13.1	****	**	305	.9	297	2.5	2	1800	21.1	****	**	344	.8	032	4.4	17
2100	17.8	****	**	289	1.6	300	5.1	2	2100	12.8	****	**	279	.6	264	1.3	0	2100	17.7	****	**	048	1.5	024	5.1	2
2400	14.2	****	**	204	.9	221	1.9	0	2400	12.7	****	**	263	.1	271	1.3	0	2400	10.0	****	**	187	1.0	142	2.5	0

DAY 07

DAY 08

DAY 09

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	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	6.0	-6.3	36	144	1.3	139	3.2	0	0300	12.8	****	97	201	.4	207	1.3	0	0300	10.7	****	98	232	.8	264	1.4	0
0600	8.3	****	41	158	.7	142	2.5	3	0600	12.7	10.6	87	255	.6	245	2.5	2	0600	9.6	****	94	147	.7	159	2.5	2
0900	14.4	****	55	048	.6	052	1.9	34	0900	12.4	10.3	87	280	1.2	278	2.5	6	0900	11.9	****	**	070	.1	014	3.2	25
1200	18.6	1.5	32	309	1.4	294	3.8	57	1200	14.9	7.8	62	302	1.3	310	3.2	25	1200	14.6	5.1	58	332	1.2	312	3.2	28
1500	20.3	.6	27	311	2.3	315	4.4	39	1500	14.9	7.5	61	310	2.1	315	4.4	17	1500	14.6	-1.6	55	303	1.7	303	3.8	35
1800	21.0	2.7	30	311	2.6	315	5.1	30	1800	14.7	8.3	65	309	2.2	305	4.4	7	1800	13.9	3.0	48	309	.8	247	4.4	6
2100	18.9	7.6	54	292	1.6	307	4.4	1	2100	13.0	****	88	293	1.0	318	3.8	0	2100	11.6	****	**	141	.7	225	3.2	1
2400	13.4	10.4	82	290	1.1	196	1.9	0	2400	12.4	****	**	179	.5	174	2.5	0	2400	9.6	4.4	70	158	1.1	155	3.2	0

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 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	8.2	-14.8	18	134	1.1	121	3.2	0	0300	9.5	****	99	198	.5	152	1.3	0	0300	5.2	2.0	80	112	1.5	115	3.8	0			
0600	8.0	-3.3	45	127	1.2	121	2.5	2	0600	8.8	****	99	202	.4	217	1.3	3	0600	3.5	1.7	88	104	2.2	110	5.1	6			
0900	10.5	****	**	058	1.1	046	2.5	22	0900	12.8	****	59	041	.6	065	1.9	36	0900	9.8	4.6	70	085	2.0	099	5.1	35			
1200	13.6	3.1	49	018	1.0	031	3.2	22	1200	16.3	3.3	42	007	1.0	047	5.1	69	1200	16.1	-1.6	30	051	1.7	068	5.1	63			
1500	14.9	2.0	42	322	1.8	317	4.4	33	1500	17.3	.7	33	048	2.2	049	5.7	59	1500	18.0	-4.1	22	030	3.2	024	6.3	59			
1800	13.8	3.0	48	315	1.6	309	3.8	14	1800	16.6	.1	33	030	3.2	034	6.3	28	1800	18.3	-5.1	20	035	2.6	046	6.3	31			
2100	11.2	****	70	258	.6	299	3.8	1	2100	13.6	.2	40	030	3.2	035	6.3	1	2100	13.5	-7	38	040	1.9	032	4.4	1			
2400	9.0	****	93	172	.6	197	1.3	0	2400	8.6	3.1	68	108	1.0	050	4.4	0	2400	7.5	1.8	67	137	1.7	148	3.2	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	5.1	****	79	138	.9	108	2.5	0	0300	6.3	****	83	138	.9	114	3.2	0	0300	6.7	****	97	156	.8	169	2.5	0			
0600	5.1	3.7	91	145	.7	129	3.8	1	0600	4.9	2.9	87	116	1.1	109	3.2	4	0600	6.3	5.4	94	108	.9	145	2.5	2			
0900	9.7	4.7	71	078	1.2	085	2.5	23	0900	10.1	4.9	70	056	1.4	073	3.2	34	0900	10.6	8.0	84	063	1.2	061	3.2	29			
1200	16.9	.4	33	098	2.0	095	5.1	61	1200	18.0	5.2	43	017	1.1	035	2.5	48	1200	18.8	5.9	43	349	.9	033	2.5	60			
1500	20.1	.9	28	130	2.0	137	5.1	58	1500	19.3	3.7	36	303	1.6	282	3.2	28	1500	19.7	6.7	43	306	1.7	314	4.4	59			
1800	21.0	-1.6	22	109	1.6	120	4.4	29	1800	21.1	4.5	34	301	2.0	310	5.1	17	1800	20.3	6.2	40	306	2.1	318	5.7	28			
2100	12.8	****	54	117	.8	062	3.8	1	2100	14.4	7.5	63	273	1.2	318	5.1	1	2100	15.8	9.1	64	280	.7	262	2.5	1			
2400	8.1	3.8	74	126	1.4	151	3.2	0	2400	9.5	6.9	84	187	1.0	194	2.5	0	2400	11.3	9.2	87	165	.9	154	1.9	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	8.4	****	94	134	.8	141	2.5	0	0300	12.5	11.0	91	319	2.0	333	5.1	0	0300	9.4	****	94	208	.4	223	1.3	0			
0600	7.8	7.0	95	126	.7	098	3.2	4	0600	11.4	****	96	284	1.2	295	3.8	1	0600	9.7	8.8	94	142	.6	154	1.9	1			
0900	10.2	8.3	88	054	1.2	046	2.5	20	0900	10.8	10.5	98	307	1.3	316	3.8	6	0900	10.3	****	90	051	.5	093	1.9	10			
1200	15.8	10.4	70	001	.8	038	2.5	20	1200	11.1	9.8	92	300	1.6	312	3.8	6	1200	11.2	****	84	344	.5	034	1.9	12			
1500	17.5	11.2	66	309	1.5	367	5.1	26	1500	11.9	10.0	88	320	1.7	307	3.8	10	1500	10.8	8.7	87	279	.7	323	1.9	13			
1800	18.6	11.3	62	312	2.5	309	6.3	28	1800	11.4	10.0	91	311	2.2	316	5.1	6	1800	9.8	****	93	398	1.0	307	2.5	2			
2100	15.5	10.9	74	385	1.4	276	5.7	0	2100	10.7	9.6	93	286	1.6	302	5.1	0	2100	8.8	8.6	99	273	.7	266	2.5	0			
2400	13.6	11.3	85	273	1.2	296	3.8	0	2400	10.0	****	99	258	.8	256	2.5	0	2400	7.8	****	**	264	1.0	260	1.9	0			

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

R & M CONSULTANTS, INC.

SUSUTINA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVELL CANYON WEATHER STATION
DATA TAKEN DURING August, 1984

DAY 19

DAY 20

DAY 21

HOUR NDNG	DEW							HOUR NDNG	DEW							HOUR NDNG	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	7.5	****	**	259	1.0	255	1.9	0	0300	8.1	****	**	193	.3	206	1.3	0	0300	6.9	****	**	186	.7	186	1.9	0
0600	7.0	****	**	199	.7	198	1.9	1	0600	7.7	****	**	184	.5	190	1.3	2	0600	6.3	****	**	167	.6	155	1.9	1
0900	9.4	****	**	213	.3	160	1.9	10	0900	8.7	****	**	122	.2	174	1.3	6	0900	****	****	**	089	.3	156	1.9	11
1200	11.3	****	**	258	.4	295	1.3	6	1200	9.5	****	**	288	1.1	315	3.8	8	1200	****	****	**	***	****	***	****	30
1500	12.1	****	**	275	1.2	301	2.5	23	1500	10.2	****	**	312	1.5	320	3.2	8	1500	****	****	**	***	****	***	****	17
1800	10.9	****	**	268	1.6	258	4.4	11	1800	10.3	****	**	288	1.3	280	3.2	10	1800	****	****	**	***	****	***	****	8
2100	9.4	****	**	258	1.4	264	3.2	0	2100	9.1	****	**	276	1.0	297	3.2	0	2100	****	****	**	***	****	***	****	0
2400	8.7	****	**	193	.4	247	1.9	0	2400	8.3	****	**	227	.5	279	1.9	0	2400	****	****	**	***	****	***	****	0

DAY 22

DAY 23

DAY 24

HOUR NDNG	DEW							HOUR NDNG	DEW							HOUR NDNG	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	****	****	**	***	****	***	****	0	0300	****	****	**	***	****	***	****	0	0300	****	****	**	***	****	***	****	0
0600	****	****	**	***	****	***	****	1	0600	****	****	**	***	****	***	****	0	0600	****	****	**	***	****	***	****	0
0900	****	****	**	***	****	***	****	11	0900	****	****	**	***	****	***	****	3	0900	****	****	**	***	****	***	****	7
1200	****	****	**	***	****	***	****	***	1200	****	****	**	***	****	***	****	9	1200	****	****	**	***	****	***	****	13
1500	****	****	**	***	****	***	****	16	1500	****	****	**	***	****	***	****	67	1500	8.4	****	46	004	.4	008	3.2	8
1800	****	****	**	***	****	***	****	4	1800	****	****	**	***	****	***	****	6	1800	8.9	****	44	337	.4	322	1.3	6
2100	****	****	**	***	****	***	****	0	2100	****	****	**	***	****	***	****	0	2100	7.9	****	43	298	.2	316	1.9	0
2400	****	****	**	***	****	***	****	0	2400	****	****	**	***	****	***	****	0	2400	7.7	****	45	195	.2	193	1.3	0

DAY 25

DAY 26

DAY 27

HOUR NDNG	DEW							HOUR NDNG	DEW							HOUR NDNG	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	7.4	****	51	337	.2	336	1.3	0	0300	2.7	-2.6	68	210	1.3	194	3.2	0	0300	-1.2	-6.5	67	171	1.3	175	3.2	0
0600	7.2	****	50	182	.2	146	1.9	0	0600	5.6	-6.1	43	163	1.4	192	7.6	1	0600	-2.8	-5.3	85	144	1.3	113	1.3	1
0900	7.0	****	**	291	.6	293	1.9	2	0900	5.1	-7.8	39	027	4.4	037	11.4	14	0900	4.7	-7.5	41	111	1.1	075	5.1	19
1200	6.4	2.7	77	316	.9	287	5.7	2	1200	7.3	-7.3	35	017	4.9	020	10.8	56	1200	7.3	-7.3	35	024	3.9	025	7.6	27
1500	6.0	1.4	72	236	1.3	261	4.4	6	1500	7.8	-6.9	35	340	4.0	341	9.5	51	1500	8.5	-7.0	33	028	2.7	028	5.7	43
1800	6.0	2.1	76	186	.9	153	4.4	8	1800	6.8	-7.7	35	005	3.7	033	8.9	22	1800	8.1	-7.4	33	029	3.9	030	7.6	2
2100	6.6	.9	77	265	1.6	270	4.4	0	2100	1.3	-6.8	55	356	1.3	348	8.3	0	2100	3.2	-8.3	43	032	3.8	023	8.9	1
2400	5.6	****	71	346	1.4	257	4.4	0	2400	-1.5	-7.1	61	184	1.2	195	3.2	0	2400	-1.5	-7.0	66	153	1.1	150	2.5	0

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 1984

DAY 28

DAY 29

DAY 30

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST			
NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	NDWG		
0300	-2.8	****	74	145	1.1	134	2.5	0	0300	.7	-6.2	60	172	1.2	178	2.5	0	0300	1.8	-6.8	53	136	1.7	119	5.1	0
0600	-3.7	-7.1	77	151	1.2	170	3.2	1	0600	-1.1	****	70	154	.9	177	2.5	1	0600	-1.8	****	68	165	1.5	162	3.8	1
0900	2.6	****	60	096	.8	115	2.5	35	0900	4.8	-5.9	46	093	.6	054	2.5	29	0900	4.9	-7.0	42	158	.6	099	5.7	33
1200	8.5	-7.8	31	082	2.1	078	5.7	53	1200	8.6	-5.8	36	118	2.2	099	4.4	49	1200	7.6	-6.7	36	080	3.2	073	7.0	59
1500	11.1	-8.8	24	087	2.1	084	5.1	47	1500	11.0	-6.0	30	128	2.1	138	5.1	43	1500	7.8	-6.9	35	029	5.3	020	10.2	42
1800	10.8	-9.6	23	107	2.4	121	5.7	16	1800	10.8	-6.7	29	115	2.2	127	5.1	19	1800	7.6	-7.0	35	025	6.1	023	10.2	19
2100	5.0	-7.6	40	145	1.7	129	5.1	0	2100	5.1	-7.8	39	041	3.5	061	11.4	0	2100	5.0	-7.3	41	028	6.3	025	11.4	0
2400	.4	-6.7	59	187	1.1	177	2.5	0	2400	2.7	-5.4	55	163	1.1	172	3.2	0	2400	3.1	-5.1	55	182	1.0	164	3.8	0

DAY 31

HOUR	DEW							
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	
NDWG	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	
0300	2.3	-3.6	65	158	1.1	149	3.2	0
0600	1.5	****	68	136	1.1	135	3.2	0
0900	4.7	-1.1	66	112	1.0	120	2.5	24
1200	7.6	-1.9	51	354	.9	054	4.4	17
1500	10.2	-1.3	45	010	1.4	028	6.3	17
1800	10.3	-1.5	44	310	.7	330	4.4	7
2100	7.2	-1.0	56	016	1.8	027	7.0	0
2400	2.8	-1.2	75	183	.9	139	2.5	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 1984

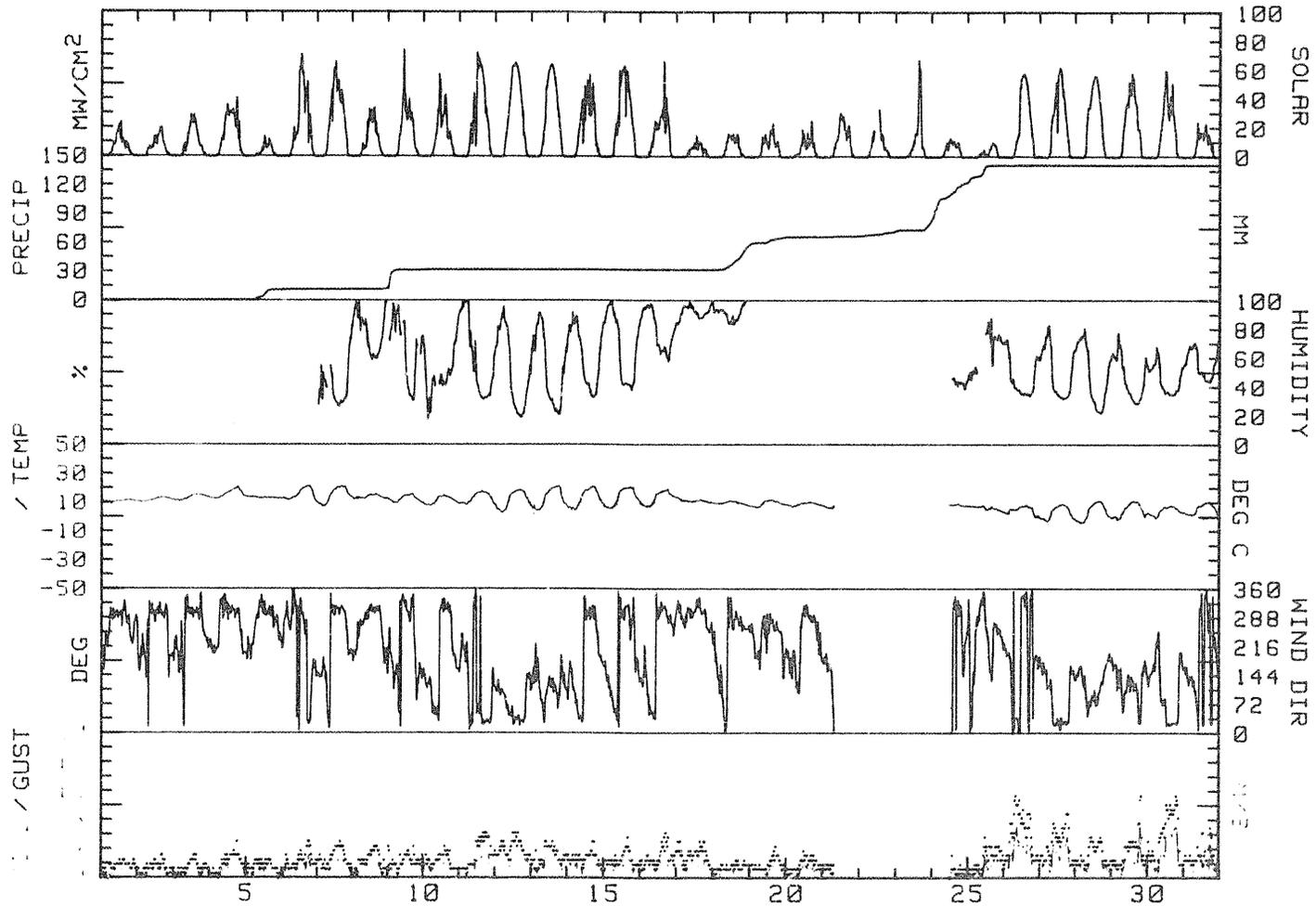
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SGH	DAY
1	11.8	9.4	10.6	289	.6	.7	307	2.5	WNW	**	*****	.6	1350	1
2	13.5	10.3	11.9	290	.5	.7	293	3.2	WNW	**	*****	.2	1335	2
3	15.6	11.0	13.3	290	.5	.7	300	3.2	WNW	**	*****	.2	2030	3
4	21.1	12.5	16.8	294	.8	1.0	300	5.1	SSW	**	*****	0.0	3200	4
5	14.3	12.7	13.5	289	.6	.7	271	2.5	WNW	**	*****	10.4	690	5
6	21.4	10.0	15.7	334	.5	1.2	024	5.1	NW	**	*****	.4	4445	6
7	21.2	7.1	14.2	295	.7	1.5	315	5.1	NW	40	2.0	0.0	5190	7
8	15.4	12.1	13.8	293	1.0	1.2	315	4.4	NW	71	8.8	1.0	2230	8
9	15.9	9.5	12.7	264	.2	1.1	264	4.4	NNW	60	4.9	19.4	3300	9
10	14.9	7.8	11.4	008	.2	1.2	317	4.4	NW	43	-1.2	.2	3035	10
11	17.8	8.4	13.1	040	1.2	1.6	034	6.3	NNE	42	1.6	0.0	5265	11
12	18.4	2.7	10.6	067	1.7	2.1	024	4.3	NNE	52	-.2	0.0	5805	12
13	21.2	4.4	12.8	115	1.2	1.4	095	5.1	ESE	48	1.6	0.0	5470	13
14	21.1	4.8	13.0	322	.3	1.4	310	5.1	WNW	60	4.7	0.0	4015	14
15	21.0	5.9	13.5	322	.3	1.3	318	5.7	NW	60	6.9	0.0	5360	15
16	19.2	6.9	13.1	316	.6	1.3	309	6.3	WNW	78	9.8	0.0	3020	16
17	13.7	10.0	11.9	303	1.5	1.6	333	5.1	NW	92	10.2	0.0	835	17
18	11.2	7.8	9.5	278	.4	.7	307	2.5	W	90	8.6	26.2	1260	18
19	12.1	6.8	9.5	253	.8	.9	258	4.4	WSW	**	*****	8.4	1395	19
20	10.6	7.0	8.8	276	.6	.9	315	3.8	WNW	**	*****	.2	1175	20
21	8.1	6.3	7.2	167	.5	.7	186	1.9	S	**	*****	.6	2055	21
22	*****	*****	*****	***	****	****	***	****	***	**	*****	5.2	1029	22
23	*****	*****	*****	***	****	****	***	****	***	**	*****	12.2	1980	23
24	9.2	7.7	8.5	325	.2	.4	008	3.2	NW	**	*****	38.6	940	24
25	8.0	3.6	5.8	254	.7	1.1	287	5.7	W	74	1.3	17.8	595	25
26	8.4	-.5	4.0	008	1.7	3.2	037	11.4	SSW	47	-6.1	.2	4325	26
27	9.2	-2.8	3.2	046	1.6	2.5	023	8.9	NNE	50	-6.9	0.0	4690	27
28	11.3	-4.1	3.6	117	1.3	1.6	078	5.7	E	45	-7.7	0.0	4650	28
29	11.1	-1.7	4.7	111	1.3	1.8	061	11.4	ESE	41	-6.4	0.0	4285	29
30	7.9	-.8	3.6	047	2.2	3.3	025	11.4	NNE	43	-6.8	0.0	3780	30
31	10.7	1.5	6.1	054	.3	1.3	027	7.0	SE	57	-2.3	0.0	1665	31
MONTH	21.4	-4.1	10.2	000	.3	1.4	037	11.4	WNW	56	1.2	141.8	94499	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 8.9
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 10.3
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 10.2
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 10.2

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
DEVIL CANYON WEATHER STATION
August, 1984



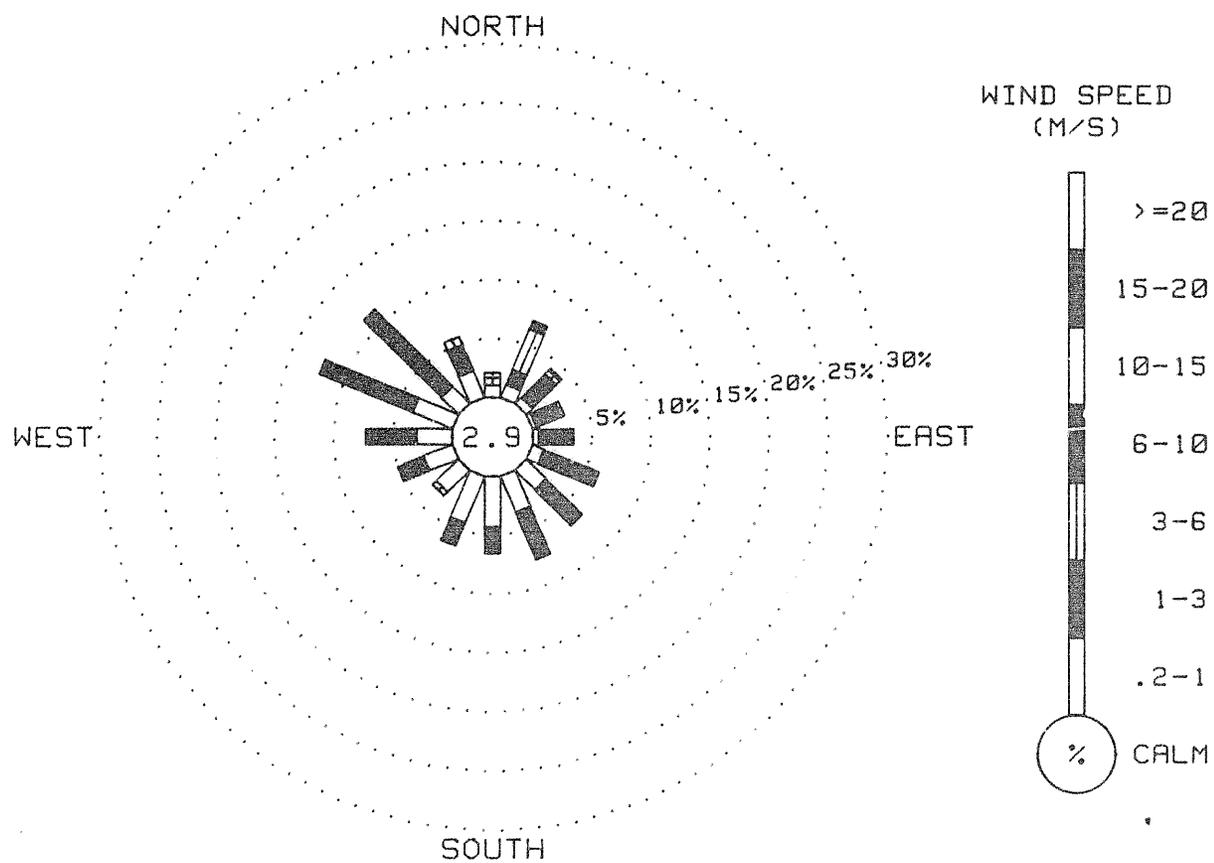
R & M CONSULTANTS, INC.,
 SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 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	1.05	.60	.45	0.00	0.00	0.00	0.00	2.10
NNE	1.20	1.35	3.75	.75	0.00	0.00	0.00	7.04
NE	.75	2.77	.45	.22	0.00	0.00	0.00	4.19
ENE	.37	2.25	.30	0.00	0.00	0.00	0.00	2.92
E	.52	2.70	.22	0.00	0.00	0.00	0.00	3.44
ESE	1.05	5.02	0.00	0.00	0.00	0.00	0.00	6.07
SE	2.32	4.19	.07	0.00	0.00	0.00	0.00	6.57
SSF	3.30	4.34	0.00	0.00	0.00	0.00	0.00	7.64
S	4.27	2.25	0.00	0.00	0.00	0.00	0.00	6.52
SSW	4.27	2.02	.07	0.00	0.00	0.00	0.00	6.37
SW	2.62	.45	0.00	0.00	0.00	0.00	0.00	3.07
WSW	2.62	2.32	0.00	0.00	0.00	0.00	0.00	4.94
W	3.00	4.27	0.00	0.00	0.00	0.00	0.00	7.27
WNW	3.60	8.54	0.00	0.00	0.00	0.00	0.00	12.14
NW	2.02	9.14	.07	0.00	0.00	0.00	0.00	11.23
NNW	2.47	2.32	.75	0.00	0.00	0.00	0.00	5.54
CALM								2.92
TOTAL	35.43	54.53	6.14	.97	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 1335 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
DEVIL CANYON WEATHER STATION
August, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING August, 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	2	3	7	9	12	17	22	18	10	11	6	8	8	3	2	1	0	0	0	0	6
2	0	0	0	0	0	0	5	6	5	7	10	12	9	15	18	20	12	8	4	2	2	0	0	0	0	6
3	0	0	0	0	0	2	8	6	8	16	21	27	25	28	23	16	10	7	6		2	0	0	0	0	8
4	0	0	0	0	1	2	6	12	13	24	30	33	30	31	32	29	21	34	18		5	1	0	0	0	13
5	0	0	0	0	0	1	2	2	2	3	5	12	8	6	10	9	7	3	2	1	0	0	0	0	0	3
6	0	0	0	0	0	3	6	17	13	16	22	60	67	59	42	45	46	13	25	11	3	0	0	0	0	19
7	0	0	0	0	1	3	11	20	34	35	52	59	56	49	46	41	44	33	23	14	2	0	0	0	0	22
8	0	0	0	0	0	2	7	5	6	17	27	28	28	28	26	20	16	9	4	2	1	0	0	0	0	9
9	0	0	0	0	0	2	5	15	23	43	53	36	26	36	29	29	21	9	5	3	1	0	0	0	0	14
10	0	0	0	0	1	2	6	11	19	32	55	21	27	36	38	16	14	16	8	4	1	0	0	0	0	13
11	0	0	0	0	0	3	12	22	23	36	11	71	65	65	61	54	39	32	24	10	3	1	0	0	0	22
12	0	0	0	0	0	4	13	22	32	44	57	63	64	64	61	54	44	34	16	10	2	0	0	0	0	24
13	0	0	0	0	0	1	5	12	22	47	54	60	64	64	60	53	43	32	21	11	2	0	0	0	0	23
14	0	0	0	0	0	3	11	20	32	25	36	37	45	34	43	33	45	27	9	5	2	0	0	0	0	17
15	0	0	0	0	0	2	13	21	22	41	51	59	62	46	60	52	42	32	22	14	2	0	0	0	0	22
16	0	0	0	0	0	3	5	9	17	22	22	20	26	29	30	42	29	30	19	3	1	0	0	0	0	13
17	0	0	0	0	0	1	2	4	6	7	7	8	11	6	11	10	4	5	5	2	1	0	0	0	0	3
18	0	0	0	0	0	1	2	5	10	15	14	14	16	11	12	16	7	4	2	1	0	0	0	0	0	5
19	0	0	0	0	0	1	2	10	10	14	12	8	12	19	20	11	8	10	7	1	0	0	0	0	0	6
20	0	0	0	0	0	2	2	2	5	8	15	12	9	12	10	12	19	9	3	2	0	0	0	0	0	3
21	0	0	0	0	0	1	2	7	11	13	23	30	26	26	18	14	20	13	4	2	0	0	0	0	0	9
22	0	0	0	0	0	1	4	7	13	***	***	***	26	20	14	11	6	5	3	1	0	0	0	0	0	4
23	0	0	0	0	0	0	1	1	2	4	6	9	16	16	45	61	19	7	4	2	0	0	0	0	0	6
24	0	0	0	0	0	0	1	2	6	8	7	13	11	10	8	8	9	8	4	1	0	0	0	0	0	2
25	0	0	0	0	0	0	1	2	3	3	4	2	2	3	6	9	10	9	6	2	0	0	0	0	0	2
26	0	0	0	0	0	1	2	8	13	16	48	55	58	57	53	45	35	25	15	6	0	0	0	0	0	13
27	0	0	0	0	0	1	3	22	29	37	49	37	59	61	50	45	35	24	14	5	1	0	0	0	0	20
28	0	0	0	0	0	1	3	25	35	37	46	52	56	56	50	42	34	20	8	3	0	0	0	0	0	19
29	0	0	0	0	0	1	3	17	26	36	36	51	47	57	49	38	31	19	17	4	0	0	0	0	0	18
30	0	0	0	0	0	1	3	11	20	30	46	60	36	27	42	41	32	22	10	2	0	0	0	0	0	16
31	0	0	0	0	0	0	2	5	17	17	17	16	14	18	20	11	15	10	7	1	0	0	0	0	0	7

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

R & M CONSULTANTS, INC.,
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING August, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1335	90
WIND SPEED	1334	90
WIND DIRECTION	1334	90
PEAK GUST	1334	90
RELATIVE HUMIDITY	660	44
PRECIPITATION	1481	100
SOLAR RADIATION	1481	100
DEW POINT	660	44

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:

- RH -15 RH Points 8/7 - 8/11
 +8 8/11 - 8/18
 -6 8/24 - 8/31
- Solar -1 mW/CM²

Additional comments on this month's data:

- RH data suspected to be poor all month due to bad oscillator, but have been published as indicative of true RH. Adjustments have been made where possible. Erratic data are not usable from 8/1 to 8/7 and 8/19 to 8/21.
- No temperature, RH, or wind data 8/21 to 8/24 due to annual maintenance. Solar radiation data lost for 3 hours on 8/22 when power was turned off. Precipitation data were estimated during this period.

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	.2	1.6	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	.2	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7
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	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	0.0	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	0.0	0.0	0.0	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	.4	.4	.2	.2	12
13	.2	0.0	.2	0.0	0.0	.2	0.0	.2	0.0	.6	.4	.2	0.0	0.0	.2	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	.2	.6	.6	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	.4	0.0	.2	.2	17
18	.4	1.6	.2	0.0	0.0	.6	.4	.6	2.0	1.2	.4	.4	.2	0.0	0.0	0.0	.2	.2	0.0	0.0	0.0	0.0	.2	.2	18
19	.4	.2	0.0	.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	.2	.2	0.0	0.0	0.0	0.0	1.0	.6	.6	.4	19
20	.2	.6	.2	.2	.8	.6	.2	.2	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	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	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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	.2	.2	.4	0.0	.2	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	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	.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	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	0.0	30

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

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

DAY 01

DAY 02

DAY 03

DAY 01									DAY 02									DAY 03								
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	1.2	-1.7	81	144	1.1	135	3.2	0	0300	1.6	-2.9	72	132	1.5	127	3.2	0									
0600	-0.5	-2.9	84	137	.7	108	2.5	1	0600	0.0	-3.0	80	105	1.7	110	5.1	1									
0900	3.7	-1.4	69	080	1.5	104	3.2	26	0900	4.5	-1.3	66	072	1.5	089	3.2	25									
1200	12.5	-1.9	37	075	1.4	122	5.7	52	1200	13.0	*****	36	042	1.1	061	2.5	51									
1500	14.7	-2.8	30	137	1.8	126	5.1	49	1500	15.3	-3.2	28	287	1.4	290	3.8	48									
1800	14.7	-2.8	30	001	.6	353	4.4	20	1800	15.6	-3.0	28	263	1.3	244	3.2	19									
2100	7.1	-2.4	51	229	1.0	225	2.5	0	2100	10.0	-0.8	47	096	.3	138	3.8	0									
2400	4.8	-2.1	61	140	1.1	139	3.2	0	2400	3.7	-0.8	72	140	1.3	116	3.8	0									

DAY 04

DAY 05

DAY 06

DAY 04									DAY 05									DAY 06								
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	5.3	*****	63	165	.7	154	1.9	0	0300	6.0	*****	76	158	1.1	146	3.2	0									
0600	3.4	*****	72	148	.4	144	1.9	0	0600	5.7	*****	80	179	.4	162	1.9	0									
0900	7.3	*****	61	155	.5	153	1.9	10	0900	8.7	*****	72	276	.3	229	1.9	14									
1200	13.9	-0.3	38	122	2.0	121	5.7	50	1200	14.2	2.1	44	092	1.3	100	5.1	25									
1500	15.0	.3	37	113	3.2	123	7.0	28	1500	15.6	1.6	39	076	1.4	055	4.4	23									
1800	14.5	.2	38	102	2.3	092	5.1	7	1800	12.2	4.0	57	291	1.3	320	5.7	8									
2100	11.2	1.4	51	123	1.7	121	4.4	0	2100	10.2	3.5	63	212	1.0	205	3.2	0									
2400	5.8	*****	71	166	1.2	145	2.5	0	2400	7.7	*****	72	192	.7	190	1.9	0									

DAY 07

DAY 08

DAY 09

DAY 07									DAY 08									DAY 09								
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	6.1	*****	93	140	.6	127	1.9	0	0300	3.4	*****	84	132	1.1	110	3.2	0									
0600	6.0	4.6	91	116	1.0	109	2.5	0	0600	2.6	.3	85	113	1.3	153	2.5	1									
0900	6.6	4.4	86	100	.7	147	2.5	10	0900	4.4	.7	77	106	1.6	112	3.2	24									
1200	9.3	5.3	76	033	.8	060	1.9	14	1200	12.3	1.6	48	095	1.3	112	3.8	43									
1500	11.6	3.9	59	265	.8	257	2.5	44	1500	14.4	-0.6	36	106	1.8	110	4.4	44									
1800	8.2	*****	76	204	.8	209	4.4	8	1800	14.6	-0.4	36	107	1.5	088	3.8	9									
2100	4.9	1.9	81	168	.9	153	1.9	0	2100	6.4	-0.3	62	156	1.2	146	2.5	0									
2400	5.0	1.8	80	136	1.2	129	3.2	0	2400	2.8	-0.5	79	120	1.0	123	2.5	0									

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

R & M CONSULTANTS, INC.

SUSIUTNA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

DAY 10								DAY 11								DAY 12										
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	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	3.9	.1	76	112	.8	105	3.2	0	0300	.8	****	82	150	.7	114	2.5	0	0300	4.4	-.2	72	114	.9	088	3.2	0
0600	.8	-1.3	86	120	1.0	123	3.2	0	0600	-.5	-2.3	88	118	1.2	131	3.2	0	0600	4.3	1.2	80	081	1.4	088	3.8	0
0900	3.9	-1.0	70	081	1.7	106	5.1	22	0900	2.2	-2.1	73	086	1.2	104	3.2	21	0900	5.9	****	75	078	1.1	098	3.2	17
1200	13.3	1.2	44	053	1.6	050	2.5	46	1200	12.7	.4	43	061	1.6	057	3.2	44	1200	8.8	3.7	70	359	.8	057	2.5	22
1500	16.2	-1.5	30	353	1.4	351	4.4	49	1500	15.9	****	27	042	1.0	068	3.2	43	1500	10.5	3.6	62	303	2.0	312	4.4	25
1800	16.5	-1.7	29	112	1.1	030	5.1	14	1800	13.4	-3.1	32	261	1.2	279	3.8	8	1800	10.0	3.6	64	315	1.8	324	3.8	4
2100	9.4	-1.7	46	120	1.0	084	4.4	0	2100	7.1	-2.4	51	183	1.0	210	1.9	0	2100	6.9	3.9	81	243	.9	243	2.5	0
2400	3.8	-1.3	69	130	1.3	102	3.2	0	2400	6.0	-1.1	60	134	1.4	132	2.5	0	2400	5.8	****	91	168	1.1	196	3.8	0

DAY 13

DAY 14

DAY 15

DAY 13								DAY 14								DAY 15										
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	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	5.3	****	93	134	.6	163	1.9	0	0300	4.3	.1	74	181	1.2	160	3.2	0	0300	9.9	1.0	54	158	1.3	121	3.2	0
0600	5.2	2.7	84	117	1.0	125	3.2	0	0600	6.2	-.1	64	168	1.0	153	3.2	0	0600	9.3	1.7	59	128	1.9	135	5.7	0
0900	5.6	****	83	099	.7	125	2.5	4	0900	9.4	-.2	51	156	1.1	116	5.1	13	0900	10.5	2.6	58	154	1.6	159	3.8	11
1200	7.6	****	79	045	.5	074	1.9	18	1200	13.1	-1.4	37	097	2.4	114	5.7	29	1200	13.4	2.9	49	098	1.7	094	4.4	22
1500	8.9	****	78	320	.8	329	1.9	16	1500	14.5	-.5	36	096	2.8	106	8.3	19	1500	15.0	1.4	40	044	1.0	068	5.2	19
1800	8.6	5.2	79	284	1.1	285	2.5	7	1800	13.7	-.9	37	106	2.9	113	7.0	2	1800	14.1	****	43	249	.2	050	3.2	6
2100	4.4	2.1	85	189	.6	267	1.9	0	2100	11.1	-1.4	42	149	1.4	152	5.1	0	2100	8.6	5.9	83	323	.7	322	3.2	0
2400	2.7	.3	84	178	.9	168	2.5	0	2400	7.4	-1.3	54	169	1.6	141	3.2	0	2400	6.5	4.3	86	135	.9	106	2.5	0

DAY 16

DAY 17

DAY 18

DAY 16								DAY 17								DAY 18										
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	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	4.6	2.8	88	122	1.4	118	4.4	0	0300	4.3	****	97	186	.4	180	1.3	0	0300	5.7	****	99	134	1.0	149	2.5	0
0600	3.2	1.2	87	102	1.6	105	3.2	0	0600	2.2	****	98	171	.6	165	1.3	0	0600	5.5	****	88	138	.8	130	3.2	0
0900	3.4	.1	79	085	1.5	095	3.2	19	0900	4.2	****	72	193	.3	150	1.9	22	0900	5.8	3.1	83	115	1.3	134	3.2	3
1200	10.9	****	65	047	1.1	064	3.2	42	1200	8.1	4.2	76	340	.4	297	3.2	19	1200	7.8	5.4	86	074	1.0	081	3.2	8
1500	14.4	2.2	44	301	1.3	307	3.8	43	1500	8.9	5.5	79	306	1.3	351	3.2	10	1500	8.5	4.2	74	317	1.1	382	3.8	7
1800	10.2	****	60	286	1.3	307	7.0	3	1800	9.1	5.7	79	315	1.3	311	3.2	5	1800	6.5	****	76	241	.8	247	4.4	2
2100	7.1	****	71	181	.9	183	2.5	0	2100	7.2	7.0	99	164	.6	132	3.2	0	2100	6.0	2.3	77	130	1.4	118	3.8	0
2400	5.6	****	87	187	.6	262	1.9	0	2400	6.5	5.0	90	140	1.2	147	4.4	0	2400	5.5	2.8	83	142	1.0	176	3.2	0

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R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

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

DAY 19

DAY 20

DAY 21

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	5.1	3.1	87	135	.9	142	2.5	0	0300	.9	*****	91	201	.4	203	1.9	0	0300	-1.4	-2.9	90	110	.9	085	3.8	0						
0600	4.3	1.7	83	149	.9	165	3.2	0	0600	2.0	*****	88	168	.9	148	2.5	0	0600	-2.4	*****	92	153	.7	146	2.5	0						
0900	5.4	1.4	75	137	.9	142	2.5	7	0900	3.4	.8	83	198	1.0	210	3.8	3	0900	.1	*****	75	119	.6	126	3.2	12						
1200	6.7	1.3	88	301	1.0	287	5.1	57	1200	7.8	*****	56	201	.9	211	3.2	31	1200	7.6	-1.1	54	059	1.5	070	3.2	38						
1500	6.9	*****	68	304	1.4	270	5.7	10	1500	9.7	-2.7	42	039	3.8	051	7.6	33	1500	11.9	-2.8	36	008	.7	053	1.9	33						
1800	3.4	.1	79	280	1.4	292	5.1	5	1800	8.8	-3.2	43	030	4.0	024	8.3	9	1800	11.5	-2.8	37	274	1.2	280	2.5	9						
2100	2.0	-3.3	85	263	1.0	254	3.8	0	2100	1.6	-3.2	70	133	.6	022	5.7	0	2100	3.5	-2.2	66	186	1.2	219	2.5	0						
2400	.5	*****	90	281	.8	309	3.2	0	2400	-5	-3.2	82	145	1.2	128	3.2	0	2400	.5	-3.4	75	143	.8	108	3.2	0						

DAY 22

DAY 23

DAY 24

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	-3	-3.2	81	119	.9	111	3.2	0	0300	1.9	-2.2	74	103	1.4	111	3.2	0	0300	3.6	-2.3	65	113	1.3	103	2.5	0						
0600	-6	-3.3	82	098	1.1	110	2.5	0	0600	.7	-2.4	80	094	2.2	099	3.2	0	0600	1.5	*****	74	107	1.3	119	3.2	0						
0900	.3	-3.6	75	094	2.0	098	3.2	15	0900	2.0	-1.9	75	093	1.9	095	3.8	12	0900	2.7	*****	73	122	.4	105	1.9	8						
1200	7.8	-4	56	081	1.6	088	3.2	36	1200	10.7	-2.5	40	073	1.2	093	4.4	26	1200	9.7	-2.7	42	098	.8	072	3.8	28						
1500	13.6	-2.1	34	087	1.4	067	3.8	31	1500	12.5	-2.3	36	070	1.3	078	5.1	18	1500	11.1	-3.2	37	081	1.6	074	3.8	11						
1800	11.8	-4.1	33	151	1.0	171	3.2	4	1800	10.2	-2.6	41	288	1.0	356	3.2	2	1800	10.1	-3.4	39	085	.5	044	2.5	2						
2100	7.8	-3.5	45	132	1.9	138	3.8	0	2100	6.4	*****	57	181	.9	204	1.9	0	2100	7.5	*****	55	221	.8	251	1.9	0						
2400	3.2	*****	66	123	1.0	147	3.2	0	2400	5.3	*****	62	119	.8	128	2.5	0	2400	6.3	*****	61	181	.7	180	1.3	0						

DAY 25

DAY 26

DAY 27

HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			WIND			GUST MAX.			HOUR	DEW			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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S	MW
0300	6.0	*****	73	199	.7	197	1.9	0	0300	4.0	.7	79	111	.9	111	3.2	0	0300	1.3	-8	86	095	1.4	105	3.2	0						
0600	4.0	*****	99	149	.5	117	1.9	0	0600	2.5	-4	81	103	1.4	096	3.2	0	0600	1.5	-4	87	084	1.6	081	3.8	0						
0900	5.0	*****	84	128	.7	135	1.9	4	0900	3.8	.2	77	094	1.3	097	2.5	10	0900	2.0	-4	84	097	1.7	089	3.2	3						
1200	7.4	*****	71	063	.8	084	1.9	33	1200	9.6	*****	58	063	1.0	074	2.5	13	1200	9.3	1.0	56	048	1.7	074	3.2	36						
1500	9.0	3.0	66	321	.7	295	3.8	10	1500	9.9	1.8	57	034	.5	099	3.8	12	1500	12.7	-7	40	070	1.2	074	3.8	24						
1800	8.4	*****	68	283	1.2	281	2.5	2	1800	9.1	.5	55	137	.5	111	2.5	2	1800	10.7	-5	46	263	1.4	281	3.2	2						
2100	6.0	*****	79	209	.7	261	1.9	0	2100	4.8	*****	70	168	1.0	147	2.5	0	2100	4.3	-1.5	66	172	1.3	144	3.8	0						
2400	3.9	*****	80	157	.8	154	1.9	0	2400	2.9	-4	79	109	.9	096	3.2	0	2400	1.8	-2.7	72	156	1.3	161	3.2	0						

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

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

DAY 28

DAY 29

DAY 30

DAY 28								DAY 29								DAY 30										
HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.									
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	NDWG	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	1.5	-2.6	74	128	1.4	143	3.2	0	0300	7.0	.7	64	111	2.1	111	6.3	0	0300	6.0	4.3	89	200	1.2	177	2.5	0
0600	.1	****	82	163	.9	160	2.5	0	0600	6.8	2.3	73	112	3.1	094	7.6	0	0600	6.8	****	83	185	1.0	203	1.9	0
0900	5.1	****	58	173	.9	175	2.5	7	0900	7.9	3.2	72	122	1.7	119	5.7	7	0900	7.1	3.2	76	165	1.1	181	2.5	7
1200	10.6	****	46	130	.3	160	1.9	31	1200	9.8	3.8	66	105	2.1	093	6.3	11	1200	11.5	2.8	55	107	1.2	118	3.8	32
1500	12.4	-1.6	38	115	2.8	124	7.0	14	1500	11.3	4.1	61	109	3.2	116	7.6	7	1500	11.8	1.4	49	123	2.8	124	5.7	15
1800	11.0	-2.5	39	102	1.6	106	5.7	1	1800	11.6	4.6	62	115	2.2	120	6.3	0	1800	10.8	-1.0	44	103	2.4	197	7.6	1
2100	8.6	-.7	52	109	2.1	139	6.3	0	2100	9.3	4.2	70	154	.9	098	3.8	0	2100	8.7	.2	55	088	2.6	075	7.0	0
2400	7.2	.7	63	090	2.2	095	6.3	0	2400	8.4	4.1	74	181	1.1	163	2.5	0	2400	8.6	.6	57	104	2.4	111	6.3	0

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING September, 1984

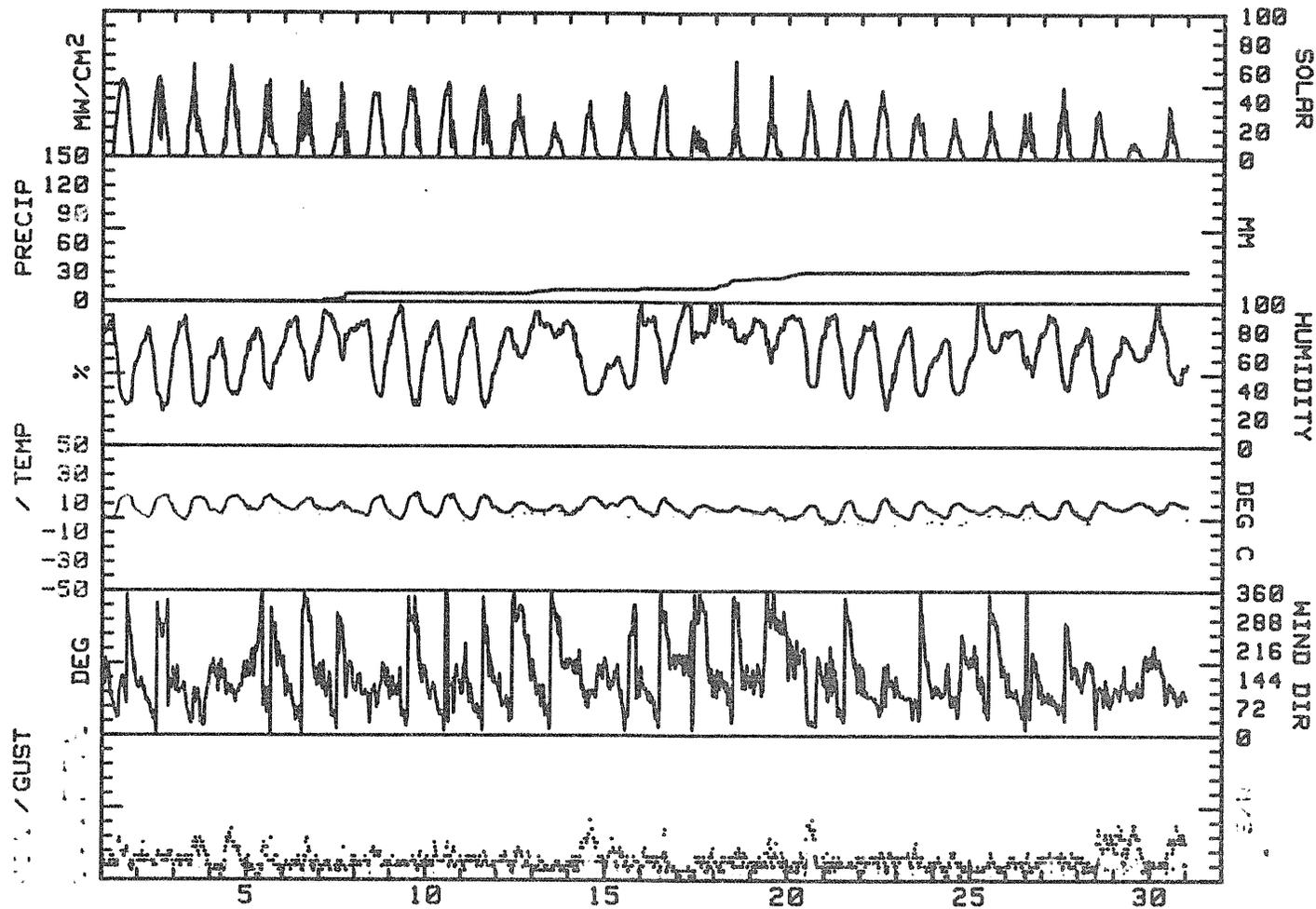
DAY	MAX.	MIN.	MEAN	RES.	RES.	AVG.	MAX.	MAX.	P'VAL	MEAN	MEAN	PRECIP	DAY'S	SOLAR	DAY
	TEMP.	TEMP.	TEMP.	WIND	WIND	WIND	GUST	GUST		RH	DP		ENERGY		
	DEG C	DEG C	DEG C	DIR.	SPD.	SPD.	DIR.	SPD.	DIR.	%	DEG C	MM	WH/SQM		
1	15.6	-0.8	7.4	120	.7	1.4	122	5.7	SE	53	-2.2	0.0	4440	1	
2	15.7	0.0	7.9	105	.4	1.5	110	5.1	ESE	55	-2.0	0.0	3875	2	
3	14.4	-1.5	6.5	087	1.3	1.6	099	5.7	ESE	54	-2.8	0.0	3120	3	
4	15.5	2.9	9.2	125	1.4	1.5	123	7.0	ESE	44	.5	0.0	3570	4	
5	15.9	5.2	10.6	155	.3	1.1	320	5.7	SSW	51	2.7	0.0	2330	5	
6	13.7	5.6	9.7	036	.2	1.1	338	5.7	SE	61	2.9	0.0	2360	6	
7	11.6	4.3	8.0	141	.5	1.0	209	4.4	SE	80	3.7	8.2	1855	7	
8	15.4	1.8	8.6	115	1.3	1.4	110	4.4	ESE	63	.4	.2	3525	8	
9	17.6	-0.6	8.5	104	.2	1.1	139	3.8	SE	55	-0.5	0.0	3490	9	
10	16.5	.8	8.7	089	.9	1.4	106	5.1	ESE	55	-0.9	0.0	3340	10	
11	15.9	-0.8	7.6	111	.6	1.3	279	3.8	SE	56	-1.7	0.0	3130	11	
12	11.1	3.7	7.4	350	.2	1.3	312	4.4	E	72	2.5	2.0	2090	12	
13	9.1	2.7	5.9	147	.2	.9	125	3.2	S	82	3.3	2.2	1245	13	
14	14.7	2.7	8.7	127	1.5	1.9	106	8.3	S	49	-0.7	0.0	1970	14	
15	15.0	6.5	10.8	124	.8	1.3	135	-5.7	ESE	60	2.5	1.4	1980	15	
16	14.5	1.9	8.2	105	.3	1.3	307	7.0	E	74	2.2	0.0	2785	16	
17	9.8	1.1	5.5	236	.2	.9	147	4.4	SSE	84	5.5	1.4	1195	17	
18	8.9	5.2	7.1	127	.6	1.2	247	4.4	SE	83	3.6	8.8	1315	18	
19	8.2	.5	4.4	261	.4	1.1	270	5.7	W	77	1.1	3.8	1445	19	
20	9.7	-0.5	4.6	069	.7	1.8	024	8.3	S	63	-1.9	3.2	2275	20	
21	12.7	-2.4	5.2	125	.3	1.0	085	3.8	SE	57	-2.3	0.0	2760	21	
22	14.5	-1.6	6.5	108	1.3	1.5	067	3.8	E	58	-2.9	0.0	2600	22	
23	12.5	.1	6.3	095	1.0	1.4	078	5.1	E	59	-2.2	0.0	1900	23	
24	11.4	1.1	6.3	114	.7	1.0	072	3.8	ESE	50	-2.7	0.0	1345	24	
25	9.5	3.9	6.7	193	.2	.8	295	3.8	SSW	73	2.7	1.2	1265	25	
26	12.1	2.3	7.2	104	.8	1.1	099	3.8	ESE	73	.3	0.0	1380	26	
27	12.7	.6	6.7	101	.9	1.5	081	3.8	E	68	-0.6	0.0	2035	27	
28	12.7	0.0	6.4	117	1.4	1.6	124	7.0	ESE	53	-1.8	0.0	1620	28	
29	11.7	6.0	8.9	118	1.9	2.1	094	7.6	ESE	67	3.1	.2	640	29	
30	12.2	4.0	8.1	120	1.5	1.9	097	7.6	ESF	63	1.8	0.0	1450	30	
MONTH	17.6	-2.4	7.4	113	.7	1.3	166	8.3	ESE	62	.4	32.6	58330		

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 6.3
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 6.3
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 8.3
 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
DEVIL CANYON WEATHER STATION
September, 1984



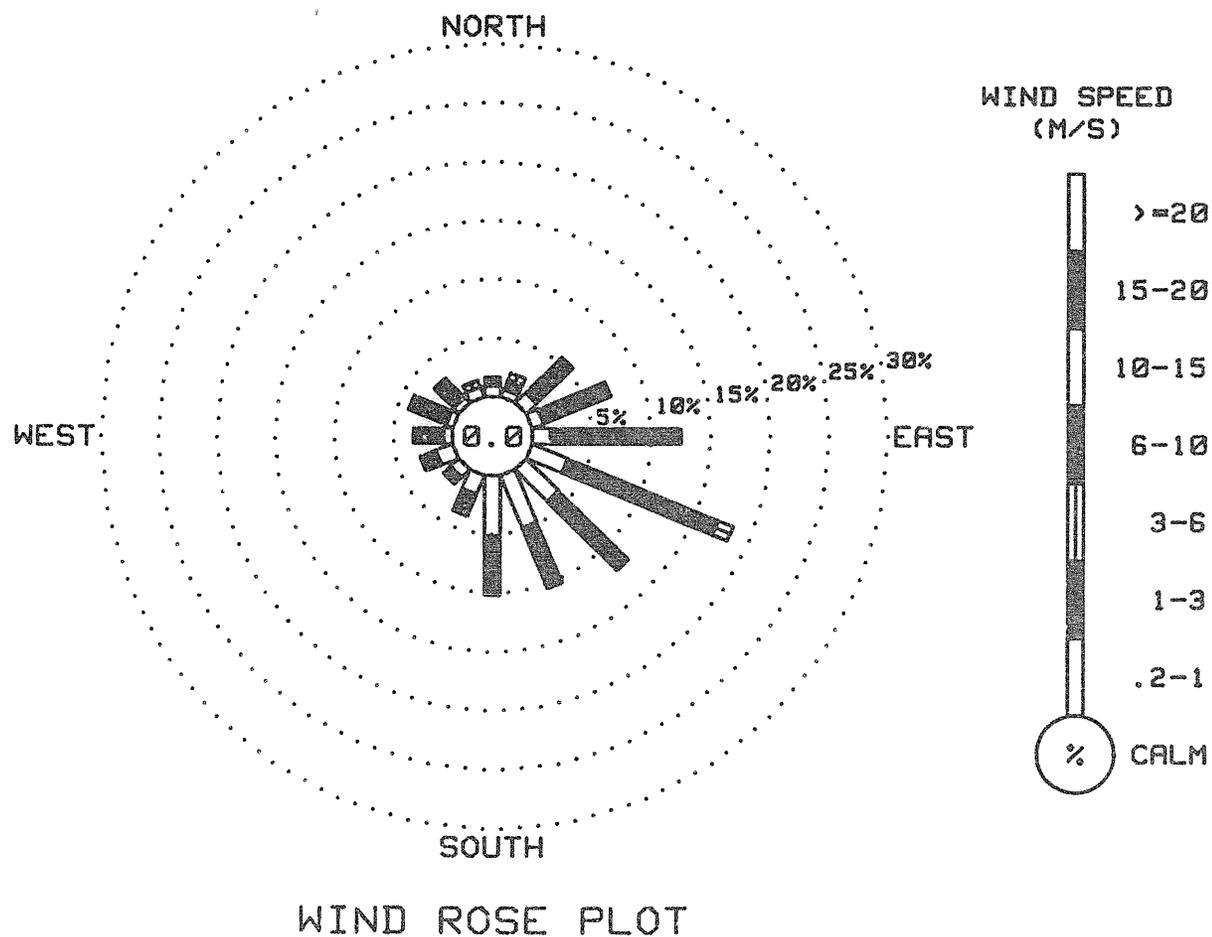
R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING September, 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	.90	.76	0.00	0.00	0.00	0.00	0.00	1.67
NNE	.69	.90	.63	0.00	0.00	0.00	0.00	2.22
NE	1.25	4.03	.21	0.00	0.00	0.00	0.00	5.49
ENE	1.04	5.97	.07	0.00	0.00	0.00	0.00	7.08
E	1.53	10.69	.28	0.00	0.00	0.00	0.00	12.50
ESE	3.19	13.68	1.39	0.00	0.00	0.00	0.00	18.26
SE	3.82	8.06	.21	0.00	0.00	0.00	0.00	12.09
SSE	4.79	5.56	0.00	0.00	0.00	0.00	0.00	10.35
S	5.14	5.00	0.00	0.00	0.00	0.00	0.00	10.14
SSW	1.74	2.01	0.00	0.00	0.00	0.00	0.00	3.75
SW	.97	.83	0.00	0.00	0.00	0.00	0.00	1.81
WSW	1.53	1.39	0.00	0.00	0.00	0.00	0.00	2.92
W	.76	2.50	0.00	0.00	0.00	0.00	0.00	3.26
WNW	.63	3.40	0.00	0.00	0.00	0.00	0.00	4.03
NW	.63	2.29	0.00	0.00	0.00	0.00	0.00	2.92
PNW	.90	.56	.07	0.00	0.00	0.00	0.00	1.53
CALM								0.00
TOTAL	29.51	67.64	2.85	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
1440 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
DEVIL CANYON WEATHER STATION
September, 1984



R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	0	0	0	0	0	1	2	13	24	34	43	50	53	53	50	47	39	23	12	3	0	0	0	0	19
2	0	0	0	0	0	1	3	11	23	34	42	50	34	54	30	40	31	21	14	3	0	0	0	0	16
3	0	0	0	0	0	1	2	13	24	33	42	56	36	26	26	22	16	11	6	2	0	0	0	0	13
4	0	0	0	0	0	0	3	9	8	30	42	48	60	51	40	28	27	11	3	1	0	0	0	0	15
5	0	0	0	0	0	0	2	6	13	18	40	37	37	34	19	12	9	8	2	0	0	0	0	0	10
6	0	0	0	0	0	0	1	3	18	13	37	15	15	30	32	29	30	11	4	1	0	0	0	0	10
7	0	0	0	0	0	0	1	5	8	13	19	15	23	36	37	6	9	13	3	1	0	0	0	0	8
8	0	0	0	0	0	1	3	7	21	31	40	44	44	43	43	33	27	13	7	1	0	0	0	0	15
9	0	0	0	0	0	0	2	12	21	27	37	48	44	42	43	39	8	24	6	1	0	0	0	0	15
10	0	0	0	0	0	0	2	8	20	29	38	45	45	51	51	10	16	16	6	1	0	0	0	0	14
11	0	0	0	0	0	0	2	9	19	29	37	43	47	29	33	29	20	12	7	1	0	0	0	0	13
12	0	0	0	0	0	0	1	4	11	18	23	24	33	31	22	22	13	7	2	0	0	0	0	0	9
13	0	0	0	0	0	0	1	2	4	7	8	17	22	15	17	12	12	7	3	0	0	0	0	0	5
14	0	0	0	0	0	0	1	4	9	22	29	29	39	21	22	14	6	3	2	0	0	0	0	0	8
15	0	0	0	0	0	0	1	4	11	18	21	30	33	31	22	13	9	6	2	0	0	0	0	0	8
16	0	0	0	0	0	0	1	7	17	26	35	41	44	47	44	10	5	4	2	0	0	0	0	0	12
17	0	0	0	0	0	0	1	7	19	16	10	17	11	7	12	8	9	4	1	0	0	0	0	0	5
18	0	0	0	0	0	0	0	2	2	3	16	10	58	20	12	5	3	2	1	0	0	0	0	0	5
19	0	0	0	0	0	0	0	2	5	11	21	38	22	15	17	6	5	4	1	0	0	0	0	0	6
20	0	0	0	0	0	0	0	1	2	11	17	27	44	39	35	28	13	11	2	0	0	0	0	0	9
21	0	0	0	0	0	0	1	5	9	30	32	37	40	39	35	28	12	11	1	0	0	0	0	0	12
22	0	0	0	0	0	0	1	3	13	18	29	36	45	38	33	29	12	6	1	0	0	0	0	0	11
23	0	0	0	0	0	0	1	5	13	23	28	26	26	20	18	23	5	4	1	0	0	0	0	0	8
24	0	0	0	0	0	0	0	2	6	13	15	24	25	18	14	11	5	4	1	0	0	0	0	0	6
25	0	0	0	0	0	0	0	2	4	9	14	23	21	21	15	12	6	3	1	0	0	0	0	0	5
26	0	0	0	0	0	0	0	2	8	12	26	11	17	18	22	7	12	4	1	0	0	0	0	0	6
27	0	0	0	0	0	0	0	2	5	22	24	34	42	23	29	10	11	3	1	0	0	0	0	0	8
28	0	0	0	0	0	0	0	2	5	12	25	31	32	24	15	11	6	1	1	0	0	0	0	0	7
29	0	0	0	0	0	0	0	1	5	9	10	9	10	7	7	5	3	1	0	0	0	0	0	0	3
30	0	0	0	0	0	0	0	2	5	7	17	34	26	20	16	12	7	2	0	0	0	0	0	0	6

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING September, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1440	100
WIND SPEED	1440	100
WIND DIRECTION	1440	100
PEAK GUST	1440	100
RELATIVE HUMIDITY	1015	70
PRECIPITATION	1440	100
SOLAR RADIATION	1440	100
DEW POINT	1015	70

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 -6 RH Points
2. Solar -1 mW/CM²

Additional comments on this month's data:

1. Timing and quantity of precipitation are suspect on days where freezing temperatures occur. However, thawing temperatures on these days also occur, so daily totals should be accurate.

No precipitation data for October

(See INTERPRETATION OF DATA).

R A M CONSULTANTS INC.

SUSANITA HYDROELECTRIC PROJECT

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

DAY 01

DAY 02

DAY 03

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	8.5	.5	57	127	1.9	108	7.6	0	0300	5.8	1.6	74	134	1.0	127	2.5	0	0300	.5	-2.9	95	114	.9	156	2.5	0
0600	5.0	****	66	140	1.4	134	4.4	0	0600	4.7	****	80	148	.6	141	1.9	0	0600	-1.5	-1.6	99	106	.9	091	2.5	0
0900	7.4	****	61	177	1.3	172	3.2	9	0900	4.2	1.9	85	122	1.0	134	2.5	5	0900	-8	-9	99	***	****	***	3.2	4
1200	11.4	.4	47	126	2.2	131	5.7	31	1200	8.3	****	67	115	.4	147	1.9	34	1200	4.0	1.4	83	104	1.7	151	3.2	21
1500	12.0	.4	45	108	2.9	106	10.2	13	1500	8.7	2.8	66	322	1.0	001	3.2	7	1500	8.4	.6	58	040	.7	061	3.2	7
1800	8.8	.3	55	139	1.5	112	6.3	1	1800	8.3	1.9	64	104	.4	088	3.8	2	1800	5.3	-1.8	60	252	.8	263	2.5	1
2100	5.1	-1.3	58	181	1.3	184	1.9	0	2100	3.6	1.6	87	129	1.4	092	3.2	0	2100	1.3	-2.6	75	161	.9	174	2.5	0
2400	6.3	.9	68	150	1.0	129	3.2	0	2400	1.8	****	94	127	1.0	139	2.5	0	2400	-7	****	82	122	1.1	125	2.5	0

DAY 04

DAY 05

DAY 06

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-1.5	-3.4	87	138	.9	135	3.2	0	0300	-1	****	72	178	.9	180	1.9	0	0300	4.1	-3.6	57	165	1.9	153	3.8	0
0600	-3.3	-4.7	90	092	1.5	094	3.8	0	0600	2.6	-3.9	62	169	.9	178	1.9	0	0600	4.7	-4.6	51	170	1.2	172	2.5	0
0900	-2.8	-5.1	84	088	2.1	087	3.8	2	0900	3.4	-4.5	56	159	1.3	160	3.2	2	0900	5.3	-3.8	52	137	1.2	133	3.2	2
1200	4.5	-2.1	62	083	1.9	087	3.8	30	1200	6.9	-5.2	42	113	1.1	088	4.4	12	1200	7.4	-2.7	49	099	1.3	123	3.8	21
1500	9.8	-4.3	37	122	1.1	132	3.8	19	1500	8.5	-5.1	38	112	2.3	111	7.0	17	1500	8.4	-1.2	51	110	1.6	100	3.8	9
1800	7.3	-4.9	42	149	1.6	137	3.2	1	1800	6.7	-4.2	46	121	2.4	123	6.3	0	1800	7.2	-1.5	54	119	1.1	120	3.2	1
2100	1.8	-4.5	63	176	1.6	165	3.2	0	2100	5.8	-3.9	50	121	1.4	101	7.0	0	2100	3.3	-2.0	68	173	1.2	178	1.9	0
2400	-1.3	-4.9	71	189	1.2	193	2.5	0	2400	3.0	-3.1	64	159	1.4	153	3.2	0	2400	.2	****	82	185	.9	186	1.9	0

DAY 07

DAY 08

DAY 09

HOUR	DEW							HOUR	DEW							HOUR	DEW									
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST		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	-1.6	-2.8	85	126	.9	139	3.2	0	0300	3.5	.0	78	142	1.0	133	3.2	0	0300	.4	****	97	130	.3	123	1.3	0
0600	-1.1	-2.2	86	101	1.4	103	3.8	0	0600	4.3	1.3	81	125	1.4	134	5.1	0	0600	.6	****	97	149	.3	178	1.9	0
0900	.9	-2.2	80	104	1.5	095	3.8	2	0900	3.2	****	83	161	.9	146	2.5	6	0900	.5	****	97	111	.6	121	1.9	5
1200	6.8	-1.2	61	105	1.2	125	3.8	9	1200	7.1	****	74	107	.7	104	2.5	14	1200	2.8	****	91	065	.7	063	2.5	14
1500	8.6	.8	58	095	1.4	091	3.8	9	1500	6.7	3.7	81	301	.4	255	2.5	3	1500	5.1	****	72	350	.5	311	1.9	23
1800	6.8	.5	64	160	1.0	118	2.5	0	1800	.9	.3	96	306	2.1	318	6.3	0	1800	4.0	****	85	275	.8	370	2.5	0
2100	2.6	****	79	185	1.1	179	1.9	0	2100	.7	****	97	296	1.2	303	3.8	0	2100	-1.1	-1.1	93	178	1.2	177	3.2	0
2400	3.4	-1.1	78	187	.8	153	1.9	0	2400	.5	****	96	157	.4	133	1.9	0	2400	-1.7	-2.7	93	139	1.2	136	3.2	0

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

R & M CONSULTANTS, INC.

SUSUTNA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST						
NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S						
0300	-3.2	-4.1	94	***	****	***	0300	-1.6	-3.5	87	147	.9	128	2.5	0300	-5	****	97	185	.2	278	1.3	0			
0600	-4.1	-4.9	94	***	****	***	0600	-3.0	-4.6	89	133	1.1	151	3.2	0600	-8	****	98	113	.4	132	1.9	0			
0900	-4.5	-5.8	91	***	****	***	0900	-3.1	****	92	121	1.2	131	3.8	0900	-8	****	95	123	.6	137	1.9	2			
1200	3.0	-1.9	70	105	1.2	143	2.5	1200	6.2	-1.2	59	133	1.0	118	3.8	27	1200	1.8	****	82	073	.3	011	1.9	9	
1500	7.5	-2.6	49	137	1.4	148	4.4	1500	7.8	-2.9	47	114	2.4	112	5.7	18	1500	3.1	-1.8	70	246	.3	306	2.5	10	
1800	4.5	-2.8	59	164	1.7	160	3.8	1800	5.2	-2.1	59	120	2.8	122	6.3	0	1800	1.0	-1.6	83	262	.8	284	1.9	0	
2100	-3	****	79	182	1.1	188	2.5	0	2100	.1	-9	93	227	.8	133	5.7	0	2100	-7	-2.0	91	199	1.1	200	1.9	0
2400	-1.6	****	85	162	.9	176	2.5	0	2400	-2	****	96	251	.7	251	1.9	0	2400	-3	****	91	181	.7	184	1.3	0

DAY 13

DAY 14

DAY 15

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST						
NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S						
0300	-5	****	92	145	.4	151	1.9	0300	-4.9	-8.5	76	145	1.2	140	2.5	0300	-3.4	****	75	187	.3	159	1.3	0		
0600	-2	-1.7	90	121	.9	124	2.5	0600	-5.8	-8.5	81	130	1.1	131	2.5	0600	-5.8	-8.4	82	140	.6	128	1.9	0		
0900	-1.0	****	93	110	1.2	109	3.2	0900	-6.1	****	82	172	1.1	155	3.2	0900	-5.6	****	83	115	1.0	116	3.2	2		
1200	3.4	****	72	104	.6	119	2.5	1200	-1.6	-7.7	63	289	.6	304	2.5	11	1200	-2.6	-6.4	75	049	1.0	044	2.5	13	
1500	5.7	-5.7	44	028	2.8	032	5.7	14	1500	2.6	****	42	288	.8	281	1.9	12	1500	.7	-7.8	53	317	.6	029	2.5	10
1800	2.5	-6.6	51	035	2.7	033	6.3	0	1800	-1.1	-10.0	51	242	1.2	248	2.5	0	1800	-2.0	-8.3	62	238	1.1	270	2.5	0
2100	-6	-6.7	63	163	1.1	159	2.5	0	2100	-4.3	****	69	185	1.0	204	1.9	0	2100	-3.9	****	66	172	1.0	189	2.5	0
2400	-3.4	****	74	144	1.1	138	3.2	0	2400	-3.3	****	72	145	.4	149	1.3	0	2400	-4.1	-8.6	71	153	1.0	162	2.5	0

DAY 16

DAY 17

DAY 18

HOUR	DEW						HOUR	DEW						HOUR	DEW											
	TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST		TEMP.	POINT	RH	DIR.	SPD.	GUST						
NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S	NDNG	DEG C	DEG C	%	DEG.	M/S	M/S						
0300	-3.3	-7.6	72	138	.9	165	3.2	0300	0.0	-15.7	30	094	3.1	094	7.0	0300	-1.7	-16.4	32	189	1.3	102	3.8	0		
0600	-3.5	-7.4	74	133	1.3	136	3.2	0600	-1.4	-17.3	29	100	2.4	084	6.3	0600	.6	-17.7	24	140	2.4	128	5.1	0		
0900	-3.3	-8.0	70	109	.9	125	2.5	1	0900	-1.8	-17.6	29	158	1.8	135	3.8	0	0900	-1	-17.9	25	130	1.7	151	5.1	0
1200	1.9	-9.2	44	101	.7	087	4.4	4	1200	2.6	-22.3	14	147	1.6	148	3.8	7	1200	3.2	-18.3	19	110	1.5	099	4.4	5
1500	4.3	-8.9	38	097	2.2	097	6.3	4	1500	5.8	-24.8	9	094	2.9	090	6.3	9	1500	6.0	-18.7	15	110	1.7	098	4.4	5
1800	3.2	-11.8	35	108	3.2	105	7.0	1	1800	4.3	-26.0	9	099	2.5	071	6.3	4	1800	3.5	-19.3	17	112	1.5	101	3.8	3
2100	.2	-11.9	40	135	2.2	120	5.7	0	2100	2.4	-20.2	17	124	1.9	117	6.3	2	2100	-1.5	-16.2	32	172	1.3	127	3.2	0
2400	.1	-13.3	36	098	2.4	088	6.3	0	2400	-2.5	****	33	142	1.4	127	5.1	0	2400	-1.2	-15.6	33	117	1.2	111	3.8	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

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

DAY 19

DAY 20

DAY 21

DAY 19							DAY 20							DAY 21													
HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-1.2	****	36	122	.7	124	1.9	0	0300	-4.3	****	45	141	1.4	148	3.2	0	0300	.1	-8.9	51	124	1.0	101	2.5	0	
0600	-3.1	-14.3	42	190	.7	267	2.5	0	0600	-4.0	****	45	120	.8	116	1.9	0	0600	-8	****	79	161	.7	150	2.5	0	
0900	-2.9	****	45	109	.9	131	2.5	0	0900	-3.6	****	50	167	.6	127	1.3	1	0900	3.1	-7.8	45	113	2.0	103	10.2	2	
1200	-8	****	41	142	.5	133	2.5	19	1200	-1.5	-10.9	49	118	.6	108	3.2	6	1200	5.1	-6.9	42	104	3.4	097	8.9	10	
1500	2.1	-11.2	37	261	1.0	267	3.2	13	1500	-8	-10.5	48	099	2.4	099	5.7	5	1500	5.7	-7.3	39	100	2.9	110	7.0	10	
1800	-1	****	42	239	1.2	255	3.2	0	1800	-1.2	****	51	123	1.5	115	4.4	0	1800	4.5	-8.4	39	089	2.3	091	5.7	1	
2100	-2.5	-12.3	47	147	.9	123	2.5	0	2100	-1.7	-9.1	57	186	1.0	191	2.5	0	2100	3.8	-6.5	47	090	2.3	093	7.0	0	
2400	-3.8	-14.1	45	141	1.7	144	3.2	0	2400	.2	****	50	136	1.2	136	3.8	0	2400	4.1	-5.7	49	097	1.3	123	5.1	0	

DAY 22

DAY 23

DAY 24

DAY 22							DAY 23							DAY 24													
HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	3.4	-4.5	56	102	.9	096	3.8	0	0300	.1	-0	99	265	1.1	274	2.5	0	0300	-3.9	-6.7	81	***	***	***	***	0	
0600	4.3	-5.0	51	105	2.5	104	8.3	0	0600	-7	-1.4	95	278	1.0	278	3.2	0	0600	-5.9	-9.8	74	***	***	***	***	0	
0900	4.6	-4.7	51	107	2.4	107	7.6	1	0900	-1.1	-2.6	90	***	***	***	***	1	0900	-8.4	-11.9	76	***	***	***	***	1	
1200	6.4	-3.6	49	090	1.8	097	5.1	9	1200	-1.6	-3.5	87	***	***	***	***	3	1200	-6.4	-11.3	68	***	***	***	***	5	
1500	7.7	-3.0	47	101	2.6	104	6.3	9	1500	-2.0	-4.4	84	***	***	***	***	1	1500	-2.3	****	58	109	.2	105	1.9	1	
1800	4.5	.5	75	128	1.2	108	4.4	0	1800	-2.7	-5.5	81	***	***	***	***	0	1800	-6.0	-10.0	73	137	1.2	129	2.5	0	
2100	3.2	.9	85	232	.9	228	3.2	0	2100	-3.3	-5.9	82	***	***	***	***	0	2100	-8.0	-11.3	77	***	***	***	2.5	0	
2400	3.0	****	88	271	1.0	265	3.2	0	2400	-3.6	-6.2	82	***	***	***	***	0	2400	-8.2	****	77	***	***	***	2.5	0	

DAY 25

DAY 26

DAY 27

DAY 25							DAY 26							DAY 27													
HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR	DEW	WIND	WIND	GUST	MAX.	HR			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	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	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-2.0	-10.6	52	***	***	***	5.7	0	0300	-8.0	-17.4	47	127	2.0	118	4.4	0	0300	-9.2	-18.5	47	075	1.5	053	3.8	0	
0600	-2.5	-12.6	46	***	***	***	5.1	0	0600	-8.5	-17.6	48	111	1.2	118	3.2	0	0600	-10.4	-18.6	51	070	1.5	086	5.1	0	
0900	-2.5	-14.1	41	***	***	***	5.7	0	0900	-8.4	-16.8	51	083	1.2	074	2.5	1	0900	-11.7	-19.2	54	066	1.8	077	3.8	0	
1200	-2.9	-13.5	44	141	2.4	130	8.9	13	1200	-2.0	-15.9	34	096	1.1	065	3.8	9	1200	-8.2	-17.1	49	042	1.1	077	3.2	4	
1500	-1.7	-16.3	50	092	1.8	067	5.1	2	1500	-1.2	****	31	129	.7	125	3.2	2	1500	-4.9	****	43	028	.9	064	2.5	2	
1800	-4.8	-14.5	47	123	1.4	142	3.8	0	1800	-2.8	-17.3	32	117	1.3	119	3.8	0	1800	-6.3	-15.8	47	131	.6	106	2.5	0	
2100	-6.2	-16.8	43	129	1.6	122	3.8	0	2100	-6.0	-17.5	40	142	1.7	123	3.2	0	2100	-8.8	****	54	115	1.0	136	2.5	0	
2400	-8.1	****	46	105	1.1	136	3.2	0	2400	-7.9	-17.8	45	140	.9	122	1.9	0	2400	-10.8	****	64	095	.7	056	3.2	0	

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

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

DAY 28

DAY 29

DAY 30

DAY 28								DAY 29								DAY 30							
HR	DEW	WIND			GUST MAX.			HR	DEW	WIND			GUST MAX.			HR	DEW	WIND			GUST MAX.		
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	NDWG	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	-11.8	-17.0	65	080	1.5	069	3.8	0300	-10.6	-23.6	34	120	1.3	120	2.5	0300	-11.4	-23.6	36	098	2.2	110	4.4
0600	-12.9	-17.7	67	078	2.1	065	4.4	0600	-13.9	-21.9	51	102	1.3	117	3.2	0600	-10.6	-22.6	37	101	2.3	104	5.1
0900	-13.0	-18.0	66	091	2.5	088	4.4	0900	-12.0	*****	38	108	1.0	113	2.5	0900	-9.7	-22.4	35	092	2.6	087	5.7
1200	-3.9	-16.3	38	105	2.2	133	5.1	1200	-7.8	-22.5	30	091	1.0	108	3.2	1200	-7.9	-20.8	35	083	2.4	087	5.1
1500	-2.9	-17.1	33	083	2.8	101	8.3	1500	-5.9	-24.8	21	089	1.6	090	3.8	1500	-6.7	-20.4	33	087	2.4	080	5.1
1800	-5.0	-19.3	32	069	2.9	066	6.3	1800	-9.3	-25.4	26	106	1.9	107	3.8	1800	-6.9	-20.3	34	087	2.4	092	5.1
2100	-6.5	-21.3	30	093	2.8	099	7.0	2100	-11.3	-24.5	33	117	1.9	117	3.8	2100	-6.7	-19.8	35	098	2.5	096	5.1
2400	-8.4	-21.9	33	129	2.1	138	5.7	2400	-12.2	-24.3	36	117	2.4	127	3.8	2400	-7.4	-20.0	36	107	2.2	109	4.4

DAY 31

HR	DEW	WIND			GUST MAX.		
NDWG	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	DEG.	M/S
0300	-7.7	-19.7	38	102	2.2	094	4.4
0600	-7.9	-18.4	43	101	2.4	105	4.4
0900	-8.5	-18.7	44	112	2.6	111	5.1
1200	-5.0	-16.0	42	111	2.6	108	5.1
1500	-2.9	-14.4	41	094	2.4	091	5.7
1800	-4.3	-14.5	45	114	1.4	113	3.2
2100	-5.8	-14.4	51	144	1.6	132	2.5
2400	-9.0	-15.3	60	127	1.2	142	2.5

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 1984

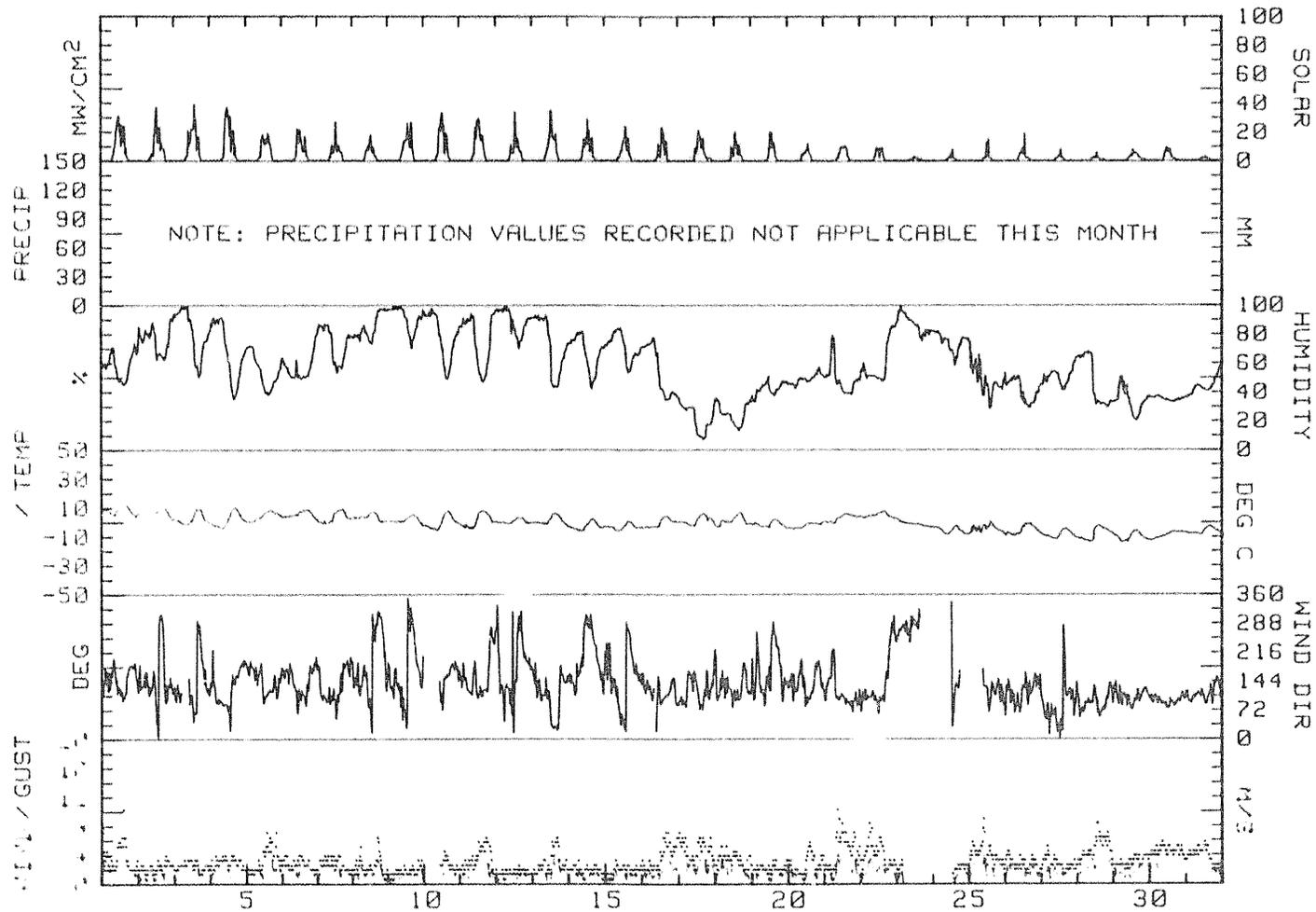
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P/VAL	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY DAY WH/SQH	
1	12.3	3.8	8.1	137	1.5	1.8	106	10.2	S	57	.3	****	1545	1
2	9.6	1.8	5.7	125	.6	1.0	088	3.8	SE	74	1.8	****	1245	2
3	9.8	-1.5	4.2	118	.7	1.2	151	3.2	ESE	82	-1.0	****	1565	3
4	10.5	-4.1	3.2	123	1.2	1.6	094	3.8	E	68	-4.3	****	1740	4
5	8.6	-1.1	4.3	135	1.3	1.5	111	7.0	ESE	51	-4.4	****	1030	5
6	9.1	.2	4.7	144	1.1	1.3	153	3.8	S	55	-2.6	****	925	6
7	9.3	-1.7	4.3	125	1.0	1.2	103	3.8	ESE	73	-1.0	****	755	7
8	7.3	.4	3.9	194	.1	1.1	318	6.3	SE	85	1.2	****	615	8
9	5.5	-2.5	1.5	145	.3	.8	177	3.2	SE	90	-.4	****	1165	9
10	7.6	-5.2	1.2	153	1.1	1.3	148	4.4	S	78	-3.7	****	1425	10
11	8.0	-4.6	1.7	133	1.1	1.5	122	6.3	ESE	68	-2.9	****	1365	11
12	3.1	-1.1	1.0	186	.3	.7	306	2.5	SE	81	-1.6	****	845	12
13	6.0	-3.4	1.3	079	.8	1.4	033	6.3	NNE	64	-4.9	****	1250	13
14	2.6	-6.3	-1.9	189	.5	1.0	155	3.2	SSE	67	-8.5	****	1010	14
15	.7	-6.2	-2.8	154	.4	.9	116	3.2	SSE	70	-8.0	****	735	15
16	4.3	-3.9	.2	113	1.7	1.8	105	7.0	ESE	51	-9.8	****	700	16
17	6.1	-2.8	1.7	113	2.0	2.3	094	7.0	E	21	-20.1	****	890	17
18	6.8	-3.2	1.8	125	1.5	1.6	128	5.1	ESE	24	-17.7	****	640	18
19	3.1	-4.3	-1.1	165	.6	1.1	267	3.2	ESE	42	-12.7	****	614	19
20	.3	-4.6	-2.2	129	1.1	1.2	099	5.7	ESE	49	-10.9	****	410	20
21	6.0	-1.9	2.6	103	1.9	2.1	103	10.2	E	46	-7.3	****	575	21
22	7.7	2.0	4.9	110	1.2	1.7	104	8.3	ESE	59	-2.8	****	430	22
23	1.8	-3.6	-.9	268	1.1	1.1	278	3.2	W	86	-3.8	****	120	23
24	-2.3	-8.8	-5.6	133	.8	.9	129	2.5	SE	75	-9.7	****	170	24
25	.2	-8.5	-4.2	121	1.6	1.8	130	8.9	SE	48	-14.0	****	260	25
26	-.8	-9.5	-5.2	119	1.2	1.3	118	4.4	ESE	41	-17.3	****	385	26
27	-4.0	-11.7	-7.9	072	1.0	1.2	086	5.1	E	49	-17.7	****	175	27
28	-2.2	-13.9	-8.1	090	2.3	2.4	101	8.3	E	47	-18.3	****	170	28
29	-5.7	-13.9	-9.8	108	1.5	1.6	090	3.8	ESE	33	-23.8	****	365	29
30	-6.6	-12.7	-9.7	094	2.4	2.4	087	5.7	E	35	-21.5	****	375	30
31	-2.9	-9.0	-6.0	110	2.0	2.1	091	5.7	ESE	44	-16.7	****	110	31
MONTH	12.3	-13.9	-.3	118	1.1	1.5	106	10.2	ESE	56	-8.5	****	23654	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 6.3
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 5.1
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 6.3
 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
DEVIL CANYON WEATHER STATION
October, 1984



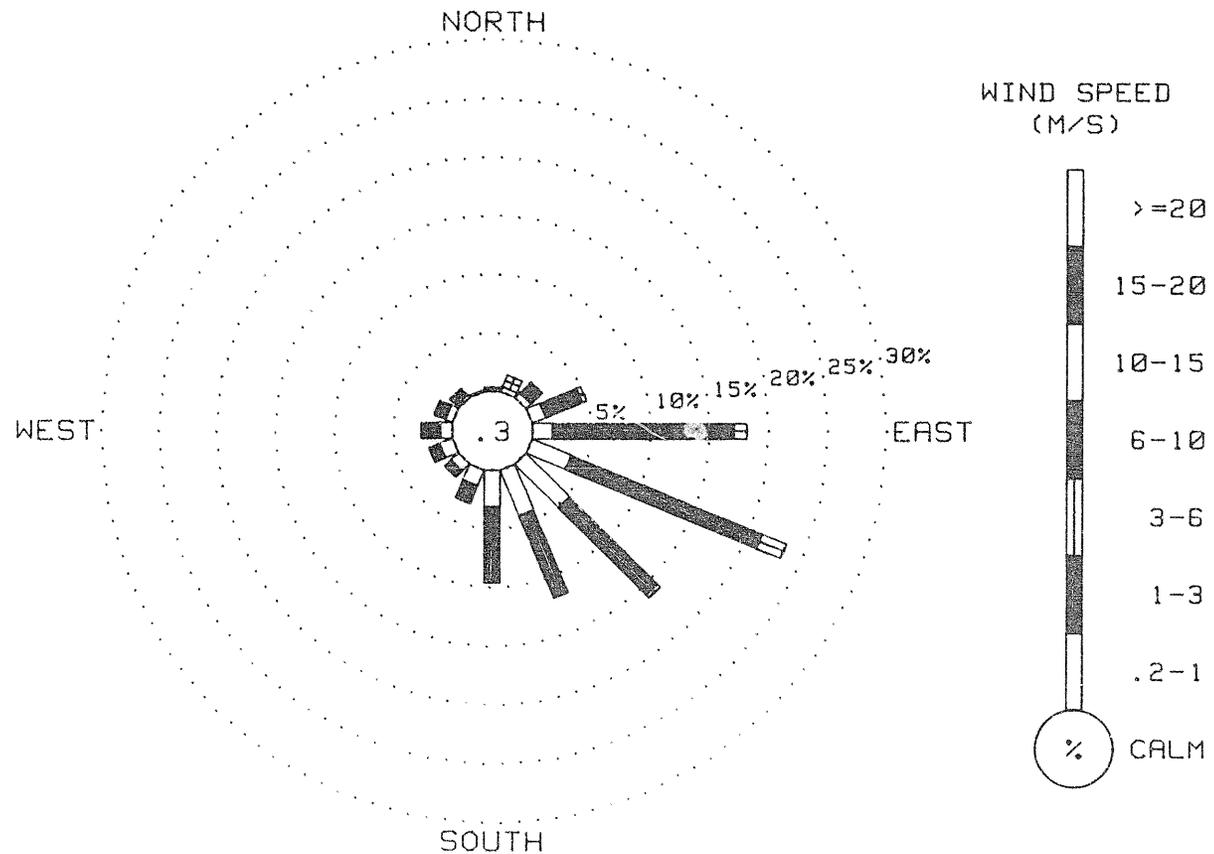
R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 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	.22	.15	0.00	0.00	0.00	0.00	0.00	.37
NNE	.44	.59	.51	0.00	0.00	0.00	0.00	1.54
NE	.59	1.17	.15	0.00	0.00	0.00	0.00	1.91
ENE	1.25	3.30	.37	0.00	0.00	0.00	0.00	4.92
E	1.69	15.33	1.10	0.00	0.00	0.00	0.00	18.12
ESE	3.60	17.46	2.20	0.00	0.00	0.00	0.00	23.26
SE	5.21	10.42	.37	0.00	0.00	0.00	0.00	15.99
SSE	4.18	7.56	0.00	0.00	0.00	0.00	0.00	11.74
S	3.08	6.38	.07	0.00	0.00	0.00	0.00	9.53
SSW	1.47	1.61	0.00	0.00	0.00	0.00	0.00	3.08
SW	.88	.73	0.00	0.00	0.00	0.00	0.00	1.61
WSW	1.17	.95	0.00	0.00	0.00	0.00	0.00	2.13
W	1.03	1.61	0.00	0.00	0.00	0.00	0.00	2.64
WNW	.66	1.03	0.00	0.00	0.00	0.00	0.00	1.69
W	.29	.00	.07	0.00	0.00	0.00	0.00	.36
WNW	.15	0.00	0.00	0.00	0.00	0.00	0.00	.15
CALLS								.29
TOTAL	25.90	68.97	4.84	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 1563 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
 DEVIL CANYON WEATHER STATION
 October, 1984



WIND ROSE PLOT

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	2	7	15	25	31	19	18	18	15	6	2	0	0	0	0	0	0	6
2	0	0	0	0	0	0	0	2	3	4	10	28	25	15	15	12	9	5	0	0	0	0	0	0	5
3	0	0	0	0	0	0	0	2	4	16	15	22	22	34	18	14	11	2	0	0	0	0	0	0	7
4	0	0	0	0	0	0	0	1	2	22	34	34	24	19	20	13	7	2	0	0	0	0	0	0	7
5	0	0	0	0	0	0	0	1	2	9	17	13	13	13	18	12	6	1	0	0	0	0	0	0	4
6	0	0	0	0	0	0	0	1	2	10	17	17	15	8	8	13	3	1	0	0	0	0	0	0	4
7	0	0	0	0	0	0	0	1	3	10	8	8	20	7	10	6	5	1	0	0	0	0	0	0	3
8	0	0	0	0	0	0	0	1	4	8	9	12	13	8	5	3	1	0	0	0	0	0	0	0	3
9	0	0	0	0	0	0	0	1	4	8	13	14	21	17	16	19	4	1	0	0	0	0	0	0	5
10	0	0	0	0	0	0	0	1	3	14	22	31	27	15	17	13	3	1	0	0	0	0	0	0	6
11	0	0	0	0	0	0	0	1	4	11	19	28	29	16	17	10	4	1	0	0	0	0	0	0	6
12	0	0	0	0	0	0	0	0	2	9	6	7	26	12	13	7	5	1	0	0	0	0	0	0	4
13	0	0	0	0	0	0	0	1	3	7	12	26	29	16	15	13	4	1	0	0	0	0	0	0	5
14	0	0	0	0	0	0	0	1	2	11	12	14	25	14	12	10	2	1	0	0	0	0	0	0	4
15	0	0	0	0	0	0	0	1	2	4	7	12	14	17	9	10	4	1	0	0	0	0	0	0	3
16	0	0	0	0	0	0	0	0	1	2	8	5	12	18	12	6	8	1	0	0	0	0	0	0	3
17	0	0	0	0	0	0	0	0	0	0	5	6	14	19	13	11	12	5	2	2	2	2	2	0	4
18	0	0	0	0	0	0	0	0	0	1	6	4	11	15	10	8	8	4	1	0	0	0	0	0	3
19	0	0	0	0	0	0	0	0	0	1	3	12	15	15	11	6	2	0	0	0	0	0	0	0	3
20	0	0	0	0	0	0	0	0	1	5	5	6	8	10	5	3	0	0	0	0	0	0	0	0	2
21	0	0	0	0	0	0	0	0	2	4	7	10	9	10	10	6	2	1	0	0	0	0	0	0	2
22	0	0	0	0	0	0	0	0	1	3	8	8	4	8	8	3	1	0	0	0	0	0	0	0	2
23	0	0	0	0	0	0	0	0	1	1	2	2	3	2	2	1	1	0	0	0	0	0	0	0	1
24	0	0	0	0	0	0	0	0	1	1	2	4	2	5	2	1	1	0	0	0	0	0	0	0	1
25	0	0	0	0	0	0	0	0	0	2	2	8	4	9	2	1	0	0	0	0	0	0	0	0	1
26	0	0	0	0	0	0	0	0	1	4	6	8	5	11	2	2	1	1	0	0	0	0	0	0	2
27	0	0	0	0	0	0	0	0	0	2	2	3	3	5	2	1	0	0	0	0	0	0	0	0	1
28	0	0	0	0	0	0	0	0	0	1	2	3	2	4	2	1	1	1	1	0	0	0	0	0	1
29	0	0	0	0	0	0	0	0	0	1	2	4	4	7	6	5	4	2	2	1	1	1	1	0	2
30	0	0	0	0	0	0	0	0	0	3	6	9	6	8	3	2	1	0	1	0	0	0	0	0	2
31	0	0	0	0	0	0	0	0	0	1	2	2	2	3	1	1	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 DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING October, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1490	100
WIND SPEED	1402	94
WIND DIRECTION	1387	93
PEAK GUST	1402	94
RELATIVE HUMIDITY	1128	76
PRECIPITATION	0	0
SOLAR RADIATION	1490	100
DEW POINT	1128	76

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 | -6 RH Points | 10/1 - 10/16 |
| | -12 | 10/16 - 10/31 |
| 2. Solar | -1 mW/CM ² | 10/1 - 10/16 |
| | -2 | 10/16 |
| | -4 | 10/17 - 10/18 |
| | -2 | 10/19 - 10/20 |
| | -1 | 10/21 - 10/24 |
| | -2 | 10/25 - 10/31 |

Additional comments on this month's data:

1. Solar radiation erratic on several days. Adjustments made to obtain minimum values (at night) of zero.
2. 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.

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

DAY 01

DAY 02

DAY 03

HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.		SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		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	-5.7	****	59	131	1.0	139	2.5	0	0300	-8.4	-22.3	32	119	1.3	095	3.2	0	0300	-10.1	-18.4	51	081	2.3	068	5.1	0													
0600	-7.8	-14.6	58	115	1.5	111	3.2	0	0600	-11.0	-22.4	39	084	2.1	092	3.2	0	0600	-11.4	-18.4	56	089	1.8	075	3.8	0													
0900	-5.4	-14.2	50	133	1.9	154	5.1	0	0900	-11.4	-22.4	40	078	2.3	083	3.8	0	0900	-12.6	-18.4	62	111	1.8	109	3.8	0													
1200	-2.2	-16.8	32	148	2.0	145	4.4	2	1200	-7.0	-20.7	33	064	2.4	073	5.1	2	1200	-8.4	-16.1	54	113	1.6	102	3.8	2													
1500	.1	-18.7	23	144	2.5	143	6.3	3	1500	-3.1	-16.2	36	115	2.2	133	5.7	2	1500	-3.3	-13.6	45	087	1.2	086	3.2	5													
1800	-2.3	-21.7	21	121	2.8	108	5.1	3	1800	-2.9	-16.0	36	131	2.9	130	5.7	1	1800	-3.7	-14.0	45	090	1.3	080	3.2	0													
2100	-2.8	-23.9	18	124	2.3	123	4.4	4	2100	-5.1	-17.0	39	120	4.0	122	7.0	0	2100	-6.9	-14.9	53	113	1.3	123	3.2	0													
2400	-4.4	-25.2	18	150	1.9	144	3.8	5	2400	-8.0	-17.7	46	093	3.4	129	6.3	0	2400	-10.1	-16.0	62	099	1.3	126	3.8	0													

DAY 04

DAY 05

DAY 06

HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.		SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		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	-12.3	-16.8	69	090	1.6	102	4.4	0	0300	-7.1	-13.3	61	070	1.4	084	3.8	0	0300	-1.2	-6.1	69	132	1.1	155	2.5	0													
0600	-13.4	-17.4	72	082	1.4	081	4.4	0	0600	-7.5	-13.3	63	078	1.6	073	3.2	0	0600	-1.4	****	74	118	1.1	135	2.5	0													
0900	-13.7	-17.5	73	080	1.5	082	3.2	1	0900	-4.2	****	64	086	.9	068	2.5	0	0900	-2.1	-6.1	74	137	1.2	142	3.2	0													
1200	-10.6	-15.3	68	065	2.0	069	3.8	7	1200	-2.5	****	62	112	.4	071	1.9	5	1200	-2.3	****	75	099	.7	133	2.5	6													
1500	-6.5	-13.4	58	056	1.3	091	3.8	3	1500	-3.3	****	86	095	1.0	093	3.8	2	1500	-1.2	****	70	036	.5	042	1.9	4													
1800	-8.2	-14.6	60	114	2.1	112	3.8	0	1800	-3.3	****	83	141	.7	084	1.9	0	1800	-1.6	-5.6	74	102	.7	069	1.9	0													
2100	-8.8	-14.4	64	080	1.4	088	3.8	0	2100	-1.7	-5.5	75	134	1.2	129	1.9	0	2100	-2.7	****	86	088	1.0	092	2.5	0													
2400	-8.4	-14.0	64	063	1.6	062	3.8	0	2400	-1.6	-6.0	72	118	1.2	125	3.2	0	2400	-3.6	****	93	023	.4	047	1.9	0													

DAY 07

DAY 08

DAY 09

HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			HOUR NDNG	DEW			WIND			WIND			GUST MAX.			
	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.		SPD.	DIR.	GUST	RAD	TEMP.	POINT	RH	DIR.	SPD.	DIR.	GUST	RAD		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	-3.3	****	94	171	.1	061	.6	0	0300	-5.9	-7.3	90	092	.9	093	2.5	0	0300	-9.5	-11.4	86	102	1.2	099	2.5	0													
0600	-4.6	****	94	188	.3	191	1.3	0	0600	-6.0	****	90	078	.8	082	2.5	0	0600	-9.7	****	86	087	.9	097	2.5	0													
0900	-4.3	****	93	164	.3	170	1.3	0	0900	-6.2	****	89	080	.9	084	2.5	0	0900	-10.8	-12.8	85	087	1.7	094	3.2	0													
1200	-3.0	****	91	175	.1	162	.6	3	1200	-5.4	****	88	095	.7	111	1.9	4	1200	-10.3	-12.6	83	093	1.9	093	3.2	2													
1500	-2.2	****	92	326	.1	335	.6	2	1500	-4.7	****	83	086	.7	093	2.5	2	1500	-7.6	****	78	078	.8	090	3.2	2													
1800	-3.3	****	93	192	.3	242	1.3	0	1800	-5.3	****	89	172	.3	213	1.3	0	1800	-9.9	-12.5	81	126	1.0	130	2.5	0													
2100	-3.8	****	92	138	.8	144	2.3	0	2100	-6.3	****	89	108	.5	142	1.9	0	2100	-11.8	-14.4	81	124	1.5	130	3.2	0													
2400	-5.7	****	90	091	1.0	085	2.5	0	2400	-7.7	****	88	092	.9	077	2.5	0	2400	-14.9	-17.2	83	102	1.6	124	3.2	0													

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

R & M CONSULTANTS, INC.

SUSUTNA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	-16.3	-18.5	83	082	1.6	076	3.2	0	0300	-19.1	-22.1	77	059	2.2	063	4.4	0	0300	-21.6	-24.4	78	083	2.1	088	3.8	0												
0600	-17.4	-19.7	82	081	1.6	075	3.2	0	0600	-20.6	-23.6	77	063	2.5	050	5.1	0	0600	-21.7	-24.6	77	083	2.5	077	4.4	0												
0900	-16.2	-18.6	82	074	1.3	070	2.5	0	0900	-21.1	-24.1	77	061	2.9	060	5.1	0	0900	-22.3	-25.2	77	090	1.7	082	3.2	0												
1200	-12.8	-15.7	79	094	1.3	078	4.4	2	1200	-19.4	-22.7	75	069	3.1	068	5.1	2	1200	-20.5	*****	76	090	1.0	086	3.2	2												
1500	-12.1	-15.8	74	110	2.4	114	4.4	1	1500	-17.1	-20.6	74	077	2.8	072	4.4	1	1500	-16.2	*****	73	149	.6	091	2.5	1												
1800	-13.6	-16.8	77	127	2.2	114	4.4	0	1800	-18.3	-21.2	78	075	1.9	075	3.8	0	1800	-16.1	-20.8	67	150	1.0	142	3.2	0												
2100	-15.4	-18.5	77	129	2.8	125	4.4	0	2100	-19.4	-22.1	79	076	1.8	080	3.8	0	2100	-18.5	-22.9	68	119	.7	099	2.5	0												
2400	-18.1	-20.8	79	089	2.1	123	5.7	0	2400	-21.0	-23.7	79	082	2.2	074	4.4	0	2400	-18.5	*****	75	094	.7	081	2.5	0												

DAY 13

DAY 14

DAY 15

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	-19.6	-23.3	72	087	1.8	089	3.8	0	0300	-15.4	-21.8	58	108	2.2	114	4.4	0	0300	-8.5	-15.1	59	100	2.2	100	5.1	0												
0600	-18.4	-22.7	69	108	2.2	109	5.1	0	0600	-15.9	-22.3	58	105	2.3	103	4.4	0	0600	-7.0	-13.4	60	112	2.2	111	3.8	0												
0900	-15.6	-20.5	66	124	1.3	129	3.8	0	0900	-16.3	-22.6	58	110	2.6	110	5.1	0	0900	-6.4	-13.3	58	103	2.1	104	4.4	0												
1200	-14.0	-20.3	59	105	1.3	096	3.8	1	1200	-14.4	-21.3	56	098	2.7	109	5.7	5	1200	-4.7	-11.9	57	100	1.8	087	4.4	6												
1500	-11.2	-18.7	54	112	1.5	086	3.8	0	1500	-12.4	-19.8	54	078	2.4	081	5.1	1	1500	-3.4	-10.9	56	097	2.0	093	5.1	3												
1800	-12.7	-19.4	57	116	1.3	116	2.5	0	1800	-11.8	-19.2	54	100	2.2	104	4.4	0	1800	-5.2	-11.1	63	107	2.2	099	3.8	0												
2100	-14.0	-20.7	57	091	1.4	088	3.2	0	2100	-10.5	-17.8	55	091	2.5	092	6.3	0	2100	-5.8	-10.9	67	097	2.2	105	4.4	0												
2400	-14.8	-21.4	57	111	1.7	103	3.8	0	2400	-9.6	-16.7	56	094	2.3	091	5.1	0	2400	-6.4	-8.2	67	103	2.1	102	3.8	0												

DAY 16

DAY 17

DAY 18

HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				WIND				GUST MAX.				HOUR	DEW				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	-8.5	-8.5	86	107	2.0	116	3.8	0	0300	-13.0	-15.4	82	073	2.1	103	4.4	0	0300	-8.7	*****	79	082	.8	063	4.4	0												
0600	-7.0	-9.1	85	117	2.4	123	4.4	0	0600	-14.7	-17.2	81	074	2.4	074	3.8	0	0600	-9.0	-11.5	82	083	1.1	056	2.5	0												
0900	-6.2	-8.6	83	110	1.9	111	4.4	0	0900	-13.5	-15.9	82	070	1.9	066	4.4	0	0900	-7.5	-10.5	79	076	1.0	095	3.2	0												
1200	-6.5	-9.5	79	113	2.1	114	4.4	2	1200	-9.2	-12.3	78	082	1.2	071	3.2	5	1200	-7.5	-10.8	77	100	1.7	102	4.4	5												
1500	-7.8	-10.8	79	126	2.7	123	5.1	1	1500	-8.3	-11.9	75	106	2.2	111	4.4	3	1500	-7.5	-11.0	76	119	2.2	119	4.4	2												
1800	-9.4	-11.9	82	120	2.3	133	4.4	0	1800	-10.1	-13.2	78	111	2.6	109	4.4	0	1800	-9.1	-12.1	79	117	2.0	124	4.4	0												
2100	-10.9	-13.1	84	094	2.0	117	3.8	0	2100	-11.1	-14.3	77	118	2.3	120	4.4	0	2100	-11.1	-13.4	85	085	1.5	123	3.8	0												
2400	-10.5	-13.0	82	101	2.5	118	5.1	0	2400	-11.6	-14.2	81	063	1.3	060	3.2	0	2400	-12.4	-14.8	82	075	1.9	074	3.2	0												

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

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

DAY 28

DAY 29

DAY 30

HOUR	DFW					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	-10.7	-13.8	78	115	1.9	107	3.8	0	0300	-10.3	-13.4	78	113	1.8	117	3.2	0	0300	-9.2	-11.7	82	110	2.6	108	4.4	0
0600	-12.5	*****	79	099	1.0	120	3.2	0	0600	-10.0	-12.8	80	105	1.7	101	3.2	0	0600	-9.4	-11.9	82	095	2.2	089	3.8	0
0900	-12.8	*****	82	059	.9	044	1.9	0	0900	-9.0	-12.3	77	109	1.9	109	3.2	0	0900	-9.5	-12.0	82	098	2.1	110	5.1	0
1200	-11.6	*****	81	051	1.0	047	1.9	1	1200	-8.2	-11.2	79	108	1.7	114	4.4	3	1200	-8.8	-11.5	81	098	2.2	107	4.4	2
1500	-9.7	-12.5	80	072	.8	078	2.5	0	1500	-7.5	-10.7	78	105	2.0	105	3.8	1	1500	-8.9	-11.7	80	106	2.4	118	5.1	1
1800	-10.5	-13.3	80	107	1.6	096	3.2	0	1800	-8.1	-10.5	83	108	2.1	111	3.8	0	1800	-8.2	-10.7	82	102	1.7	115	4.4	0
2100	-11.7	-14.6	79	114	1.9	110	3.2	0	2100	-8.4	-10.5	85	115	2.3	120	3.8	0	2100	-8.2	-10.9	81	104	2.1	095	3.8	0
2400	-11.2	-14.1	79	116	1.9	120	3.8	0	2400	-8.9	-11.3	83	110	2.3	110	4.4	0	2400	-7.1	-10.0	80	075	1.4	063	3.2	0

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

R & M CONSULTANTS, INC.

SUSITNA HYDROELECTRIC PROJECT

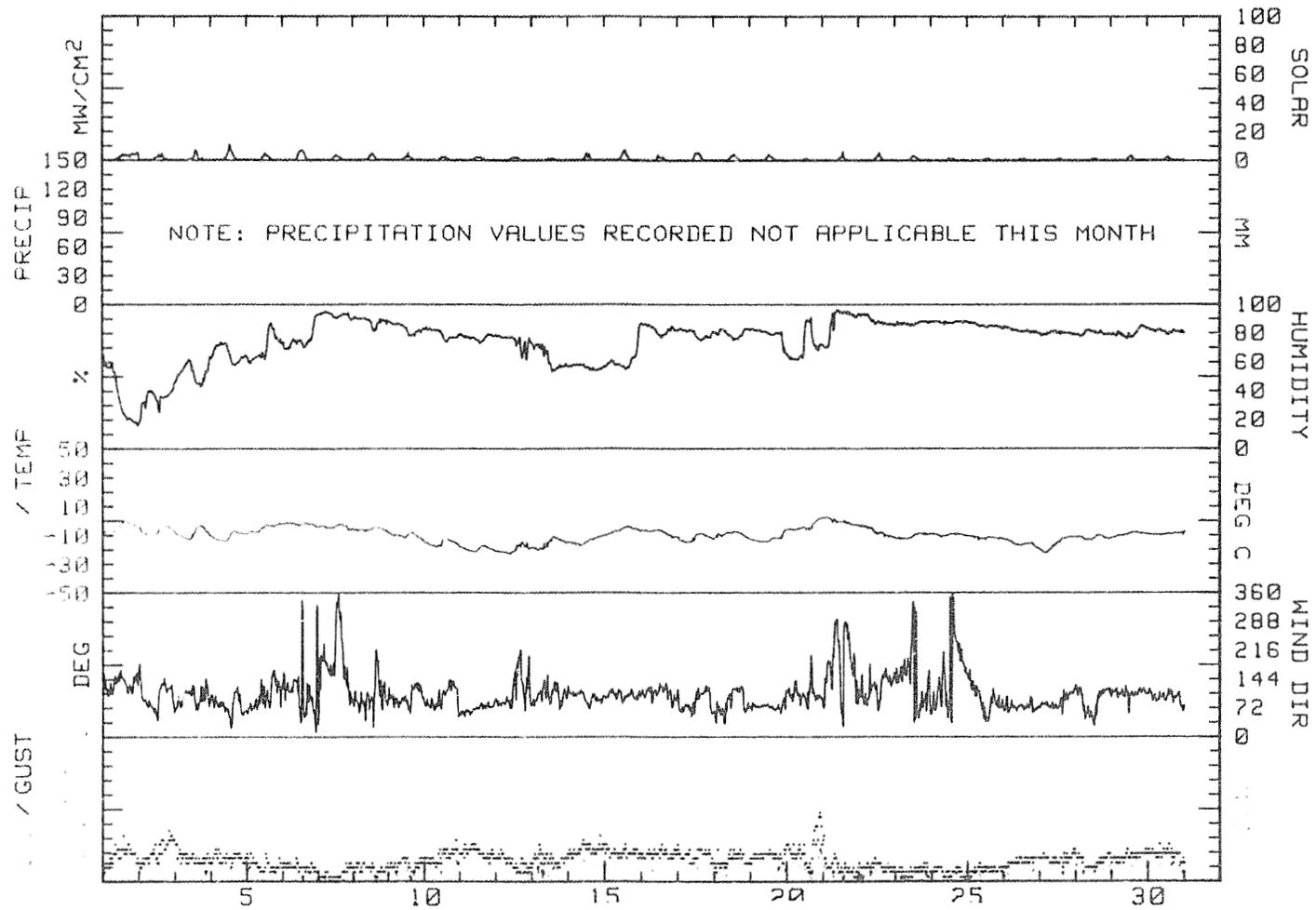
MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1984

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 DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/50M
1	.1	-8.0	-4.0	134	1.9	2.0	143	6.3	SE	35	-18.2	****	480
2	-2.2	-11.4	-6.8	102	2.4	2.7	122	7.0	E	35	-19.9	****	195
3	-2.6	-12.6	-7.6	097	1.5	1.6	068	5.1	ESE	53	-16.4	****	220
4	-6.5	-13.8	-10.2	080	1.5	1.6	102	4.4	ENE	66	-15.6	****	350
5	-1.4	-7.9	-4.7	100	1.0	1.1	084	3.8	ENE	69	-9.4	****	175
6	-.9	-3.8	-2.4	106	.7	.9	142	3.2	ESE	73	-5.8	****	330
7	-2.1	-5.8	-4.0	137	.3	.4	144	2.5	S	91	-6.7	****	145
8	-4.2	-7.7	-6.0	092	.7	.8	093	2.5	E	89	-7.6	****	170
9	-7.5	-14.9	-11.2	100	1.3	1.3	094	3.2	E	84	-13.1	****	145
10	-11.9	-18.1	-15.0	103	1.8	2.0	123	5.7	ESE	79	-18.1	****	110
11	-17.1	-21.1	-19.1	070	2.4	2.4	050	5.1	ENE	77	-22.4	****	115
12	-14.3	-22.3	-18.3	097	1.2	1.4	077	4.4	E	75	-23.4	****	105
13	-10.7	-20.3	-15.5	106	1.5	1.6	109	5.1	ESE	62	-20.9	****	45
14	-9.6	-16.8	-13.2	098	2.4	2.4	092	6.3	ESE	56	-20.4	****	150
15	-3.4	-9.6	-6.5	103	2.1	2.1	100	5.1	ESE	62	-12.4	****	255
16	-5.8	-11.5	-8.7	111	2.2	2.3	123	5.1	ESE	82	-10.3	****	115
17	-8.3	-14.7	-11.5	090	1.9	2.0	103	4.4	ENE	80	-14.4	****	230
18	-6.9	-12.4	-9.7	093	1.4	1.6	063	4.4	ENE	80	-11.9	****	170
19	-5.4	-14.5	-10.0	078	2.2	2.2	119	5.1	ENE	79	-14.8	****	140
20	2.4	-5.9	-1.8	104	2.2	2.3	097	9.5	ESE	69	-7.8	****	35
21	2.8	-3.0	-.1	190	.3	.9	070	6.3	S	84	-1.7	****	125
22	-2.8	-11.7	-7.3	121	.8	.9	136	3.2	SE	89	-7.8	****	150
23	-8.1	-12.4	-10.3	111	.3	.5	084	2.5	SSE	88	-10.1	****	110
24	-8.3	-11.1	-9.7	158	.2	.5	112	1.9	S	88	-10.2	****	45
25	-10.1	-12.4	-11.3	091	.6	.7	113	2.5	E	85	-13.4	****	35
26	-12.6	-19.6	-16.1	074	1.6	1.6	070	3.2	ENE	82	-18.5	****	40
27	-10.7	-22.0	-16.4	090	1.6	1.7	107	4.4	ENE	80	-18.1	****	35
28	-9.7	-12.8	-11.3	100	1.3	1.4	107	3.8	ESE	80	-14.0	****	40
29	-7.5	-10.9	-9.2	109	2.0	2.0	114	4.4	ESE	80	-11.7	****	100
30	-7.1	-9.5	-8.3	100	2.1	2.1	110	5.1	E	81	-11.4	****	80
MONTH	2.8	-22.3	-9.5	099	1.4	1.6	097	9.5	ESE	71	-13.5	****	2440

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 8.9
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 8.9
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 8.9
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 7.6

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
DEVIL CANYON WEATHER STATION
November, 1984



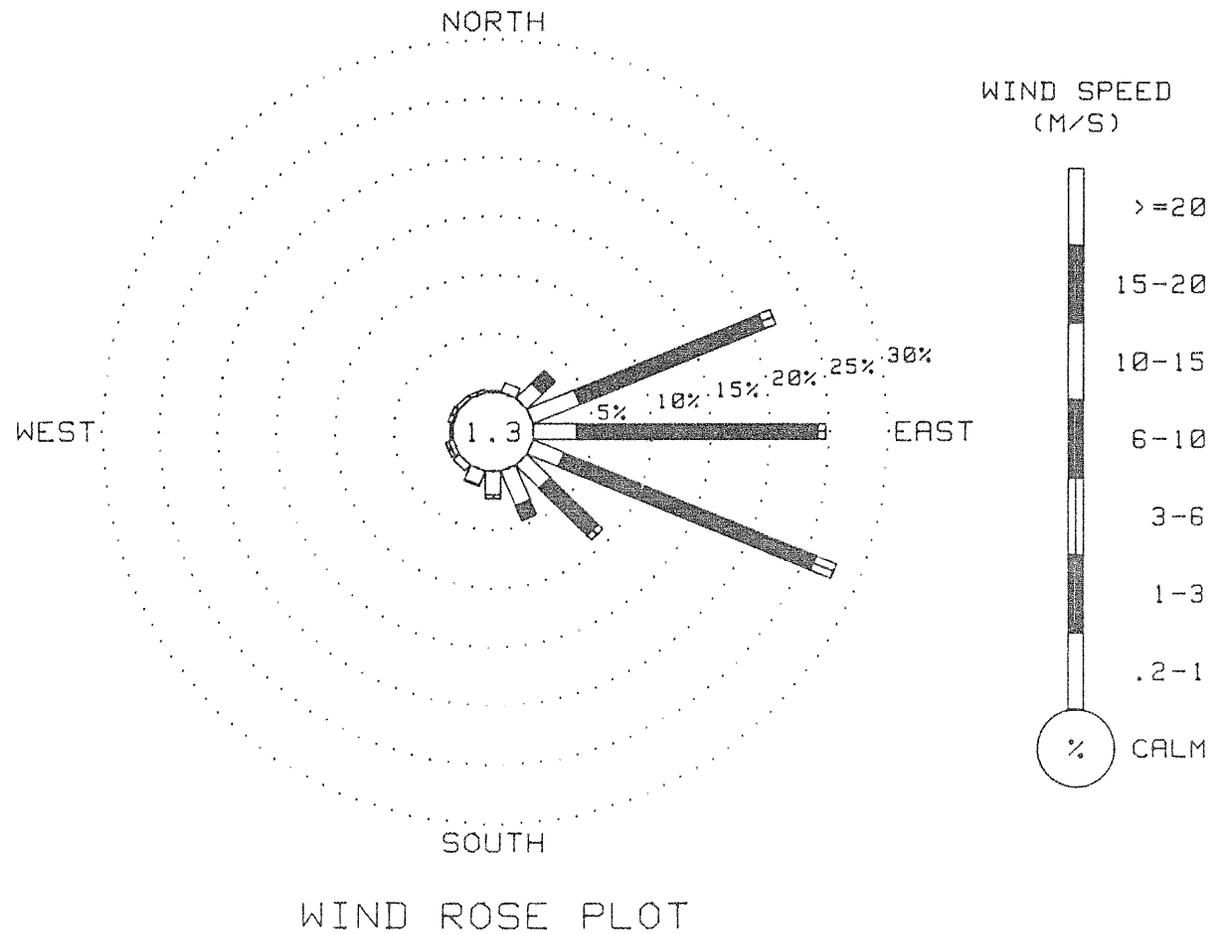
R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING November, 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	.14	0.00	0.00	0.00	0.00	0.00	0.00	.14
NNE	.90	0.00	0.00	0.00	0.00	0.00	0.00	.90
NE	1.88	1.46	0.00	0.00	0.00	0.00	0.00	3.35
ENE	4.31	16.74	1.04	0.00	0.00	0.00	0.00	22.09
E	3.68	20.28	.69	0.00	0.00	0.00	0.00	24.65
ESE	2.85	22.92	1.88	0.00	0.00	0.00	0.00	27.64
SE	2.78	5.63	.56	0.00	0.00	0.00	0.00	8.96
SSE	3.19	1.32	0.00	0.00	0.00	0.00	0.00	4.51
S	2.01	.35	0.00	0.00	0.00	0.00	0.00	2.36
SSW	1.32	.07	0.00	0.00	0.00	0.00	0.00	1.39
SW	.69	0.00	0.00	0.00	0.00	0.00	0.00	.69
WSW	.42	.38	0.00	0.00	0.00	0.00	0.00	.80
W	.07	.21	0.00	0.00	0.00	0.00	0.00	.28
WNW	.14	.35	0.00	0.00	0.00	0.00	0.00	.49
W	.35	0.00	0.00	0.00	0.00	0.00	0.00	.35
WNW	.28	0.00	0.00	0.00	0.00	0.00	0.00	.28
CALM								1.00
TOTAL	25.00	69.58	4.17	0.00	0.00	0.00	0.00	100.00

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT
 1440 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
DEVIL CANYON WEATHER STATION
November, 1984



R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	0	0	0	0	0	0	0	0	0	1	2	2	3	4	4	4	3	3	3	4	4	4	5	5	2
2	0	0	0	0	0	0	0	0	0	1	2	2	3	3	2	4	2	1	1	0	0	0	0	0	1
3	0	0	0	0	0	0	0	0	0	1	1	2	3	7	6	2	1	0	1	0	0	0	0	0	1
4	0	0	0	0	0	0	0	0	1	2	3	6	11	7	4	2	1	0	0	0	0	0	0	0	1
5	0	0	0	0	0	0	0	0	0	2	3	4	4	3	2	1	0	0	0	0	0	0	0	0	1
6	0	0	0	0	0	0	0	0	0	2	5	6	7	7	5	2	0	0	0	0	0	0	0	0	1
7	0	0	0	0	0	0	0	0	0	1	2	3	3	3	2	1	0	0	0	0	0	0	0	0	1
8	0	0	0	0	0	0	0	0	0	1	2	4	4	4	3	1	0	0	0	0	0	0	0	0	1
9	0	0	0	0	0	0	0	0	0	1	2	2	5	2	2	1	0	0	0	0	0	0	0	0	1
10	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	1	2	2	2	2	2	1	0	0	0	0	0	0	0	0	0
13	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
14	0	0	0	0	0	0	0	0	0	1	2	5	3	4	2	0	0	0	0	0	0	0	0	0	1
15	0	0	0	0	0	0	0	0	0	1	3	5	6	6	3	2	1	0	0	0	0	0	0	0	1
16	0	0	0	0	0	0	0	0	0	1	3	2	2	2	2	1	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	1	3	5	5	5	4	2	0	0	0	0	0	0	0	0	1
18	0	0	0	0	0	0	0	0	0	1	3	3	4	4	3	1	0	0	0	0	0	0	0	0	1
19	0	0	0	0	0	0	0	0	0	1	2	4	4	3	2	1	0	0	0	0	0	0	0	0	1
20	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
21	0	0	0	0	0	0	0	0	0	0	2	2	4	4	1	0	0	0	0	0	0	0	0	0	1
22	0	0	0	0	0	0	0	0	0	1	2	3	5	4	2	1	0	0	0	0	0	0	0	0	1
23	0	0	0	0	0	0	0	0	0	1	2	3	3	2	1	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0
25	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
26	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
27	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
28	0	0	0	0	0	0	0	0	0	1	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	1	3	3	2	2	0	0	0	0	0	0	0	0	0	0
30	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

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING November, 1984

PARAMETER	NUMBER OF USABLE OBSERVATIONS	PERCENT OF TOTAL OBSERVATIONS
TEMPERATURE	1440	100
WIND SPEED	1440	100
WIND DIRECTION	1440	100
PEAK GUST	1440	100
RELATIVE HUMIDITY	1062	74
PRECIPITATION	0	0
SOLAR RADIATION	1440	100
DEW POINT	1062	74

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 | -12 PH Points | 11/1 - 11/2 |
| 2. | Solar | -2 mW/CM ² | 11/1 - 11/2 |
| | | -3 | 11/2 |
| | | -2 | 11/3 |
| | | -1 | 11/4 - 11/12 |
| | | -2 | 11/13 - 11/14 |
| | | -1 | 11/15 - 11/30 |

Additional comments on this month's data:

- Solar radiation erratic on several days. Adjustments made to obtain minimum values (at night) of zero. Data for the second half of day 1 not valid since non-zero readings occur at night after adjustments are made. Sensor probably not calibrated correctly.

No precipitation data for December

(See INTERPRETATION OF DATA).

R A M CONSULTANTS INC.

SUSITANA HYDROELECTRIC PROJECT

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

DAY 01

DAY 02

DAY 03

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	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	-6.7	-9.6	80	069	1.4	073	3.2	0	0300	-5.8	-9.3	76	119	2.0	126	3.8	0	0300	-1.4	-5.8	72	169	1.0	178	3.5	0
0600	-6.6	-9.3	81	085	1.1	116	3.8	0	0600	-5.3	-9.0	75	096	1.1	111	3.2	0	0600	-1.6	-5.6	74	099	1.0	087	5.1	0
0900	-5.4	-8.6	78	109	1.8	118	3.8	0	0900	-4.7	-9.5	69	126	1.4	124	3.2	0	0900	-1.7	-5.4	76	097	1.7	094	3.8	0
1200	-5.4	-8.5	79	108	1.8	114	3.8	2	1200	-4.3	*****	68	127	.9	114	2.5	2	1200	-2.5	*****	88	106	1.5	106	3.2	2
1500	-4.2	*****	79	073	.9	089	3.2	1	1500	-3.3	-9.1	64	102	.8	092	2.5	1	1500	-1.3	-5.5	73	108	1.1	113	2.5	1
1800	-4.2	-6.2	86	113	1.8	111	3.8	0	1800	-3.3	-8.5	67	120	1.1	124	2.5	0	1800	-1.1	-5.1	74	102	1.0	126	3.2	0
2100	-4.5	-7.7	78	108	1.8	111	3.8	0	2100	-1.9	*****	74	122	.9	106	3.2	0	2100	-.8	-5.0	73	110	1.6	089	4.4	0
2400	-5.3	-8.7	77	115	2.3	113	4.4	0	2400	-1.7	-6.8	68	133	1.0	130	2.5	0	2400	0.0	-4.4	72	136	1.4	107	2.5	0

DAY 04

DAY 05

DAY 06

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	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	-3.9	74	137	.9	121	1.9	0	0300	-.8	-4.3	77	138	1.7	141	3.2	0	0300	-5.9	*****	90	078	1.4	076	3.8	0
0600	1.9	-3.9	65	144	1.5	129	3.8	0	0600	-2.0	-5.1	79	138	1.3	114	2.5	0	0600	-7.2	-8.6	90	058	1.1	040	3.2	0
0900	1.4	-4.2	66	154	1.4	141	3.2	0	0900	1.1	-3.0	74	113	1.0	130	3.2	0	0900	-7.5	-9.0	89	063	1.2	062	3.2	0
1200	2.3	-3.8	64	119	1.9	155	4.4	2	1200	.1	*****	92	137	.8	091	3.2	2	1200	-7.8	-9.6	87	069	1.1	063	3.2	2
1500	1.8	-3.8	66	140	1.3	148	5.1	1	1500	1.3	*****	78	106	1.0	106	3.2	0	1500	-7.5	-9.5	86	043	1.3	038	3.2	0
1800	1.8	*****	68	126	1.2	109	3.8	0	1800	-1.3	-3.4	86	134	1.1	118	2.5	0	1800	-8.1	*****	87	057	.8	039	2.5	0
2100	1.2	-3.8	69	140	1.4	133	3.2	0	2100	-3.8	-5.2	90	123	1.3	130	3.2	0	2100	-8.6	*****	88	091	.7	083	2.5	0
2400	.1	-4.0	74	133	1.5	139	3.2	0	2400	-4.4	-5.8	90	093	1.3	093	3.2	0	2400	-8.9	-10.1	91	111	.8	100	1.9	0

DAY 07

DAY 08

DAY 09

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	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	-9.7	89	062	.9	077	2.5	0	0300	-5.7	*****	90	135	.3	178	1.3	0	0300	-11.6	*****	88	160	.4	220	1.9	0
0600	-7.6	*****	94	055	.7	050	1.9	0	0600	-6.5	*****	90	147	.5	115	1.9	0	0600	-13.6	*****	88	159	.9	110	3.2	0
0900	-7.5	-8.5	93	055	.9	049	3.2	0	0900	-8.4	*****	90	136	.8	132	1.9	0	0900	-15.8	*****	89	111	.9	095	3.2	0
1200	-8.7	*****	92	077	.6	069	2.5	1	1200	-7.8	*****	94	183	.6	192	1.9	1	1200	-16.0	-17.8	86	082	1.1	091	3.2	1
1500	-7.5	*****	92	058	.7	071	1.9	0	1500	-8.1	*****	94	228	.6	332	2.5	0	1500	-17.2	-19.1	85	111	1.1	090	3.2	0
1800	-7.0	*****	92	068	.7	066	1.9	0	1800	-7.6	*****	94	233	.8	224	1.9	0	1800	-17.7	-19.8	84	096	1.5	110	3.2	0
2100	-5.8	-7.3	89	076	.6	112	2.5	0	2100	-7.5	*****	96	253	.9	248	1.9	0	2100	-19.3	-21.3	84	083	1.4	065	3.8	0
2400	-5.8	*****	90	110	.3	059	1.9	0	2400	-8.1	*****	91	242	.7	343	1.9	0	2400	-20.1	-22.2	83	082	1.6	080	3.8	0

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

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

DAY 10

DAY 11

DAY 12

HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.							
	TEMP.	POINT	RH	DIR.	SPD.			DIR.	GUST	DIR.		GUST	DIR.	TEMP.	POINT	RH			DIR.	SPD.	DIR.		GUST	DIR.	GUST	DIR.	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	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	-20.5	-22.8	82	083	1.8	079	3.2	0	0300	-12.9	-17.2	70	118	2.2	119	4.4	0	0300	-21.4	-24.2	78	114	1.1	119	3.2	0											
0600	-20.3	-22.4	83	145	.7	133	3.8	0	0600	-15.7	-19.0	76	113	1.5	122	3.2	0	0600	-22.3	-25.2	77	109	1.6	107	3.8	0											
0900	-15.4	-17.6	83	137	1.0	136	3.2	0	0900	-16.7	-19.5	79	076	1.5	079	3.2	0	0900	-22.8	-25.8	76	099	1.7	116	3.2	0											
1200	-13.0	-16.6	74	120	1.2	101	5.1	1	1200	-15.1	-18.2	77	085	1.9	082	3.2	1	1200	-23.0	-26.2	75	079	2.2	079	4.4	1											
1500	-14.8	-18.9	71	099	1.8	098	5.1	0	1500	-15.1	-18.2	77	068	1.4	058	3.2	0	1500	-22.4	-25.6	75	077	2.0	077	3.8	0											
1800	-14.1	-18.2	71	114	1.9	116	3.8	0	1800	-17.4	-20.2	79	069	1.9	061	3.8	0	1800	-22.7	-25.9	75	087	1.3	082	2.5	0											
2100	-15.1	-19.0	72	112	1.3	105	3.2	0	2100	-18.9	-21.6	79	067	2.3	064	3.8	0	2100	-17.1	-21.6	68	110	.9	109	2.5	0											
2400	-12.4	-17.1	68	131	1.8	131	3.8	0	2400	-20.8	-23.6	78	081	1.2	064	3.8	0	2400	-16.0	-20.5	68	115	1.3	101	3.8	0											

DAY 13

DAY 14

DAY 15

HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.							
	TEMP.	POINT	RH	DIR.	SPD.			DIR.	GUST	DIR.		GUST	DIR.	TEMP.	POINT	RH			DIR.	SPD.	DIR.		GUST	DIR.	GUST	DIR.	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	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	-16.4	-20.7	69	106	1.6	098	3.8	0	0300	-20.5	-23.9	74	098	2.3	095	5.7	0	0300	-20.2	-24.4	69	073	2.3	063	5.1	0											
0600	-15.1	-19.8	67	129	1.1	085	2.5	0	0600	-23.6	-26.9	74	105	2.1	103	5.1	0	0600	-16.3	*****	74	096	1.1	093	3.8	0											
0900	-16.3	-20.5	70	120	1.4	138	3.2	0	0900	-24.3	-27.4	75	116	1.3	100	3.8	0	0900	-13.6	-18.0	69	086	1.1	090	4.4	0											
1200	-17.7	-21.7	71	086	1.4	129	3.2	1	1200	-24.0	-27.2	75	096	1.1	136	3.8	1	1200	-12.2	-18.0	62	109	2.1	117	4.4	1											
1500	-18.4	-22.0	73	075	2.0	089	3.8	1	1500	-23.4	*****	74	105	1.3	085	4.4	1	1500	-12.3	-16.1	73	112	2.4	122	4.4	0											
1800	-19.4	-22.7	75	065	2.1	662	4.4	0	1800	-23.6	-27.2	72	091	1.2	184	5.1	0	1800	-12.6	-15.0	82	101	2.2	099	4.4	0											
2100	-20.2	-23.3	76	094	1.4	074	4.4	0	2100	-23.2	-27.0	71	069	1.9	071	5.1	0	2100	-13.0	-15.4	82	104	2.2	108	3.8	0											
2400	-18.8	-22.1	75	098	1.9	097	5.1	0	2400	-20.0	-25.2	63	078	2.9	086	5.7	0	2400	-12.8	-15.1	83	116	2.2	119	3.8	0											

DAY 16

DAY 17

DAY 18

HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.			HOUR	DEW					WIND DIR.	WIND SPD.	GUST MAX.							
	TEMP.	POINT	RH	DIR.	SPD.			DIR.	GUST	DIR.		GUST	DIR.	TEMP.	POINT	RH			DIR.	SPD.	DIR.		GUST	DIR.	GUST	DIR.	TEMP.			POINT	RH	DIR.	SPD.	DIR.	GUST	DIR.	GUST
	DEG C	DEG C	%	DEG.	M/S	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	-12.4	-14.8	82	108	1.9	115	3.8	0	0300	-9.3	-12.0	81	084	2.1	098	5.7	0	0300	-7.3	*****	93	058	.7	039	1.9	0											
0600	-11.7	-14.0	83	107	1.8	105	4.4	0	0600	-9.2	-11.4	84	095	2.0	051	4.4	0	0600	-6.7	*****	95	063	.9	070	2.5	0											
0900	-11.1	-13.4	83	104	1.7	115	4.4	0	0900	-8.6	-11.0	83	105	2.5	101	5.1	0	0900	-6.3	*****	92	054	.7	046	2.5	0											
1200	-10.5	-12.8	83	097	2.0	105	4.4	1	1200	-7.9	-10.3	83	099	2.4	106	7.0	1	1200	-5.3	*****	93	071	.5	109	1.9	0											
1500	-10.1	-12.4	83	099	2.0	096	3.8	0	1500	-8.8	-9.9	92	065	1.6	078	5.1	0	1500	-4.7	*****	93	048	.7	028	2.5	0											
1800	-9.6	-12.3	81	106	2.1	102	4.4	0	1800	-8.9	*****	92	035	1.0	053	2.5	0	1800	-4.6	*****	95	031	.4	065	1.9	0											
2100	-10.0	-12.6	81	098	2.3	084	4.4	0	2100	-8.6	*****	92	046	.8	044	1.9	0	2100	-4.2	*****	96	023	.5	024	1.9	0											
2400	-10.6	-13.1	82	093	2.0	112	4.4	0	2400	-7.8	*****	92	049	.6	036	2.5	0	2400	-3.3	*****	95	037	.0	039	2.5	0											

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

R & M CONSULTANTS, INC.

SUSTITNA HYDROELECTRIC PROJECT

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

DAY 19

DAY 20

DAY 21

DAY 19								DAY 20								DAY 21										
HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG		
	DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW			
0300	-2.9	*****	97	265	.3	207	1.9	0	0300	-13.5	-19.4	61	128	1.8	133	3.8	0	0300	-17.9	-22.7	66	071	1.9	097	4.4	0
0600	-5.9	-6.7	94	118	.8	122	2.5	0	0600	-17.0	*****	73	128	.8	121	3.2	0	0600	-17.0	-21.6	67	068	1.6	067	4.4	0
0900	-8.7	-10.4	88	140	1.6	133	3.2	0	0900	-17.4	-21.4	71	108	.7	090	2.5	0	0900	-15.9	-20.4	68	047	1.7	049	3.8	0
1200	-10.9	-13.7	80	141	2.0	153	3.8	1	1200	-14.0	-19.7	62	090	1.5	098	3.8	1	1200	-12.9	-17.4	69	078	1.8	086	4.4	0
1500	-11.0	-15.9	67	127	2.3	133	3.8	0	1500	-13.9	-19.6	62	105	1.8	115	3.8	0	1500	-13.1	-17.1	72	104	2.5	106	5.1	0
1800	-12.7	-17.9	65	132	2.4	133	3.8	0	1800	-15.8	-20.8	65	085	1.5	073	3.2	0	1800	-12.8	-16.8	72	094	2.6	107	5.1	0
2100	-11.7	-18.1	59	150	2.0	160	3.8	0	2100	-17.5	-22.0	68	082	1.7	092	3.8	0	2100	-13.0	-16.3	76	101	2.7	103	5.1	0
2400	-12.5	-19.3	57	134	2.0	144	3.8	0	2400	-16.9	-21.9	65	065	1.9	073	4.4	0	2400	-12.6	-15.8	77	103	2.6	105	4.4	0

DAY 22

DAY 23

DAY 24

DAY 22								DAY 23								DAY 24										
HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG		
	DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW			
0300	-11.8	-15.6	73	102	3.0	107	5.1	0	0300	-7.3	-8.5	91	102	2.0	102	3.8	0	0300	-11.1	-12.7	88	167	1.0	209	1.9	0
0600	-11.6	-14.5	79	108	3.1	117	5.1	0	0600	-7.0	-8.2	91	095	2.0	092	4.4	0	0600	-13.8	*****	89	148	.9	139	3.2	0
0900	-10.6	-13.2	81	102	2.6	105	5.1	0	0900	-7.2	-8.3	92	098	2.0	107	3.8	0	0900	-14.1	-15.7	88	093	1.5	092	3.2	0
1200	-10.3	-13.1	80	102	2.6	099	5.1	0	1200	-6.7	-8.1	90	106	2.0	108	3.8	0	1200	-17.0	-18.8	86	078	1.2	067	3.2	1
1500	-9.7	-12.8	78	092	2.1	087	5.1	0	1500	-6.2	-7.7	89	109	1.6	104	3.8	0	1500	-18.1	-20.0	85	079	1.0	076	2.5	0
1800	-9.3	-11.7	83	107	2.5	109	5.7	0	1800	-6.3	*****	90	092	1.1	103	3.2	0	1800	-19.2	-21.2	84	092	1.3	106	3.8	0
2100	-8.6	-10.5	86	114	2.6	120	5.1	0	2100	-5.9	*****	92	241	.6	258	3.2	0	2100	-20.4	-22.5	83	079	1.0	061	2.5	0
2400	-7.5	-9.3	87	111	2.1	117	4.4	0	2400	-6.6	-7.7	92	231	.9	232	1.9	0	2400	-20.2	*****	83	074	1.0	072	3.2	0

DAY 25

DAY 26

DAY 27

DAY 25								DAY 26								DAY 27										
HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD	HOUR	DEW		WIND		GUST MAX.		RAD			
NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG	TEMP.	POINT	RH	DIR.	SPD.	DIR.		NDNG		
	DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW		DEG C	DEG C	%	DEG.	M/S	DEG.	MW			
0300	-19.4	-21.4	84	075	1.3	095	3.8	0	0300	-10.9	*****	86	104	1.0	115	3.2	0	0300	-23.3	*****	81	211	.3	196	1.9	0
0600	-17.1	-18.9	86	064	2.1	062	3.8	0	0600	-14.1	*****	85	105	1.1	099	2.5	0	0600	-21.9	-24.0	83	198	.7	100	3.2	0
0900	-16.3	-18.0	87	068	1.7	069	3.2	0	0900	-16.6	*****	84	130	.7	118	1.9	0	0900	-21.9	-24.1	82	072	1.4	068	3.2	0
1200	-10.8	-12.6	87	093	1.4	085	3.2	1	1200	-17.9	*****	83	097	.6	078	2.5	0	1200	-21.5	-23.9	81	077	2.6	081	3.8	1
1500	-10.1	-12.3	84	105	1.5	099	3.2	0	1500	-18.1	*****	84	081	1.0	081	2.5	0	1500	-22.3	-24.8	80	078	1.6	083	3.8	0
1800	-10.1	-12.6	82	105	2.1	107	3.8	0	1800	-19.8	-21.8	84	084	1.5	084	3.2	0	1800	-22.6	*****	81	091	1.4	087	3.2	0
2100	-10.7	-12.9	84	112	2.0	112	3.8	0	2100	-20.5	-22.8	82	106	1.3	089	3.2	0	2100	-21.5	-23.9	81	111	1.0	108	3.2	0
2400	-10.7	-12.6	86	112	1.7	117	3.8	0	2400	-21.9	-24.1	82	129	1.2	113	3.2	0	2400	-15.7	-17.8	84	109	1.1	131	3.8	0

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

R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING December, 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.
	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	-14.0	-17.1	77	151	.9	159	2.5	0	0300	-15.8	-19.5	73	095	2.4	095	5.7	0	0300	-10.6	-12.4	87	106	1.3	106	3.2	0
0600	-14.6	-18.8	70	141	1.4	130	3.8	0	0600	-15.4	-18.1	80	097	2.4	102	5.1	0	0600	-9.6	-12.0	83	103	1.4	103	3.2	0
0900	-16.7	*****	71	138	.9	141	1.9	0	0900	-14.7	-17.2	81	098	2.3	098	4.4	0	0900	-8.7	*****	88	098	.6	123	2.5	0
1200	-15.4	-20.5	65	139	1.5	130	3.8	1	1200	-14.2	-16.8	81	093	1.9	096	3.8	0	1200	-7.4	*****	89	124	.3	063	1.3	0
1500	-15.8	-21.0	64	114	2.1	105	4.4	1	1500	-13.3	-15.3	85	096	1.8	096	3.8	0	1500	-5.7	*****	88	197	.6	185	1.9	0
1800	-17.7	-22.5	66	103	2.0	098	4.4	0	1800	-12.2	-14.1	86	097	1.6	100	3.2	0	1800	-4.0	-6.3	84	116	1.6	111	5.7	0
2100	-18.0	-22.4	68	106	2.3	108	4.4	0	2100	-11.5	-13.3	87	094	1.5	100	3.2	0	2100	-3.9	-5.6	88	104	1.3	098	5.7	0
2400	-16.4	-20.6	70	099	2.7	093	5.7	0	2400	-11.3	-13.1	87	099	1.4	101	2.5	0	2400	-3.3	-4.2	94	126	.5	245	1.9	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	-3.4	-4.3	94	075	.7	046	2.5	0	
0600	-3.3	-4.7	90	121	1.3	115	3.2	0	
0900	-3.0	*****	96	161	.6	143	1.9	0	
1200	-1.8	*****	96	190	.5	152	1.9	0	
1500	-.9	*****	94	155	.9	130	1.9	0	
1800	-1.0	-1.7	95	165	1.0	174	1.9	0	
2100	.1	-.8	94	169	1.0	156	1.9	0	
2400	.8	-.5	91	161	1.1	160	1.9	0	

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

R & M CONSULTANTS, INC.

SUSTITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING December, 1984

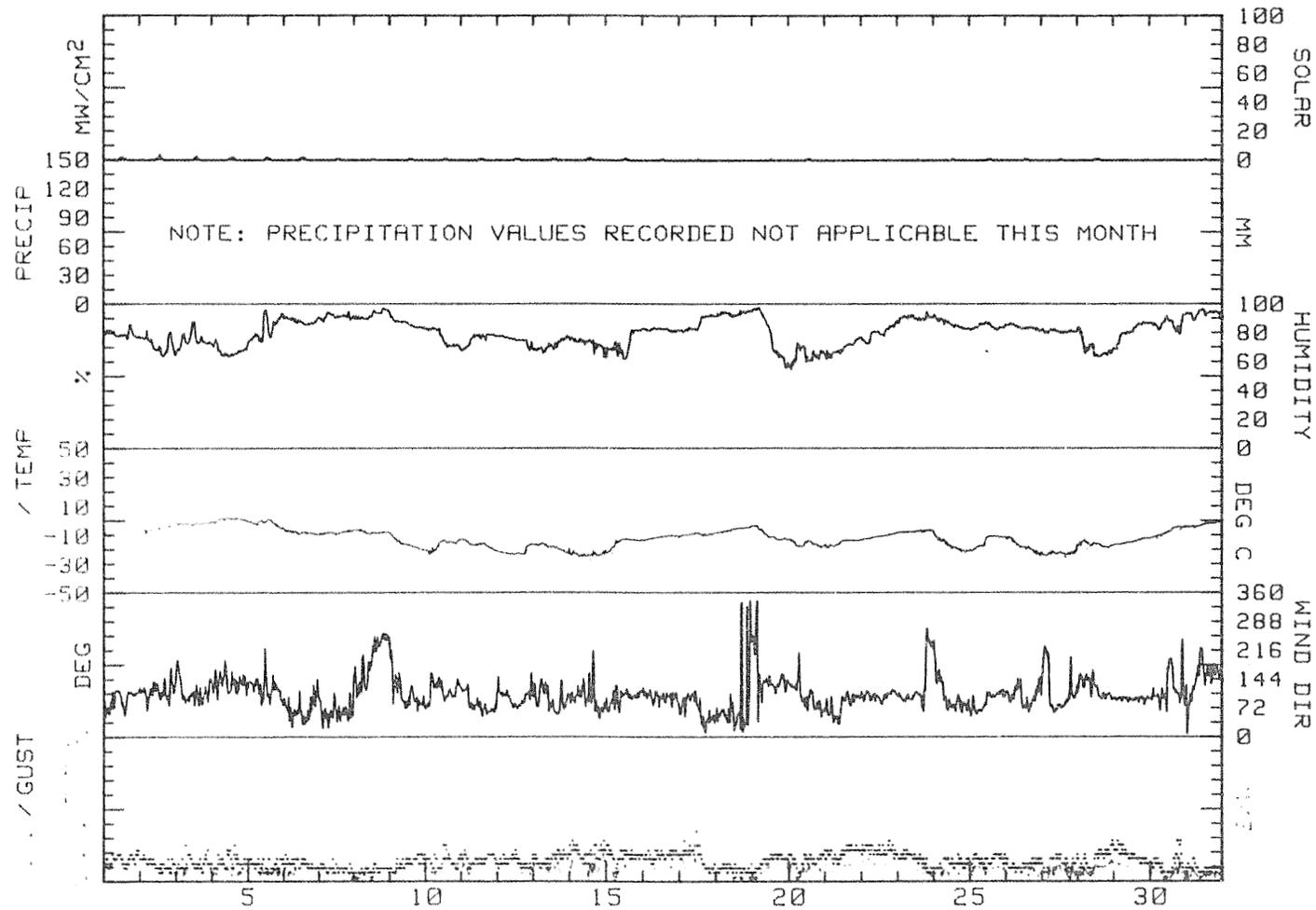
DAY	MAX. TEMP. DEG C	MIN. TEMP. DEG C	MEAN TEMP. DEG C	RES. WIND DIR. DEG	RES. WIND SPD. M/S	AVG. WIND SPD. M/S	MAX. GUST DIR. DEG	MAX. GUST SPD. M/S	P'VAL DIR.	MEAN RH %	MEAN DP DEG C	PRECIP MM	DAY'S SOLAR ENERGY WH/SGH	DAY
1	-3.8	-8.0	-5.9	101	1.6	1.7	113	4.4	ESE	80	-8.4	****	65	1
2	-1.2	-8.0	-4.6	119	1.1	1.2	126	3.8	ESE	72	-8.6	****	95	2
3	0.0	-2.5	-1.3	114	1.2	1.3	087	5.1	ESE	75	-5.2	****	65	3
4	2.6	-.9	.9	136	1.4	1.4	148	5.1	SE	67	-3.8	****	70	4
5	1.5	-5.4	-2.0	123	1.1	1.2	141	3.2	SE	83	-3.9	****	55	5
6	-5.7	-9.4	-7.6	068	1.0	1.1	076	3.8	ENE	89	-8.8	****	75	6
7	-5.8	-8.8	-7.3	066	.7	.7	049	3.2	ENE	90	-9.3	****	30	7
8	-5.7	-8.7	-7.2	206	.5	.7	232	2.5	WSW	94	-7.8	****	15	8
9	-8.3	-20.1	-14.2	100	1.0	1.2	065	3.8	E	85	-19.1	****	30	9
10	-12.4	-21.8	-17.1	114	1.4	1.5	101	5.1	ESE	75	-19.1	****	30	10
11	-12.3	-20.8	-16.6	085	1.6	1.8	119	4.4	ENE	76	-19.4	****	35	11
12	-15.6	-23.2	-19.4	096	1.5	1.5	079	4.4	ESE	75	-24.5	****	40	12
13	-15.1	-22.1	-18.6	093	1.5	1.7	097	5.1	ENE	72	-21.8	****	40	13
14	-20.0	-24.5	-22.3	092	1.7	1.9	095	5.7	E	73	-26.5	****	55	14
15	-12.0	-22.1	-17.1	101	1.9	2.0	063	5.1	ESE	73	-18.2	****	40	15
16	-9.6	-12.8	-11.2	101	2.0	2.0	105	4.4	ESE	83	-13.2	****	20	16
17	-7.8	-10.8	-9.3	083	1.5	1.7	106	7.0	NE	85	-11.0	****	10	17
18	-3.3	-7.7	-5.5	052	.5	.6	070	2.5	ENE	94	-7.3	****	0	18
19	-2.7	-12.7	-7.7	137	1.6	1.8	153	3.8	SE	74	-14.1	****	10	19
20	-12.1	-17.7	-14.9	096	1.4	1.5	073	4.4	ENE	64	-20.5	****	35	20
21	-12.6	-18.2	-15.4	087	2.1	2.2	106	5.1	E	70	-18.8	****	0	21
22	-7.5	-12.5	-10.0	105	2.6	2.6	109	5.7	ESE	80	-12.9	****	0	22
23	-5.8	-7.4	-6.6	107	1.2	1.6	092	4.4	ESE	91	-8.1	****	5	23
24	-7.3	-20.5	-13.9	098	1.0	1.1	106	3.8	E	87	-17.5	****	20	24
25	-10.0	-20.2	-15.1	092	1.6	1.7	095	3.8	ESE	85	-15.6	****	30	25
26	-10.6	-22.3	-16.5	104	1.0	1.1	115	3.2	ESE	84	-19.1	****	25	26
27	-15.7	-23.7	-19.7	090	1.1	1.3	068	3.8	ENE	81	-23.8	****	20	27
28	-12.6	-18.1	-15.4	117	1.6	1.7	093	5.7	SE	67	-20.6	****	45	28
29	-11.3	-16.1	-13.7	096	1.9	1.9	095	5.7	E	82	-16.3	****	0	29
30	-3.1	-11.3	-7.2	113	.9	1.0	111	5.7	ESE	85	-9.1	****	0	30
31	.8	-3.8	-1.5	151	.8	.9	115	3.2	S	93	-2.5	****	15	31
MONTH	2.6	-24.5	-11.1	102	1.3	1.5	106	7.0	ESE	78	-14.0	****	975	

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.1
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 5.1
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 5.1
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 3.8

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
DEVIL CANYON WEATHER STATION
December, 1984



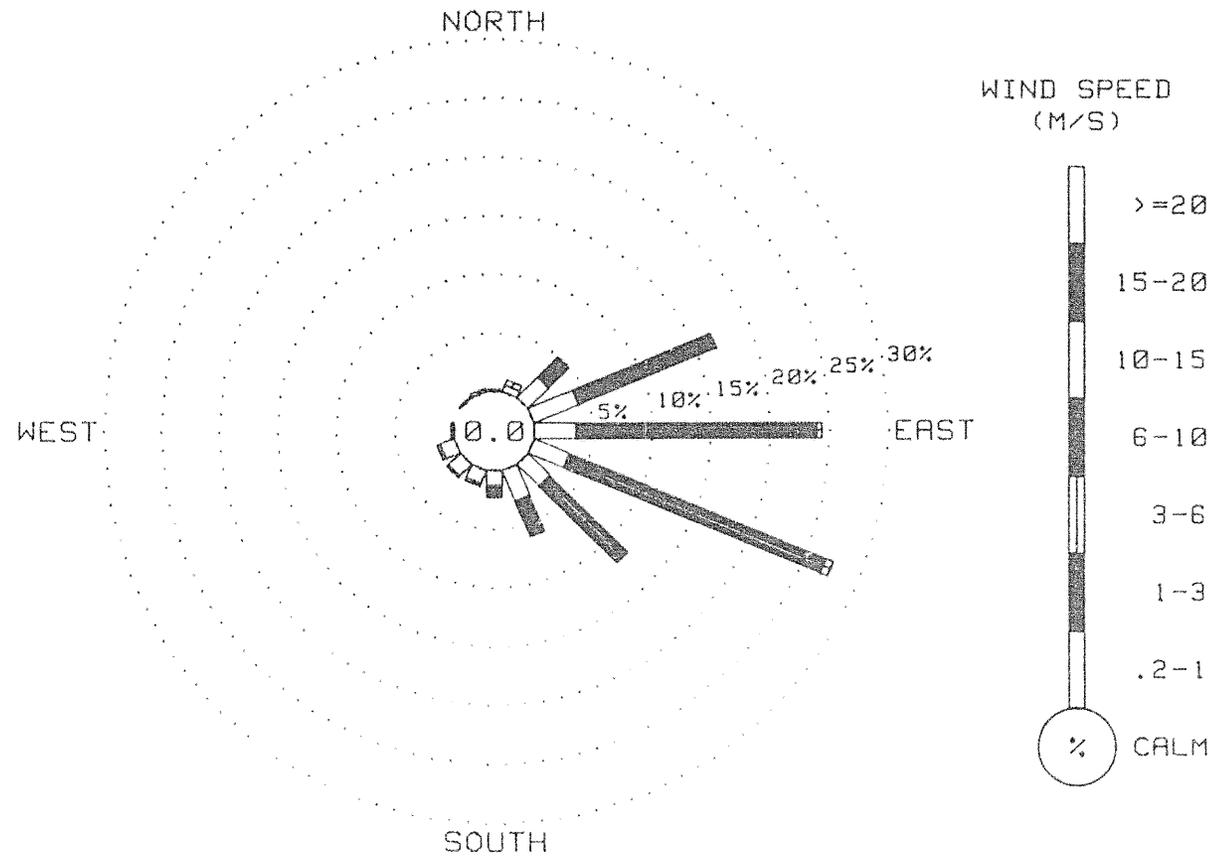
R & M CONSULTANTS, INC.
 SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION
 DATA TAKEN DURING December, 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	.20	0.00	0.00	0.00	0.00	0.00	0.00	.20
NNE	.60	.47	0.00	0.00	0.00	0.00	0.00	1.08
NE	2.49	2.42	0.00	0.00	0.00	0.00	0.00	4.91
ENE	4.10	12.43	.13	0.00	0.00	0.00	0.00	16.67
E	3.56	20.30	.47	0.00	0.00	0.00	0.00	24.33
ESE	3.23	23.45	.67	0.00	0.00	0.00	0.00	27.35
SE	2.62	9.21	0.00	0.00	0.00	0.00	0.00	11.83
SSE	2.82	3.23	0.00	0.00	0.00	0.00	0.00	6.05
S	1.28	1.01	0.00	0.00	0.00	0.00	0.00	2.29
SSW	1.21	.27	0.00	0.00	0.00	0.00	0.00	1.48
SW	0.41	.20	0.00	0.00	0.00	0.00	0.00	0.61
WSW	1.28	.27	0.00	0.00	0.00	0.00	0.00	1.55
W	.27	0.00	0.00	0.00	0.00	0.00	0.00	.27
WNW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
NW	.13	0.00	0.00	0.00	0.00	0.00	0.00	.13
NNW	.27	0.00	0.00	0.00	0.00	0.00	0.00	.27
CALM								0.00
TOTAL	25.47	73.25	1.28	0.00	0.00	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 **

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



WIND ROSE PLOT

R & M CONSULTANTS, INC.
 SUBITNA HYDROELECTRIC PROJECT

HOURLY SOLAR RADIATION SUMMARY FOR DEVIL CANYON 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	1	2	2	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	2	4	2	1	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	3	1	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	1	2	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	2	1	1	0	0	0	0	0	0	0	0	0	0	0
6	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	0
7	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	0
8	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	0
9	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	0
10	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	0
11	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	0
12	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	0
13	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	0
14	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	0
15	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	0
16	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	0
17	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	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	0	**
19	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	0
20	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	0
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	**
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	**
23	0	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
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	0
25	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	0
26	0	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
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	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	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	0	**
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	**
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	0

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

R & M CONSULTANTS, INC.
SUSITNA HYDROELECTRIC PROJECT

OBSERVATION SUMMARY FOR DEVIL CANYON WEATHER STATION
DATA TAKEN DURING December, 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	1109	75
PRECIPITATION	0	0
SOLAR RADIATION	1488	100
DEW POINT	1109	75

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/CM^2

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 V, Devil Canyon Station (No. 0660). Prepared under contract to Harza-Ebasco Susitna Joint Venture for Alaska Power Authority. Document No. 1092. 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)