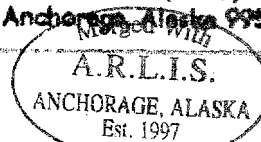


1092

**SUSITNA  
HYDROELECTRIC PROJECT**

FEDERAL ENERGY REGULATORY COMMISSION  
PROJECT No. 7114

**LIBRARY**  
ALASKA DEPT. OF FISH & GAME  
333 Raspberry Rd.  
Anchorage, Alaska 99518-1562



**PROCESSED CLIMATIC DATA  
OCTOBER 1982 - SEPTEMBER 1983**

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

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

UNDER CONTRACT TO

**HARZA-EBASCO**  
SUSITNA JOINT VENTURE

FINAL REPORT

JUNE 1984  
DOCUMENT No. 1092

**ALASKA POWER AUTHORITY**

TK  
1425  
.58  
A23  
no. 1092

**SUSITNA HYDROELECTRIC PROJECT**

**PROCESSED CLIMATIC DATA  
OCTOBER 1982 - SEPTEMBER 1983**

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

Report by

R&M Consultants, Inc.

Under Contract to  
Harza-Ebasco Susitna Joint Venture

Prepared for  
Alaska Power Authority

Final Report  
June 1984

3 3755 000 36658 3

**ARLIS**  
Alaska Resources  
Library & Information Services  
Anchorage, Alaska

**NOTICE**

**ANY QUESTIONS OR COMMENTS CONCERNING  
THIS REPORT SHOULD BE DIRECTED TO  
THE ALASKA POWER AUTHORITY  
SUSITNA PROJECT OFFICE**

ALASKA POWER AUTHORITY  
SUSITNA HYDROELECTRIC PROJECT

TASK 4 - HYDROLOGY

PROCESSED CLIMATIC DATA (1983)  
OCTOBER 1982 - SEPTEMBER 1983

VOLUME INDEX

VOLUME 1: 0610 - SUSITNA GLACIER STATION  
VOLUME 2: 0620 - DENALI STATION  
VOLUME 3: 0640 - KOSINA CREEK STATION  
VOLUME 4: 0650 - WATANA STATION  
VOLUME 5: 0660 - DEVIL CANYON STATION  
VOLUME 6: 0665 - SHERMAN STATION  
VOLUME 7: 0686.5 - EKLUTNA LAKE STATION

ALASKA POWER AUTHORITY  
SUSITNA HYDROELECTRIC PROJECT

PROCESSED CLIMATIC DATA - DEVIL CANYON STATION  
OCTOBER 1982 - SEPTEMBER 1983

| TABLE OF CONTENTS                                              | PAGE  |
|----------------------------------------------------------------|-------|
| Volume Index                                                   | ii    |
| List of Figures                                                | iv    |
| Acknowledgments                                                | v     |
| Addendum                                                       | vi    |
| <br>                                                           |       |
| I. BACKGROUND                                                  | I-1   |
| A. Purpose                                                     | I-1   |
| B. History of Devil Canyon Station (No. 0660)                  | I-1   |
| <br>                                                           |       |
| II. ANNUAL DATA SUMMARIES - DEVIL CANYON STATION               | II-1  |
| <br>                                                           |       |
| III. REPORT PREPARATION                                        | III-1 |
| A. Description of Symbols Used in Annual and Monthly Summaries | III-1 |
| B. Data Computation Standards (Climate)                        | III-3 |
| <br>                                                           |       |
| IV. INTERPRETATION OF DATA - WATER YEAR 1983                   | IV-1  |
| A. General Notes on Interpreting Data                          | IV-1  |
| B. Notes on Interpreting Devil Canyon Station Data             | IV-6  |
| <br>                                                           |       |
| V. MONTHLY CLIMATIC DATA SUMMARIES                             | V-1   |
| Devil Canyon Station - Water Year 1983                         |       |

## LIST OF FIGURES

| Figure | Description          | Page |
|--------|----------------------|------|
| I-1    | Station Location Map | I-2  |

### Acknowledgments

These climatic data were collected under contract to Acres American, Incorporated (through February 1983) and under contract to Harza-Ebasco Joint Venture (after February) for the Alaska Power Authority's Susitna Hydroelectric Feasibility Study. The data recorders are Model 5100 Weather Wizards manufactured by Meteorology Research, Incorporated (MRI), now part of Belfort Instrument Company. All sensors were supplied by MRI or were replacements obtained from MRI's suppliers. Field maintenance and data collection were performed by the hydrology staff of R&M Consultants, Incorporated. Data reduction and processing were performed by Lisa Fotherby, Len Story, Bob Butera, Carl Schoch, and Jeff Coffin, using computer programs developed by Mark Holmstrand. The computer hardware used was a Hewlett-Packard 9845B system. Review comments were provided by Khalid Jawed of Harza-Ebasco.

## ADDENDUM

Subsequent to preparation of the final report and prior to publication, adjustments were made to some of this station's humidity data. Data were adjusted for the months where the RH sensor was seriously out of calibration. The revised mean daily values for both relative humidity and dewpoint are presented in the following table.

June 1984

# ADDENDUM

Revised RH and Dewpoint Data

STATION: DEVIL CANYON YEAR: 1982-83

|       | October         |                     | November        |                     | December        |                     | January         |                     | February        |                     | March           |                     |       |
|-------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-------|
| DAY   | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | DAY   |
| 1     | 57              | -5.9                | 63              | -9.4                | 76              | -19.9               | 90              | -4.5                | 55              | -7.1                | 98              | -5.8                | 1     |
| 2     | 59              | -6.3                | 85              | -5.6                | 70              | -22.4               | 90              | -4.6                | 66              | -5.9                | 71              | -13.3               | 2     |
| 3     | 50              | -8.6                | 80              | -12.6               | 64              | -21.5               | 92              | -7.3                | 61              | -7.7                | 67              | -17.5               | 3     |
| 4     | 47              | -10.2               | 75              | -5.9                | 59              | -23.2               | 81              | -19.4               | 57              | -8.7                | 67              | -16.9               | 4     |
| 5     | 36              | -13.6               | 79              | -10.2               | 67              | -13.0               | 73              | -25.9               | 52              | -10.0               | 62              | -14.1               | 5     |
| 6     | 38              | -13.9               | 78              | -18.2               | 64              | -10.7               | 61              | -23.5               | 67              | -7.4                | 59              | -14.1               | 6     |
| 7     | 56              | -9.0                | 70              | -19.6               | 65              | -5.6                | 61              | -26.5               | 90              | -5.5                | 57              | -14.2               | 7     |
| 8     | 76              | -7.2                | 81              | -12.4               | 86              | -3.3                | 60              | -30.1               | 88              | -12.0               | 48              | -18.0               | 8     |
| 9     | 84              | -3.0                | 92              | -8.3                | 82              | -10.7               | 51              | -31.6               | 82              | -17.8               | 45              | -20.8               | 9     |
| 10    | 80              | -6.0                | 87              | -10.9               | 70              | -15.9               | 46              | -31.1               | 78              | -17.7               | 70              | -14.3               | 10    |
| 11    | 75              | -6.9                | 91              | -6.1                | 61              | -13.0               | 62              | -33.0               | 72              | -20.5               | 70              | -8.5                | 11    |
| 12    | 88              | -1.7                | 81              | -6.1                | 61              | -10.2               | **              | *****               | 71              | -23.3               | 64              | -8.9                | 12    |
| 13    | 81              | -4.6                | 82              | -5.2                | 67              | -7.8                | **              | *****               | 66              | -24.1               | 57              | -10.6               | 13    |
| 14    | 73              | -9.3                | 93              | -6.7                | 67              | -9.7                | **              | *****               | 62              | -21.8               | 57              | -9.7                | 14    |
| 15    | 65              | -14.1               | 95              | -12.8               | 57              | -9.3                | **              | *****               | 49              | -22.0               | 61              | -8.0                | 15    |
| 16    | 70              | -8.7                | 82              | -17.9               | 58              | -9.9                | **              | *****               | 35              | -23.4               | 69              | -8.0                | 16    |
| 17    | 79              | -6.2                | 77              | -21.3               | 66              | -10.3               | **              | *****               | 33              | -25.5               | 58              | -10.6               | 17    |
| 18    | 74              | -9.8                | 68              | -24.5               | 82              | -15.0               | **              | *****               | 56              | -19.4               | 65              | -11.4               | 18    |
| 19    | 80              | -6.2                | 53              | -25.1               | 64              | -15.1               | 94              | -7.4                | 74              | -18.5               | 61              | -12.8               | 19    |
| 20    | 62              | -12.8               | 69              | -17.1               | 58              | -16.5               | 76              | -11.0               | 58              | -12.5               | 54              | -11.1               | 20    |
| 21    | 45              | -19.4               | 75              | -11.9               | 75              | -19.9               | 48              | -15.9               | 55              | -11.8               | 46              | -12.8               | 21    |
| 22    | 48              | -19.9               | 70              | -10.5               | 71              | -22.7               | 57              | -20.3               | 65              | -10.4               | 49              | -13.7               | 22    |
| 23    | 40              | -21.1               | 74              | -6.0                | 59              | -20.9               | 31              | -21.6               | 46              | -13.0               | 49              | -14.4               | 23    |
| 24    | 39              | -22.0               | 86              | -4.4                | 64              | -17.2               | 27              | -22.8               | 69              | -8.0                | 54              | -12.1               | 24    |
| 25    | 50              | -20.7               | 76              | -6.3                | 65              | -16.1               | 36              | -20.6               | 67              | -10.8               | 49              | -11.8               | 25    |
| 26    | 38              | -27.4               | 66              | -11.4               | 64              | -11.2               | 53              | -12.7               | 55              | -10.9               | 44              | -13.0               | 26    |
| 27    | 46              | -27.6               | 78              | -10.1               | 73              | -5.5                | 74              | -11.3               | 54              | -12.7               | 42              | -14.7               | 27    |
| 28    | 62              | -19.2               | 85              | -15.2               | 94              | -9                  | 92              | -7.6                | 80              | -7.5                | 45              | -13.6               | 28    |
| 29    | 65              | -19.3               | 90              | -8.1                | 95              | -3                  | 91              | -12.5               |                 |                     | 57              | -12.1               | 29    |
| 30    | 61              | -25.3               | 86              | -12.7               | 88              | -4.7                | 76              | -9.6                |                 |                     | 55              | -12.0               | 30    |
| 31    | 59              | -23.4               |                 |                     | 85              | -10.6               | 67              | -6.0                |                 |                     | 58              | -8.7                | 31    |
| MONTH | 56              | -13.2               | 77              | -11.8               | 70              | -12.7               | 65              | -17.4               | 61              | -13.9               | 57              | -12.5               | MONTH |

# ADDENDUM

Revised RH and Dewpoint Data

STATION: DEVIL CANYON YEAR: 1983

|       | April           |                     | May             |                     | June            |                     | * July          |                     | August          |                     | September       |                     |       |
|-------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-----------------|---------------------|-------|
| DAY   | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | DAY   |
| 1     | 51              | -11.2               | 47              | -7.2                | 59              | 4.4                 | 94              | 9.8                 | 62              | 9.2                 | 83              | 4.5                 | 1     |
| 2     | 44              | -13.6               | 88              | .8                  | 87              | 6.4                 | 82              | 9.1                 | 61              | 5.5                 | 34              | -12.2               | 2     |
| 3     | 42              | -12.6               | 80              | -5.5                | 93              | 4.1                 | 66              | 9.8                 | 57              | 5.2                 | 39              | -7.6                | 3     |
| 4     | 57              | -5.6                | 61              | -3.1                | 85              | 3.9                 | 80              | 12.1                | 91              | 9.9                 | 42              | -9.9                | 4     |
| 5     | 69              | -5.9                | 48              | -5.7                | 73              | 5.4                 | 78              | 13.3                | 87              | 9.3                 | 48              | -10.9               | 5     |
| 6     | 59              | -9.2                | 52              | -5.2                | 51              | .1                  | 91              | 10.8                | 79              | 8.7                 | 34              | -15.0               | 6     |
| 7     | 47              | -12.1               | 45              | -6.3                | 44              | -5.5                | 79              | 10.8                | 81              | 8.5                 | 45              | -7.6                | 7     |
| 8     | 52              | -11.0               | 43              | -6.3                | 52              | .5                  | 80              | 8.7                 | 89              | 8.8                 | 67              | .4                  | 8     |
| 9     | 61              | -10.5               | 52              | -2.1                | 48              | -1.5                | 79              | 8.5                 | 78              | 7.4                 | 54              | -1.5                | 9     |
| 10    | 43              | -18.1               | 34              | -8.0                | 46              | -4.4                | 69              | 8.7                 | 68              | 5.8                 | 60              | -1.5                | 10    |
| 11    | 51              | -16.9               | 35              | -7.6                | 83              | 6.4                 | 80              | 9.4                 | 68              | 6.8                 | 58              | -3.0                | 11    |
| 12    | 68              | -5.2                | 44              | -3.7                | 58              | 3.7                 | 86              | 9.7                 | 88              | 7.9                 | 44              | -3.8                | 12    |
| 13    | 70              | -4.9                | 46              | -2.1                | 53              | 3.4                 | 93              | 9.4                 | 87              | 5.8                 | 49              | -4.4                | 13    |
| 14    | 75              | -2.9                | 52              | -3.3                | 71              | 6.1                 | 88              | 10.2                | 76              | 3.0                 | 69              | -1.0                | 14    |
| 15    | 84              | -2.5                | 60              | .6                  | 83              | 7.7                 | 72              | 11.0                | 79              | 3.3                 | 49              | -5.8                | 15    |
| 16    | 50              | -7.5                | 57              | -2.0                | 64              | 5.4                 | 77              | 10.9                | 64              | 3.7                 | 42              | -9.9                | 16    |
| 17    | 52              | -9.9                | 87              | 2.9                 | 52              | 3.2                 | 90              | 10.1                | 85              | 4.7                 | 44              | -8.4                | 17    |
| 18    | 48              | -7.9                | 69              | .5                  | 42              | 2.7                 | 78              | 7.5                 | 59              | .6                  | 41              | -10.6               | 18    |
| 19    | 46              | -9.6                | 68              | -8.8                | 67              | 7.8                 | 68              | 5.8                 | 58              | .6                  | 39              | -7.1                | 19    |
| 20    | 44              | -9.6                | 48              | -2.1                | 56              | 5.9                 | 75              | 9.5                 | 83              | 6.2                 | 86              | 3.2                 | 20    |
| 21    | 49              | -8.3                | 71              | 2.0                 | 57              | 7.4                 | 71              | 8.5                 | 89              | 7.2                 | 86              | 5.1                 | 21    |
| 22    | 63              | -3.0                | 63              | 1.6                 | 60              | 8.1                 | 68              | 7.8                 | 80              | 7.3                 | 90              | 2.5                 | 22    |
| 23    | 85              | .4                  | 60              | -5.5                | 59              | 6.7                 | 94              | 8.4                 | 82              | 5.4                 | 34              | -18.7               | 23    |
| 24    | 42              | -7.1                | 47              | -3.9                | 47              | 5.2                 | 78              | 9.2                 | 83              | 3.7                 | 24              | -23.2               | 24    |
| 25    | 32              | -9.2                | 48              | -2.3                | 41              | 4.8                 | 69              | 7.1                 | 84              | 4.0                 | 18              | -24.8               | 25    |
| 26    | 45              | -6.5                | 66              | .8                  | 75              | 9.4                 | 78              | 9.2                 | 68              | 5.5                 | 29              | -20.8               | 26    |
| 27    | 48              | -5.9                | 55              | -1.6                | 91              | 8.6                 | 60              | 9.2                 | **              | *****               | 29              | -18.2               | 27    |
| 28    | 62              | -3.0                | 48              | .6                  | 78              | 9.4                 | 59              | 8.6                 | **              | *****               | 68              | -5.5                | 28    |
| 29    | 79              | 1.0                 | 42              | 1.8                 | 82              | 8.9                 | 70              | 10.6                | 96              | 6.9                 | 83              | -4.4                | 29    |
| 30    | 24              | -18.9               | 50              | 5.2                 | 58              | 8.3                 | 94              | 10.9                | 60              | 3.5                 | 94              | 2.4                 | 30    |
| 31    |                 |                     | 75              | 4.9                 |                 |                     | 86              | 12.2                | 83              | 5.4                 |                 |                     | 31    |
| MONTH | 53              | -8.2                | 54              | -1.6                | 62              | 5.0                 | 77              | 9.6                 | 74              | 5.9                 | 46              | -7.1                | MONTH |

\* NOTE: Data for July were not changed.

## I. BACKGROUND

### A. Purpose

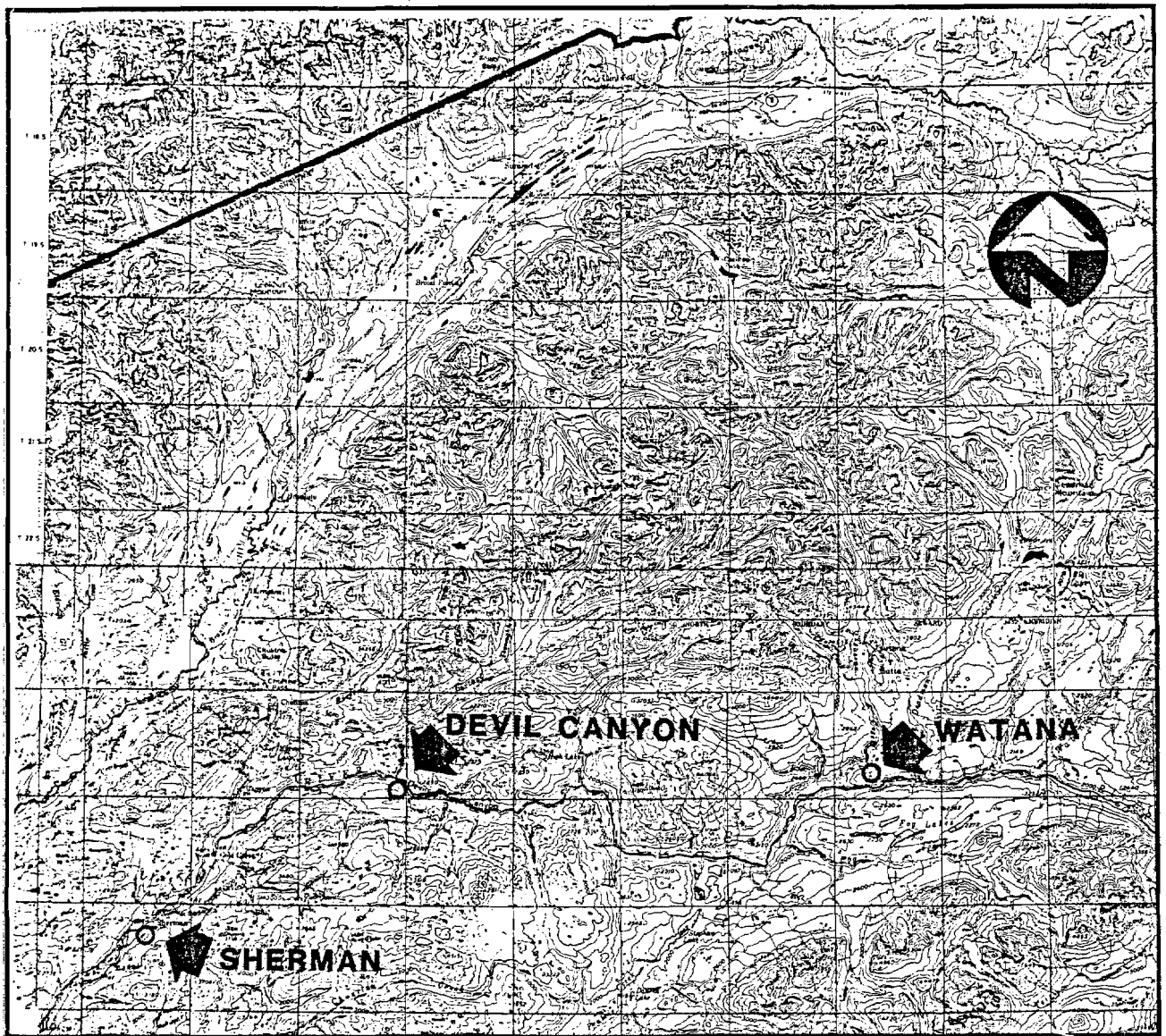
The Devil Canyon climate station was installed near the Devil Canyon damsite to obtain environmental data for reservoir, hydrology, and transmission line studies and design and planning of access roads and dam construction.

### B. History of Devil Canyon Station (No. 0660)

The station was installed on July 17, 1980. It is located 1/8-mile south of the Susitna River, adjacent to the proposed Devil Canyon damsite. It lies at a 1,500-foot elevation on a ridge within the plateau region, yet is close to the actual walls of the canyon (see Figure I-1 for location). Devil Canyon Station is at Susitna River Mile 153.

Previous data reports for this station are:

| Report                                                                                            | Period Covered         |
|---------------------------------------------------------------------------------------------------|------------------------|
| 1. Processed Climatic Data<br>Volume 6<br>Devil Canyon Station<br>March 1982 (R&M Consultants)    | July 1980 - Sept. 1981 |
| 2. Processed Climatic Data<br>Volume 6<br>Devil Canyon Station<br>December 1982 (R&M Consultants) | Oct. 1981 - Sept. 1982 |



TALKEETNA MTS. AND HEALY QUADRANGLES APPROX. SCALE 1" = 11 MILES

## CLIMATE STATIONS UPPER SUSITNA BASIN



Figure I-1

PREPARED BY:

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

PREPARED FOR:

**HARZA-EBASCO**  
SUSITNA JOINT VENTURE

II. ANNUAL DATA SUMMARIES

DEVIL CANYON STATION (No. 0660)

SUMMARY OF CLIMATE DATA RECORDED AT DEVIL CANYON STATION (NO. 660)  
WATER YEAR 1983

| Month  | Temperature  |              |              | Wind                    |                          |                          |                                 |                                  | P'val.<br>Dir.<br>(True) | Mean<br>RH<br>(%) | Mean<br>DP<br>(°C) | Precip.<br>(mm) | Total<br>Solar<br>Energy<br>(WH/m2) | Month  |
|--------|--------------|--------------|--------------|-------------------------|--------------------------|--------------------------|---------------------------------|----------------------------------|--------------------------|-------------------|--------------------|-----------------|-------------------------------------|--------|
|        | Max.<br>(°C) | Min.<br>(°C) | Mean<br>(°C) | Res.<br>Dir.<br>(°True) | Res.<br>Speed<br>(m/sec) | Avg.<br>Speed<br>(m/sec) | Max.<br>Gust<br>Dir.<br>(°True) | Max.<br>Gust<br>Speed<br>(m/sec) |                          |                   |                    |                 |                                     |        |
| OCT    | 5.5M         | -23.4M       | -6.2M        | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | 25,252M                             | OCT    |
| NOV    | 0.5          | -22.2        | -8.9         | 104                     | 1.4                      | 1.6                      | 113                             | 7.6                              | ESE                      | M                 | M                  | M               | 12,060                              | NOV    |
| DEC    | 1.8          | -21.6        | -8.2         | 111M                    | 1.4M                     | 1.7M                     | 107M                            | 9.5M                             | ESE(M)                   | M                 | M                  | M               | 9,143                               | DEC    |
| JAN    | 1.9M         | -31.6M       | -12.0M       | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | 9,735M                              | JAN    |
| FEB    | 3.3          | -24.2        | -7.5         | 112                     | 1.4                      | 1.7                      | 095                             | 7.6                              | ESE                      | M                 | M                  | M               | 22,838                              | FEB    |
| MAR    | 6.4          | -17.1        | -4.9         | 099                     | 1.7                      | 1.9                      | 092                             | 8.3                              | E                        | 66M               | -11.0M             | M               | 74,842                              | MAR    |
| APR    | 14.3         | -12.3        | 0.8          | 090M                    | 0.6M                     | 1.5M                     | 281M                            | 10.2M                            | ESE(M)                   | M                 | M                  | 33.2            | 113,821                             | APR    |
| MAY    | 20.1M        | -2.2M        | 6.8M         | 004M                    | 0.2M                     | 1.4M                     | 095M                            | 8.9M                             | WNW(M)                   | M                 | M                  | 25.4            | 143,590M                            | MAY    |
| JUN    | 25.7         | 1.9          | 11.2         | 324                     | 0.7                      | 1.5                      | 024                             | 8.9                              | NW                       | 65M               | 5.5M               | 31.6            | 153,883                             | JUN    |
| JUL    | 23.3         | 3.5          | 12.8         | 303                     | 0.8                      | 1.4                      | 102                             | 8.9                              | NW                       | 77                | 9.6                | 46.4            | 130,781                             | JUL    |
| AUG    | 22.9M        | 0.7M         | 9.7M         | 310M                    | 0.2M                     | 1.2M                     | 011M                            | 8.9M                             | WNW(M)                   | 75M               | 4.7M               | 103.0           | 97,826M                             | AUG    |
| SEP    | 13.0M        | -9.7M        | 3.7M         | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | 0.0             | 64,543M                             | SEP    |
| Annual | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | Annual |

Note: Refer to Section III of report for explanation of symbols used.

SUMMARY OF CLIMATE DATA RECORDED AT DEVIL CANYON STATION (NO. 660)  
WATER YEAR 1982

| Month  | Temperature  |              |              | Wind                    |                          |                          |                                 |                                  | P'val.<br>Dir.<br>(True) | Mean<br>RH<br>(%) | Mean<br>DP<br>(°C) | Precip.<br>(mm) | Total<br>Solar<br>Energy<br>(WH/m2) | Month  |
|--------|--------------|--------------|--------------|-------------------------|--------------------------|--------------------------|---------------------------------|----------------------------------|--------------------------|-------------------|--------------------|-----------------|-------------------------------------|--------|
|        | Max.<br>(°C) | Min.<br>(°C) | Mean<br>(°C) | Res.<br>Dir.<br>(°True) | Res.<br>Speed<br>(m/sec) | Avg.<br>Speed<br>(m/sec) | Max.<br>Gust<br>Dir.<br>(°True) | Max.<br>Gust<br>Speed<br>(m/sec) |                          |                   |                    |                 |                                     |        |
| OCT    | 5.4M         | -12.4M       | -0.4M        | 126M                    | 0.8M                     | 1.2M                     | 118M                            | 7.6M                             | ESE(M)                   | 66M               | -5.3M              | M               | 31,312M                             | OCT    |
| NOV    | 6.0          | -20.0        | -8.3         | 119M                    | 1.3M                     | 1.6M                     | 107M                            | 12.1M                            | ESE(M)                   | 68M               | -12.7M             | M               | 11,313M                             | NOV    |
| DEC    | 3.9          | -28.9        | -11.6        | 103                     | 1.2                      | 1.6                      | 104                             | 10.2                             | ESE                      | 74M               | -15.5M             | M               | 8,853                               | DEC    |
| JAN    | -6.1         | -28.7        | -17.0        | 103                     | 2.2                      | 2.5                      | 088                             | 12.1                             | ESE                      | 51M               | -25.4M             | M               | 13,923                              | JAN    |
| FEB    | 5.4          | -30.0        | -12.1        | 104M                    | 1.4M                     | 1.9M                     | 025M                            | 13.3M                            | ESE(M)                   | M*                | M*                 | M               | 26,125                              | FEB    |
| MAR    | 4.3          | -22.3        | -7.1         | 100M                    | 1.1M                     | 1.6M                     | 014M                            | 12.7M                            | ESE(M)                   | M*                | M*                 | M               | M                                   | MAR    |
| APR    | 8.9          | -21.9        | -2.7         | 087                     | 0.8                      | 1.7                      | 024                             | 11.4                             | ESE                      | M*                | M*                 | 21.0            | M                                   | APR    |
| MAY    | 17.2         | -5.7         | 4.4          | 334                     | 0.1                      | 1.4                      | 046                             | 8.3                              | NW                       | M*                | M*                 | 22.0            | 156,845                             | MAY    |
| JUN    | 26.4         | 0.0          | 9.9          | 306                     | 0.6                      | 1.4                      | 242                             | 10.2                             | WNW                      | M*                | M*                 | 85.2            | 136,964                             | JUN    |
| JUL    | 28.3         | 1.5          | 11.7         | 298                     | 0.8                      | 1.3                      | 255                             | 7.6                              | WNW                      | M*                | M*                 | 106.4           | 119,205                             | JUL    |
| AUG    | 21.6         | 1.2          | 10.8         | 322                     | 0.3                      | 1.2                      | 318                             | 7.0                              | WNW                      | M*                | M*                 | 35.0            | 119,478                             | AUG    |
| SEP    | 15.5         | -3.1         | 6.0          | 139                     | 0.1                      | 0.7                      | 096                             | 9.5                              | ESE                      | M*                | M*                 | 156.6           | 51,505                              | SEP    |
| Annual | 28.3M        | -30.0M       | -1.3M        | 101M                    | 0.6M                     | 1.5M                     | 025M                            | 13.3M                            | ESE(M)                   | M                 | M                  | M               | M                                   | Annual |

\* Months when RH values were reported in the annual report but where subsequent review indicated the data were unusable.

Note: Refer to Section III of report for explanation of symbols used.

SUMMARY OF CLIMATE DATA RECORDED AT DEVIL CANYON STATION (NO. 660)  
WATER YEAR 1981

| Month  | Temperature  |              |              | Wind                    |                          |                          |                                 |                                  |                          | Mean<br>RH<br>(%) | Mean<br>DP<br>(°C) | Precip.<br>(mm) | Total<br>Solar<br>Energy<br>(WH/m2) | Month  |
|--------|--------------|--------------|--------------|-------------------------|--------------------------|--------------------------|---------------------------------|----------------------------------|--------------------------|-------------------|--------------------|-----------------|-------------------------------------|--------|
|        | Max.<br>(°C) | Min.<br>(°C) | Mean<br>(°C) | Res.<br>Dir.<br>(°True) | Res.<br>Speed<br>(m/sec) | Avg.<br>Speed<br>(m/sec) | Max.<br>Gust<br>Dir.<br>(°True) | Max.<br>Gust<br>Speed<br>(m/sec) | P'val.<br>Dir.<br>(True) |                   |                    |                 |                                     |        |
| OCT    | 11.2M        | -13.4M       | 0.2M         | 127                     | 0.9                      | 1.3                      | 105                             | 8.9                              | ESE                      | 62M               | -7.6M              | M               | M                                   | OCT    |
| NOV    | 4.2          | -18.1        | -5.1         | 115M                    | 1.3M                     | 1.5M                     | 100M                            | 10.2M                            | ESE(M)                   | 75M               | -9.7M              | M               | M                                   | NOV    |
| DEC    | 1.2          | -34.4        | 17.9         | 105                     | 1.6                      | 1.9                      | 093                             | 9.5                              | ESE                      | 57                | -25.2              | M               | M                                   | DEC    |
| JAN    | 5.6          | -16.5        | -2.5         | 123                     | 1.3                      | 1.6                      | 108                             | 9.5                              | ESE                      | 70M               | -10.7M             | M               | M                                   | JAN    |
| FEB    | 4.4          | -27.8        | -7.3         | M                       | M                        | M                        | M                               | M                                | M                        | 80M               | -10.8M             | M               | M                                   | FEB    |
| MAR    | 9.2M         | -14.8M       | -1.8M        | 112M                    | 1.2M                     | 1.6                      | 074                             | 8.9                              | ESE(M)                   | 63M               | -9.0M              | M               | 63,510                              | MAR    |
| APR    | 12.3M        | -15.2M       | -1.8M        | 098M                    | 1.0M                     | 1.7                      | M                               | 13.9                             | ESE(M)                   | 48M               | -12.0M             | 1.2             | 141,149                             | APR    |
| MAY    | 24.0         | -2.8         | 8.7          | 341                     | 0.2                      | 1.4                      | 027                             | 10.8                             | WNW                      | 59M               | 0.3M               | 39.0            | 141,937                             | MAY    |
| JUN    | 24.1         | -0.4         | 10.0         | 302                     | 0.7                      | 1.5                      | 043                             | 12.7                             | NW                       | 67M               | 3.6M               | 166.4           | 143,143                             | JUN    |
| JUL    | 19.9         | 0.0          | 9.3          | 300                     | 0.6                      | 1.2                      | 252                             | 10.2                             | WNW                      | 80M               | 7.5M               | 176.6           | 80,423                              | JUL    |
| AUG    | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | AUG    |
| SEP    | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | SEP    |
| Annual | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | Annual |

\* Months when RH values were reported in the annual report but where subsequent review indicated the data were unusable.

Note: Refer to Section III of report for explanation of symbols used.

SUMMARY OF CLIMATE DATA RECORDED AT DEVIL CANYON STATION (NO. 660)  
WATER YEAR 1980

| Month  | Temperature  |              |              | Wind                    |                          |                          |                                 |                                  | P'val.<br>Dir.<br>(True) | Mean<br>RH<br>(%) | Mean<br>DP<br>(°C) | Precip.<br>(mm) | Total<br>Solar<br>Energy<br>(WH/m2) | Month  |
|--------|--------------|--------------|--------------|-------------------------|--------------------------|--------------------------|---------------------------------|----------------------------------|--------------------------|-------------------|--------------------|-----------------|-------------------------------------|--------|
|        | Max.<br>(°C) | Min.<br>(°C) | Mean<br>(°C) | Res.<br>Dir.<br>(°True) | Res.<br>Speed<br>(m/sec) | Avg.<br>Speed<br>(m/sec) | Max.<br>Gust<br>Dir.<br>(°True) | Max.<br>Gust<br>Speed<br>(m/sec) |                          |                   |                    |                 |                                     |        |
| OCT    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | OCT    |
| NOV    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | NOV    |
| DEC    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | DEC    |
| JAN    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | JAN    |
| FEB    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | FEB    |
| MAR    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | MAR    |
| APR    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | APR    |
| MAY    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | MAY    |
| JUN    |              |              |              |                         |                          |                          |                                 |                                  |                          |                   |                    |                 |                                     | JUN    |
| JUL    | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | JUL    |
| AUG    | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | AUG    |
| SEP    | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | SEP    |
| Annual | M            | M            | M            | M                       | M                        | M                        | M                               | M                                | M                        | M                 | M                  | M               | M                                   | Annual |

\* Months when RH values were reported in the annual report but where subsequent review indicated the data were unusable.

Note: Refer to Section III of report for explanation of symbols used.

### III. REPORT PREPARATION

#### A. DESCRIPTION OF SYMBOLS USED IN ANNUAL AND MONTHLY SUMMARIES

##### 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.

##### Monthly Summaries

Blank entries for three-hourly, daily, or monthly values (generally just for relative humidity or dewpoint) indicate the R.H. and D.P. data have been deleted for the period. For further explanation, refer to the section "Interpretation of Data."

M Insufficient or partial data. M follows average and/or total values if any readings for the period were missing and would have been required for determination of the table value. M follows the summary values for the month if 1-9 daily values had M's appended to them or had asterisks in their place. M appears alone in place of the monthly values if all daily values had blank entries or asterisks. Parentheses surround the M where other letters may cause confusion (i.e in prevailing direction).

\*\*\*\* Erroneous or missing data (may be from 2 to 6 asterisks, depending on number of digits possible in the value). Appears 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.

## B. DATA COMPUTATION STANDARDS (CLIMATE)

### Graphical Data Plot

Graphical representation of valid recorded and/or computed data.

### 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 is invalid, no value is reported for the current hour.

### 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 month wind speeds are determined for 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).
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 is determined by averaging the recorded solar intensity and converting the units. The monthly value is the sum of the daily values.

#### 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.

#### Wind Frequency Summary Table

1. Reported data are determined from all valid readings.

#### Wind Rose Graphical Plot

1. Plot is a graphical representation of the wind frequency summary table.

## 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/cm<sup>2</sup>

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: ±1°C

Wind Speed: ±0.5 meters per second

Wind Direction: ±1% of full scale

Relative Humidity: ±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 |

#### IV. INTERPRETATION OF DATA

##### A. GENERAL - Notes on Interpreting Data

###### 1. General

- a. 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 the section "Data Computation Standards."
- b. The estimates of usable data for the current year in Table IV.1 at the end of this section were prepared by reviewing the published summary tables for each month. Precipitation estimates came from the hourly table; estimates for usable percentages of temperature, relative humidity, and solar radiation data were based on the 3-hour summaries; wind estimates came from comparison with the other parameters and a cursory review of the raw-data printout; and usable longwave radiation estimates were from the raw data.
- c. An enhancement that has been added to this year's series of reports is use of symbols to indicate where data are missing from parameter totals or averages in the summary tables. This is intended to assist the data user in evaluating the quality of the data.

Estimates that are below 90% are reported to the nearest 5%, estimates above 90% are to the nearest 1%. If the data are nearly all good, except for infrequent "bugs," this is

indicated by a "99 + " value. If the estimate is quite rough, this is denoted by a "±" after the value.

2. **Precipitation** - Precipitation data for most stations are 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.

An exception to the normal system of recording winter precipitation is at the Watana Station (No. 0650). That site is equipped with a Wyoming wind gage to eliminate the effects of the wind on the snow, and it also has an AC-powered heater on the precipitation bucket to melt snow that falls into it. The Watana data are thus published for the whole year. Details on the Watana data are included in "Notes on Interpreting Watana Station Data," in the Watana report.

3. **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. Though the data are generally of poor quality throughout the 1983 year, they are believed to be useful as **indicators** of the true humidity and have for that reason been left in the report.

When the calibration of the R.H. sensor is too high, readings near the top end (i.e. approaching 100%) may go "over the top" and be read as, say, 110% (if the calibration is high by 10 points). Having only two digits in which to record the R.H., the Weather Wizard will report this as "10," which will drastically affect the computation of instantaneous dewpoint, average R.H., and average dewpoint values. The graphical plot of R.H. will also be misleading, with periodic "spikes" down to very low values. Each plot may be interpreted, however, by mentally adjusting the entire plot downward an appropriate amount to keep the maximum values at 100%. The approximate amount of such adjustment for each month is noted in the following section, "Notes on Interpreting Devil Canyon Station Data". Because the R.H. and dewpoint values in the monthly summary tables are numerical averages, they are not easily interpreted and have been deleted for the days when RH was "overtopped". Values in the three-hour summaries have been retained since they are instantaneous readings; they should, however, be adjusted by the same amount indicated for the plots.

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. However, to avoid undue congestion in the table, daily values have not been individually noted as containing missing records; only the monthly average has been so designated. The same applies to R.H.

4. **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 "Usable Data" table and of the graphical plot 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  $\pm 1\%$  of the full-scale value of  $140 \text{ mW/cm}^2$ , they often record a reading of 0 (during night) as 1 or even  $2 \text{ mW/cm}^2$ . This also can bias the daily or monthly totals, making the computed energy much higher than the true solar energy. This type of error in the data is difficult to adjust automatically, but the user can compensate for it in his interpretation by reviewing the instantaneous radiation readings printed in the 3-hour summary tables. If the 3-hour values never drop below 1, even in the winter time, the sensor is very likely reading high. An error of  $+1 \text{ mW/cm}^2$  on every reading will cause the computed daily total energy to be high by  $240 \text{ watt-hr./cm}^2$ . The user can adjust the numbers used accordingly.

5. **Wind Speed and Direction** - The wind frequency summary table in each month's report notes the number of wind observations used in preparing the table. Since data for this year have all been recorded at 15-minute intervals, there were 4 readings recorded per hour and 96 readings per day. This gives a maximum possible number of observations for each month as follows (dependent on the number of days in the month):

| Month                                                            | Max. Possible #<br>of Observations |
|------------------------------------------------------------------|------------------------------------|
| October, December, January, March<br>May, July, August (31 days) | 2976                               |
| November, April, June, September<br>(30 days)                    | 2880                               |
| February (28 days)                                               | 2688                               |
| February in leap years (29 days)                                 | 2784                               |

## B. Notes on Interpreting DEVIL CANYON Station Data

1. **General** - All data were lost from January 11-19, 1983, when the station was pulled for inspection. Also, all data except precipitation and solar radiation were lost from August 26-28, 1983, when the unit underwent annual maintenance.

2. **Precipitation** - Data are presented for April, despite the occurrence of sub-freezing temperatures on several days. This may give errors in the reporting of the timing or the amount of precipitation, and the user should be aware of this in interpreting and applying the data.

The lack of any precipitation at all recorded for the period August 28-September 30 is suspicious since the gages at Watana (25 miles to the east) and Sherman (20 miles west-southwest) reported 5.0 and 20.8 millimeters, respectively, for September. The Devil Canyon gage may have been disconnected; the data are considered unreliable.

3. **Relative Humidity** - As discussed in the preceding section of general notes, many of the R.H. data for the year were considered unreliable or required some "judgment" in their use. Due to calibration problems with the R.H. sensors, some of the data should be adjusted prior to application. The amount of adjustment for each month applicable is listed below, and an example of the interpretation is explained afterward.

| Month        | Adjustment to Graphical R.H. Values |
|--------------|-------------------------------------|
| October 1982 | -20 R.H. Points                     |
| November     | -10                                 |
| December     | -15                                 |
| January 1983 | - 5                                 |
| February     | -10                                 |
| March        | -10                                 |
| April        | -20                                 |
| May          | -15                                 |
| June         | - 2                                 |
| August       | -20 after August 28                 |
| September    | -20                                 |

**Example:** In March, the readings peak over the top at about "110 percent" in the graphical plot (The plot does not go to 110, but readings of "10" are equivalent to 110 percent). This value is assumed to correspond to a true R.H. of 100 percent. Therefore, 10 points should be subtracted from all the plotted R.H. values. Values from 0-10 should be read as 100-110 (and therefore adjusted to 90-100). The graphical plot may thus be interpreted semi-quantitatively. The numerical values (daily averages), however, are more difficult to interpret and have been deleted from the tables.

4. **Solar Radiation** - The minimum (nightly) value for solar radiation intensity is generally  $1 \text{ mw/cm}^2$  throughout the year. As explained in the General Notes (Section IV.A), this gives daily totals that are too high by 240 watt-hours per day. Inspection should be made of the night-time values in the 3-hour tables (to see whether "1" appears in place of "0"), and then the daily and monthly totals should be adjusted accordingly.

TABLE IV.1  
SUSITNA HYDROELECTRIC PROJECT - CLIMATE DATA PROCESSING  
APPROXIMATE PERCENTAGES OF USABLE DATA

Station: Devil Canyon

Water Year: 1983

|                   | <u>OCT</u> | <u>NOV</u> | <u>DEC</u> | <u>JAN</u> | <u>FEB</u> | <u>MAR</u> | <u>APR</u> | <u>MAY</u> | <u>JUN</u> | <u>JUL</u> | <u>AUG</u> | <u>SEP</u> | <u>YEAR</u> |
|-------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|
| Temperature       | 99         | 100        | 100        | 75         | 100        | 100        | 100        | 99+        | 100        | 100        | 93         | 95         | 97          |
| Wind Speed        | 99         | 100        | 90         | 70         | 100        | 100        | 99         | 99+        | 100        | 100        | 93         | 95±        | 95          |
| Wind Direction    | 93         | 100        | 97         | 75         | 100        | 100        | 99         | 99+        | 100        | 100        | 93         | 85         | 95          |
| Relative Humidity | 99         | 100        | 100        | 75         | 100        | 100        | 100        | 99+        | 100        | 100        | 93         | 96         | 97          |
| Precipitation     | 0          | 0          | 0          | 0          | 0          | 0          | 100        | 100        | 100        | 100        | 100?       | 0?         | 42(1)       |
| Solar Radiation   | 99         | 100        | 100        | 75         | 100        | 100        | 100        | 99+        | 100        | 100        | 99         | 95         | 97          |
| Peak Gust         | 99         | 100        | 90         | 70         | 100        | 100        | 99         | 99+        | 100        | 100        | 93         | 93±        | 95          |
| Longwave          | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A        | N/A         |

(1) Maximum possible recovery percentage is 50% for the year since precipitation bucket is not heated and measurement of sub-freezing precipitation (generally during Oct. - Mar.) is not possible.

V. MONTHLY CLIMATIC DATA SUMMARIES

DEVIL CANYON STATION, WATER YEAR 1983

No precipitation data for October

(See INTERPRETATION OF DATA).

# R & M CONSULTANTS, INC.

## SUSTITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

DAY 01

DAY 02

DAY 03

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | 1.3   | ***** | 79   | 162  | .4   | 127  | 1.9  | 1    | 0300 | .7    | ***** | 12   | 096  | .7   | 140  | 1.9  | 1    |
| 0600 | .7    | ***** | 81   | 156  | .7   | 244  | 1.9  | 1    | 0600 | .2    | ***** | 15   | 121  | .4   | 134  | 1.3  | 1    |
| 0900 | 1.4   | ***** | 80   | 064  | .1   | 138  | 1.9  | 9    | 0900 | 1.3   | ***** | 94   | 077  | .5   | 119  | 1.9  | 15   |
| 1200 | 2.7   | -3.2  | 65   | 319  | .7   | 278  | 2.5  | 15   | 1200 | 4.4   | 2.4   | 87   | 039  | .9   | 032  | 2.5  | 25   |
| 1500 | 3.3   | ***** | 62   | 306  | .8   | 300  | 2.5  | 11   | 1500 | 2.7   | -6.2  | 52   | 357  | 1.2  | 324  | 3.8  | 12   |
| 1800 | 1.7   | ***** | 94   | 266  | .5   | 278  | 2.5  | 1    | 1800 | 1.8   | -2.0  | 76   | 259  | .5   | 292  | 3.2  | 1    |
| 2100 | 1.0   | ***** | 92   | 181  | .8   | 195  | 1.9  | 1    | 2100 | .7    | ***** | 79   | 123  | .8   | 130  | 1.9  | 1    |
| 2400 | 1.0   | -29.7 | 8    | 113  | .7   | 077  | 1.9  | 1    | 2400 | -.6   | ***** | 9    | 131m | .3m  | 128m | 1.9m | 1    |

DAY 04

DAY 05

DAY 06

| DEW WIND WIND GUST MAX. HOUR |       |       |    |      |      |      |      |     | DEW WIND WIND GUST MAX. HOUR |       |       |    |      |      |      |      |     | DEW WIND WIND GUST MAX. HOUR |       |       |    |      |      |      |      |     |
|------------------------------|-------|-------|----|------|------|------|------|-----|------------------------------|-------|-------|----|------|------|------|------|-----|------------------------------|-------|-------|----|------|------|------|------|-----|
| 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  |      | M/S  | MW  |                              | DEG C | DEG C | %  | DEG. | M/S  |      | M/S  | MW  |                              | DEG C | DEG C | %  | DEG. | M/S  |      | M/S  | MW  |
| 0300                         | -2.6  | ***** | 87 | 169  | 1.0  | 152  | 1.9  | 1   | 0300                         | 0.0   | ***** | 69 | 145  | .8   | 133  | 2.5  | 1   | 0300                         | -6.1  | -10.5 | 71 | 163  | 1.0  | 151  | 2.5  | 1   |
| 0600                         | -3.4  | -5.0  | 89 | 164  | .9   | 168  | 1.9  | 1   | 0600                         | -2.4  | -6.4  | 74 | 145  | 1.2  | 084  | 3.2  | 1   | 0600                         | -5.1  | -9.0  | 74 | 139  | 1.2  | 128  | 2.5  | 1   |
| 0900                         | .1    | ***** | 73 | 128  | .6   | 134  | 2.5  | 23  | 0900                         | .9    | -6.0  | 60 | 156  | 1.3  | 172  | 2.5  | 18  | 0900                         | -1.4  | ***** | 68 | 144  | .5   | 141  | 2.5  | 24  |
| 1200                         | 3.4   | -4.8  | 55 | 090  | 1.1  | 117  | 4.4  | 18  | 1200                         | 2.6   | -6.6  | 51 | 104  | 2.0  | 100  | 5.1  | 15  | 1200                         | 3.8   | -6.8  | 46 | 316  | .7   | 304  | 3.8  | 19  |
| 1500                         | 4.1   | -5.7  | 49 | 105  | 1.9  | 097  | 4.4  | 10  | 1500                         | 1.8   | -9.0  | 45 | 048  | 2.4  | 018  | 8.3  | 14  | 1500                         | 4.1   | -7.2  | 44 | 108  | 2.0  | 026  | 4.4  | 13  |
| 1800                         | 0.0   | -6.4  | 62 | 124  | 1.8  | 122  | 4.4  | 1   | 1800                         | -.4   | -10.1 | 48 | 017  | 6.0  | 030  | 10.2 | 1   | 1800                         | .9    | -7.6  | 53 | 146  | 1.5  | 129  | 3.8  | 1   |
| 2100                         | -2.0  | ***** | 73 | 167  | 1.2  | 158  | 3.2  | 1   | 2100                         | -1.1  | -10.2 | 50 | 096  | 1.7  | 023  | 9.5  | 1   | 2100                         | .3    | -7.0  | 58 | 182  | 1.0  | 203  | 1.9  | 1   |
| 2400                         | -1.7  | ***** | 75 | 152  | .6   | 136  | 1.9  | 1   | 2400                         | -2.8  | ***** | 57 | 131  | 1.9  | 163  | 5.7  | 1   | 2400                         | -1.6  | -7.3  | 65 | 173  | 1.8  | 158  | 1.9  | 1   |

DAY 07

DAY 08

DAY 09

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | 0.0   | -5.6  | 66   | 146  | 1.2  | 139  | 3.8  | 1    | 0300 | -2.4  | -35.1 | 6    | 282  | .7   | 327  | 3.2  | 1    |
| 0600 | .1    | -5.5  | 66   | 125  | 1.8  | 123  | 3.8  | 1    | 0600 | -2.8  | ***** | 0    | 311  | 1.5  | 317  | 3.8  | 1    |
| 0900 | -1.2  | ***** | 1    | 116  | 1.0  | 117  | 3.8  | 3    | 0900 | -2.5  | -4.5  | 86   | 259  | 1.0  | 255  | 4.4  | 3    |
| 1200 | -.8   | ***** | 98   | 062  | .5   | 062  | 3.2  | 6    | 1200 | -1.0  | ***** | 66   | 220  | .5   | 223  | 2.5  | 7    |
| 1500 | .5    | ***** | 29   | 351  | .5   | 030  | 1.9  | 4    | 1500 | -1.1  | -5.3  | 73   | 088  | 1.2  | 099  | 4.4  | 6    |
| 1800 | -1.0  | -35.7 | 5    | 287  | 1.2  | 279  | 3.2  | 1    | 1800 | ***** | ***** | **   | ***  | ***  | 106  | 3.2  | ***  |
| 2100 | -1.3  | -30.3 | 9    | 140  | .5   | 273  | 1.9  | 1    | 2100 | ***** | ***** | **   | ***  | ***  | ***  | ***  | ***  |
| 2400 | -2.9  | ***** | 2    | 133  | .8   | 138  | 3.2  | 1    | 2400 | -2.9  | ***** | 6    | 122M | .4M  | 091M | 1.3M | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

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. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | TEMP. | POINT | RH   | DIR. | SPD. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %    | DEG. | M/S  |
| 0300  | -2.3  | ***** | 7    | 286  | .7   | 293  | 1.9   | 1     | 0300 | -4.7 | ***** | 0    | ***   | ***   | ***  | ***  | 1    |
| 0600  | -2.5  | ***** | 8    | 274  | .6   | 259  | 1.9   | 1     | 0600 | -5.3 | ***** | 99   | 167m  | .2m   | 260m | 1.3m | 1    |
| 0900  | -2.2  | ***** | 8    | 311  | 1.0  | 290  | 2.5   | 2     | 0900 | -6.1 | -6.8  | 95   | 100   | 1.2   | 103  | 2.5  | 3    |
| 1200  | -1.8  | -2.2  | 97   | 332  | 1.1  | 323  | 3.8   | 3     | 1200 | -2.2 | ***** | 89   | 078   | .8    | 092  | 2.5  | 4    |
| 1500  | -2.8  | -2.9  | 99   | 324  | 1.7  | 316  | 3.8   | 2     | 1500 | -1.0 | -2.3  | 91   | 124   | 1.6   | 117  | 5.1  | 1    |
| 1800  | -3.9  | ***** | 98   | 299  | 1.2  | 311  | 3.8   | 1     | 1800 | -1.3 | ***** | 94   | 118   | 1.3   | 104  | 4.4  | 1    |
| 2100  | -4.7  | ***** | 1    | 239m | .7m  | 215m | 1.9m  | 1     | 2100 | -.5  | ***** | 94   | 137   | 1.0   | 140  | 3.2  | 1    |
| 2400  | -5.0  | ***** | 99   | ***  | ***  | ***  | ***   | 1     | 2400 | -1.3 | ***** | 5    | 227   | .6    | 261  | 1.9  | 1    |

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. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | -2.1  | ***** | 0    | 165  | .2   | 343  | 3.8   | 1     | 0300 | -5.0 | ***** | 0    | ***   | ***   | ***   | ***  | 1    |
| 0600  | -2.5  | ***** | 4    | 214  | .4   | 206  | 2.5   | 1     | 0600 | -5.3 | ***** | 1    | ***   | ***   | ***   | ***  | 1    |
| 0900  | -2.7  | ***** | 95   | 244  | .2   | 251  | 1.9   | 2     | 0900 | -3.6 | -5.3  | 88   | 145m  | 1.5m  | 145m  | 1.9m | 10   |
| 1200  | -2.5  | ***** | 94   | 139  | .4   | 058  | 2.5   | 4     | 1200 | -3.2 | ***** | 86   | 125   | 1.2   | 129   | 3.2  | 6    |
| 1500  | -2.9  | ***** | 99   | 184m | .8m  | 183m | 1.3m  | 2     | 1500 | -2.1 | -4.6  | 83   | 101   | .9    | 109   | 2.5  | 4    |
| 1800  | -3.7  | ***** | 2    | ***  | ***  | ***  | ***   | 1     | 1800 | -6.1 | -6.5  | 97   | 151   | 1.0   | 161   | 2.5  | 1    |
| 2100  | -4.3  | ***** | 3    | ***  | ***  | ***  | ***   | 1     | 2100 | -8.1 | -8.2  | 99   | 117   | 1.2   | 160   | 2.5  | 1    |
| 2400  | -5.1  | ***** | 2    | ***  | ***  | ***  | ***   | 1     | 2400 | -9.2 | -9.5  | 98   | 093   | 1.3   | 088   | 3.2  | 1    |

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. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | -7.6  | -9.3  | 88   | 083  | 1.8  | 077  | 3.2   | 1     | 0300 | -1.9 | -44.6 | 1    | 118m  | 1.5m  | 125m  | 3.2m | 1    |
| 0600  | -3.8  | -6.7  | 80   | 119  | 1.3  | 078  | 3.8   | 1     | 0600 | -2.5 | ***** | 3    | 091   | .5    | 118   | 3.2  | 1    |
| 0900  | -2.2  | ***** | 79   | 134  | 1.2  | 134  | 3.2   | 2     | 0900 | -1.8 | ***** | 99   | 058   | .5    | 099   | 1.9  | 3    |
| 1200  | -3.3  | -3.9  | 96   | 099  | 1.3  | 107  | 3.8   | 3     | 1200 | .8   | ***** | 82   | 207   | .1    | 204   | 1.9  | 4    |
| 1500  | -2.5  | -2.9  | 97   | 074  | .8   | 098  | 3.2   | 2     | 1500 | .2   | -1.0  | 92   | 193   | .9    | 207   | 2.5  | 3    |
| 1800  | -2.5  | -3.1  | 96   | 101  | 1.1  | 080  | 2.5   | 1     | 1800 | -3.2 | -3.3  | 99   | 159   | .6    | 200   | 1.9  | 1    |
| 2100  | -2.6  | -40.6 | 3    | 111  | 1.1  | 101  | 2.5   | 1     | 2100 | -6.5 | -43.3 | 3    | 136   | 1.1   | 138   | 3.2  | 1    |
| 2400  | -2.5  | ***** | 5    | ***  | ***  | ***  | ***   | 1     | 2400 | -6.4 | -45.3 | 2    | 139   | 1.0   | 102   | 3.2  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

DAY 19

DAY 20

DAY 21

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |      |    |
|------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|-------|------|------|-------|-------|----|-----|-----|-----|------|----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |      |    |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %     | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S   | DEG.  |    |     |     |     |      |    |
|      |       |       |      |      | M/S  | MW   |      |       |       |       |       | M/S  | MW   |      |       |       |      |      | M/S   | MW    |    |     |     |     |      |    |
| 0300 | -3.6  | ***** | 93   | 078  | .9   | 110  | 2.5  | 1     | 0300  | -6.0  | -6.4  | 97   | 099  | 1.5  | 091   | 3.8   | 1    | 0300 | -11.2 | -13.0 | 87 | 131 | 1.0 | 114 | 3.8  | 1  |
| 0600 | -4.2  | ***** | 7    | 042  | 1.0  | 071  | 2.5  | 1     | 0600  | -7.0  | -7.1  | 99   | 092  | 1.6  | 092   | 3.8   | 1    | 0600 | -11.0 | -14.1 | 78 | 119 | 1.6 | 136 | 3.8  | 1  |
| 0900 | -3.5  | ***** | 4    | 027  | .8   | 003  | 1.9  | 2     | 0900  | -5.8  | ***** | 83   | 112  | 1.1  | 098   | 2.5   | 8    | 0900 | -10.1 | -13.7 | 75 | 092 | 1.4 | 090 | 3.8  | 7  |
| 1200 | -2.2  | ***** | 2    | 028  | .9   | 030  | 1.9  | 3     | 1200  | -2.9  | -8.5  | 65   | 125  | 1.6  | 116   | 3.8   | 8    | 1200 | -6.2  | -13.8 | 55 | 050 | 1.1 | 021 | 8.3  | 12 |
| 1500 | -1.3  | ***** | 2    | 032  | .7   | 025  | 1.9  | 2     | 1500  | -3.6  | -9.2  | 65   | 216m | 1.7m | 216m  | 3.2m  | 3    | 1500 | -6.7  | -14.7 | 53 | 014 | 5.0 | 015 | 11.4 | 4  |
| 1800 | -2.5  | ***** | 5    | 091  | .6   | 107  | 1.9  | 1     | 1800  | -7.5  | -11.3 | 74   | 162m | 1.8m | 123m  | 4.4m  | 1    | 1800 | -8.4  | -15.6 | 56 | 016 | 5.0 | 015 | 11.4 | 1  |
| 2100 | -4.2  | ***** | 6    | 134m | .9m  | 130m | 1.9m | 1     | 2100  | -10.0 | -13.3 | 77   | 123  | 2.3  | 119   | 5.1   | 1    | 2100 | -8.7  | -15.9 | 56 | 029 | 2.2 | 010 | 8.9  | 1  |
| 2400 | -5.5  | ***** | 1    | 211m | 1.1m | 218m | 2.5m | 1     | 2400  | -10.8 | -13.4 | 81   | 118  | 1.9  | 110   | 5.7   | 1    | 2400 | -8.8  | -16.0 | 56 | 091 | 2.5 | 095 | 6.3  | 1  |

DAY 22

DAY 23

DAY 24

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX.  |       |    |
|------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|-------|------|------|-------|-------|----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %     | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S   | DEG.  |    |
| 0300 | -12.6 | ***** | 75   | 124  | 1.4  | 129  | 4.4  | 1     | 0300  | -10.4 | -15.5 | 66   | 151  | 1.2  | 134   | 2.5   | 1    | 0300 | -11.7 | -18.1 | 59 |
| 0600 | -13.8 | ***** | 77   | 183  | 1.0  | 164  | 1.9  | 1     | 0600  | -11.1 | -16.2 | 66   | 152  | 1.6  | 159   | 2.5   | 1    | 0600 | -11.1 | -17.5 | 59 |
| 0900 | -11.4 | -15.3 | 73   | 200  | .9   | 186  | 2.5  | 5     | 0900  | -9.3  | -15.4 | 61   | 135  | 1.7  | 128   | 3.2   | 5    | 0900 | -10.5 | -17.0 | 59 |
| 1200 | -4.9  | -13.5 | 51   | 140  | .9   | 105  | 5.7  | 10    | 1200  | -7.2  | -15.2 | 53   | 107  | 3.1  | 103   | 7.0   | 8    | 1200 | -8.1  | -16.3 | 52 |
| 1500 | -5.8  | -14.4 | 51   | 111  | 2.8  | 116  | 6.3  | 5     | 1500  | -7.8  | -15.5 | 54   | 107  | 3.2  | 095   | 7.0   | 4    | 1500 | -8.5  | -15.9 | 55 |
| 1800 | -6.9  | -14.4 | 55   | 125  | 1.2  | 128  | 3.2  | 1     | 1800  | -10.3 | -16.8 | 59   | 102  | 3.0  | 108   | 7.0   | 1    | 1800 | -10.7 | -16.9 | 60 |
| 2100 | -7.3  | -14.1 | 58   | 116  | 1.8  | 119  | 5.1  | 1     | 2100  | -11.7 | -17.9 | 60   | 123  | 2.7  | 132   | 5.1   | 1    | 2100 | -11.7 | -16.7 | 66 |
| 2400 | -9.3  | -15.6 | 60   | 150  | 1.6  | 115  | 3.8  | 1     | 2400  | -11.9 | -18.3 | 59   | 118  | 2.7  | 121   | 5.1   | 1    | 2400 | -13.2 | -17.5 | 70 |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |     |   |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|-----|-----|-----|-----|---|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |     |   |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |     |     |     |     |   |
| 0300  | -12.3 | -16.5 | 71   | 137  | 2.2  | 122  | 4.4   | 1     | 0300  | -19.4 | -23.1 | 72   | 104  | 1.6   | 100   | 4.4   | 1    | 0300 | -21.1 | -24.2 | 76 | 101 | 1.4 | 087 | 3.2 | 1 |
| 0600  | -11.8 | -15.0 | 77   | 119  | 2.1  | 112  | 4.4   | 1     | 0600  | -18.5 | -22.8 | 69   | 117  | 1.3   | 113   | 3.8   | 1    | 0600 | -22.4 | -25.3 | 77 | 105 | 1.2 | 118 | 3.2 | 1 |
| 0900  | -11.0 | -13.0 | 85   | 136  | 1.9  | 144  | 3.8   | 7     | 0900  | -15.1 | -21.5 | 58   | 123  | 1.3   | 118   | 3.2   | 5    | 0900 | -21.9 | -25.1 | 75 | 079 | 1.6 | 070 | 3.8 | 4 |
| 1200  | -7.8  | -13.2 | 65   | 134  | 1.3  | 107  | 3.2   | 8     | 1200  | -11.9 | -21.2 | 46   | 099  | 1.0   | 109   | 3.8   | 7    | 1200 | -16.6 | -22.9 | 58 | 070 | 2.0 | 076 | 3.8 | 6 |
| 1500  | -8.6  | -15.2 | 59   | 156  | 1.4  | 155  | 3.2   | 4     | 1500  | -12.4 | ***** | 46   | 120  | 1.3   | 108   | 3.8   | 6    | 1500 | -15.6 | -22.4 | 56 | 115 | 2.0 | 118 | 4.4 | 6 |
| 1800  | -13.4 | -18.7 | 64   | 142  | 1.6  | 129  | 3.8   | 1     | 1800  | -15.8 | -23.0 | 54   | 128  | 1.4   | 129   | 3.8   | 1    | 1800 | -17.6 | -23.3 | 61 | 129 | 1.9 | 145 | 3.2 | 1 |
| 2100  | -15.7 | -20.8 | 65   | 115  | 1.7  | 101  | 3.8   | 1     | 2100  | -16.2 | -23.2 | 55   | 138  | 2.1   | 155   | 3.8   | 1    | 2100 | -16.6 | -22.3 | 61 | 120 | 1.5 | 134 | 3.8 | 1 |
| 2400  | -18.1 | -22.0 | 71   | 111  | 1.7  | 119  | 3.2   | 1     | 2400  | -19.1 | ***** | 66   | 147  | 1.8   | 117   | 4.4   | 1    | 2400 | -14.8 | -21.0 | 59 | 101 | 1.6 | 102 | 5.7 | 1 |

R & M CONSULTANTS, INC.  
SUSTITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

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  | MM   |     | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MM   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MM   |     |
| 0300  | -14.4 | -19.9 | 63   | 093  | 1.7  | 088  | 4.4  | 1   | 0300  | -11.6 | -12.5 | 93   | 066  | 1.0  | 117  | 3.2  | 1    | 0300  | -21.1 | -23.1 | 84   | 082  | 2.2  | 073  | 4.4  | 1   |
| 0600  | -15.1 | -17.1 | 85   | 090  | 1.8  | 104  | 5.1  | 1   | 0600  | -11.3 | ***** | 93   | 088  | .2   | 058  | 3.2  | 1    | 0600  | -22.0 | -24.2 | 82   | 092  | 1.3  | 095  | 3.8  | 1   |
| 0900  | -14.9 | -16.6 | 87   | 098  | 1.8  | 103  | 4.4  | 2   | 0900  | -10.4 | ***** | 92   | 137  | .3   | 150  | 1.3  | 4    | 0900  | -22.3 | -24.8 | 80   | 078  | 2.0  | 074  | 4.4  | 4   |
| 1200  | -13.3 | -14.9 | 88   | 095  | 2.0  | 107  | 5.1  | 5   | 1200  | -7.4  | ***** | 71   | 000  | .3   | 025  | 1.3  | 7    | 1200  | -17.7 | -21.5 | 72   | 051  | 1.6  | 056  | 3.2  | 6   |
| 1500  | -12.2 | -14.2 | 85   | 103  | 2.4  | 097  | 5.1  | 2   | 1500  | -11.4 | -13.7 | 83   | 147  | .8   | 151  | 2.5  | 3    | 1500  | -16.0 | -19.1 | 77   | 067  | 1.4  | 080  | 3.2  | 3   |
| 1800  | -11.3 | -12.9 | 88   | 103  | 2.2  | 105  | 5.1  | 1   | 1800  | -14.3 | -16.3 | 85   | 136  | 1.8  | 139  | 3.8  | 1    | 1800  | -18.3 | -20.8 | 81   | 095  | 1.6  | 094  | 3.8  | 1   |
| 2100  | -12.3 | -13.9 | 88   | 115  | 2.2  | 091  | 4.4  | 1   | 2100  | -16.5 | -18.4 | 85   | 112  | 1.9  | 137  | 3.8  | 1    | 2100  | -19.8 | -21.8 | 84   | 076  | 2.0  | 096  | 4.4  | 1   |
| 2400  | -11.8 | -13.3 | 89   | 117  | 2.4  | 122  | 4.4  | 1   | 2400  | -19.2 | -21.2 | 84   | 118  | 2.1  | 141  | 4.4  | 1    | 2400  | -20.1 | -22.8 | 79   | 068  | 2.5  | 076  | 4.4  | 1   |

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  | MM   |     |
| 0300  | -21.7 | -24.2 | 80   | 068  | 2.3  | 066  | 4.4  | 1   |
| 0600  | -22.3 | -24.7 | 81   | 077  | 2.8  | 077  | 4.4  | 1   |
| 0900  | -21.9 | -24.6 | 79   | 074  | 2.9  | 079  | 4.4  | 4   |
| 1200  | -17.5 | -20.7 | 76   | 069  | 2.7  | 065  | 4.4  | 8   |
| 1500  | -14.4 | -17.1 | 80   | 071  | 1.8  | 070  | 3.8  | 2   |
| 1800  | -11.2 | ***** | 80   | 096  | 1.0  | 090  | 2.5  | 1   |
| 2100  | -10.7 | -13.8 | 78   | 106  | 1.3  | 104  | 3.8  | 1   |
| 2400  | -9.0  | -12.4 | 76   | 124  | 1.8  | 117  | 4.4  | 1   |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

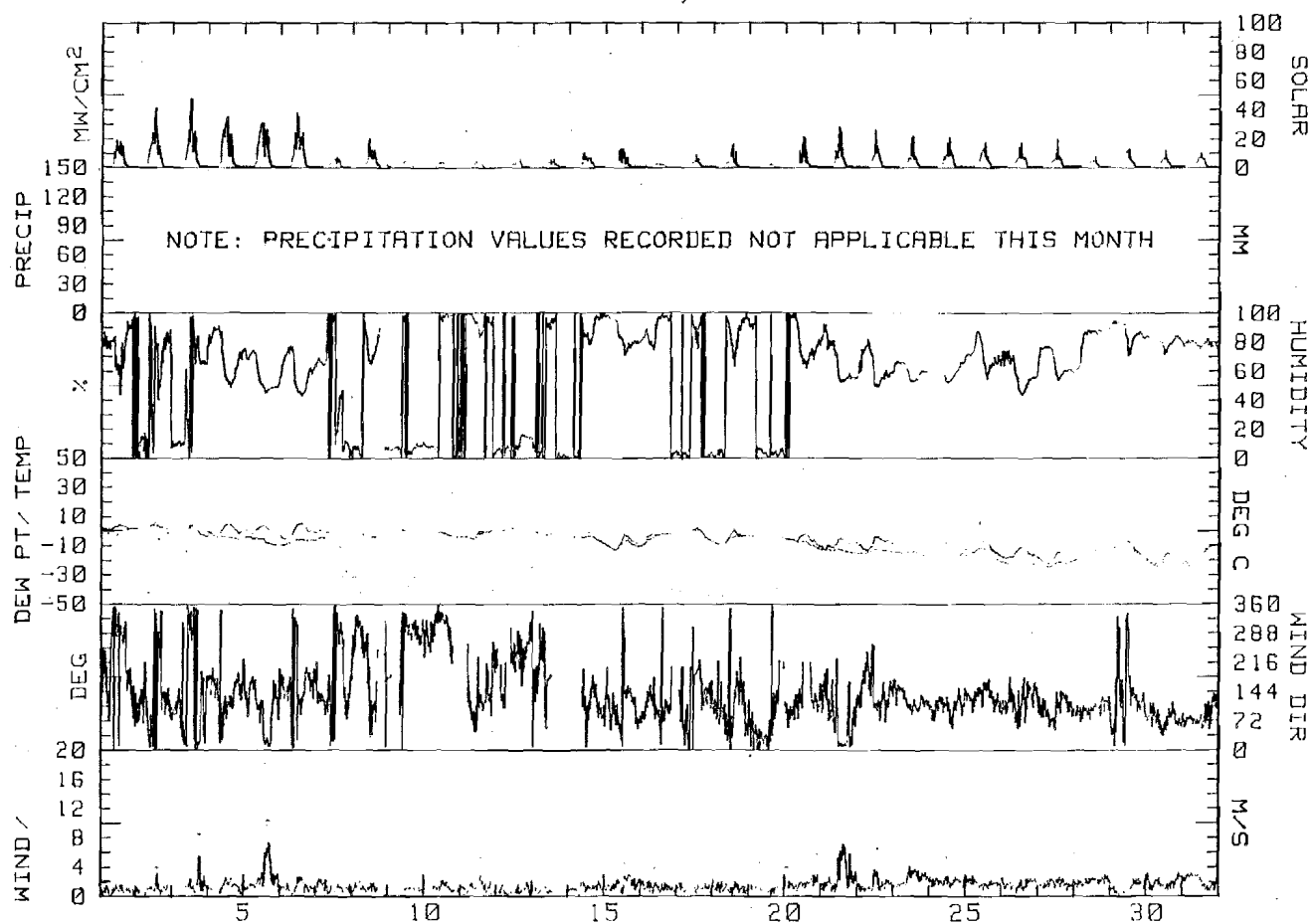
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SQM | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 3.6                    | .6                     | 2.1                    | 216                         | .1                          | .7                          | 278                         | 2.5                         | WNW           |                 |                     | ****         | 1123                               | 1   |
| 2     | 5.5                    | -7                     | 2.4                    | 069M                        | .3M                         | .8M                         | 324M                        | 3.8M                        | SE (M)        |                 |                     | ****         | 1688                               | 2   |
| 3     | 4.7                    | -1.5                   | 1.6                    | 013M                        | .6M                         | 1.0M                        | 017M                        | 8.3M                        | NNE(M)        |                 |                     | ****         | 1725                               | 3   |
| 4     | 4.1                    | -4.2                   | -.1                    | 133                         | 1.0                         | 1.2                         | 117                         | 4.4                         | SSE           | 67              | -5.3                | ****         | 1855                               | 4   |
| 5     | 3.3                    | -2.8                   | .3                     | 075                         | 1.3                         | 2.4                         | 030                         | 10.2                        | ESE           | 56              | -7.7                | ****         | 1940                               | 5   |
| 6     | 4.5                    | -6.1                   | -.8                    | 146                         | .9                          | 1.2                         | 026                         | 4.4                         | S             | 58              | -8.2                | ****         | 1790                               | 6   |
| 7     | .9                     | -2.9                   | -1.0                   | 127                         | .5                          | 1.1                         | 139                         | 3.8                         | ESE           |                 |                     | ****         | 475                                | 7   |
| 8     | -5.5M                  | -4.2M                  | -2.4M                  | 280M                        | .3M                         | 1.0M                        | 255M                        | 4.4M                        | WSW(M)        |                 |                     | ****         | 980M                               | 8   |
| 9     | .3                     | -2.7                   | -1.2                   | 292M                        | .6M                         | .7M                         | 307M                        | 2.5M                        | WNW(M)        |                 |                     | ****         | 375                                | 9   |
| 10    | -1.3                   | -5.0                   | -3.2                   | 308M                        | .9M                         | 1.0M                        | 323M                        | 3.8M                        | NW (M)        |                 |                     | ****         | 383                                | 10  |
| 11    | 0.0                    | -6.3                   | -3.2                   | 120M                        | .9M                         | 1.1M                        | 117M                        | 5.1M                        | ESE(M)        |                 |                     | ****         | 378                                | 11  |
| 12    | 1.8                    | -1.3                   | .3                     | 223M                        | .4M                         | .7M                         | 314M                        | 3.8M                        | SW (M)        |                 |                     | ****         | 395                                | 12  |
| 13    | -.8                    | -5.1                   | -3.0                   | 189M                        | .3M                         | .6M                         | 343M                        | 3.8M                        | S (M)         |                 |                     | ****         | 428                                | 13  |
| 14    | -1.3                   | -9.2                   | -5.3                   | 117M                        | 1.1M                        | 1.1M                        | 129M                        | 3.2M                        | ESE(M)        |                 |                     | ****         | 643                                | 14  |
| 15    | -3.1                   | -13.2                  | -8.2                   | 109                         | 1.4                         | 1.7                         | 139                         | 4.4                         | SE            | 85              | -10.8               | ****         | 683                                | 15  |
| 16    | -1.8                   | -8.5                   | -5.2                   | 103M                        | 1.2M                        | 1.3M                        | 078M                        | 3.8M                        | E (M)         |                 |                     | ****         | 345                                | 16  |
| 17    | 2.5                    | -8.2                   | -2.9                   | 137M                        | .6M                         | .9M                         | 125M                        | 3.2M                        | SSW(M)        |                 |                     | ****         | 478                                | 17  |
| 18    | .7                     | -10.6                  | -5.0                   | 101                         | .8                          | 1.1                         | 105                         | 3.8                         | E             |                 |                     | ****         | 638                                | 18  |
| 19    | -.9                    | -5.5                   | -3.2                   | 058M                        | .6M                         | .9M                         | 110M                        | 2.5M                        | NNE(M)        |                 |                     | ****         | 355                                | 19  |
| 20    | -2.4                   | -11.4                  | -6.9                   | 117M                        | 1.6M                        | 1.7M                        | 118M                        | 5.7M                        | ESE(M)        |                 |                     | ****         | 773                                | 20  |
| 21    | -5.7                   | -13.3                  | -9.5                   | 044                         | 1.9                         | 2.7                         | 015                         | 11.4                        | NNE           | 65              | -14.7               | ****         | 928                                | 21  |
| 22    | -4.5                   | -14.6                  | -9.6                   | 134                         | 1.3                         | 1.5                         | 116                         | 6.3                         | ESE           | 60              | -14.8               | ****         | 888                                | 22  |
| 23    | -7.1                   | -12.5                  | -9.8                   | 119                         | 2.3                         | 2.4                         | 103                         | 7.0                         | ESE           | 60              | -16.2               | ****         | 755                                | 23  |
| 24    | -8.0                   | -13.2                  | -10.6                  | 109                         | 2.0                         | 2.1                         | 111                         | 5.1                         | ESE           | 59              | -17.0               | ****         | 870                                | 24  |
| 25    | -7.4                   | -18.1                  | -12.8                  | 130                         | 1.7                         | 1.8                         | 122                         | 4.4                         | SE            | 70              | -16.6               | ****         | 788                                | 25  |
| 26    | -11.3                  | -19.4                  | -15.4                  | 124                         | 1.4                         | 1.6                         | 100                         | 4.4                         | ESE           | 58              | -22.5               | ****         | 720                                | 26  |
| 27    | -14.8                  | -23.4                  | -19.1                  | 102                         | 1.6                         | 1.7                         | 102                         | 5.7                         | E             | 66              | -23.4               | ****         | 663                                | 27  |
| 28    | -11.3                  | -15.1                  | -13.2                  | 103                         | 2.0                         | 2.1                         | 104                         | 5.1                         | E             | 82              | -15.8               | ****         | 438                                | 28  |
| 29    | -7.4                   | -19.2                  | -13.3                  | 115                         | .9                          | 1.2                         | 141                         | 4.4                         | SE            | 85              | -16.2               | ****         | 630                                | 29  |
| 30    | -15.3                  | -22.8                  | -19.1                  | 076                         | 1.8                         | 1.9                         | 073                         | 4.4                         | ENE           | 81              | -22.2               | ****         | 545                                | 30  |
| 31    | -9.0                   | -22.7                  | -15.9                  | 081                         | 2.0                         | 2.1                         | 066                         | 4.4                         | ENE           | 79              | -20.1               | ****         | 585                                | 31  |
| MONTH | 5.5M                   | -23.4M                 | -6.2M                  | 104M                        | .9M                         | 1.4M                        | 015M                        | 11.4M                       | ESE(M)        | M               | M                   | ****         | 25252M                             |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 9.5  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 9.5  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 10.8  
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 11.4

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

\*\*\*\* SEE NOTES AT THE BACK OF THIS REPORT \*\*\*\*

R&M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
October, 1982



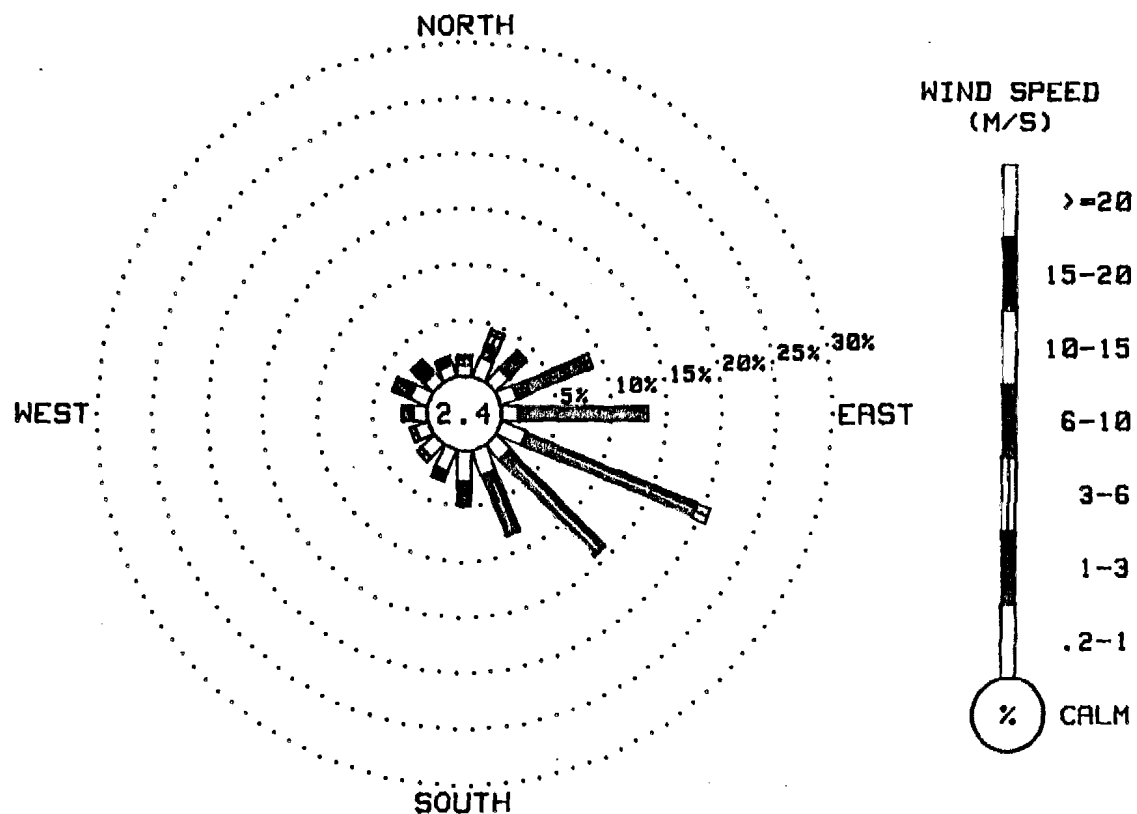
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING October, 1982

| DIRECTION | VELOCITY (M/S) |           |           |            |            |            |               | TOTAL  |
|-----------|----------------|-----------|-----------|------------|------------|------------|---------------|--------|
|           | 0.2            | 1.0       | 3.0       | 6.0        | 10.0       | 15.0       | 20.0          |        |
|           | TO<br>1.0      | TO<br>3.0 | TO<br>6.0 | TO<br>10.0 | TO<br>15.0 | TO<br>20.0 | OR<br>GREATER |        |
| N         | 1.02           | .44       | .22       | .15        | 0.00       | 0.00       | 0.00          | 1.83   |
| NNE       | 1.86           | 1.17      | 1.06      | .44        | 0.00       | 0.00       | 0.00          | 4.53   |
| NE        | 1.75           | 2.12      | .04       | 0.00       | 0.00       | 0.00       | 0.00          | 3.91   |
| ENE       | 1.64           | 6.83      | .47       | 0.00       | 0.00       | 0.00       | 0.00          | 8.95   |
| E         | 1.53           | 11.36     | .40       | 0.00       | 0.00       | 0.00       | 0.00          | 13.29  |
| ESE       | 2.48           | 16.80     | 1.28      | 0.00       | 0.00       | 0.00       | 0.00          | 20.56  |
| SE        | 1.86           | 12.02     | .22       | 0.00       | 0.00       | 0.00       | 0.00          | 14.10  |
| SSE       | 2.41           | 5.88      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 8.29   |
| S         | 2.78           | 2.12      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 4.89   |
| SSW       | 2.08           | .91       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.99   |
| SW        | 1.61           | .44       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.05   |
| WSW       | 1.28           | .44       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 1.72   |
| W         | 1.31           | .99       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.30   |
| WNW       | 1.79           | 1.72      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 3.51   |
| NW        | 1.24           | 1.53      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.78   |
| NNW       | 1.21           | .69       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 1.90   |
| CALM      |                |           |           |            |            |            |               | 2.41   |
| TOTAL     | 27.87          | 65.45     | 3.69      | .58        | 0.00       | 0.00       | 0.00          | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2738 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

R&M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
October, 1982



WIND ROSE PLOT

No precipitation data for November

(See INTERPRETATION OF DATA).

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

DAY 01

-DAY 02

DAY 03

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | -8.0  | -11.5 | 76   | 108  | 1.6  | 104  | 3.2  | 1    | 0300 | -1.7  | -4.1  | 84   | 177  | 1.0  | 179  | 1.9  | 1    |
| 0600 | -6.5  | -10.2 | 75   | 118  | 1.4  | 102  | 3.8  | 1    | 0600 | -3.1  | ***** | 94   | 172  | .8   | 196  | 1.9  | 1    |
| 0900 | -3.6  | -7.4  | 75   | 116  | 1.3  | 104  | 5.1  | 6    | 0900 | -2.9  | -40.8 | 3    | 170  | .3   | 116  | 1.9  | 3    |
| 1200 | -1.6  | -6.5  | 69   | 107  | 2.7  | 106  | 7.0  | 9    | 1200 | -.9   | ***** | 94   | 044  | .8   | 085  | 3.2  | 10   |
| 1500 | -.8   | -5.7  | 69   | 109  | 2.4  | 113  | 7.6  | 3    | 1500 | -1.2  | ***** | 97   | 020  | .5   | 024  | 1.9  | 2    |
| 1800 | -.7   | -5.3  | 71   | 109  | 1.9  | 108  | 6.3  | 1    | 1800 | -1.6  | -1.9  | 98   | 125  | .9   | 132  | 3.2  | 1    |
| 2100 | 0.0   | -4.4  | 72   | 167  | 1.0  | 172  | 4.4  | 1    | 2100 | -4.6  | -5.2  | 96   | 130  | 1.3  | 135  | 3.2  | 1    |
| 2400 | -1.5  | ***** | 80   | 198  | 1.1  | 231  | 2.5  | 1    | 2400 | -9.2  | -9.3  | 99   | 084  | 1.2  | 097  | 3.2  | 1    |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |

DAY 04

DAY 05

DAY 06

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | -1.8  | -4.0  | 85   | 177  | .7   | 170  | 6.3  | 1    | 0300 | -4.1  | ***** | 97   | 153  | .6   | 151  | 1.9  | 1    |
| 0600 | -3.8  | -5.1  | 91   | 155  | 1.2  | 139  | 5.1  | 1    | 0600 | -4.5  | -5.9  | 90   | 142  | 1.0  | 132  | 2.5  | 1    |
| 0900 | -2.1  | -4.5  | 84   | 165  | .7   | 122  | 2.5  | 4    | 0900 | -5.0  | ***** | 89   | 144  | .7   | 130  | 2.5  | 4    |
| 1200 | -.7   | -4.6  | 75   | 111  | 1.2  | 116  | 4.4  | 7    | 1200 | -3.2  | ***** | 80   | 307  | .0   | 071  | 1.9  | 8    |
| 1500 | -1.7  | -4.4  | 82   | 091  | 1.8  | 098  | 4.4  | 2    | 1500 | -4.5  | ***** | 86   | 353  | .2   | 354  | 1.3  | 2    |
| 1800 | -4.0  | ***** | 94   | 098  | 1.3  | 097  | 3.8  | 1    | 1800 | -9.1  | -11.5 | 83   | 129  | 1.1  | 118  | 2.5  | 1    |
| 2100 | -4.2  | -43.8 | 2    | 162  | .4   | 157  | 2.5  | 1    | 2100 | -11.9 | -12.8 | 93   | 127  | 1.1  | 149  | 2.5  | 1    |
| 2400 | -3.5  | ***** | 2    | 128  | .7   | 144  | 2.5  | 1    | 2400 | -14.3 | ***** | 94   | 133  | .7   | 142  | 2.5  | 1    |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |

DAY 07

DAY 08

DAY 09

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | -17.4 | -19.1 | 87   | 082  | 2.3  | 083  | 3.8  | 1    | 0300 | -10.5 | -14.2 | 74   | 112  | 2.4  | 109  | 5.1  | 1    |
| 0600 | -17.7 | -19.6 | 85   | 075  | 2.4  | 075  | 4.4  | 1    | 0600 | -11.4 | -12.7 | 90   | 103  | 2.1  | 090  | 5.7  | 1    |
| 0900 | -18.5 | -20.5 | 84   | 072  | 2.4  | 065  | 4.4  | 3    | 0900 | -10.7 | -12.3 | 88   | 102  | 1.9  | 109  | 5.1  | 2    |
| 1200 | -15.7 | -18.4 | 80   | 075  | 2.6  | 065  | 4.4  | 4    | 1200 | -9.3  | -10.1 | 94   | 095  | 1.6  | 098  | 3.8  | 3    |
| 1500 | -12.1 | -16.3 | 71   | 108  | 1.7  | 124  | 3.8  | 2    | 1500 | -8.1  | -8.8  | 95   | 101  | 1.8  | 097  | 4.4  | 1    |
| 1800 | -13.7 | -16.9 | 77   | 113  | 2.0  | 115  | 3.8  | 1    | 1800 | -7.7  | -7.8  | 99   | 104  | 1.5  | 107  | 4.4  | 1    |
| 2100 | -14.0 | -17.3 | 76   | 117  | 2.3  | 122  | 3.8  | 1    | 2100 | -7.9  | ***** | 99   | 119  | 1.7  | 115  | 3.8  | 1    |
| 2400 | -13.8 | -17.0 | 77   | 119  | 2.3  | 120  | 5.1  | 1    | 2400 | -8.0  | ***** | 2    | 062  | .4   | 088  | 2.5  | 1    |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       |       |      |      |      |      |      |      |
|      |       |       |      |      |      |      |      |      |      |       | </    |      |      |      |      |      |      |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |   |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|---|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |   |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |   |
| 0300  | -10.9 | ***** | 0    | 059  | 1.2  | 057  | 2.5   | 1     | 0300  | -5.8 | ***** | 3    | 101  | 1.3   | 104   | 3.2   | 1    | 0300 | -6.8 | ***** | 0  | 058 | 1.5 | 067 | 3.2 | 1 |
| 0600  | -12.4 | -13.1 | 95   | 055  | 1.5  | 051  | 3.8   | 1     | 0600  | -5.2 | -37.2 | 6    | 101  | 1.0   | 117   | 2.5   | 1    | 0600 | -4.3 | -5.0  | 95 | 118 | 1.0 | 119 | 2.5 | 1 |
| 0900  | -13.2 | -14.0 | 94   | 082  | 2.4  | 075  | 4.4   | 2     | 0900  | -5.2 | ***** | 1    | 089  | 1.1   | 117   | 3.8   | 2    | 0900 | -3.9 | -5.0  | 92 | 143 | 1.4 | 111 | 2.5 | 2 |
| 1200  | -10.6 | ***** | 96   | 078  | 1.4  | 094  | 3.2   | 2     | 1200  | -3.8 | -4.1  | 98   | 090  | 1.1   | 114   | 3.2   | 4    | 1200 | -2.1 | -4.1  | 86 | 138 | 1.3 | 137 | 4.4 | 7 |
| 1500  | -6.7  | -7.0  | 98   | 096  | 1.3  | 083  | 3.2   | 1     | 1500  | -4.2 | -43.8 | 2    | 116  | 1.8   | 116   | 3.8   | 1    | 1500 | -2.5 | -4.7  | 85 | 138 | 1.5 | 144 | 3.8 | 2 |
| 1800  | -6.5  | -6.6  | 99   | 104  | 1.8  | 094  | 4.4   | 1     | 1800  | -3.9 | -4.0  | 99   | 104  | 1.4   | 120   | 3.8   | 1    | 1800 | -1.6 | -2.8  | 92 | 140 | 1.3 | 113 | 3.8 | 1 |
| 2100  | -6.3  | -6.4  | 99   | 114  | 1.8  | 108  | 3.2   | 1     | 2100  | -4.5 | ***** | 1    | 119  | 1.5   | 132   | 3.8   | 1    | 2100 | -1.8 | ***** | 99 | 171 | 1.2 | 157 | 3.8 | 1 |
| 2400  | -6.1  | -45.1 | 2    | 102  | 1.8  | 102  | 4.4   | 1     | 2400  | -6.5 | ***** | 0    | 067  | 1.2   | 059   | 3.2   | 1    | 2400 | -.5  | -2.9  | 84 | 131 | 1.2 | 119 | 3.8 | 1 |

DAY 13

DAY 14

DAY 15

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX.  |       |    |
|------|-------|-------|------|------|------|------|------|-------|-------|------|-------|------|------|------|-------|-------|------|------|-------|-------|----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S   | DEG.  |    |
| 0300 | -2.3  | -3.7  | 90   | 123  | 1.6  | 141  | 3.8  | 1     | 0300  | -4.2 | -35.0 | 7    | 065  | .6   | 080   | 2.5   | 1    | 0300 | -9.3  | ***** | 1  |
| 0600 | -3.5  | ***** | 97   | 125  | 1.4  | 137  | 3.8  | 1     | 0600  | -4.3 | ***** | 6    | 065  | .6   | 087   | 1.9   | 1    | 0600 | -10.1 | ***** | 2  |
| 0900 | -5.8  | ***** | 0    | 093  | 1.5  | 081  | 3.2  | 4     | 0900  | -5.2 | -42.4 | 3    | 080  | 1.0  | 079   | 3.2   | 2    | 0900 | -11.2 | ***** | 98 |
| 1200 | -3.0  | ***** | 90   | 117  | 2.1  | 115  | 4.4  | 8     | 1200  | -5.8 | ***** | 99   | 051  | .9   | 089   | 3.8   | 5    | 1200 | -9.3  | -10.2 | 93 |
| 1500 | -1.1  | -2.4  | 91   | 152  | 1.1  | 126  | 3.2  | 2     | 1500  | -5.5 | ***** | 0    | 055  | .8   | 037   | 2.5   | 1    | 1500 | -9.0  | -10.5 | 89 |
| 1800 | -1.6  | ***** | 96   | 128  | 1.1  | 107  | 3.2  | 1     | 1800  | -5.9 | ***** | 3    | 080  | .9   | 113   | 3.2   | 1    | 1800 | -11.8 | -12.5 | 95 |
| 2100 | -2.4  | ***** | 6    | 150  | .6   | 138  | 2.5  | 1     | 2100  | -7.8 | -46.2 | 2    | 109  | 1.2  | 118   | 2.5   | 1    | 2100 | -13.4 | -14.2 | 94 |
| 2400 | -3.1  | ***** | 7    | 052  | .4   | 075  | 1.9  | 1     | 2400  | -9.2 | ***** | 2    | 191  | .1   | 105   | 2.5   | 1    | 2400 | -15.3 | -15.9 | 95 |

DAY 16

DAY 17

DAY 18

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |
| 0300  | -16.2 | -17.0 | 94   | 086  | 2.1  | 074  | 3.8   | 1     | 0300  | -18.0 | -19.1 | 91   | 088  | 2.8   | 097   | 5.1   | 1    | 0300 | -21.0 | -23.1 | 83 |
| 0600  | -16.7 | -17.5 | 94   | 091  | 2.2  | 087  | 3.8   | 1     | 0600  | -18.4 | -19.8 | 89   | 092  | 1.8   | 093   | 5.1   | 1    | 0600 | -21.5 | -23.8 | 82 |
| 0900  | -16.3 | -17.3 | 92   | 082  | 2.5  | 088  | 4.4   | 2     | 0900  | -19.7 | -20.9 | 90   | 090  | 2.1   | 084   | 3.8   | 2    | 0900 | -22.2 | -24.3 | 83 |
| 1200  | -14.8 | -16.1 | 90   | 076  | 2.3  | 072  | 3.8   | 3     | 1200  | -17.3 | -19.1 | 86   | 086  | 2.2   | 092   | 3.8   | 3    | 1200 | -19.2 | -22.3 | 76 |
| 1500  | -13.6 | -14.9 | 90   | 085  | 2.1  | 084  | 3.8   | 1     | 1500  | -15.8 | -17.6 | 86   | 094  | 2.0   | 093   | 4.4   | 1    | 1500 | -16.0 | -20.0 | 71 |
| 1800  | -15.2 | -16.1 | 93   | 090  | 1.9  | 078  | 3.2   | 1     | 1800  | -17.7 | -19.9 | 83   | 079  | 2.1   | 079   | 3.8   | 1    | 1800 | -18.5 | -22.1 | 73 |
| 2100  | -16.8 | ***** | 93   | 106  | 1.0  | 103  | 2.5   | 1     | 2100  | -19.9 | -21.9 | 84   | 083  | 2.8   | 093   | 5.1   | 1    | 2100 | -19.4 | -23.3 | 71 |
| 2400  | -16.8 | -17.9 | 91   | 092  | 1.9  | 079  | 3.8   | 1     | 2400  | -21.1 | -23.2 | 83   | 094  | 2.8   | 085   | 4.4   | 1    | 2400 | -19.4 | -23.8 | 68 |

## R &amp; M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |      |       |       |      |     |     |     |     |   |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-------|-------|------|-------|-------|------|-----|-----|-----|-----|---|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST  | RAD   |      |       |       |      |     |     |     |     |   |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %    | DEG.  | M/S   | DEG. | M/S | MW  |     |     |   |
| 0300  | -20.2 | -24.7 | 67   | 121  | 2.9  | 137  | 5.7  | 1     | 0300  | -14.5 | -20.3 | 61   | 120  | 3.3  | 123  | 6.3   | 1     | 0300 | -10.5 | -11.8 | 90   | 103 | 2.0 | 111 | 3.8 | 1 |
| 0600  | -20.3 | -25.0 | 66   | 112  | 2.5  | 124  | 5.1  | 1     | 0600  | -13.5 | -19.4 | 61   | 114  | 3.4  | 123  | 5.7   | 1     | 0600 | -9.4  | -11.3 | 86   | 080 | 1.5 | 101 | 3.2 | 1 |
| 0900  | -21.1 | -25.1 | 70   | 112  | 2.5  | 133  | 6.3  | 2     | 0900  | -13.2 | -18.4 | 65   | 107  | 3.3  | 115  | 5.7   | 1     | 0900 | -9.7  | -11.5 | 87   | 072 | 1.7 | 079 | 3.2 | 2 |
| 1200  | -16.6 | -22.2 | 62   | 105  | 2.2  | 128  | 5.1  | 5     | 1200  | -12.6 | -13.9 | 90   | 122  | 3.5  | 131  | 5.7   | 3     | 1200 | -7.1  | -9.2  | 85   | 071 | 1.8 | 064 | 3.2 | 4 |
| 1500  | -16.0 | -22.0 | 60   | 116  | 3.0  | 114  | 5.7  | 1     | 1500  | -11.5 | -12.7 | 91   | 117  | 2.8  | 118  | 5.1   | 1     | 1500 | -6.2  | -8.9  | 81   | 111 | 1.5 | 095 | 3.8 | 1 |
| 1800  | -16.6 | -22.5 | 60   | 125  | 2.8  | 121  | 4.4  | 1     | 1800  | -10.9 | -12.0 | 92   | 113  | 2.8  | 109  | 4.4   | 1     | 1800 | -6.0  | -9.4  | 77   | 123 | 1.8 | 127 | 3.8 | 1 |
| 2100  | -16.5 | -22.2 | 61   | 114  | 2.8  | 128  | 5.1  | 1     | 2100  | -10.4 | -11.5 | 92   | 118  | 2.9  | 112  | 5.1   | 1     | 2100 | -7.7  | -9.9  | 84   | 072 | 1.1 | 081 | 2.5 | 1 |
| 2400  | -15.3 | -21.1 | 61   | 111  | 3.4  | 115  | 7.0  | 1     | 2400  | -10.4 | -11.2 | 94   | 100  | 1.7  | 103  | 3.8   | 1     | 2400 | -6.4  | -9.6  | 78   | 105 | 1.7 | 125 | 4.4 | 1 |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -6.7  | -9.9  | 78   | 126  | 2.5  | 119  | 5.1  | 1    | 0300  | -4.6  | ***** | 84   | 072  | 1.2  | 076  | 3.2  | 1    |
| 0600  | -7.4  | -9.2  | 87   | 090  | 1.5  | 106  | 3.8  | 1    | 0600  | -2.1  | -5.4  | 78   | 107  | 1.3  | 113  | 3.8  | 1    |
| 0900  | -6.4  | -9.3  | 80   | 094  | 1.6  | 105  | 4.4  | 1    | 0900  | -1.7  | -4.9  | 79   | 131  | 1.0  | 119  | 3.2  | 1    |
| 1200  | -5.2  | -8.6  | 77   | 089  | 1.6  | 079  | 3.8  | 6    | 1200  | -1.1  | ***** | 79   | 099  | 1.1  | 099  | 2.5  | 4    |
| 1500  | -5.0  | -8.2  | 78   | 119  | 1.9  | 128  | 4.4  | 1    | 1500  | -1.2  | -4.0  | 81   | 104  | 1.3  | 090  | 3.2  | 1    |
| 1800  | -5.8  | -8.9  | 79   | 137  | 1.8  | 152  | 4.4  | 1    | 1800  | -1.0  | -2.8  | 88   | 124  | 1.5  | 129  | 3.2  | 1    |
| 2100  | -5.9  | -8.6  | 81   | 070  | 1.3  | 109  | 3.2  | 1    | 2100  | -1.3  | -2.2  | 94   | 131  | 1.5  | 110  | 3.2  | 1    |
| 2400  | -6.1  | -8.4  | 84   | 076  | 1.8  | 069  | 2.5  | 1    | 2400  | -1.6  | ***** | 2    | 125  | .7   | 151  | 2.5  | 1    |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300  | -4.0  | -4.4  | 97   | 144  | 1.0  | 142  | 3.2  | 1     | 0300  | -6.1  | -9.6  | 76   | 119  | 1.8  | 110  | 3.8  | 1    |
| 0600  | -3.2  | -3.8  | 96   | 135  | 1.4  | 098  | 3.2  | 1     | 0600  | -6.5  | -10.0 | 76   | 112  | 2.2  | 114  | 4.4  | 1    |
| 0900  | -2.9  | -4.5  | 89   | 147  | 1.3  | 137  | 3.2  | 1     | 0900  | -6.7  | -10.2 | 76   | 116  | 2.4  | 108  | 4.4  | 2    |
| 1200  | .2    | -2.7  | 81   | 142  | 1.6  | 142  | 3.2  | 4     | 1200  | -6.7  | -10.4 | 75   | 110  | 2.5  | 113  | 4.4  | 4    |
| 1500  | -1.6  | -4.1  | 83   | 152  | 1.5  | 159  | 3.8  | 1     | 1500  | -6.3  | -9.8  | 76   | 115  | 3.0  | 110  | 5.7  | 1    |
| 1800  | -2.8  | -5.9  | 79   | 131  | 1.4  | 150  | 2.5  | 1     | 1800  | -7.2  | -10.4 | 78   | 113  | 2.6  | 107  | 5.7  | 1    |
| 2100  | -2.9  | -6.4  | 77   | 134  | 1.2  | 123  | 3.8  | 1     | 2100  | -5.6  | -8.8  | 78   | 129  | 2.6  | 142  | 4.4  | 1    |
| 2400  | -4.9  | -8.3  | 77   | 120  | 1.7  | 110  | 3.8  | 1     | 2400  | -5.2  | -8.3  | 79   | 114  | 1.9  | 120  | 4.4  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

| DAY 28 |       |       |    |      |      |      |      |      | DAY 29 |       |       |    |      |      |      |      |      | DAY 30 |       |       |    |      |      |      |      |      |
|--------|-------|-------|----|------|------|------|------|------|--------|-------|-------|----|------|------|------|------|------|--------|-------|-------|----|------|------|------|------|------|
| HR     | DEW   | WIND  |    |      | GUST |      |      | MAX. | HR     | DEW   | WIND  |    |      | GUST |      |      | MAX. | HR     | 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   | -13.4 | -13.8 | 97 | 072  | 2.5  | 070  | 4.4  | 1    | 0300   | -9.1  | ***** | 0  | 074  | 1.5  | 068  | 3.2  | 1    | 0300   | -6.2  | ***** | 2  | 192  | .2   | 130  | 1.9  | 1    |
| 0600   | -14.0 | -14.6 | 95 | 080  | 2.9  | 082  | 4.4  | 1    | 0600   | -8.2  | ***** | 1  | 070  | .9   | 075  | 2.5  | 1    | 0600   | -9.9  | ***** | 1  | 289  | .6   | 288  | 3.2  | 1    |
| 0900   | -14.0 | -14.8 | 94 | 082  | 2.9  | 075  | 4.4  | 1    | 0900   | -6.5  | ***** | 3  | 058  | .7   | 057  | 1.9  | 1    | 0900   | -10.6 | ***** | 98 | 283  | .8   | 276  | 3.8  | 1    |
| 1200   | -13.4 | -14.4 | 92 | 078  | 2.9  | 078  | 4.4  | 4    | 1200   | -5.6  | -5.9  | 98 | 115  | 1.0  | 122  | 2.5  | 2    | 1200   | -11.5 | -12.3 | 94 | 272  | 1.0  | 253  | 3.2  | 2    |
| 1500   | -13.1 | -14.0 | 93 | 080  | 2.7  | 071  | 3.8  | 1    | 1500   | -5.9  | ***** | 1  | 110  | 1.0  | 130  | 2.5  | 1    | 1500   | -12.0 | ***** | 97 | 262  | .6   | 267  | 3.8  | 1    |
| 1800   | -13.9 | -14.7 | 94 | 086  | 2.8  | 090  | 3.8  | 1    | 1800   | -5.6  | ***** | 0  | 093  | 1.3  | 112  | 3.2  | 1    | 1800   | -11.9 | ***** | 96 | 244  | .7   | 287  | 1.9  | 1    |
| 2100   | -12.7 | -13.2 | 96 | 082  | 2.4  | 081  | 3.8  | 1    | 2100   | -5.8  | ***** | 1  | 117  | 1.8  | 131  | 3.8  | 1    | 2100   | -11.7 | -12.2 | 96 | 108  | .6   | 144  | 2.5  | 1    |
| 2400   | -10.3 | -10.4 | 99 | 078  | 2.1  | 086  | 3.8  | 1    | 2400   | -5.8  | ***** | 0  | 116  | 1.3  | 112  | 3.2  | 1    | 2400   | -11.3 | ***** | 96 | 148  | .3   | 090  | 1.9  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

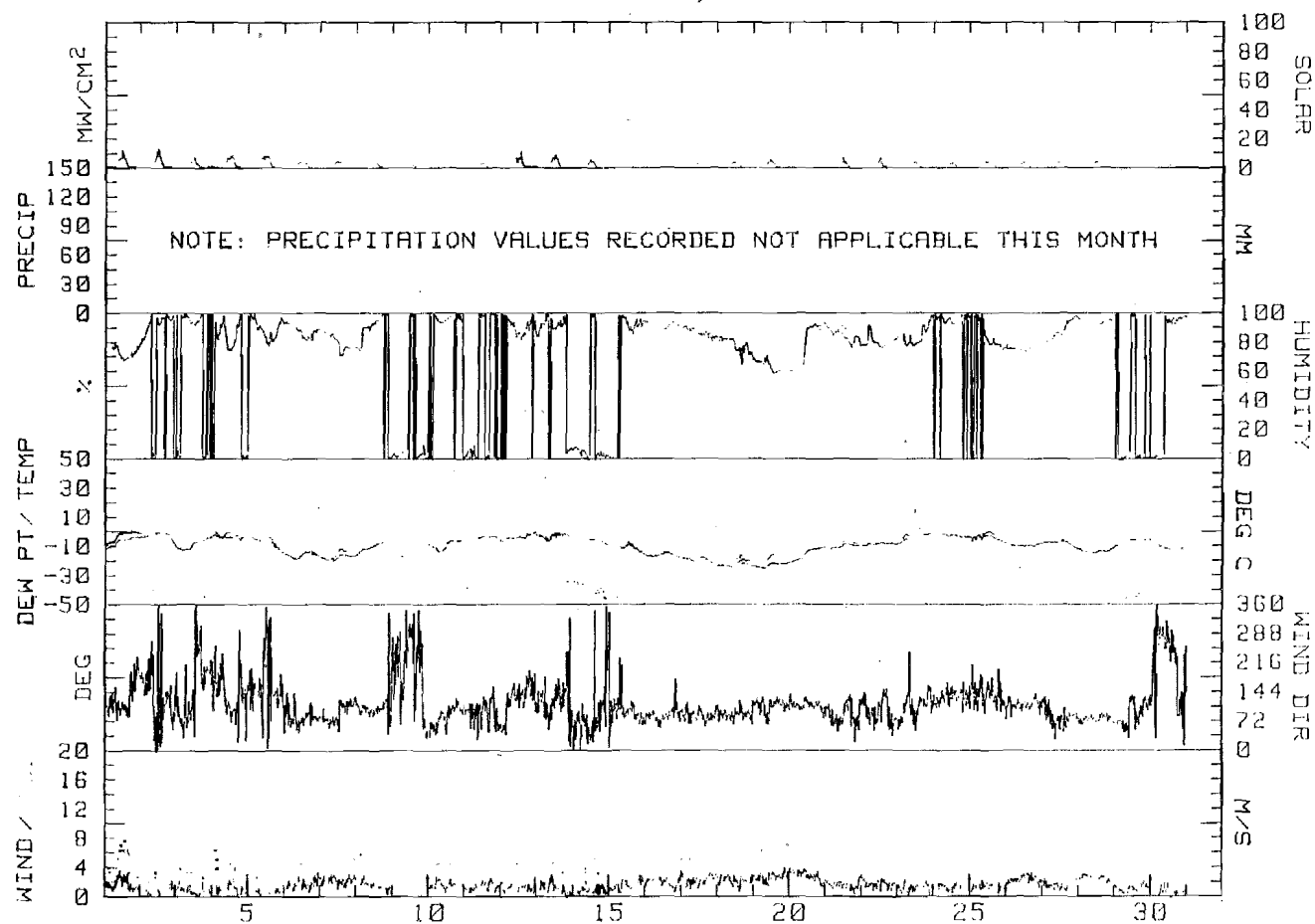
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SDH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | .2                     | -9.1                   | -4.5                   | 120                         | 1.5                         | 1.8                         | 113                         | 7.6                         | ESE           | 73              | -7.5                | ****         | 653                                | 1   |
| 2     | -6.6                   | -9.6                   | -5.1                   | 120                         | .6                          | .9                          | 085                         | 3.2                         | S             |                 |                     | ****         | 615                                | 2   |
| 3     | -2.7                   | -12.9                  | -7.8                   | 116                         | .5                          | .9                          | 070                         | 3.8                         | ENE           |                 |                     | ****         | 440                                | 3   |
| 4     | -3.3                   | -5.5                   | -2.9                   | 125                         | .9                          | 1.1                         | 170                         | 6.3                         | ESE           |                 |                     | ****         | 568                                | 4   |
| 5     | -2.6                   | -14.3                  | -8.5                   | 135                         | .6                          | .8                          | 132                         | 2.5                         | SE            | 89              | -8.7                | ****         | 605                                | 5   |
| 6     | -11.7                  | -18.1                  | -14.9                  | 082                         | 1.6                         | 1.7                         | 082                         | 4.4                         | E             | 88              | -16.8               | ****         | 423                                | 6   |
| 7     | -11.9                  | -18.5                  | -15.2                  | 094                         | 2.1                         | 2.3                         | 120                         | 5.1                         | ESE           | 80              | -18.1               | ****         | 423                                | 7   |
| 8     | -7.4                   | -13.6                  | -10.5                  | 104                         | 1.7                         | 1.8                         | 090                         | 5.7                         | ESE           |                 |                     | ****         | 340                                | 8   |
| 9     | -5.7                   | -8.5                   | -7.1                   | 194                         | .1                          | .5                          | 120                         | 2.5                         | WSW           |                 |                     | ****         | 310                                | 9   |
| 10    | -5.9                   | -13.7                  | -9.8                   | 088                         | 1.6                         | 1.7                         | 075                         | 4.4                         | ESE           |                 |                     | ****         | 305                                | 10  |
| 11    | -3.6                   | -6.5                   | -5.1                   | 100                         | 1.3                         | 1.4                         | 117                         | 3.8                         | ESE           |                 |                     | ****         | 318                                | 11  |
| 12    | -5                     | -6.8                   | -3.7                   | 130                         | 1.1                         | 1.4                         | 137                         | 4.4                         | SE            |                 |                     | ****         | 493                                | 12  |
| 13    | -7                     | -6.5                   | -3.6                   | 121                         | 1.1                         | 1.3                         | 115                         | 4.4                         | ESE           |                 |                     | ****         | 540                                | 13  |
| 14    | -3.2                   | -9.2                   | -6.2                   | 076                         | .7                          | .9                          | 089                         | 3.8                         | ENE           |                 |                     | ****         | 400                                | 14  |
| 15    | -6.7                   | -15.3                  | -11.0                  | 093                         | 1.6                         | 1.6                         | 095                         | 4.4                         | E             |                 |                     | ****         | 365                                | 15  |
| 16    | -13.0                  | -16.8                  | -14.9                  | 087                         | 2.0                         | 2.0                         | 088                         | 4.4                         | E             | 92              | -16.5               | ****         | 350                                | 16  |
| 17    | -15.7                  | -21.4                  | -18.6                  | 088                         | 2.3                         | 2.4                         | 097                         | 5.1                         | E             | 87              | -19.9               | ****         | 350                                | 17  |
| 18    | -15.9                  | -22.2                  | -19.1                  | 092                         | 2.2                         | 2.3                         | 090                         | 4.4                         | E             | 78              | -23.0               | ****         | 390                                | 18  |
| 19    | -15.2                  | -21.4                  | -18.3                  | 115                         | 2.8                         | 2.8                         | 115                         | 7.0                         | ESE           | 63              | -23.2               | ****         | 418                                | 19  |
| 20    | -10.1                  | -15.3                  | -12.7                  | 115                         | 2.9                         | 3.0                         | 123                         | 6.3                         | ESE           | 79              | -15.4               | ****         | 330                                | 20  |
| 21    | -5.8                   | -10.7                  | -8.3                   | 093                         | 1.5                         | 1.7                         | 125                         | 4.4                         | ENE           | 85              | -10.4               | ****         | 393                                | 21  |
| 22    | -4.6                   | -7.5                   | -6.1                   | 103                         | 1.6                         | 1.8                         | 119                         | 5.1                         | ENE           | 80              | -8.9                | ****         | 378                                | 22  |
| 23    | -8                     | -6.0                   | -3.4                   | 112                         | 1.1                         | 1.3                         | 113                         | 3.8                         | ESE           |                 |                     | ****         | 348                                | 23  |
| 24    | -1.0                   | -4.7                   | -2.9                   | 136                         | 1.4                         | 1.4                         | 138                         | 3.8                         | SE            |                 |                     | ****         | 335                                | 24  |
| 25    | .5                     | -6.7                   | -3.1                   | 138                         | 1.4                         | 1.5                         | 159                         | 3.8                         | SE            |                 |                     | ****         | 358                                | 25  |
| 26    | -4.9                   | -7.3                   | -6.1                   | 116                         | 2.4                         | 2.4                         | 110                         | 5.7                         | ESE           | 76              | -9.7                | ****         | 358                                | 26  |
| 27    | -3.8                   | -11.8                  | -7.8                   | 086                         | 1.5                         | 1.6                         | 114                         | 4.4                         | E             | 88              | -8.5                | ****         | 363                                | 27  |
| 28    | -10.3                  | -14.7                  | -12.5                  | 080                         | 2.7                         | 2.7                         | 070                         | 4.4                         | E             | 95              | -13.8               | ****         | 368                                | 28  |
| 29    | -5.4                   | -10.1                  | -7.8                   | 097                         | 1.1                         | 1.2                         | 131                         | 3.8                         | ENE           |                 |                     | ****         | 258                                | 29  |
| 30    | -5.8                   | -12.0                  | -8.9                   | 259                         | .4                          | .7                          | 276                         | 3.8                         | W             |                 |                     | ****         | 273                                | 30  |
| MONTH | .5                     | -22.2                  | -8.9                   | 104                         | 1.4                         | 1.6                         | 113                         | 7.6                         | ESE           | M               | M                   | ****         | 12060                              |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.1  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 5.7  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 5.7  
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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

R&M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
November, 1982



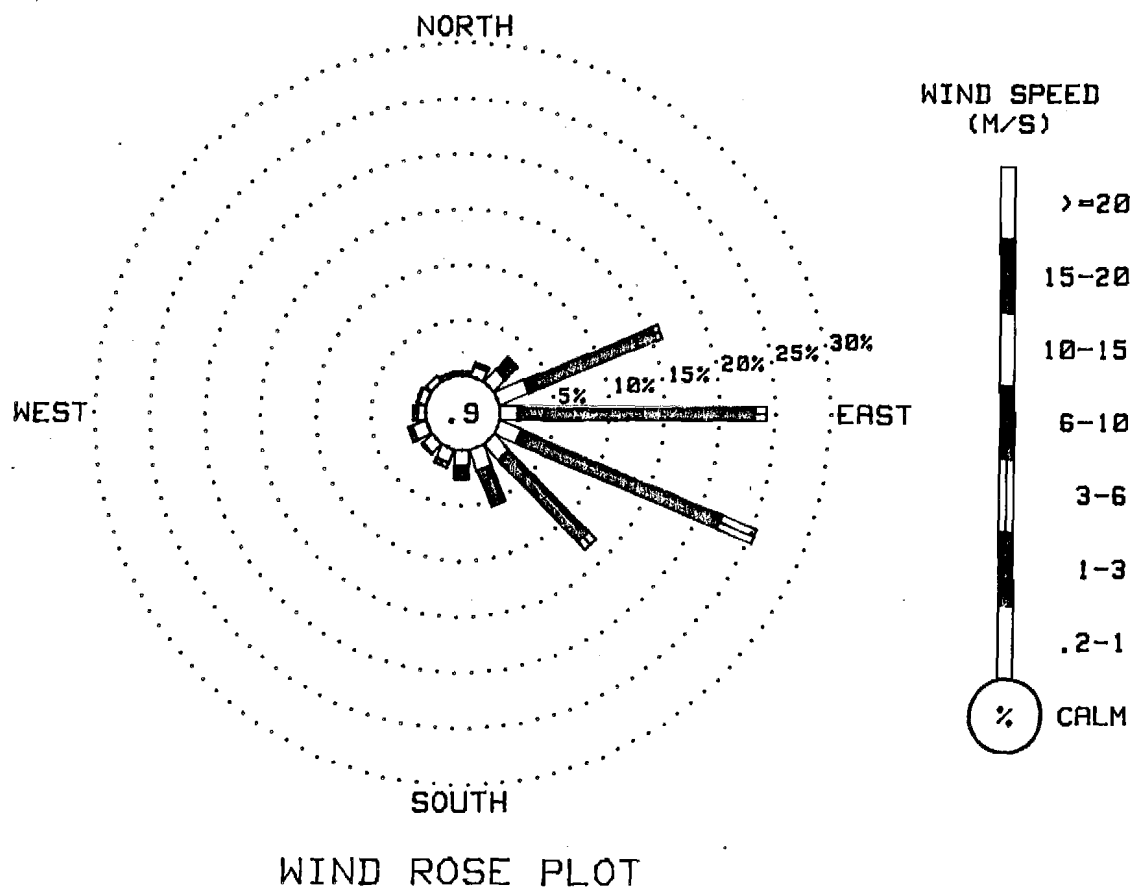
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING November, 1982

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | .35              | .03              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .38    |
| NNE       | .97              | .28              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.25   |
| NE        | 1.56             | 1.49             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 3.06   |
| ENE       | 2.95             | 12.40            | .56              | 0.00              | 0.00               | 0.00               | 0.00                  | 15.90  |
| E         | 1.67             | 21.42            | 1.08             | 0.00              | 0.00               | 0.00               | 0.00                  | 24.17  |
| ESE       | 2.19             | 19.72            | 3.40             | 0.00              | 0.00               | 0.00               | 0.00                  | 25.31  |
| SE        | 2.01             | 10.24            | .97              | 0.00              | 0.00               | 0.00               | 0.00                  | 13.23  |
| SSE       | 2.01             | 3.44             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.45   |
| S         | 1.39             | 1.22             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.60   |
| SSW       | 1.25             | .42              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.67   |
| SW        | 1.15             | .07              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.22   |
| WSW       | 1.39             | .31              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.70   |
| W         | .76              | .38              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.15   |
| WNW       | .83              | .10              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .94    |
| NW        | .69              | 0.00             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .69    |
| NNW       | .35              | .03              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .38    |
| CALM      |                  |                  |                  |                   |                    |                    |                       | .90    |
| TOTAL     | 21.53            | 71.56            | 6.01             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2880 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
November, 1982



No precipitation data for December

(See INTERPRETATION OF DATA).

# R & M CONSULTANTS, INC.

## SUSTANA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

DAY 01

DAY 02

DAY 03

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -12.2 | -13.3 | 92   | 153  | .3   | 095  | 2.5  | 1    | 0300  | -21.3 | ***** | 90   | 097  | 1.2  | 092  | 3.2  | 1    |
| 0600  | -13.7 | ***** | 95   | 285  | .7   | 280  | 3.2  | 1    | 0600  | -17.2 | -18.9 | 87   | 145  | 1.1  | 149  | 3.8  | 1    |
| 0900  | -14.7 | ***** | 94   | 264  | .2   | 287  | 1.9  | 1    | 0900  | -18.6 | ***** | 90   | 134  | 1.0  | 141  | 4.4  | 1    |
| 1200  | -14.1 | ***** | 92   | 115  | .6   | 128  | 1.9  | 2    | 1200  | -15.2 | -17.2 | 85   | 153  | 1.2  | 158  | 2.5  | 2    |
| 1500  | -15.4 | -16.3 | 93   | 109  | .6   | 122  | 2.5  | 1    | 1500  | -16.0 | -18.1 | 84   | 128  | 2.6  | 133  | 5.1  | 1    |
| 1800  | -16.1 | ***** | 92   | 129  | 1.0  | 126  | 2.5  | 1    | 1800  | -18.4 | -20.4 | 84   | 131  | 2.7  | 128  | 4.4  | 1    |
| 2100  | -18.0 | -19.1 | 91   | 118  | 1.0  | 091  | 2.5  | 1    | 2100  | -20.0 | -22.0 | 84   | 105  | 1.7  | 132  | 4.4  | 1    |
| 2400  | -19.9 | -21.3 | 89   | 092  | 1.3  | 098  | 2.5  | 1    | 2400  | -20.9 | -22.7 | 85   | 066  | 1.4  | 091  | 4.4  | 1    |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -14.6 | -19.8 | 76   | 105  | 1.9  | 104  | 5.1  | 1    | 0300  | -11.7 | -14.6 | 79   | 090  | 1.3  | 067  | 3.2  | 1    |
| 0600  | -17.2 | -20.7 | 74   | 108  | 2.3  | 111  | 5.1  | 1    | 0600  | -9.2  | -12.0 | 80   | 098  | 1.2  | 092  | 3.2  | 1    |
| 0900  | -18.7 | -21.9 | 76   | 116  | 2.9  | 105  | 5.7  | 1    | 0900  | -8.7  | -9.5  | 94   | 119  | 1.1  | 117  | 2.5  | 1    |
| 1200  | -17.4 | -20.9 | 74   | 109  | 2.7  | 118  | 4.4  | 4    | 1200  | -7.1  | -8.3  | 91   | 110  | 1.1  | 107  | 3.8  | 3    |
| 1500  | -17.6 | -21.1 | 74   | 109  | 2.8  | 124  | 5.7  | 1    | 1500  | -6.5  | -8.9  | 83   | 114  | 1.8  | 098  | 4.4  | 1    |
| 1800  | -17.7 | -21.2 | 74   | 117  | 3.2  | 125  | 6.3  | 1    | 1800  | -6.7  | -9.0  | 84   | 109  | 1.3  | 117  | 3.2  | 1    |
| 2100  | -17.6 | -20.5 | 78   | 108  | 1.9  | 138  | 5.7  | 1    | 2100  | -6.0  | -8.1  | 85   | 113  | 1.2  | 093  | 3.2  | 1    |
| 2400  | -13.1 | -16.3 | 77   | 066  | 1.4  | 069  | 3.2  | 1    | 2400  | -5.8  | ***** | 86   | 108  | 1.3  | 056  | 3.2  | 1    |

DAY 07

DAY 08

DAY 09

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -1.8  | -5.0  | 79   | 094  | 2.5  | 098  | 7.0  | 1    | 0300  | -1.0  | ***** | 4    | 119  | .5   | 123  | 1.9  | 1    |
| 0600  | -1.1  | -4.3  | 79   | 100  | 3.1  | 100  | 8.9  | 1    | 0600  | -1.4  | -37.8 | 4    | 117  | .7   | 108  | 2.5  | 1    |
| 0900  | .5    | -2.1  | 83   | 099  | 2.9  | 091  | 7.6  | 1    | 0900  | -1.7  | ***** | 6    | 106  | 1.3  | 108  | 3.2  | 1    |
| 1200  | 1.7   | -1.2  | 81   | 108  | 4.1  | 107  | 9.5  | 3    | 1200  | -1.6  | -39.9 | 3    | 120  | 1.4  | 127  | 3.2  | 2    |
| 1500  | 1.4   | -1.3  | 82   | 106  | 2.7  | 106  | 8.3  | 1    | 1500  | -1.4  | -39.7 | 3    | 133  | 1.2  | 114  | 3.2  | 1    |
| 1800  | .1    | -2.5  | 83   | 130  | 1.4  | 107  | 4.4  | 1    | 1800  | -1.8  | ***** | 2    | 179  | .8   | 139  | 1.9  | 1    |
| 2100  | .5    | -1.9  | 84   | 131  | 1.3  | 086  | 3.2  | 1    | 2100  | -1.1  | ***** | 6    | 171  | .7   | 136  | 3.2  | 1    |
| 2400  | -.8   | ***** | 5    | 137  | .7   | 168  | 1.9  | 1    | 2400  | -.7   | -1.0  | 98   | 226  | .4   | 305  | 5.1  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |   |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|---|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |   |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |   |
| 0300  | -16.8 | -17.1 | 98   | 071  | 2.3  | 081  | 4.4   | 1     | 0300  | -6.6 | -9.8  | 78   | 169  | 2.0   | 147   | 3.8   | 1    | 0300 | -3.8 | ***** | 83 | 134 | 1.2 | 127 | 3.8 | 1 |
| 0600  | -18.5 | -19.0 | 96   | 075  | 2.0  | 080  | 4.4   | 1     | 0600  | -6.1 | -9.8  | 75   | 126  | 2.8   | 108   | 6.3   | 1    | 0600 | -3.2 | -7.0  | 75 | 130 | 1.3 | 106 | 4.4 | 1 |
| 0900  | -18.7 | -19.3 | 95   | 084  | 1.6  | 053  | 3.8   | 1     | 0900  | -6.6 | -10.1 | 76   | 142  | 1.8   | 124   | 4.4   | 1    | 0900 | -4.4 | -7.8  | 77 | 119 | 1.9 | 129 | 4.4 | 1 |
| 1200  | -14.0 | -14.4 | 97   | 130  | .7   | 112  | 3.2   | 2     | 1200  | -4.9 | -9.0  | 73   | 108  | 2.1   | 127   | 5.1   | 2    | 1200 | -3.9 | -7.5  | 76 | 123 | 1.2 | 095 | 3.8 | 3 |
| 1500  | -8.4  | -9.6  | 91   | 174  | 1.3  | 168  | 2.5   | 1     | 1500  | -6.1 | -9.8  | 75   | 109  | 2.0   | 115   | 5.1   | 1    | 1500 | -3.3 | -6.9  | 76 | 149 | 1.5 | 110 | 4.4 | 1 |
| 1800  | -5.0  | -9.6  | 70   | 134  | 2.4  | 141  | 6.3   | 1     | 1800  | -7.2 | -10.4 | 78   | 126  | 2.3   | 131   | 3.8   | 1    | 1800 | -2.3 | -6.1  | 75 | 128 | 1.5 | 151 | 3.8 | 1 |
| 2100  | -5.0  | -9.2  | 72   | 112  | 2.6  | 111  | 6.3   | 1     | 2100  | -7.2 | -10.5 | 77   | 117  | 2.3   | 127   | 5.1   | 1    | 2100 | -4.1 | -7.5  | 77 | 117 | 2.6 | 124 | 5.1 | 1 |
| 2400  | -8.4  | -10.8 | 83   | 135  | 1.9  | 105  | 5.7   | 1     | 2400  | -5.9 | -8.8  | 80   | 149  | 1.5   | 135   | 3.2   | 1    | 2400 | -4.8 | -7.0  | 95 | 157 | 1.0 | 118 | 2.5 | 1 |

DAY 13

DAY 14

DAY 15

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      |    |     |     |     |     |   |
|------|-------|-------|------|------|------|------|------|-------|-------|------|-------|------|------|------|-------|-------|------|------|------|------|----|-----|-----|-----|-----|---|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |    |     |     |     |     |   |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |    |     |     |     |     |   |
| 0300 | -2.5  | ***** | 83   | 182  | 1.4  | 181  | 3.2  | 1     | 0300  | -3.2 | -6.0  | 81   | 149  | 1.4  | 156   | 2.5   | 1    | 0300 | -.3  | -6.5 | 63 | 107 | 1.9 | 102 | 5.7 | 1 |
| 0600 | -2.8  | -4.5  | 88   | 134  | 1.1  | 114  | 3.8  | 1     | 0600  | -4.9 | -6.8  | 87   | 138  | 1.2  | 139   | 2.5   | 1    | 0600 | -1.0 | -6.5 | 66 | 119 | 1.8 | 111 | 5.7 | 1 |
| 0900 | -4.3  | -6.2  | 87   | 142  | 1.7  | 157  | 3.8  | 1     | 0900  | -9.0 | -10.2 | 91   | 153  | 1.3  | 158   | 3.8   | 1    | 0900 | -1.2 | -6.5 | 67 | 127 | 1.7 | 147 | 3.8 | 1 |
| 1200 | -3.1  | -5.9  | 81   | 162  | 1.3  | 157  | 3.2  | 4     | 1200  | -3.3 | -6.3  | 80   | 140  | 1.0  | 116   | 3.2   | 4    | 1200 | -.8  | -5.6 | 70 | 109 | 1.6 | 117 | 3.8 | 3 |
| 1500 | -3.0  | ***** | 83   | 154  | 1.4  | 154  | 4.4  | 1     | 1500  | -2.8 | -6.3  | 77   | 137  | 1.3  | 116   | 3.2   | 1    | 1500 | -2.4 | -5.5 | 79 | 137 | 1.3 | 136 | 3.2 | 1 |
| 1800 | -2.0  | -4.7  | 82   | 166  | 1.1  | 106  | 3.8  | 1     | 1800  | -6.3 | ***** | 87   | 127  | .8   | 100   | 2.5   | 1    | 1800 | -2.9 | -5.4 | 83 | 155 | 1.7 | 162 | 3.8 | 1 |
| 2100 | -1.0  | -4.2  | 79   | 119  | 1.9  | 109  | 6.3  | 1     | 2100  | -8.2 | ***** | 88   | 158  | .8   | 148   | 2.5   | 1    | 2100 | -2.7 | -5.2 | 83 | 148 | 1.4 | 125 | 2.5 | 1 |
| 2400 | -2.4  | -5.2  | 81   | 119  | 1.6  | 116  | 4.4  | 1     | 2400  | -1.1 | -7.4  | 62   | 133  | 1.0  | 124   | 4.4   | 1    | 2400 | -1.9 | -5.2 | 78 | 150 | 1.5 | 155 | 4.4 | 1 |

DAY 16

DAY 17

DAY 18

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |
| 0300  | -1.0  | -4.9  | 75   | 124  | 1.3  | 087  | 3.8   | 1     | 0300  | -2.9  | -6.7  | 75   | 120  | 1.7   | 120   | 3.8   | 1    | 0300 | -11.6 | ***** | 1  |
| 0600  | -2.7  | -6.3  | 76   | 147  | 1.6  | 122  | 3.8   | 1     | 0600  | -3.7  | -7.1  | 77   | 123  | 1.9   | 119   | 3.8   | 1    | 0600 | -13.4 | ***** | 1  |
| 0900  | -3.1  | -6.9  | 75   | 142  | 1.3  | 157  | 3.2   | 1     | 0900  | -4.0  | -7.4  | 77   | 114  | 1.6   | 116   | 3.8   | 1    | 0900 | -13.5 | -13.6 | 99 |
| 1200  | -1.8  | -6.3  | 71   | 153  | 1.3  | 149  | 2.5   | 3     | 1200  | -3.9  | -7.2  | 78   | 110  | 1.9   | 117   | 4.4   | 3    | 1200 | -12.9 | -13.4 | 96 |
| 1500  | -2.5  | -7.0  | 71   | 130  | 1.8  | 115  | 4.4   | 1     | 1500  | -4.2  | -7.3  | 79   | 118  | 2.3   | 123   | 4.4   | 1    | 1500 | -12.3 | -12.7 | 97 |
| 1800  | -3.3  | -7.6  | 72   | 129  | 1.5  | 128  | 3.2   | 1     | 1800  | -5.3  | -7.3  | 86   | 105  | 2.1   | 114   | 3.8   | 1    | 1800 | -12.1 | -12.5 | 97 |
| 2100  | -3.8  | -7.9  | 73   | 126  | 1.5  | 120  | 3.2   | 1     | 2100  | -7.4  | -8.1  | 95   | 089  | 1.6   | 108   | 3.2   | 1    | 2100 | -12.7 | -12.8 | 99 |
| 2400  | -3.8  | -7.6  | 75   | 118  | 1.2  | 109  | 3.2   | 1     | 2400  | -10.5 | -10.6 | 99   | 075  | 2.0   | 074   | 3.8   | 1    | 2400 | -12.5 | ***** | 99 |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST  | MAX.  | HOUR | DEW   | WIND  | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|-------|-------|------|-------|-------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR.  | SPD.  | DIR. | TEMP. | POINT | RH   | DIR. | SPD. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG.  | M/S   | DEG. | DEG C | DEG C | %    | DEG. | M/S  |
| 0300  | -9.4  | -10.8 | 96   | 130  | .9   | 105  | 3.2   | 1     | 0300 | -9.4  | -13.8 | 70   | 164   | 1.3   | 133  | 3.2  | 1    |
| 0600  | -12.6 | -13.4 | 94   | 100  | 1.0  | 133  | 3.2   | 1     | 0600 | -6.6  | -12.5 | 63   | 165   | 1.3   | 177  | 2.5  | 1    |
| 0900  | -12.8 | -13.7 | 93   | 063  | 1.2  | 063  | 3.2   | 1     | 0900 | -7.3  | -12.2 | 68   | 111   | 1.9   | 123  | 5.1  | 1    |
| 1200  | -9.9  | -12.0 | 85   | 065  | 1.4  | 087  | 3.2   | 3     | 1200 | -7.7  | -11.8 | 72   | 120   | 1.8   | 129  | 4.4  | 3    |
| 1500  | -8.7  | -12.3 | 75   | 122  | 1.8  | 122  | 4.4   | 1     | 1500 | -9.0  | -12.9 | 73   | 139   | 2.3   | 130  | 4.4  | 1    |
| 1800  | -8.0  | -12.3 | 71   | 126  | 1.4  | 119  | 3.2   | 1     | 1800 | -12.0 | ***** | 82   | 126   | 1.4   | 152  | 3.8  | 1    |
| 2100  | -6.6  | -11.7 | 67   | 137  | 1.2  | 148  | 2.5   | 1     | 2100 | -14.3 | -15.9 | 88   | 100   | 1.6   | 109  | 3.2  | 1    |
| 2400  | -6.9  | -12.3 | 65   | 145  | 1.5  | 159  | 3.2   | 1     | 2400 | -15.3 | -16.3 | 92   | 093   | 2.2   | 090  | 3.8  | 1    |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST  | MAX.  | HOUR | DEW   | WIND  | WIND  | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|-------|-------|------|-------|-------|-------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR.  | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG.  | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | -19.5 | -21.1 | 87   | 074  | 3.4  | 067  | 5.1   | 1     | 0300 | -16.5 | -18.6 | 84   | 062   | 1.5   | 075   | 3.2  | 1    |
| 0600  | -20.3 | -21.9 | 87   | 074  | 3.4  | 072  | 5.7   | 1     | 0600 | -13.6 | -16.9 | 76   | 083   | 1.4   | 101   | 4.4  | 1    |
| 0900  | -19.9 | -21.4 | 88   | 077  | 3.6  | 079  | 5.7   | 1     | 0900 | -12.9 | -16.7 | 73   | 107   | 1.9   | 098   | 3.8  | 1    |
| 1200  | -18.8 | -20.6 | 86   | 079  | 3.2  | 081  | 5.1   | 3     | 1200 | -12.0 | -16.5 | 69   | 114   | 2.3   | 109   | 4.4  | 4    |
| 1500  | -17.8 | -19.6 | 86   | 075  | 2.6  | 073  | 3.8   | 1     | 1500 | -13.4 | -17.9 | 69   | 127   | 2.1   | 127   | 3.8  | 1    |
| 1800  | -17.9 | -19.6 | 87   | 068  | 1.6  | 075  | 3.8   | 1     | 1800 | -14.7 | -18.8 | 71   | 120   | 2.1   | 125   | 4.4  | 1    |
| 2100  | -17.7 | -19.5 | 86   | 078  | 2.0  | 075  | 3.2   | 1     | 2100 | -16.7 | -19.6 | 78   | 081   | 1.7   | 136   | 3.8  | 1    |
| 2400  | -16.5 | -18.4 | 85   | 065  | 1.4  | 071  | 3.2   | 1     | 2400 | -16.5 | -18.9 | 82   | 074   | 2.1   | 095   | 3.8  | 1    |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND  | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|-------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | -11.1 | -13.7 | 81   | 113  | 3.2  | 124  | 5.7   | 1     | 0300 | -8.4 | -11.9 | 76   | 102   | 1.8   | 101   | 4.4  | 1    |
| 0600  | -11.1 | -13.6 | 82   | 079  | 2.0  | 107  | 5.1   | 1     | 0600 | -7.6 | -11.1 | 76   | 117   | 1.0   | 116   | 3.2  | 1    |
| 0900  | -11.8 | -14.4 | 81   | 087  | 2.1  | 076  | 4.4   | 1     | 0900 | -6.2 | -9.4  | 78   | 147   | 1.3   | 141   | 2.5  | 1    |
| 1200  | -11.1 | -13.7 | 81   | 100  | 2.6  | 116  | 6.3   | 3     | 1200 | -4.1 | -7.5  | 77   | 121   | 1.2   | 095   | 3.2  | 3    |
| 1500  | -11.1 | -13.6 | 82   | 112  | 2.7  | 114  | 5.7   | 1     | 1500 | -4.2 | -7.3  | 79   | 111   | 1.8   | 102   | 3.8  | 1    |
| 1800  | -10.8 | -13.4 | 81   | 115  | 2.6  | 123  | 5.7   | 1     | 1800 | -4.0 | ***** | 85   | 132   | 1.5   | 131   | 4.4  | 1    |
| 2100  | -11.8 | ***** | 84   | 081  | .8   | 121  | 3.8   | 1     | 2100 | -3.7 | -5.7  | 86   | 169   | 1.2   | 171   | 2.5  | 1    |
| 2400  | -8.0  | -11.2 | 78   | 106  | 1.2  | 094  | 4.4   | 1     | 2400 | -2.7 | ***** | 87   | 172   | 1.1   | 181   | 1.9  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

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                | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD               | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                 | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                  | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                  | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |
| DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                         | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                        | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                         | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                         | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW                           | DEG C DEG C % DEG. M/S DEG. M/S MW                           | DEG C DEG C % DEG. M/S DEG. M/S MW                         | DEG C DEG C % DEG. M/S DEG. M/S MW          |
| 0300 0.0 -28.1 10 *** **                    | 0300 1.1 -28.4 9 153 .6 086 1.9 1 0300 -1.3 -43.6 1 *** ** | 0600 -.1 -28.2 10 *** **                    | 0600 .9 -28.6 9 205 1.4 252 3.2 1 0600 -.8 -35.6 5 *** ** | 0900 .1 -29.2 9 *** **                      | 0900 .5 ***** 12 237 .9 230 2.5 1 0900 -1.3 -34.3 6 *** ** | 1200 .1 -28.0 10 *** **                     | 1200 1.7 -45.0 0 126 1.0 146 3.2 2 1200 -1.8 -34.7 6 *** ** | 1500 .1 -29.2 9 *** **                      | 1500 .1 ***** 13 137 .5 128 3.2 1 1500 -2.7 -40.6 3 *** ** | 1800 .1 -29.2 9 *** **                      | 1800 .2 -25.9 12 012M .2M244M1.3M 1 1800 -4.1 -46.1 1 *** ** | 2100 .1 ***** 10 137M .1M112M1.3M 1 2100 -7.7 -42.2 4 *** ** | 2400 .5 -28.9 9 146 .5 087 1.9 1 2400 -2.2 -25.4 13 *** ** | 2400 -9.2 ***** 2 *** **                    |

DAY 31

| 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 | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |
| DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          |
| 0300 -10.1 ***** 1 *** **                   | 0600 -10.1 ***** 2 *** **                   | 0900 -9.7 ***** 0 *** **                    | 1200 -7.9 ***** 1 *** **                    | 1500 -7.1 ***** 1 *** **                    |
| 1800 -7.3 ***** 1 *** **                    | 2100 -7.1 ***** 1 *** **                    | 2400 -6.6 ***** 1 *** **                    |                                             |                                             |

# R & M CONSULTANTS, INC.

## SUSTITNA HYDROELECTRIC PROJECT

MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

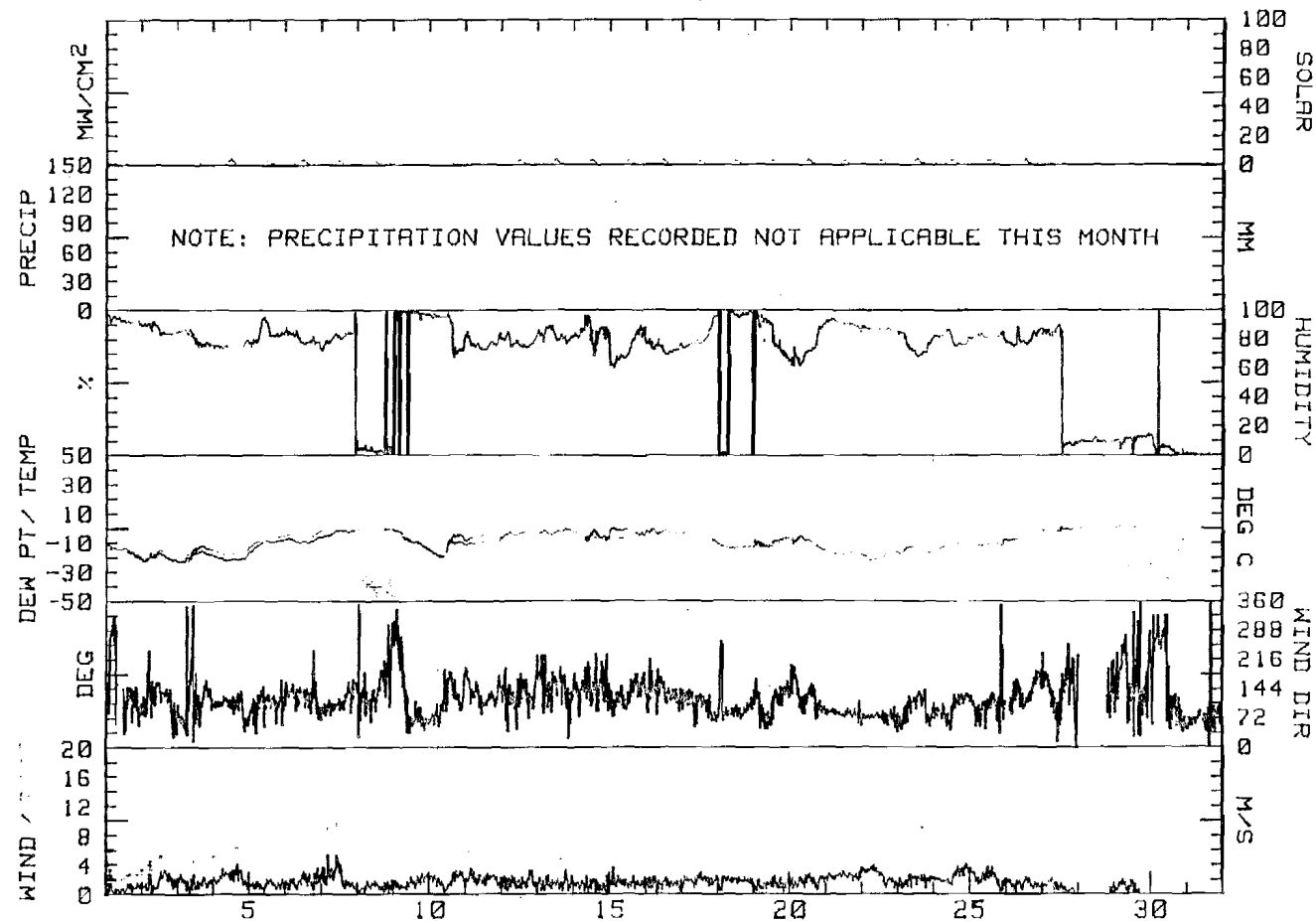
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SQM | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | -11.1                  | -19.9                  | -15.5                  | 117                         | .5                          | .8                          | 280                         | 3.2                         | SE            | 92              | -17.7               | ****         | 268                                | 1   |
| 2     | -15.1                  | -21.6                  | -18.4                  | 121                         | 1.5                         | 1.7                         | 133                         | 5.1                         | SE            | 86              | -20.1               | ****         | 283                                | 2   |
| 3     | -11.9                  | -21.4                  | -16.7                  | 107                         | 1.2                         | 1.6                         | 125                         | 4.4                         | ESE           | 80              | -18.9               | ****         | 293                                | 3   |
| 4     | -13.1                  | -18.7                  | -15.9                  | 108                         | 2.3                         | 2.5                         | 125                         | 6.3                         | ESE           | 75              | -20.5               | ****         | 343                                | 4   |
| 5     | -4.7                   | -13.1                  | -8.9                   | 108                         | 1.3                         | 1.3                         | 098                         | 4.4                         | ESE           | 83              | -10.3               | ****         | 305                                | 5   |
| 6     | -1.5                   | -7.5                   | -4.5                   | 122                         | 1.7                         | 1.9                         | 110                         | 7.0                         | SE            | 88              | -7.9                | ****         | 333                                | 6   |
| 7     | 1.8                    | -1.9                   | -.1                    | 107                         | 2.3                         | 2.4                         | 107                         | 9.5                         | ESE           |                 |                     | ****         | 300                                | 7   |
| 8     | 0.0                    | -1.8                   | -.9                    | 134                         | .7                          | 1.0                         | 305                         | 5.1                         | SE            |                 |                     | ****         | 258                                | 8   |
| 9     | -.6                    | -14.4                  | -7.5                   | 067                         | 1.0                         | 1.7                         | 277                         | 5.1                         | ENE           |                 |                     | ****         | 270                                | 9   |
| 10    | -4.3                   | -19.1                  | -11.7                  | 110                         | 1.6                         | 1.9                         | 141                         | 6.3                         | ESE           | 86              | -13.3               | ****         | 273                                | 10  |
| 11    | -4.8                   | -8.7                   | -6.8                   | 129                         | 2.0                         | 2.1                         | 108                         | 6.3                         | ESE           | 77              | -10.1               | ****         | 295                                | 11  |
| 12    | -2.3                   | -6.8                   | -4.6                   | 130                         | 1.5                         | 1.6                         | 124                         | 5.1                         | ESE           | 77              | -7.2                | ****         | 310                                | 12  |
| 13    | -.1                    | -5.1                   | -2.6                   | 145                         | 1.3                         | 1.5                         | 109                         | 6.3                         | SSE           | 83              | -5.0                | ****         | 329                                | 13  |
| 14    | -.9                    | -9.0                   | -5.0                   | 142                         | 1.1                         | 1.2                         | 124                         | 4.4                         | SE            | 83              | -6.9                | ****         | 318                                | 14  |
| 15    | .3                     | -5.5                   | -2.6                   | 130                         | 1.5                         | 1.7                         | 102                         | 5.7                         | ESE           | 73              | -6.1                | ****         | 308                                | 15  |
| 16    | -.3                    | -5.0                   | -2.7                   | 134                         | 1.4                         | 1.5                         | 115                         | 4.4                         | SE            | 74              | -6.7                | ****         | 315                                | 16  |
| 17    | -2.6                   | -10.5                  | -6.6                   | 107                         | 1.8                         | 1.9                         | 117                         | 4.4                         | ESE           | 82              | -7.5                | ****         | 303                                | 17  |
| 18    | -10.2                  | -13.9                  | -12.1                  | 089                         | 1.7                         | 1.8                         | 077                         | 4.4                         | E             |                 |                     | ****         | 308                                | 18  |
| 19    | -6.6                   | -13.0                  | -9.8                   | 113                         | 1.1                         | 1.3                         | 122                         | 4.4                         | SE            |                 |                     | ****         | 300                                | 19  |
| 20    | -5.6                   | -15.3                  | -10.5                  | 124                         | 1.6                         | 1.8                         | 123                         | 5.1                         | ESE           | 74              | -13.5               | ****         | 315                                | 20  |
| 21    | -15.0                  | -18.8                  | -16.9                  | 083                         | 2.6                         | 2.6                         | 071                         | 5.1                         | E             | 91              | -17.7               | ****         | 310                                | 21  |
| 22    | -16.0                  | -20.6                  | -18.3                  | 075                         | 2.6                         | 2.7                         | 072                         | 5.7                         | ENE           | 87              | -20.5               | ****         | 395                                | 22  |
| 23    | -11.8                  | -17.8                  | -14.8                  | 099                         | 1.8                         | 2.0                         | 101                         | 4.4                         | ESE           | 75              | -18.1               | ****         | 328                                | 23  |
| 24    | -8.0                   | -16.8                  | -12.4                  | 105                         | 2.3                         | 2.5                         | 119                         | 5.7                         | ESE           | 80              | -14.6               | ****         | 309                                | 24  |
| 25    | -7.8                   | -12.7                  | -10.3                  | 102                         | 2.1                         | 2.3                         | 116                         | 6.3                         | ESE           | 81              | -13.5               | ****         | 310                                | 25  |
| 26    | -.8                    | -8.7                   | -4.8                   | 130                         | 1.2                         | 1.4                         | 101                         | 4.4                         | ESE           | 80              | -8.4                | ****         | 300                                | 26  |
| 27    | .4                     | -2.9                   | -1.3                   | 143                         | .8                          | 1.0                         | 098                         | 3.2                         | SSE           |                 |                     | ****         | 253                                | 27  |
| 28    | .9                     | -.4                    | .3                     | 145                         | .3                          | .4                          | 087                         | 1.9                         | SE            |                 |                     | ****         | 240                                | 28  |
| 29    | 1.7                    | -.3                    | .7                     | 179M                        | .6M                         | 1.0M                        | 252M                        | 3.2M                        | SE(M)         |                 |                     | ****         | 268                                | 29  |
| 30    | -.1                    | -9.3                   | -4.7                   | ***                         | ****                        | ****                        | ***                         | ****                        | ***           |                 |                     | ****         | 253                                | 30  |
| 31    | -6.6                   | -10.4                  | -8.5                   | ***                         | ****                        | ****                        | ***                         | ****                        | ***           |                 |                     | ****         | 250                                | 31  |
| MONTH | 1.8                    | -21.6                  | -8.2                   | 111M                        | 1.4M                        | 1.7M                        | 107M                        | 9.5M                        | ESE(M)        | M               | M                   | ****         | 9143                               |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 7.0  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 6.3  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 9.5  
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 8.9

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

\*\*\*\* SEE NOTES AT THE BACK OF THIS REPORT \*\*\*\*

R&M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
December, 1982



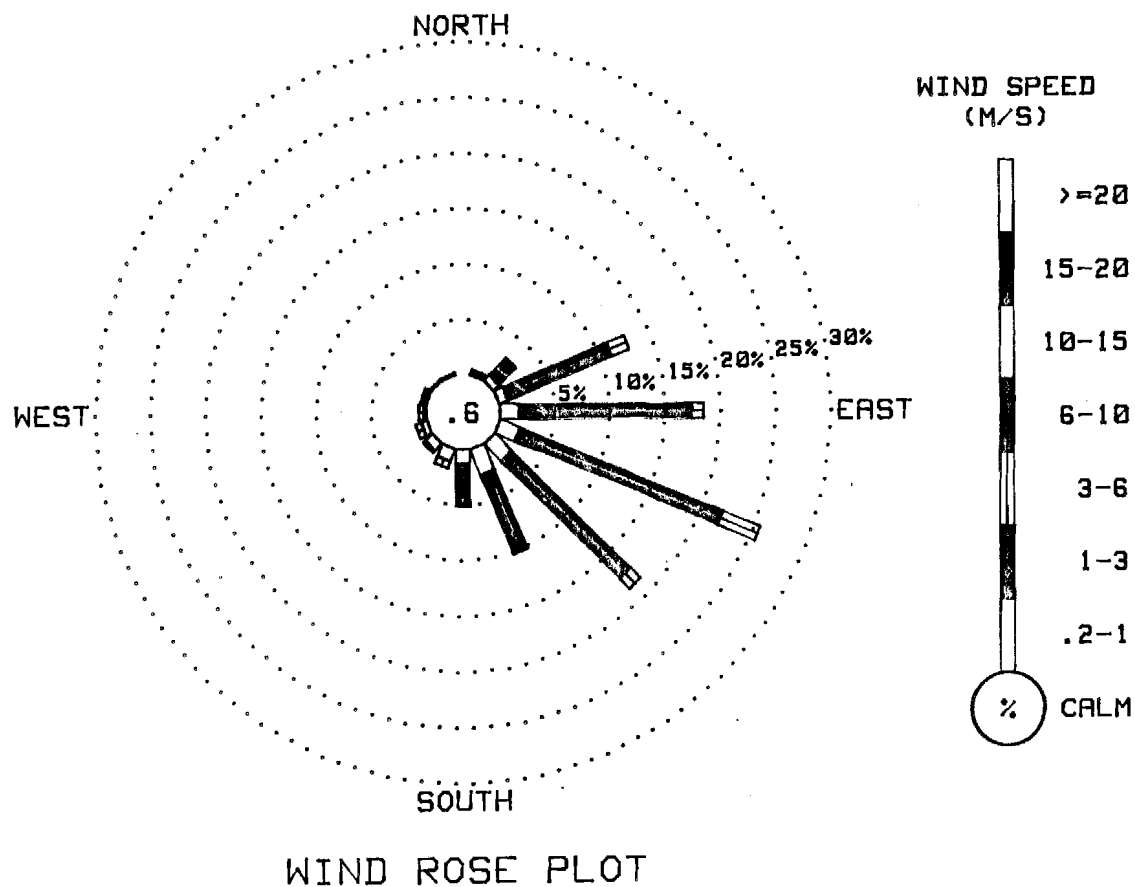
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING December, 1982

| DIRECTION | VELOCITY (M/S) |           |           |           |            |            |                       | TOTAL  |
|-----------|----------------|-----------|-----------|-----------|------------|------------|-----------------------|--------|
|           | 0.2<br>TO      | 1.0<br>TO | 3.0<br>TO | 6.0<br>TO | 10.0<br>TO | 15.0<br>TO | 20.0<br>OR<br>GREATER |        |
|           | 1.0            | 3.0       | 6.0       | 10.0      | 15.0       | 20.0       |                       |        |
| N         | 0.00           | 0.00      | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 0.00   |
| NNE       | .19            | .26       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | .45    |
| NE        | .68            | 2.10      | .04       | 0.00      | 0.00       | 0.00       | 0.00                  | 2.82   |
| ENE       | .86            | 10.10     | 1.69      | 0.00      | 0.00       | 0.00       | 0.00                  | 12.65  |
| E         | 1.73           | 15.62     | 1.09      | 0.00      | 0.00       | 0.00       | 0.00                  | 18.44  |
| ESE       | 1.99           | 19.83     | 3.68      | 0.00      | 0.00       | 0.00       | 0.00                  | 25.50  |
| SE        | 2.29           | 15.02     | 1.28      | 0.00      | 0.00       | 0.00       | 0.00                  | 18.59  |
| SSE       | 2.55           | 7.66      | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 10.21  |
| S         | 1.31           | 3.79      | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 5.11   |
| SSW       | 1.16           | .64       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 1.80   |
| SW        | .86            | .23       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 1.09   |
| WSW       | .56            | .53       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | 1.09   |
| W         | .23            | .49       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | .71    |
| WNW       | .38            | .23       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | .60    |
| NW        | .15            | .04       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | .19    |
| NNW       | .15            | .04       | 0.00      | 0.00      | 0.00       | 0.00       | 0.00                  | .19    |
| CALM      |                |           |           |           |            |            |                       | .56    |
| TOTAL     | 15.10          | 76.57     | 7.77      | 0.00      | 0.00       | 0.00       | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2663 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

R&M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT  
DEVIL CANYON WEATHER STATION  
December, 1982





# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING January, 1983

DAY 10

DAY 11

DAY 12

| HOUR                                                                                   | DEW                                                                                    | WIND                                                                                   | WIND                                             | GUST MAX.                                        | HOUR                                             | DEW                                              | WIND                                             | WIND                                             | GUST MAX.                                        | HOUR                                             | DEW                                         | WIND                                        | WIND                                        | GUST MAX.                                   |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|
| NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                                            | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                                            | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD                                            | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |
| DEG C DEG C % DEG. M/S DEG. M/S MW                                                     | DEG C DEG C % DEG. M/S DEG. M/S MW                                                     | DEG C DEG C % DEG. M/S DEG. M/S MW                                                     | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW               | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          |
| 0300 -23.2 -30.3 52 128 2.9 121 5.7 1 0300 -28.7 -33.2 65 094 2.4 091 5.1 1 0300 ***** | 0600 -23.8 -30.9 52 134 2.5 128 5.7 1 0600 -30.3 -33.7 72 100 2.3 095 5.7 1 0600 ***** | 0900 -23.1 -30.4 51 132 2.6 140 5.1 1 0900 -24.6 -28.9 67 153 1.2 123 5.1 1 0900 ***** | 1200 -21.8 -29.2 51 124 2.2 120 5.1 4 1200 ***** | 1500 -21.0 -28.3 52 130 1.5 126 5.1 1 1500 ***** | 1800 -20.4 -28.4 49 120 2.7 108 5.7 1 1800 ***** | 2100 -22.4 -29.6 52 103 1.8 107 5.1 1 2100 ***** | 2400 -26.2 -30.9 64 102 1.5 128 3.8 1 2400 ***** | 0300 -28.7 -33.2 65 094 2.4 091 5.1 1 0300 ***** | 0600 -30.3 -33.7 72 100 2.3 095 5.7 1 0600 ***** | 0900 -24.6 -28.9 67 153 1.2 123 5.1 1 0900 ***** | 1200 *****                                  | 1500 *****                                  | 1800 *****                                  | 2100 *****                                  |

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

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

## R &amp; M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING January, 1983

DAY 19

DAY 20

DAY 21

| HOUR                                 |  |       |  |       |  |      |  |      |  |      |  | HOUR |  |      |  |      |  |       |  |       |  |       |  | HOUR                                                                        |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------|--|-------|--|-------|--|------|--|------|--|------|--|------|--|------|--|------|--|-------|--|-------|--|-------|--|-----------------------------------------------------------------------------|--|------|--|------|--|------|--|------|--|-------|--|-------|--|-------|--|-------|--|-----|--|------|--|------|--|------|--|------|--|------|--|--|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| DEW                                  |  |       |  | WIND  |  |      |  | WIND |  |      |  | GUST |  |      |  | MAX. |  |       |  | DEW   |  |       |  | WIND                                                                        |  |      |  | WIND |  |      |  | GUST |  |       |  | MAX.  |  |       |  | DEW   |  |     |  | WIND |  |      |  | WIND |  |      |  | GUST |  |  |  | MAX. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NDNG                                 |  | TEMP. |  | POINT |  | RH   |  | DIR. |  | SPD. |  | DIR. |  | GUST |  | RAD  |  | NDNG  |  | TEMP. |  | POINT |  | RH                                                                          |  | DIR. |  | SPD. |  | DIR. |  | GUST |  | RAD   |  | NDNG  |  | TEMP. |  | POINT |  | RH  |  | DIR. |  | SPD. |  | DIR. |  | GUST |  | RAD  |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| DEG C                                |  | DEG C |  | %     |  | DEG. |  | M/S  |  | DEG. |  | M/S  |  | MW   |  |      |  | DEG C |  | DEG C |  | %     |  | DEG.                                                                        |  | M/S  |  | DEG. |  | M/S  |  | MW   |  | DEG C |  | DEG C |  | %     |  | DEG.  |  | M/S |  | DEG. |  | M/S  |  | MW   |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                                      |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |                                                                             |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0300 ***** ** *** **                 |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 0300 -6.7 -8.0 91 119 1.2 129 2.5 1 0300 -6.7 -12.5 63 143 1.7 136 3.2 1    |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0600 ***** ** *** **                 |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 0600 -8.8 -10.6 91 120 1.4 131 3.8 1 0600 -6.8 -13.3 66 129 1.8 145 3.8 1   |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0900 ***** ** *** **                 |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 0900 -11.8 -12.3 96 099 1.4 154 3.2 1 0900 -6.4 -13.7 58 147 1.8 135 3.2 1  |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1200 ***** ** *** **                 |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 1200 -6.7 -9.1 83 111 1.4 129 3.8 4 1200 -4.5 -14.5 46 121 1.9 124 4.4 6    |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1500 -6.1 -43.0 3 280M .4M 274M 2.5M |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 1 1500 -6.3 -9.7 77 120 1.4 135 3.2 1 1500 -5.2 -15.4 45 131 1.8 123 3.8 2  |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1800 -6.9 ***** 0 094 .7 093 2.5     |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 1 1800 -6.2 -10.2 73 136 1.7 128 3.2 1 1800 -7.5 -16.7 48 116 1.8 116 4.4 1 |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2100 -7.1 ***** 2 078 .7 069 1.9     |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 1 2100 -6.0 -10.7 69 129 1.6 160 3.8 1 2100 -8.4 -16.3 53 118 1.2 122 3.8 1 |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2400 -6.7 -7.3 96 126 .9 136 2.5     |  |       |  |       |  |      |  |      |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  | 1 2400 -6.2 -11.3 67 118 2.3 111 5.1 1 2400 -9.8 -16.9 56 112 1.2 132 4.4 1 |  |      |  |      |  |      |  |      |  |       |  |       |  |       |  |       |  |     |  |      |  |      |  |      |  |      |  |      |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

DAY 22

DAY 23

DAY 24

| 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  |  |  |  |  |  |  |  |  |  | -13.6 |  |  |  |  |  |  |  |  |  | -19.3  |  |  |  |  |  |  |  |  |  | 62   |  |  |  |  |  |  |  |  |  | 077  |  |  |  |  |  |  |  |  |  | 2.7  |  |  |  |  |  |  |  |  |  | 087  |  |  |  |  |  |  |  |  |  | 4.4  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 0600  |  |  |  |  |  |  |  |  |  | -15.3 |  |  |  |  |  |  |  |  |  | -20.4  |  |  |  |  |  |  |  |  |  | 65   |  |  |  |  |  |  |  |  |  | 085  |  |  |  |  |  |  |  |  |  | 2.8  |  |  |  |  |  |  |  |  |  | 089  |  |  |  |  |  |  |  |  |  | 7.0  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 0900  |  |  |  |  |  |  |  |  |  | -17.3 |  |  |  |  |  |  |  |  |  | -21.1  |  |  |  |  |  |  |  |  |  | 72   |  |  |  |  |  |  |  |  |  | 085  |  |  |  |  |  |  |  |  |  | 2.5  |  |  |  |  |  |  |  |  |  | 082  |  |  |  |  |  |  |  |  |  | 5.1  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 1200  |  |  |  |  |  |  |  |  |  | -14.6 |  |  |  |  |  |  |  |  |  | -19.7  |  |  |  |  |  |  |  |  |  | 65   |  |  |  |  |  |  |  |  |  | 079  |  |  |  |  |  |  |  |  |  | 2.5  |  |  |  |  |  |  |  |  |  | 074  |  |  |  |  |  |  |  |  |  | 4.4  |  |  |  |  |  |  |  |  |  | 5   |  |  |  |  |  |  |  |  |  |
| 1500  |  |  |  |  |  |  |  |  |  | -10.0 |  |  |  |  |  |  |  |  |  | -16.7  |  |  |  |  |  |  |  |  |  | 58   |  |  |  |  |  |  |  |  |  | 089  |  |  |  |  |  |  |  |  |  | 2.5  |  |  |  |  |  |  |  |  |  | 093  |  |  |  |  |  |  |  |  |  | 5.1  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 1800  |  |  |  |  |  |  |  |  |  | -11.3 |  |  |  |  |  |  |  |  |  | -17.3  |  |  |  |  |  |  |  |  |  | 61   |  |  |  |  |  |  |  |  |  | 085  |  |  |  |  |  |  |  |  |  | 2.3  |  |  |  |  |  |  |  |  |  | 091  |  |  |  |  |  |  |  |  |  | 5.1  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 2100  |  |  |  |  |  |  |  |  |  | -14.5 |  |  |  |  |  |  |  |  |  | -19.6  |  |  |  |  |  |  |  |  |  | 65   |  |  |  |  |  |  |  |  |  | 091  |  |  |  |  |  |  |  |  |  | 2.7  |  |  |  |  |  |  |  |  |  | 105  |  |  |  |  |  |  |  |  |  | 6.3  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 2400  |  |  |  |  |  |  |  |  |  | -15.1 |  |  |  |  |  |  |  |  |  | -20.0  |  |  |  |  |  |  |  |  |  | 66   |  |  |  |  |  |  |  |  |  | 079  |  |  |  |  |  |  |  |  |  | 3.0  |  |  |  |  |  |  |  |  |  | 086  |  |  |  |  |  |  |  |  |  | 5.7  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 0300  |  |  |  |  |  |  |  |  |  | -13.4 |  |  |  |  |  |  |  |  |  | -19.1  |  |  |  |  |  |  |  |  |  | 62   |  |  |  |  |  |  |  |  |  | 077  |  |  |  |  |  |  |  |  |  | 2.4  |  |  |  |  |  |  |  |  |  | 103  |  |  |  |  |  |  |  |  |  | 5.7  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 0600  |  |  |  |  |  |  |  |  |  | -14.0 |  |  |  |  |  |  |  |  |  | -19.9  |  |  |  |  |  |  |  |  |  | 61   |  |  |  |  |  |  |  |  |  | 090  |  |  |  |  |  |  |  |  |  | 2.6  |  |  |  |  |  |  |  |  |  | 127  |  |  |  |  |  |  |  |  |  | 6.3  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 0900  |  |  |  |  |  |  |  |  |  | -2.7  |  |  |  |  |  |  |  |  |  | -15.5  |  |  |  |  |  |  |  |  |  | 37   |  |  |  |  |  |  |  |  |  | 114  |  |  |  |  |  |  |  |  |  | 1.9  |  |  |  |  |  |  |  |  |  | 118  |  |  |  |  |  |  |  |  |  | 5.7  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 1200  |  |  |  |  |  |  |  |  |  | 1.3   |  |  |  |  |  |  |  |  |  | -16.2  |  |  |  |  |  |  |  |  |  | 26   |  |  |  |  |  |  |  |  |  | 134  |  |  |  |  |  |  |  |  |  | 2.1  |  |  |  |  |  |  |  |  |  | 135  |  |  |  |  |  |  |  |  |  | 5.7  |  |  |  |  |  |  |  |  |  | 6   |  |  |  |  |  |  |  |  |  |
| 1500  |  |  |  |  |  |  |  |  |  | -5    |  |  |  |  |  |  |  |  |  | -19.7  |  |  |  |  |  |  |  |  |  | 22   |  |  |  |  |  |  |  |  |  | 123  |  |  |  |  |  |  |  |  |  | 3.4  |  |  |  |  |  |  |  |  |  | 131  |  |  |  |  |  |  |  |  |  | 8.3  |  |  |  |  |  |  |  |  |  | 3   |  |  |  |  |  |  |  |  |  |
| 1800  |  |  |  |  |  |  |  |  |  | -2.9  |  |  |  |  |  |  |  |  |  | -21.7  |  |  |  |  |  |  |  |  |  | 22   |  |  |  |  |  |  |  |  |  | 116  |  |  |  |  |  |  |  |  |  | 3.0  |  |  |  |  |  |  |  |  |  | 112  |  |  |  |  |  |  |  |  |  | 6.3  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 2100  |  |  |  |  |  |  |  |  |  | -3.5  |  |  |  |  |  |  |  |  |  | -21.7  |  |  |  |  |  |  |  |  |  | 23   |  |  |  |  |  |  |  |  |  | 152  |  |  |  |  |  |  |  |  |  | 3.4  |  |  |  |  |  |  |  |  |  | 144  |  |  |  |  |  |  |  |  |  | 7.0  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 2400  |  |  |  |  |  |  |  |  |  | -3.8  |  |  |  |  |  |  |  |  |  | -22.0  |  |  |  |  |  |  |  |  |  | 23   |  |  |  |  |  |  |  |  |  | 152  |  |  |  |  |  |  |  |  |  | 1.8  |  |  |  |  |  |  |  |  |  | 131  |  |  |  |  |  |  |  |  |  | 7.0  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 0300  |  |  |  |  |  |  |  |  |  | -4.9  |  |  |  |  |  |  |  |  |  | -20.3  |  |  |  |  |  |  |  |  |  | 29   |  |  |  |  |  |  |  |  |  | 121  |  |  |  |  |  |  |  |  |  | 3.0  |  |  |  |  |  |  |  |  |  | 111  |  |  |  |  |  |  |  |  |  | 8.3  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 0600  |  |  |  |  |  |  |  |  |  | -7.1  |  |  |  |  |  |  |  |  |  | -20.1  |  |  |  |  |  |  |  |  |  | 35   |  |  |  |  |  |  |  |  |  | 096  |  |  |  |  |  |  |  |  |  | 1.9  |  |  |  |  |  |  |  |  |  | 146  |  |  |  |  |  |  |  |  |  | 6.3  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 0900  |  |  |  |  |  |  |  |  |  | -8.1  |  |  |  |  |  |  |  |  |  | -21.3  |  |  |  |  |  |  |  |  |  | 34   |  |  |  |  |  |  |  |  |  | 088  |  |  |  |  |  |  |  |  |  | 2.8  |  |  |  |  |  |  |  |  |  | 088  |  |  |  |  |  |  |  |  |  | 8.9  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 1200  |  |  |  |  |  |  |  |  |  | -7.5  |  |  |  |  |  |  |  |  |  | -21.1  |  |  |  |  |  |  |  |  |  | 33   |  |  |  |  |  |  |  |  |  | 113  |  |  |  |  |  |  |  |  |  | 3.1  |  |  |  |  |  |  |  |  |  | 123  |  |  |  |  |  |  |  |  |  | 7.6  |  |  |  |  |  |  |  |  |  | 6   |  |  |  |  |  |  |  |  |  |
| 1500  |  |  |  |  |  |  |  |  |  | -8.7  |  |  |  |  |  |  |  |  |  | -21.9  |  |  |  |  |  |  |  |  |  | 34   |  |  |  |  |  |  |  |  |  | 116  |  |  |  |  |  |  |  |  |  | 2.7  |  |  |  |  |  |  |  |  |  | 100  |  |  |  |  |  |  |  |  |  | 9.5  |  |  |  |  |  |  |  |  |  | 3   |  |  |  |  |  |  |  |  |  |
| 1800  |  |  |  |  |  |  |  |  |  | -7.1  |  |  |  |  |  |  |  |  |  | -20.1  |  |  |  |  |  |  |  |  |  | 35   |  |  |  |  |  |  |  |  |  | 134  |  |  |  |  |  |  |  |  |  | 1.3  |  |  |  |  |  |  |  |  |  | 118  |  |  |  |  |  |  |  |  |  | 3.8  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |
| 2100  |  |  |  |  |  |  |  |  |  | -5.6  |  |  |  |  |  |  |  |  |  | -18.8  |  |  |  |  |  |  |  |  |  | 35   |  |  |  |  |  |  |  |  |  | 101  |  |  |  |  |  |  |  |  |  | 2.2  |  |  |  |  |  |  |  |  |  | 106  |  |  |  |  |  |  |  |  |  | 5.1  |  |  |  |  |  |  |  |  |  | 1   |  |  |  |  |  |  |  |  |  |
| 2400  |  |  |  |  |  |  |  |  |  | -5.8  |  |  |  |  |  |  |  |  |  | -18.9  |  |  |  |  |  |  |  |  |  | 35   |  |  |  |  |  |  |  |  |  | 100  |  |  |  |  |  |  |  |  |  | 2.2  |  |  |  |  |  |  |  |  |  | 075  |  |  |  |  |  |  |  |  |  | 5.1  |  |  |  |  |  |  |  |  |  | 2   |  |  |  |  |  |  |  |  |  |

DAY 25

DAY 26

DAY 27

| HOUR                                        |      |       |    |     |     |     |     |   |      | DEW                                         |       |    |     |     |     |     |   |      |       | WIND WIND GUST MAX.                         |    |     |     |     |     |   |      |      |       | HOUR                                        |     |     |     |     |   |      |      |       |    | DEW                                         |     |     |     |   |      |      |       |    |     | WIND WIND GUST MAX.                         |     |     |   |  |  |  |  |  |  |
|---------------------------------------------|------|-------|----|-----|-----|-----|-----|---|------|---------------------------------------------|-------|----|-----|-----|-----|-----|---|------|-------|---------------------------------------------|----|-----|-----|-----|-----|---|------|------|-------|---------------------------------------------|-----|-----|-----|-----|---|------|------|-------|----|---------------------------------------------|-----|-----|-----|---|------|------|-------|----|-----|---------------------------------------------|-----|-----|---|--|--|--|--|--|--|
| NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |      |       |    |     |     |     |     |   |      | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |       |    |     |     |     |     |   |      |       | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |    |     |     |     |     |   |      |      |       | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |     |     |     |     |   |      |      |       |    | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |     |     |     |   |      |      |       |    |     | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |     |     |   |  |  |  |  |  |  |
| DEG C DEG C % DEG. M/S DEG. M/S MW          |      |       |    |     |     |     |     |   |      | DEG C DEG C % DEG. M/S DEG. M/S MW          |       |    |     |     |     |     |   |      |       | DEG C DEG C % DEG. M/S DEG. M/S MW          |    |     |     |     |     |   |      |      |       | DEG C DEG C % DEG. M/S DEG. M/S MW          |     |     |     |     |   |      |      |       |    | DEG C DEG C % DEG. M/S DEG. M/S MW          |     |     |     |   |      |      |       |    |     | DEG C DEG C % DEG. M/S DEG. M/S MW          |     |     |   |  |  |  |  |  |  |
|                                             |      |       |    |     |     |     |     |   |      |                                             |       |    |     |     |     |     |   |      |       |                                             |    |     |     |     |     |   |      |      |       |                                             |     |     |     |     |   |      |      |       |    |                                             |     |     |     |   |      |      |       |    |     |                                             |     |     |   |  |  |  |  |  |  |
| 0300                                        | -7.6 | -20.2 | 36 | 105 | 2.3 | 109 | 6.3 | 2 | 0300 | -6.2                                        | -14.7 | 51 | 119 | 1.4 | 103 | 5.1 | 1 | 0300 | -7.8  | -10.6                                       | 80 | 075 | 2.0 | 086 | 3.8 | 1 | 0600 | -9.1 | -20.9 | 38                                          | 107 | 2.2 | 117 | 5.1 | 2 | 0600 | -2.2 | -11.5 | 49 | 117                                         | 2.3 | 123 | 7.6 | 1 | 0600 | -7.2 | -10.4 | 78 | 093 | 2.4                                         | 079 | 3.8 | 1 |  |  |  |  |  |  |
| 0900                                        | -8.8 | -19.8 | 41 | 091 | 1.9 | 103 | 4.4 | 2 | 0900 | -5.1                                        | -13.8 | 54 | 119 | 2.4 | 140 | 6.3 | 2 | 0900 | -10.6 | -13.1                                       | 82 | 114 | 2.7 | 137 | 5.7 | 2 | 1200 | -8.4 | -19.4 | 41                                          | 097 | 3.2 | 102 | 8.3 | 6 | 1200 | -2.8 | -10.4 | 56 | 119                                         | 1.6 | 159 | 5.1 | 7 | 1200 | -9.0 | -12.3 | 77 | 052 | 1.8                                         | 063 | 3.8 | 6 |  |  |  |  |  |  |
| 1500                                        | -7.2 | -18.0 | 42 | 101 | 2.9 | 102 | 6.3 | 3 | 1500 | -2.3                                        | -9.2  | 59 | 112 | 2.5 | 109 | 5.7 | 2 | 1500 | -7.0  | -10.2                                       | 78 | 057 | 2.4 | 055 | 5.7 | 3 | 1800 | -9.1 | -18.7 | 46                                          | 108 | 2.0 | 092 | 5.1 | 1 | 1800 | -4.5 | -10.1 | 65 | 122                                         | 2.1 | 122 | 4.4 | 1 | 1800 | -6.1 | -9.6  | 76 | 118 | 2.9                                         | 113 | 6.3 | 1 |  |  |  |  |  |  |
| 2100                                        | -6.1 | -15.7 | 47 | 126 | 1.4 | 078 | 4.4 | 1 | 2100 | -5.0                                        | -9.1  | 73 | 096 | 1.1 | 119 | 3.8 | 1 | 2100 | -5.7  | -9.2                                        | 76 | 127 | 3.4 | 130 | 5.7 | 1 | 2400 | -6.1 | -15.4 | 48                                          | 108 | 1.7 | 075 | 4.4 | 1 | 2400 | -4.8 | -8.2  | 77 | 105                                         | 1.1 | 076 | 3.8 | 1 | 2400 | -6.3 | -41.2 | 4  | 121 | 2.5                                         | 125 | 4.4 | 1 |  |  |  |  |  |  |

R & M CONSULTANTS, INC.  
SUSTITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING January, 1983

DAY 28

DAY 29

DAY 30

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND  | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |       |      |      |      |      |      |     |
|-------|-------|-------|------|------|------|------|------|-----|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|-----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | 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  | -5.6  | -5.7  | 99   | 114  | 1.9  | 133  | 3.8  | 1   | 0300  | -8.9  | ***** | 1    | 093  | 1.3  | 103  | 4.4  | 1    | 0300  | -7.3  | -9.3  | 86   | 153  | 1.6  | 164  | 5.1  | 1   |
| 0600  | -5.0  | -5.4  | 97   | 128  | 2.5  | 137  | 4.4  | 1   | 0600  | -11.3 | -11.4 | 99   | 113  | 2.5  | 124  | 5.1  | 1    | 0600  | -7.7  | -9.7  | 86   | 139  | 1.2  | 135  | 3.2  | 1   |
| 0900  | -5.8  | -6.1  | 98   | 116  | 1.9  | 125  | 3.8  | 2   | 0900  | -13.1 | -13.2 | 99   | 073  | 2.4  | 064  | 4.4  | 2    | 0900  | -6.2  | -8.6  | 83   | 134  | 1.2  | 146  | 3.2  | 2   |
| 1200  | -5.3  | -6.1  | 94   | 117  | 1.8  | 141  | 3.8  | 7   | 1200  | -12.1 | -13.0 | 93   | 072  | 2.7  | 076  | 4.4  | 6    | 1200  | -4.2  | -7.8  | 76   | 131  | 1.8  | 121  | 3.8  | 7   |
| 1500  | -4.6  | -5.6  | 93   | 123  | 2.0  | 117  | 4.4  | 3   | 1500  | -11.1 | -12.0 | 93   | 076  | 2.8  | 075  | 4.4  | 3    | 1500  | -4.9  | -8.5  | 76   | 104  | 2.9  | 104  | 6.3  | 3   |
| 1800  | -7.4  | ***** | 1    | 099  | 1.8  | 071  | 3.8  | 1   | 1800  | -12.0 | -12.4 | 97   | 090  | 2.4  | 081  | 3.8  | 1    | 1800  | -6.0  | -8.9  | 80   | 103  | 2.2  | 100  | 4.4  | 1   |
| 2100  | -9.9  | ***** | 1    | 085  | 2.1  | 073  | 3.8  | 1   | 2100  | -13.0 | -13.3 | 98   | 090  | 2.0  | 088  | 4.4  | 1    | 2100  | -5.4  | -8.1  | 81   | 118  | 2.1  | 129  | 3.8  | 1   |
| 2400  | -12.2 | ***** | 0    | 085  | 2.2  | 071  | 3.8  | 1   | 2400  | -7.0  | -8.4  | 90   | 146  | 1.7  | 121  | 4.4  | 1    | 2400  | -5.3  | ***** | 86   | 117  | 1.7  | 112  | 4.4  | 1   |

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 | -4.4  | -6.4  | 86   | 134  | 1.0  | 086  | 3.8  | 1   |
| 0600 | -2.0  | ***** | 86   | 196  | .3   | 016  | 2.5  | 1   |
| 0900 | .7    | ***** | 73   | 160  | 1.3  | 161  | 3.2  | 2   |
| 1200 | 1.7   | -3.5  | 68   | 127  | 1.3  | 115  | 4.4  | 10  |
| 1500 | .2    | -5.4  | 66   | 118  | 1.4  | 116  | 3.8  | 3   |
| 1800 | -.6   | -5.7  | 68   | 124  | 1.5  | 128  | 4.4  | 1   |
| 2100 | -.9   | ***** | 72   | 130  | 1.5  | 143  | 3.8  | 1   |
| 2400 | .4    | -3.8  | 73   | 163  | 1.2  | 165  | 3.2  | 1   |

## R &amp; M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

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

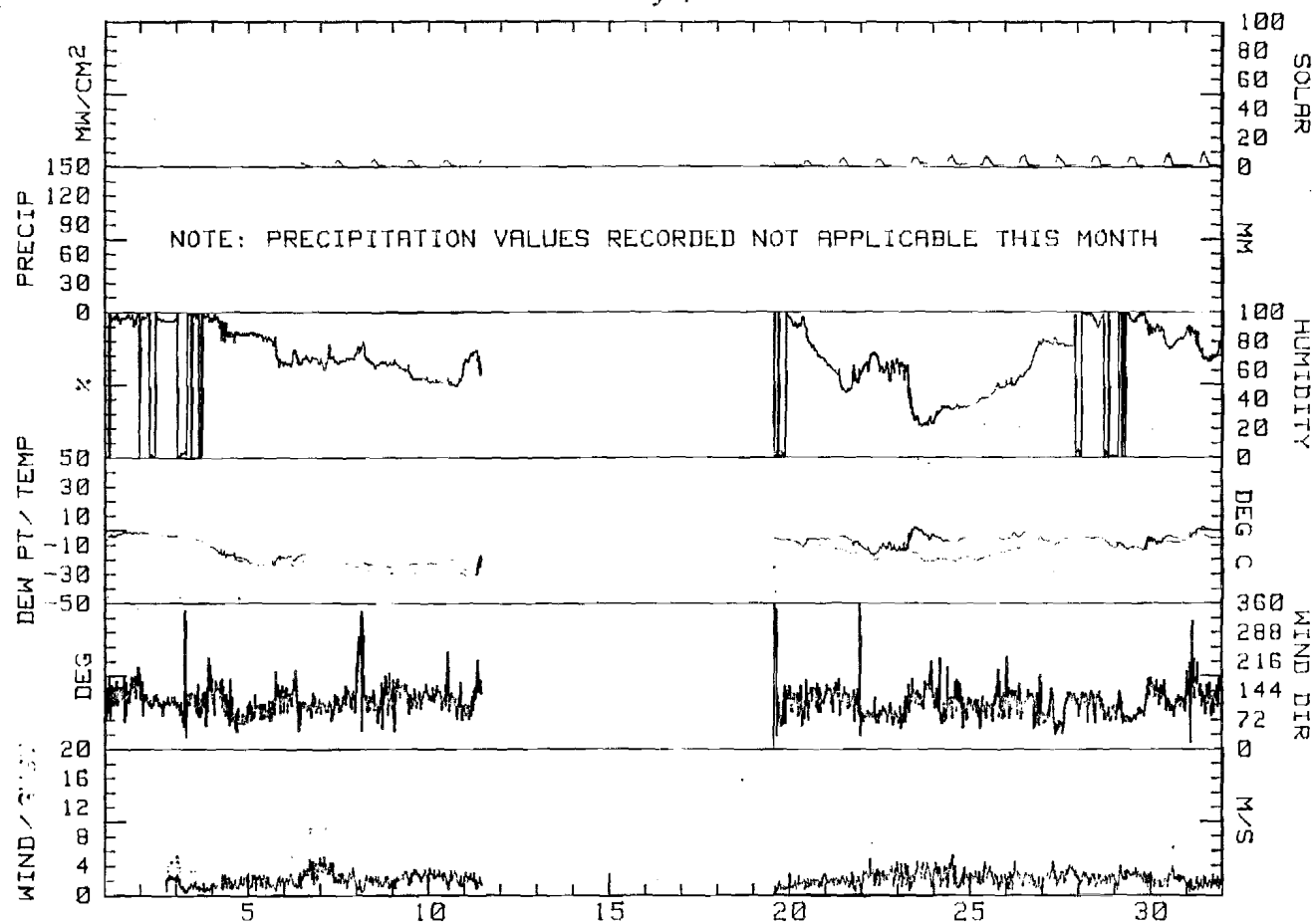
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY DAY<br>WH/SDM |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|----------------------------------------|
| 1     | -1.1                   | -7.2                   | -4.2                   | ***                         | ***                         | ***                         | ***                         | ***                         | ***           |                 |                     | ***          | 265                                    |
| 2     | -1.4                   | -4.2                   | -2.8                   | 114M                        | 2.1M                        | 2.1M                        | 101M                        | 5.1M                        | ESE(M)        |                 |                     | ***          | 268                                    |
| 3     | -4.2                   | -11.7                  | -8.0                   | 115                         | .9                          | 1.0                         | 107                         | 4.4                         | ESE           |                 |                     | ***          | 253                                    |
| 4     | -11.3                  | -21.0                  | -16.2                  | 097                         | 1.3                         | 1.5                         | 092                         | 4.4                         | ENE           | 87              | -18.6               | ***          | 278                                    |
| 5     | -17.9                  | -24.9                  | -21.4                  | 102                         | 1.5                         | 1.7                         | 092                         | 4.4                         | E             | 79              | -25.0               | ***          | 278                                    |
| 6     | -16.3                  | -21.1                  | -18.7                  | 112                         | 2.4                         | 2.5                         | 106                         | 8.9                         | ESE           | 67              | -22.5               | ***          | 290                                    |
| 7     | -17.2                  | -25.4                  | -21.3                  | 110                         | 2.5                         | 2.6                         | 094                         | 8.9                         | ESE           | 67              | -25.4               | ***          | 340                                    |
| 8     | -22.4                  | -27.0                  | -24.7                  | 124                         | 1.2                         | 1.5                         | 088                         | 5.1                         | ESE           | 66              | -29.1               | ***          | 363                                    |
| 9     | -23.2                  | -26.4                  | -24.8                  | 133                         | 2.3                         | 2.4                         | 109                         | 5.7                         | SE            | 57              | -30.4               | ***          | 363                                    |
| 10    | -20.2                  | -26.2                  | -23.2                  | 123                         | 2.2                         | 2.3                         | 121                         | 5.7                         | SE            | 52              | -29.7               | ***          | 365                                    |
| 11    | -18.2M                 | -31.6M                 | -24.9M                 | 115M                        | 1.7M                        | 2.0M                        | 140M                        | 6.3M                        | E(M)          | 68M             | -32.1M              | ***          | 311M                                   |
| 12    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 13    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 14    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 15    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 16    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 17    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 18    | *****                  | *****                  | *****                  | ***                         | ***                         | ***                         | ***                         | ***                         | ***           | **              | *****               | ***          | *****                                  |
| 19    | -5.8M                  | -7.4M                  | -6.6M                  | 102M                        | .6M                         | .9M                         | 274M                        | 2.5M                        | SE(M)         |                 |                     | ***          | 269M                                   |
| 20    | -5.8                   | -12.3                  | -9.1                   | 119                         | 1.5                         | 1.6                         | 111                         | 5.1                         | ESE           | 82              | -10.1               | ***          | 358                                    |
| 21    | -4.4                   | -11.3                  | -7.9                   | 128                         | 1.6                         | 1.7                         | 124                         | 4.4                         | SE            | 54              | -14.4               | ***          | 428                                    |
| 22    | -8.8                   | -18.0                  | -13.4                  | 084                         | 2.6                         | 2.6                         | 089                         | 7.0                         | E             | 63              | -19.2               | ***          | 418                                    |
| 23    | 1.6                    | -15.0                  | -6.7                   | 120                         | 2.3                         | 2.7                         | 131                         | 8.3                         | ESE           | 37              | -19.2               | ***          | 583                                    |
| 24    | -3.8                   | -9.9                   | -6.9                   | 103                         | 2.3                         | 2.6                         | 100                         | 9.5                         | ESE           | 33              | -20.5               | ***          | 663                                    |
| 25    | -5.8                   | -9.9                   | -7.9                   | 104                         | 2.2                         | 2.3                         | 102                         | 8.3                         | ESE           | 42              | -18.8               | ***          | 550                                    |
| 26    | -1.9                   | -7.3                   | -4.6                   | 115                         | 1.8                         | 2.0                         | 123                         | 7.6                         | ESE           | 59              | -11.3               | ***          | 503                                    |
| 27    | -5.5                   | -10.6                  | -8.1                   | 099                         | 2.2                         | 2.6                         | 113                         | 6.3                         | ENE           |                 |                     | ***          | 470                                    |
| 28    | -3.9                   | -12.2                  | -8.1                   | 109                         | 1.9                         | 2.1                         | 137                         | 4.4                         | ESE           |                 |                     | ***          | 530                                    |
| 29    | -5.4                   | -13.9                  | -9.7                   | 091                         | 2.1                         | 2.3                         | 124                         | 5.1                         | E             |                 |                     | ***          | 490                                    |
| 30    | -4.0                   | -9.7                   | -6.9                   | 121                         | 1.7                         | 1.9                         | 104                         | 6.3                         | ESE           | 82              | -8.7                | ***          | 533                                    |
| 31    | 1.9                    | -5.3                   | -1.7                   | 137                         | 1.1                         | 1.3                         | 115                         | 4.4                         | SE            | 73              | -4.9                | ***          | 573                                    |
| MONTH | 1.9M                   | -31.6M                 | -12.0M                 | 112M                        | 1.8M                        | 1.5M                        | 100M                        | 9.5M                        | ESE(M)        | M               | M                   | ***          | 9735M                                  |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 7.6  
 GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 8.9  
 GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 7.0  
 GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 5.1

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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



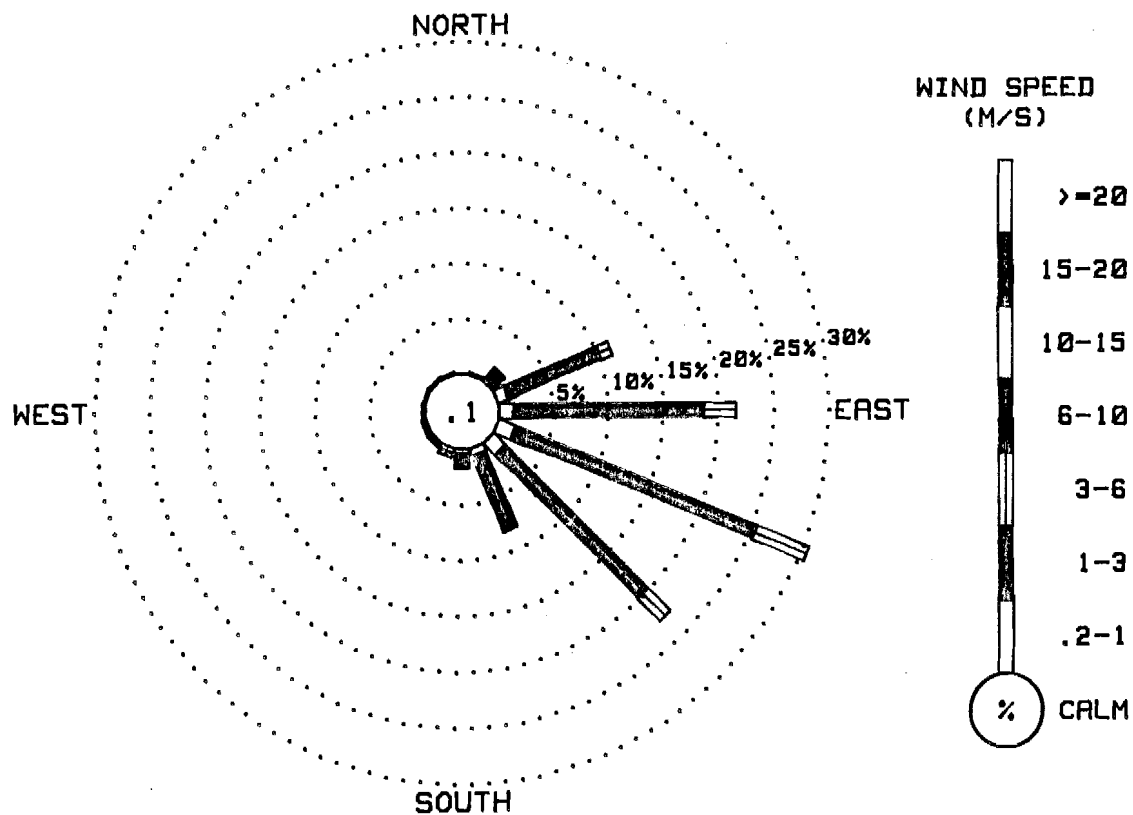
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING January, 1983

| DIRECTION | VELOCITY (M/S) |           |           |            |            |            |               | TOTAL  |
|-----------|----------------|-----------|-----------|------------|------------|------------|---------------|--------|
|           | 0.2            | 1.0       | 3.0       | 6.0        | 10.0       | 15.0       | 20.0          |        |
|           | TO<br>1.0      | TO<br>3.0 | TO<br>6.0 | TO<br>10.0 | TO<br>15.0 | TO<br>20.0 | OR<br>GREATER |        |
| N         | .05            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .05    |
| NNE       | .15            | .05       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .20    |
| NE        | .29            | 1.18      | .05       | 0.00       | 0.00       | 0.00       | 0.00          | 1.52   |
| ENE       | 1.03           | 9.09      | 1.08      | 0.00       | 0.00       | 0.00       | 0.00          | 11.20  |
| E         | 1.38           | 17.24     | 2.90      | 0.00       | 0.00       | 0.00       | 0.00          | 21.51  |
| ESE       | 1.67           | 23.62     | 5.11      | 0.00       | 0.00       | 0.00       | 0.00          | 30.40  |
| SE        | 1.52           | 18.17     | 2.95      | 0.00       | 0.00       | 0.00       | 0.00          | 22.64  |
| SSE       | .74            | 6.88      | .44       | 0.00       | 0.00       | 0.00       | 0.00          | 8.06   |
| S         | .44            | 1.28      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 1.72   |
| SSW       | .44            | .39       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .83    |
| SW        | .34            | .10       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .44    |
| WSW       | .29            | .05       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .34    |
| W         | .15            | .15       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .29    |
| WNW       | .25            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .25    |
| NW        | .25            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .25    |
| NNW       | .20            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .20    |
| CALM      |                |           |           |            |            |            |               | .10    |
| TOTAL     | 9.18           | 78.19     | 12.52     | 0.00       | 0.00       | 0.00       | 0.00          | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2036 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



No precipitation data for February

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING February, 1983

DAY 01

DAY 02

DAY 03

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | 1.0   | -4.2  | 68   | 119  | 1.2  | 098  | 0300  | -3    | -3.7  | 78   | 161  | 1.7  | 142  | 0300  | -1.2  | -4.7  | 77   | 124  | 1.5  | 118  |
| 0600  | 3.2   | -5.0  | 55   | 119  | 2.3  | 112  | 0600  | .3    | -3.6  | 75   | 164  | 1.5  | 162  | 0600  | -1.2  | -4.9  | 76   | 152  | 1.6  | 152  |
| 0900  | 1.8   | -6.3  | 55   | 142  | 2.2  | 130  | 0900  | -2.9  | -5.1  | 85   | 146  | 1.5  | 147  | 0900  | -1.6  | -5.3  | 76   | 137  | 1.2  | 145  |
| 1200  | 2.1   | -5.3  | 58   | 118  | 1.7  | 128  | 1200  | .9    | -3.0  | 75   | 145  | 1.1  | 149  | 1200  | -.5   | -5.5  | 69   | 126  | 1.9  | 113  |
| 1500  | .7    | -4.9  | 66   | 115  | 1.6  | 117  | 1500  | .4    | -3.1  | 77   | 112  | 1.3  | 138  | 1500  | -1.0  | ***** | 68   | 120  | 1.2  | 120  |
| 1800  | -1.5  | -4.7  | 79   | 147  | 1.1  | 141  | 1800  | 0.0   | -3.7  | 76   | 125  | 1.8  | 120  | 1800  | -2.5  | -6.5  | 74   | 149  | 1.4  | 131  |
| 2100  | .1    | -3.3  | 78   | 149  | 1.4  | 145  | 2100  | -1.1  | -4.6  | 77   | 120  | 1.6  | 133  | 2100  | -.8   | -5.2  | 72   | 151  | 1.3  | 160  |
| 2400  | -.3   | -2.4  | 86   | 171  | 1.4  | 154  | 2400  | -.8   | -4.3  | 77   | 131  | 1.6  | 115  | 2400  | .1    | -5.3  | 67   | 128  | 2.0  | 115  |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | 0.0   | -5.4  | 67   | 094  | 2.3  | 099  | 0300  | -.9   | -6.2  | 67   | 150  | 1.1  | 098  | 0300  | -9.0  | ***** | 0    | 131  | 1.3  | 140  |
| 0600  | -1.4  | -7.1  | 65   | 128  | 1.5  | 095  | 0600  | .2    | -7.3  | 57   | 119  | 1.9  | 098  | 0600  | -7.2  | ***** | 0    | 200  | .6   | 127  |
| 0900  | -1.7  | -6.8  | 68   | 129  | 2.5  | 125  | 0900  | -.4   | -7.9  | 57   | 105  | 2.1  | 120  | 0900  | -1.5  | -4.5  | 80   | 155  | 1.0  | 134  |
| 1200  | -.9   | -6.2  | 67   | 119  | 2.0  | 127  | 1200  | 1.1   | -7.2  | 54   | 101  | 2.4  | 095  | 1200  | .9    | -3.4  | 73   | 082  | .8   | 098  |
| 1500  | -1.7  | -6.1  | 72   | 112  | 2.1  | 114  | 1500  | -.4   | -7.6  | 58   | 112  | 2.0  | 111  | 1500  | .9    | ***** | 70   | 107  | .8   | 013  |
| 1800  | -3.2  | -6.6  | 77   | 143  | 1.2  | 153  | 1800  | -1.6  | -6.7  | 68   | 122  | 1.5  | 120  | 1800  | -1.3  | ***** | 78   | 166  | .8   | 149  |
| 2100  | -1.8  | -5.3  | 77   | 150  | 1.1  | 134  | 2100  | -4.1  | -7.7  | 76   | 135  | 1.5  | 132  | 2100  | -1.4  | -5.2  | 75   | 137  | 1.4  | 130  |
| 2400  | -.1   | -5.3  | 68   | 138  | 1.1  | 122  | 2400  | -6.7  | -8.7  | 86   | 133  | 2.1  | 137  | 2400  | -2.7  | -3.3  | 96   | 233  | .8   | 302  |

DAY 07

DAY 08

DAY 09

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | -3.3  | -30.7 | 10   | 279  | 1.3  | 304  | 0300  | -6.0  | ***** | 1    | 261  | .3   | 253  | 0300  | -16.1 | ***** | 98   | 091  | 1.2  | 085  |
| 0600  | -3.4  | ***** | 8    | 259  | .9   | 265  | 0600  | -6.7  | ***** | 0    | 117  | .3   | 107  | 0600  | -16.6 | -17.1 | 96   | 118  | 1.3  | 117  |
| 0900  | -3.9  | ***** | 8    | 224  | .4   | 262  | 0900  | -6.3  | ***** | 0    | 204  | .4   | 212  | 0900  | -16.9 | -17.4 | 96   | 116  | 1.5  | 121  |
| 1200  | -2.6  | ***** | 98   | 346  | .2   | 211  | 1200  | -3.8  | ***** | 95   | 308  | .2   | 289  | 1200  | -14.3 | ***** | 95   | 128  | .7   | 104  |
| 1500  | -3.2  | -4.8  | 89   | 032  | .5   | 096  | 1500  | -4.9  | ***** | 96   | 285  | .5   | 300  | 1500  | -10.9 | ***** | 93   | 174  | .4   | 143  |
| 1800  | -7.5  | -42.1 | 4    | 131  | .8   | 067  | 1800  | -7.5  | ***** | 1    | 132  | .6   | 121  | 1800  | -12.9 | -14.1 | 91   | 125  | 1.1  | 120  |
| 2100  | -6.7  | ***** | 1    | 193  | .4   | 176  | 2100  | -9.2  | -9.3  | 99   | 092  | .6   | 130  | 2100  | -16.2 | -17.2 | 92   | 119  | 1.3  | 105  |
| 2400  | -6.7  | ***** | 0    | 242  | .5   | 278  | 2400  | -12.8 | -12.9 | 99   | 104  | 1.5  | 093  | 2400  | -18.5 | -19.4 | 93   | 111  | 1.7  | 113  |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING February, 1983

### DAY 10

### DAY 11

### DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300  | -17.1 | -18.2 | 91   | 105  | 1.6  | 108  | 3.8  | 1     | 0300  | -16.3 | -17.5 | 91   | 097  | 1.1  | 078  | 3.8  | 1    |
| 0600  | -18.4 | ***** | 93   | 140  | .7   | 126  | 5.1  | 1     | 0600  | -19.4 | -20.4 | 92   | 096  | 2.4  | 107  | 4.4  | 1    |
| 0900  | -15.5 | -16.4 | 93   | 168  | .5   | 103  | 3.2  | 3     | 0900  | -19.7 | -20.9 | 90   | 079  | 1.9  | 078  | 4.4  | 2    |
| 1200  | -13.2 | ***** | 84   | 111  | .2   | 085  | 3.8  | 7     | 1200  | -15.8 | -18.3 | 81   | 076  | 2.3  | 063  | 4.4  | 6    |
| 1500  | -8.7  | ***** | 76   | 070  | .2   | 349  | 2.5  | 3     | 1500  | -11.1 | -15.1 | 72   | 080  | 1.5  | 110  | 3.8  | 3    |
| 1800  | -11.4 | -13.0 | 88   | 141  | 1.0  | 151  | 2.5  | 1     | 1800  | -15.1 | -17.8 | 80   | 126  | 1.9  | 125  | 4.4  | 1    |
| 2100  | -15.0 | -16.2 | 91   | 120  | 1.5  | 137  | 3.8  | 1     | 2100  | -16.5 | -18.7 | 83   | 105  | 1.5  | 086  | 3.8  | 1    |
| 2400  | -16.4 | ***** | 93   | 102  | 1.4  | 085  | 3.8  | 1     | 2400  | -19.5 | -21.1 | 87   | 080  | 2.3  | 065  | 4.4  | 1    |

### 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  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300  | -22.5 | -24.2 | 86   | 072  | 2.3  | 077  | 3.8  | 1     | 0300  | -16.8 | -19.7 | 78   | 051  | 1.9  | 051  | 3.8  | 1    |
| 0600  | -23.4 | -25.2 | 85   | 071  | 2.6  | 073  | 4.4  | 1     | 0600  | -17.1 | -20.0 | 78   | 059  | 2.1  | 058  | 4.4  | 1    |
| 0900  | -23.8 | -25.7 | 84   | 067  | 2.5  | 065  | 4.4  | 4     | 0900  | -19.0 | -21.7 | 79   | 060  | 1.9  | 060  | 3.8  | 5    |
| 1200  | -16.9 | -20.9 | 71   | 062  | 2.2  | 070  | 3.8  | 6     | 1200  | -15.7 | -20.1 | 69   | 060  | 2.4  | 065  | 4.4  | 8    |
| 1500  | -14.9 | -19.6 | 67   | 113  | 2.1  | 109  | 3.8  | 3     | 1500  | -12.5 | -17.9 | 64   | 053  | 1.5  | 064  | 3.8  | 4    |
| 1800  | -15.2 | -19.3 | 71   | 129  | 2.7  | 116  | 5.1  | 1     | 1800  | -15.0 | -18.7 | 73   | 121  | 1.5  | 122  | 3.8  | 1    |
| 2100  | -16.3 | -20.0 | 73   | 119  | 2.8  | 127  | 5.1  | 1     | 2100  | -16.7 | -19.5 | 79   | 076  | 1.0  | 062  | 3.2  | 1    |
| 2400  | -18.0 | -21.0 | 77   | 058  | 2.1  | 049  | 5.1  | 1     | 2400  | -17.5 | ***** | 79   | 095  | 1.0  | 093  | 2.5  | 1    |

### 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  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300  | -11.2 | -19.9 | 49   | 100  | 2.5  | 099  | 5.1  | 1     | 0300  | -14.1 | -22.8 | 48   | 130  | 2.8  | 142  | 5.1  | 1    |
| 0600  | -13.0 | ***** | 54   | 102  | 1.5  | 092  | 4.4  | 1     | 0600  | -14.3 | -23.0 | 48   | 103  | 2.5  | 112  | 5.1  | 1    |
| 0900  | -12.4 | -20.5 | 51   | 110  | 1.4  | 105  | 3.8  | 4     | 0900  | -13.2 | -22.2 | 47   | 138  | 2.4  | 122  | 5.7  | 5    |
| 1200  | -8.2  | -18.4 | 44   | 103  | 2.5  | 123  | 5.1  | 11    | 1200  | -9.2  | -20.1 | 41   | 131  | 2.9  | 128  | 6.3  | 12   |
| 1500  | -7.3  | -18.1 | 42   | 100  | 2.6  | 096  | 5.1  | 6     | 1500  | -8.2  | -19.2 | 41   | 131  | 2.8  | 134  | 5.7  | 6    |
| 1800  | -10.3 | -20.3 | 44   | 119  | 2.9  | 112  | 5.1  | 1     | 1800  | -12.3 | -22.1 | 44   | 134  | 2.6  | 126  | 4.4  | 2    |
| 2100  | -12.6 | -21.6 | 47   | 142  | 2.6  | 143  | 5.1  | 1     | 2100  | -13.4 | -22.9 | 45   | 134  | 2.6  | 135  | 5.1  | 1    |
| 2400  | -13.7 | -22.4 | 48   | 133  | 2.7  | 118  | 5.1  | 1     | 2400  | -15.1 | ***** | 47   | 113  | 1.4  | 126  | 4.4  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING February, 1983

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | -7.2  | -7.3  | 99   | 116  | .9   | 112  | 0300  | -11.9 | -13.0 | 92   | 096  | 1.7  | 091  | 0300  | -6.5  | ***** | 76   | 086  | 1.0  | 093  |
| 0600  | -6.3  | -7.4  | 92   | 122  | 1.3  | 124  | 0600  | -5.0  | ***** | 87   | 144  | .8   | 153  | 0600  | -8.8  | ***** | 78   | 091  | .8   | 073  |
| 0900  | -5.7  | -7.5  | 87   | 112  | 1.7  | 117  | 0900  | -4.0  | -8.6  | 70   | 126  | 1.4  | 154  | 0900  | -9.3  | -12.6 | 77   | 079  | 1.2  | 073  |
| 1200  | -3.3  | -7.6  | 72   | 108  | 1.9  | 111  | 1200  | -1.9  | -9.3  | 57   | 098  | 2.0  | 108  | 1200  | -1.4  | -8.8  | 57   | 074  | 1.4  | 082  |
| 1500  | -2.5  | -7.4  | 69   | 108  | 2.1  | 113  | 1500  | -2.6  | -9.5  | 59   | 097  | 2.7  | 089  | 1500  | -6    | -8.3  | 56   | 094  | 2.3  | 096  |
| 1800  | -7.2  | -8.6  | 90   | 126  | 1.4  | 096  | 1800  | -5.2  | -10.2 | 68   | 124  | 2.1  | 107  | 1800  | -2.2  | -8.3  | 63   | 104  | 2.1  | 095  |
| 2100  | -9.4  | -10.8 | 90   | 110  | 1.7  | 099  | 2100  | -5.2  | ***** | 68   | 133  | 1.1  | 117  | 2100  | -3.1  | -7.6  | 71   | 114  | 1.6  | 107  |
| 2400  | -12.9 | -13.3 | 97   | 081  | 2.3  | 069  | 2400  | -6.9  | ***** | 73   | 156  | 1.1  | 171  | 2400  | -6.3  | -9.2  | 80   | 105  | 1.5  | 125  |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | -9.1  | -10.6 | 89   | 085  | 2.0  | 088  | 0300  | -4.6  | -9.0  | 71   | 156  | 1.3  | 142  | 0300  | -2.8  | -8.0  | 67   | 104  | 1.8  | 088  |
| 0600  | -10.5 | -10.8 | 98   | 092  | 2.1  | 086  | 0600  | -8.3  | ***** | 80   | 171  | 1.1  | 180  | 0600  | -3.3  | -7.1  | 75   | 107  | 2.0  | 090  |
| 0900  | -10.5 | -10.8 | 98   | 106  | 1.7  | 093  | 0900  | -3.0  | -9.7  | 60   | 122  | 1.3  | 118  | 0900  | -2.7  | -6.3  | 76   | 104  | 2.1  | 106  |
| 1200  | 1.0   | -5.4  | 62   | 128  | .8   | 114  | 1200  | .7    | -9.4  | 47   | 113  | 2.1  | 098  | 1200  | -1.8  | -4.0  | 85   | 097  | 2.3  | 108  |
| 1500  | 2.5   | -5.6  | 55   | 148  | 2.0  | 122  | 1500  | 1.1   | -10.2 | 43   | 112  | 2.6  | 127  | 1500  | -1.0  | -3.5  | 83   | 098  | 1.9  | 085  |
| 1800  | -1.0  | -6.7  | 65   | 140  | 1.6  | 114  | 1800  | -2.0  | -10.6 | 52   | 107  | 2.2  | 120  | 1800  | -2.7  | -4.3  | 89   | 109  | 1.7  | 112  |
| 2100  | -3.1  | -6.9  | 75   | 179  | 1.4  | 186  | 2100  | -3.4  | -10.0 | 60   | 113  | 1.9  | 125  | 2100  | -4.8  | -5.4  | 96   | 140  | 1.8  | 162  |
| 2400  | -2.9  | -7.6  | 70   | 156  | 1.6  | 131  | 2400  | -3.8  | -10.4 | 60   | 108  | 1.9  | 107  | 2400  | -7.2  | ***** | 1    | 126  | 1.5  | 146  |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | -9.9  | -36.9 | 9    | 118  | 1.1  | 093  | 0300  | -4.7  | ***** | 80   | 136  | 1.1  | 147  | 0300  | -6.6  | -11.1 | 70   | 122  | 2.3  | 118  |
| 0600  | -12.1 | ***** | 0    | 091  | 1.3  | 083  | 0600  | -4.2  | -7.5  | 78   | 151  | 1.4  | 134  | 0600  | -7.7  | -11.2 | 76   | 126  | 1.6  | 126  |
| 0900  | -10.5 | ***** | 2    | 132  | .7   | 093  | 0900  | -2.5  | -7.4  | 69   | 152  | 1.6  | 136  | 0900  | -8.5  | -11.6 | 78   | 075  | 1.1  | 126  |
| 1200  | .3    | -6.3  | 61   | 217  | .4   | 269  | 1200  | 0.0   | -7.7  | 56   | 110  | 2.0  | 111  | 1200  | -1.5  | -9.4  | 55   | 048  | 1.0  | 054  |
| 1500  | .9    | -7.6  | 53   | 107  | 2.9  | 093  | 1500  | -.1   | -8.3  | 54   | 115  | 2.6  | 109  | 1500  | .5    | -9.0  | 49   | 080  | 1.7  | 079  |
| 1800  | -2.6  | -8.6  | 63   | 101  | 2.5  | 106  | 1800  | -3.5  | -9.5  | 63   | 115  | 2.2  | 115  | 1800  | -2.5  | -8.8  | 62   | 117  | 1.6  | 077  |
| 2100  | -5.8  | -8.7  | 80   | 170  | 1.6  | 136  | 2100  | -4.5  | -9.5  | 68   | 128  | 1.4  | 129  | 2100  | -4.2  | -9.4  | 67   | 125  | 1.9  | 113  |
| 2400  | -5.5  | -8.4  | 80   | 160  | 1.2  | 175  | 2400  | -4.8  | -9.8  | 68   | 119  | 1.9  | 133  | 2400  | -4.8  | -9.6  | 69   | 115  | 2.0  | 128  |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING February, 1983

DAY 28

| HR    | TEMP. | DEW   | POINT | RH  | DIR. | SPD. | DIR. | GUST | MAX. |
|-------|-------|-------|-------|-----|------|------|------|------|------|
| DEG C | DEG C | %     | DEG.  | M/S | DEG. | M/S  | MW   |      |      |
| 0300  | -5.5  | -9.4  | 74    | 066 | 1.6  | 111  | 3.2  | 1    |      |
| 0600  | -6.8  | -36.9 | 7     | 060 | 1.1  | 115  | 3.2  | 1    |      |
| 0900  | -5.9  | -42.9 | 3     | 044 | 1.2  | 045  | 2.5  | 11   |      |
| 1200  | -2.2  | -3.8  | 89    | 069 | 1.5  | 091  | 3.8  | 25   |      |
| 1500  | -1.7  | -3.2  | 90    | 109 | 2.5  | 109  | 5.1  | 6    |      |
| 1800  | -3.1  | ***** | 2     | 118 | 1.3  | 111  | 3.2  | 1    |      |
| 2100  | -4.0  | ***** | 8     | 032 | .4   | 032  | 1.3  | 1    |      |
| 2400  | -4.2  | ***** | 8     | 048 | .5   | 081  | 1.9  | 1    |      |

R & M CONSULTANTS, INC.  
SUSTITNA HYDROELECTRIC PROJECT

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

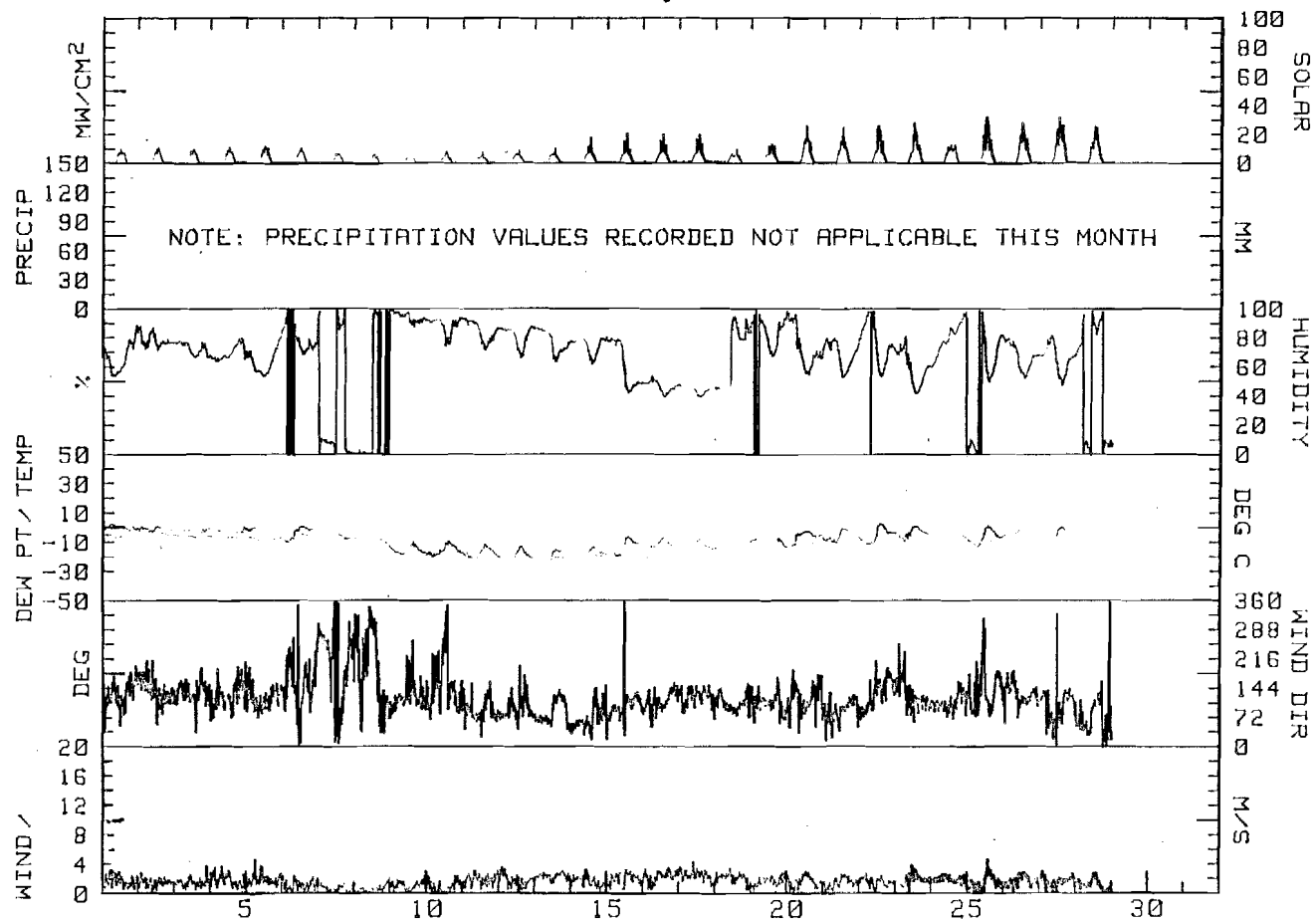
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SGH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 3.3                    | -1.5                   | .9                     | 133                         | 1.6                         | 1.7                         | 112                         | 5.7                         | ESE           | 67              | -4.4                | ****         | 595                                | 1   |
| 2     | 1.5                    | -2.9                   | -.7                    | 138                         | 1.4                         | 1.6                         | 142                         | 4.4                         | SE            | 78              | -3.7                | ****         | 613                                | 2   |
| 3     | .3                     | -3.2                   | -1.5                   | 135                         | 1.5                         | 1.6                         | 115                         | 7.0                         | ESE           | 73              | -5.3                | ****         | 615                                | 3   |
| 4     | 1.1                    | -4.0                   | -1.5                   | 123                         | 1.7                         | 1.8                         | 099                         | 6.3                         | SE            | 69              | -6.2                | ****         | 620                                | 4   |
| 5     | 1.1                    | -6.7                   | -2.8                   | 119                         | 1.8                         | 2.0                         | 095                         | 7.6                         | ESE           | 64              | -7.3                | ****         | 703                                | 5   |
| 6     | 1.3                    | -9.4                   | -4.1                   | 145                         | .7                          | 1.2                         | 098                         | 5.7                         | SSE           |                 |                     | ****         | 625                                | 6   |
| 7     | -2.4                   | -7.5                   | -5.0                   | 251                         | .3                          | .8                          | 304                         | 3.8                         | WSW           |                 |                     | ****         | 495                                | 7   |
| 8     | -3.8                   | -12.8                  | -8.3                   | 122                         | .2                          | .6                          | 093                         | 3.8                         | ESE           |                 |                     | ****         | 448                                | 8   |
| 9     | -8.9                   | -18.5                  | -13.7                  | 117                         | 1.1                         | 1.2                         | 113                         | 4.4                         | ESE           | 94              | -16.2               | ****         | 435                                | 9   |
| 10    | -8.4                   | -20.0                  | -14.2                  | 120                         | .8                          | 1.1                         | 126                         | 5.1                         | E             | 90              | -16.0               | ****         | 500                                | 10  |
| 11    | -10.9                  | -20.2                  | -15.6                  | 091                         | 1.8                         | 1.9                         | 107                         | 4.4                         | E             | 84              | -18.7               | ****         | 465                                | 11  |
| 12    | -11.9                  | -22.8                  | -17.4                  | 089                         | 1.7                         | 1.8                         | 082                         | 5.1                         | E             | 83              | -21.5               | ****         | 558                                | 12  |
| 13    | -14.5                  | -24.2                  | -19.4                  | 087                         | 2.1                         | 2.4                         | 116                         | 5.1                         | ENE           | 78              | -22.2               | ****         | 583                                | 13  |
| 14    | -12.5                  | -19.0                  | -15.8                  | 068                         | 1.5                         | 1.7                         | 058                         | 4.4                         | ENE           | 74              | -19.8               | ****         | 720                                | 14  |
| 15    | -5.8                   | -19.3                  | -12.6                  | 103                         | 1.9                         | 2.0                         | 123                         | 5.1                         | ESE           | 61              | -19.2               | ****         | 805                                | 15  |
| 16    | -6.2                   | -13.7                  | -10.0                  | 115                         | 2.3                         | 2.4                         | 099                         | 5.1                         | ESE           | 47              | -20.0               | ****         | 843                                | 16  |
| 17    | -7.4                   | -15.1                  | -11.3                  | 128                         | 2.5                         | 2.6                         | 128                         | 6.3                         | SE            | 45              | -21.9               | ****         | 898                                | 17  |
| 18    | -8.5                   | -14.7                  | -11.6                  | 108                         | 2.1                         | 2.2                         | 090                         | 6.3                         | ESE           | 68              | -16.8               | ****         | 628                                | 18  |
| 19    | -2.2                   | -13.0                  | -7.6                   | 108                         | 1.6                         | 1.7                         | 113                         | 4.4                         | ESE           |                 |                     | ****         | 743                                | 19  |
| 20    | -1.6                   | -13.2                  | -7.4                   | 115                         | 1.5                         | 1.7                         | 089                         | 5.7                         | SE            | 70              | -10.0               | ****         | 1083                               | 20  |
| 21    | .1                     | -9.6                   | -4.8                   | 095                         | 1.5                         | 1.6                         | 096                         | 5.1                         | E             | 67              | -9.3                | ****         | 1040                               | 21  |
| 22    | 3.1                    | -10.7                  | -3.8                   | 126                         | 1.4                         | 1.7                         | 114                         | 5.1                         | SSE           |                 |                     | ****         | 1085                               | 22  |
| 23    | 1.7                    | -8.8                   | -3.6                   | 120                         | 1.7                         | 1.9                         | 098                         | 7.0                         | ESE           | 58              | -10.0               | ****         | 1158                               | 23  |
| 24    | -.8                    | -7.3                   | -4.1                   | 109                         | 1.9                         | 1.9                         | 088                         | 5.1                         | ESE           |                 |                     | ****         | 950                                | 24  |
| 25    | 1.7                    | -12.7                  | -5.5                   | 122                         | 1.2                         | 1.6                         | 093                         | 7.6                         | E             |                 |                     | ****         | 1388                               | 25  |
| 26    | .5                     | -4.9                   | -2.2                   | 125                         | 1.7                         | 1.8                         | 111                         | 6.3                         | ESE           | 67              | -8.3                | ****         | 1363                               | 26  |
| 27    | 1.1                    | -9.8                   | -4.4                   | 107                         | 1.5                         | 1.7                         | 118                         | 5.1                         | ESE           | 66              | -10.0               | ****         | 1598                               | 27  |
| 28    | -1.1                   | -7.1                   | -4.1                   | 078                         | 1.1                         | 1.3                         | 109                         | 5.1                         | NE            |                 |                     | ****         | 1288                               | 28  |
| MONTH | 3.3                    | -24.2                  | -7.5                   | 112                         | 1.4                         | 1.7                         | 095                         | 7.6                         | ESE           | M               | M                   | ****         | 22838                              |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 3.8  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 6.3  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 6.3  
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 5.7

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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



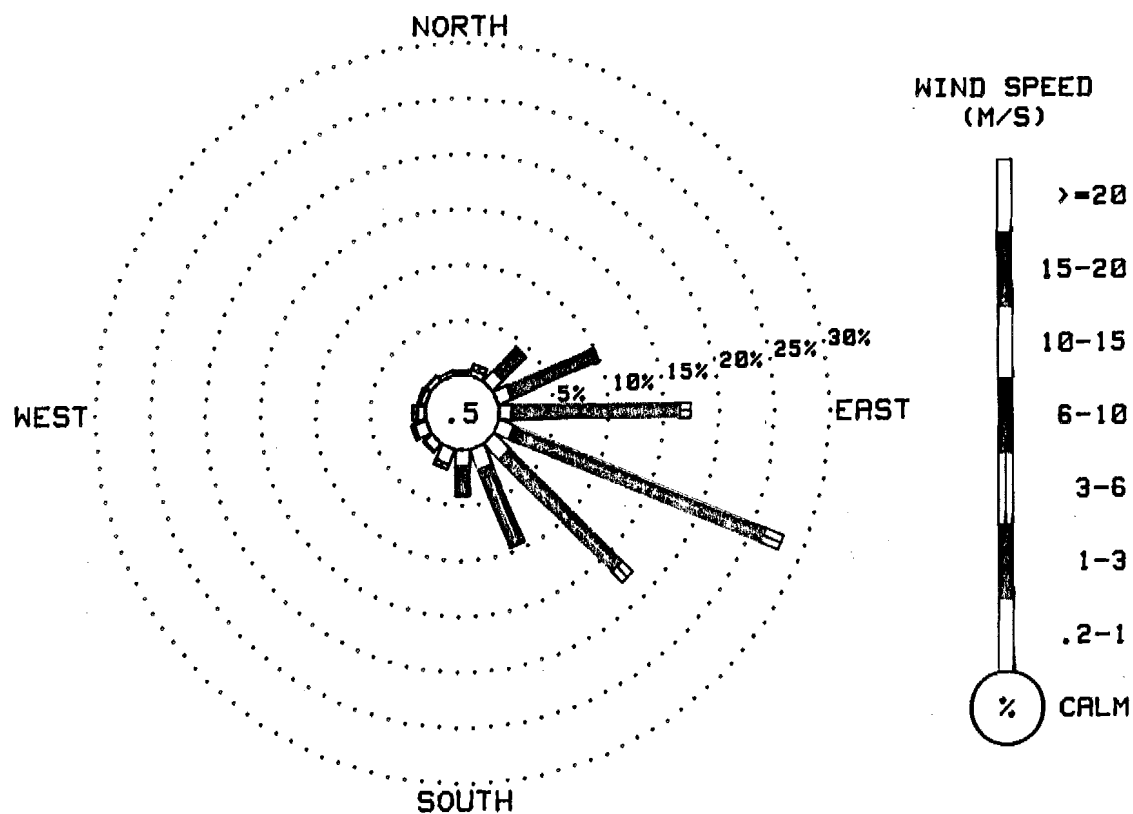
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING February, 1983

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | .34              | .04              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .37    |
| NNE       | .56              | .52              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.08   |
| NE        | 1.34             | 2.87             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.21   |
| ENE       | 1.34             | 8.17             | .30              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.81   |
| E         | 1.16             | 15.22            | 1.01             | 0.00              | 0.00               | 0.00               | 0.00                  | 17.38  |
| ESE       | 1.49             | 24.58            | 1.79             | 0.00              | 0.00               | 0.00               | 0.00                  | 27.86  |
| SE        | 2.05             | 14.32            | 1.42             | 0.00              | 0.00               | 0.00               | 0.00                  | 17.79  |
| SSE       | 2.01             | 7.42             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.51   |
| S         | 1.53             | 2.61             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.14   |
| SSW       | 1.45             | .45              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.90   |
| SW        | .93              | .07              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.01   |
| WSW       | 1.19             | .19              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.38   |
| W         | .75              | .45              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 1.19   |
| WNW       | .56              | .22              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .78    |
| NW        | .60              | .04              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .63    |
| NNW       | .45              | 0.00             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | .45    |
| CALM      |                  |                  |                  |                   |                    |                    |                       | .48    |
| TOTAL     | 17.75            | 77.17            | 4.59             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2681 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



WIND ROSE PLOT

No precipitation data for March

(See INTERPRETATION OF DATA).

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING March, 1983

DAY 01

DAY 02

DAY 03

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |     |     |     |     |    |
| 0300  | -4.2  | -38.0 | 5    | 068  | .4   | 127  | 1.9   | 1     | 0300  | -7.5  | ***** | 99   | 124  | 1.0   | 126   | 2.5   | 1    | 0300 | -16.4 | -17.7 | 90 | 074 | 2.7 | 081 | 4.4 | 1  |
| 0600  | -4.9  | ***** | 9    | 081  | .6   | 066  | 1.9   | 1     | 0600  | -9.7  | ***** | 0    | 086  | 1.1   | 121   | 3.2   | 1    | 0600 | -14.3 | -15.9 | 88 | 090 | 1.7 | 095 | 4.4 | 1  |
| 0900  | -4.9  | -36.9 | 6    | 064  | .8   | 069  | 2.5   | 5     | 0900  | -10.7 | -11.8 | 92   | 110  | 2.4   | 113   | 5.7   | 7    | 0900 | -12.2 | -15.4 | 77 | 120 | 3.0 | 120 | 5.1 | 8  |
| 1200  | -2.6  | -3.5  | 94   | 033  | 1.2  | 029  | 2.5   | 10    | 1200  | -6.3  | -11.0 | 69   | 109  | 3.0   | 116   | 5.7   | 30   | 1200 | -8.8  | -14.4 | 64 | 087 | 2.9 | 066 | 6.3 | 30 |
| 1500  | -2.2  | ***** | 92   | 019  | .8   | 050  | 2.5   | 6     | 1500  | -4.5  | -11.5 | 58   | 099  | 2.2   | 105   | 4.4   | 12   | 1500 | -8.4  | -14.8 | 60 | 095 | 3.0 | 100 | 7.0 | 12 |
| 1800  | -3.4  | ***** | 3    | 360  | .3   | 030  | 1.9   | 1     | 1800  | -8.8  | -12.7 | 73   | 117  | 1.7   | 109   | 4.4   | 1    | 1800 | -11.7 | -15.2 | 75 | 085 | 2.5 | 096 | 6.3 | 1  |
| 2100  | -6.7  | -38.3 | 6    | 200  | .3   | 189  | 1.9   | 1     | 2100  | -11.7 | -14.6 | 79   | 137  | 2.3   | 153   | 3.8   | 1    | 2100 | -13.2 | -16.2 | 78 | 104 | 3.2 | 100 | 5.7 | 1  |
| 2400  | -5.8  | ***** | 99   | 118  | .6   | 102  | 1.9   | 1     | 2400  | -14.1 | -16.4 | 83   | 116  | 1.8   | 138   | 5.1   | 1    | 2400 | -15.6 | -17.8 | 83 | 134 | 3.3 | 110 | 5.7 | 1  |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |     |     |     |     |    |
| 0300  | -16.1 | -18.1 | 85   | 147  | 3.1  | 152  | 5.1   | 1     | 0300  | -11.8 | -15.3 | 75   | 115  | 2.7   | 121   | 5.1   | 1    | 0300 | -11.0 | -14.2 | 77 | 104 | 2.0 | 119 | 5.1 | 1  |
| 0600  | -14.1 | -16.4 | 83   | 130  | 2.5  | 119  | 5.1   | 1     | 0600  | -10.8 | -14.4 | 75   | 119  | 2.4   | 120   | 5.1   | 1    | 0600 | -13.1 | -15.4 | 83 | 088 | 2.2 | 097 | 3.8 | 1  |
| 0900  | -12.1 | -15.3 | 77   | 118  | 3.1  | 097  | 7.0   | 10    | 0900  | -8.5  | -12.6 | 72   | 105  | 2.0   | 079   | 4.4   | 8    | 0900 | -11.0 | -14.5 | 75 | 077 | 2.2 | 076 | 3.8 | 13 |
| 1200  | -10.5 | -14.7 | 71   | 086  | 3.2  | 094  | 7.0   | 17    | 1200  | -5.9  | -10.8 | 68   | 080  | 2.1   | 107   | 4.4   | 12   | 1200 | -2.1  | -10.2 | 54 | 045 | 1.4 | 074 | 3.8 | 27 |
| 1500  | -9.0  | -13.8 | 68   | 081  | 2.6  | 086  | 5.7   | 12    | 1500  | -4.7  | -9.5  | 69   | 067  | 2.2   | 054   | 4.4   | 10   | 1500 | -1.0  | -9.1  | 54 | 093 | 2.2 | 096 | 5.7 | 13 |
| 1800  | -9.4  | -13.3 | 73   | 095  | 2.5  | 082  | 5.1   | 1     | 1800  | -4.9  | -9.7  | 69   | 086  | 1.8   | 080   | 4.4   | 1    | 1800 | -4.0  | -10.0 | 63 | 094 | 1.8 | 079 | 3.8 | 1  |
| 2100  | -10.1 | -13.7 | 75   | 099  | 2.8  | 091  | 5.1   | 1     | 2100  | -6.8  | -11.5 | 69   | 099  | 2.4   | 100   | 5.1   | 1    | 2100 | -6.7  | -11.1 | 71 | 125 | 2.3 | 115 | 3.8 | 1  |
| 2400  | -12.1 | -15.3 | 77   | 107  | 2.9  | 105  | 5.7   | 1     | 2400  | -9.5  | -13.4 | 73   | 114  | 2.5   | 108   | 4.4   | 1    | 2400 | -7.6  | -11.2 | 75 | 115 | 1.3 | 115 | 3.2 | 1  |

DAY 07

DAY 08

DAY 09

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |     |     |     |     |    |
| 0300  | -9.5  | -12.3 | 80   | 092  | 1.2  | 125  | 4.4   | 1     | 0300  | -12.4 | -16.6 | 71   | 085  | 2.2   | 084   | 5.1   | 1    | 0300 | -15.3 | -19.7 | 69 | 072 | 3.5 | 069 | 5.7 | 1  |
| 0600  | -9.0  | -12.0 | 79   | 071  | 1.6  | 068  | 3.2   | 1     | 0600  | -13.7 | -17.5 | 73   | 091  | 2.1   | 078   | 4.4   | 1    | 0600 | -17.0 | -21.0 | 71 | 074 | 2.1 | 076 | 5.1 | 1  |
| 0900  | -9.2  | -13.1 | 73   | 064  | 1.6  | 068  | 3.8   | 15    | 0900  | -10.1 | -16.2 | 61   | 079  | 2.3   | 069   | 5.1   | 17   | 0900 | -14.3 | -20.2 | 61 | 069 | 3.5 | 073 | 5.7 | 17 |
| 1200  | -2.8  | -10.4 | 56   | 059  | 1.6  | 066  | 3.8   | 30    | 1200  | -3.6  | -13.4 | 47   | 084  | 2.3   | 085   | 5.1   | 33   | 1200 | -3.8  | -15.9 | 39 | 068 | 2.3 | 062 | 4.4 | 34 |
| 1500  | -1.2  | -10.9 | 48   | 082  | 1.9  | 087  | 5.1   | 17    | 1500  | -.1   | -13.2 | 37   | 068  | 1.9   | 097   | 4.4   | 21   | 1500 | -3.0  | -16.1 | 36 | 096 | 2.9 | 098 | 6.3 | 21 |
| 1800  | -5.1  | -11.9 | 59   | 091  | 1.7  | 066  | 4.4   | 1     | 1800  | -5.3  | -14.9 | 47   | 110  | 1.9   | 092   | 4.4   | 1    | 1800 | -7.3  | -17.3 | 45 | 108 | 2.3 | 096 | 5.1 | 2  |
| 2100  | -8.6  | -13.4 | 68   | 131  | 2.2  | 116  | 4.4   | 1     | 2100  | -9.1  | -16.5 | 55   | 123  | 2.0   | 151   | 3.8   | 1    | 2100 | -10.6 | -17.9 | 55 | 114 | 1.9 | 105 | 3.8 | 1  |
| 2400  | -10.5 | -15.2 | 68   | 132  | 3.2  | 131  | 5.7   | 1     | 2400  | -12.8 | -17.8 | 66   | 071  | 2.8   | 072   | 4.4   | 1    | 2400 | -13.0 | ***** | 62 | 127 | 1.3 | 151 | 3.8 | 1  |

## R &amp; M CONSULTANTS, INC.

## SUSTITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING March, 1983

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |    |
| 0300  | -16.0 | -20.5 | 68   | 084  | 1.6  | 075  | 3.2   | 1     | 0300  | -6.8 | -8.9  | 85   | 119  | 2.2   | 119   | 4.4   | 1    | 0300 | -6.5 | -7.9  | 90 | 107 | 1.6 | 117 | 3.8 | 1  |
| 0600  | -14.6 | -18.8 | 70   | 089  | 1.8  | 077  | 3.8   | 1     | 0600  | -7.3 | -8.5  | 91   | 115  | 2.3   | 107   | 5.1   | 1    | 0600 | -7.5 | -8.7  | 91 | 092 | 1.8 | 097 | 3.8 | 1  |
| 0900  | -11.1 | -14.0 | 79   | 079  | 1.6  | 074  | 3.2   | 11    | 0900  | -6.6 | -8.9  | 84   | 090  | 1.6   | 123   | 3.8   | 8    | 0900 | -2.7 | ***** | 80 | 123 | .8  | 089 | 3.2 | 12 |
| 1200  | -7.5  | -10.1 | 82   | 047  | 1.4  | 027  | 3.2   | 12    | 1200  | -.7  | -5.6  | 69   | 065  | 1.2   | 096   | 4.4   | 21   | 1200 | 3.4  | ***** | 61 | 327 | .5  | 328 | 3.2 | 18 |
| 1500  | -7.0  | -7.7  | 95   | 072  | 1.6  | 066  | 3.8   | 7     | 1500  | .9   | -4.1  | 69   | 083  | 2.3   | 092   | 5.7   | 20   | 1500 | 5.7  | -5.4  | 45 | 053 | 1.1 | 077 | 3.8 | 15 |
| 1800  | -6.7  | -8.5  | 87   | 097  | 1.8  | 080  | 4.4   | 1     | 1800  | -1.4 | -5.1  | 76   | 100  | 1.8   | 097   | 5.1   | 1    | 1800 | 1.4  | -6.4  | 56 | 125 | 1.8 | 130 | 5.1 | 1  |
| 2100  | -6.5  | -8.6  | 85   | 104  | 2.2  | 105  | 5.1   | 1     | 2100  | -4.4 | ***** | 83   | 124  | 1.2   | 116   | 3.2   | 1    | 2100 | -3.4 | -6.7  | 78 | 159 | 1.2 | 142 | 2.5 | 1  |
| 2400  | -6.7  | -8.8  | 85   | 119  | 2.1  | 107  | 3.8   | 1     | 2400  | -4.7 | ***** | 83   | 128  | 1.1   | 132   | 3.2   | 1    | 2400 | -5.3 | -8.1  | 81 | 107 | .9  | 089 | 2.5 | 1  |

DAY 13

DAY 14

DAY 15

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |    |
| 0300  | -7.2  | -9.2  | 86   | 077  | 1.2  | 072  | 3.2   | 1     | 0300  | -6.7 | ***** | 83   | 128  | .6    | 150   | 2.5   | 1    | 0300 | -3.6 | -7.7  | 73 | 106 | 1.5 | 129 | 3.8 | 1  |
| 0600  | -8.9  | -10.5 | 88   | 073  | 2.5  | 066  | 5.1   | 1     | 0600  | -7.6 | -10.0 | 83   | 084  | 1.4   | 079   | 2.5   | 1    | 0600 | -5.0 | ***** | 78 | 074 | 1.5 | 055 | 2.5 | 1  |
| 0900  | -6.7  | -10.4 | 75   | 060  | 2.0  | 065  | 4.4   | 21    | 0900  | -5.3 | -9.2  | 74   | 078  | 2.0   | 088   | 3.2   | 17   | 0900 | -3.2 | -7.2  | 74 | 059 | 1.5 | 083 | 3.2 | 11 |
| 1200  | 2.6   | -6.8  | 50   | 052  | 2.0  | 059  | 4.4   | 36    | 1200  | 1.1  | -6.9  | 55   | 075  | 1.7   | 097   | 4.4   | 26   | 1200 | 2.6  | -4.6  | 59 | 061 | 1.6 | 059 | 4.4 | 44 |
| 1500  | 4.4   | -6.9  | 44   | 104  | 2.2  | 110  | 5.1   | 24    | 1500  | 2.4  | -6.0  | 54   | 078  | 2.0   | 074   | 5.1   | 16   | 1500 | 3.4  | -3.8  | 59 | 090 | 2.3 | 099 | 5.7 | 25 |
| 1800  | .9    | -7.1  | 55   | 111  | 2.1  | 113  | 4.4   | 1     | 1800  | .6   | -6.0  | 61   | 102  | 1.6   | 105   | 3.8   | 1    | 1800 | .9   | -4.3  | 68 | 099 | 1.8 | 092 | 4.4 | 1  |
| 2100  | -2.0  | ***** | 64   | 148  | 1.5  | 141  | 3.2   | 1     | 2100  | -1.0 | -6.1  | 68   | 111  | 2.1   | 103   | 4.4   | 1    | 2100 | -2.1 | -5.2  | 79 | 148 | 1.8 | 145 | 3.2 | 1  |
| 2400  | -4.0  | ***** | 80   | 121  | .9   | 101  | 2.5   | 1     | 2400  | -2.2 | -6.9  | 70   | 119  | 2.0   | 130   | 3.8   | 1    | 2400 | -3.6 | -5.6  | 86 | 122 | 1.5 | 137 | 3.2 | 1  |

DAY 16

DAY 17

DAY 18

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX.  |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|------|------|-------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG.  | M/S   |    |     |     |     |     |    |
| 0300  | -5.5  | -6.3  | 94   | 089  | 1.6  | 073  | 3.2   | 1     | 0300  | -8.3  | -9.0  | 95   | 113  | 1.1   | 084   | 3.2   | 1    | 0300 | -10.1 | -11.3 | 91 | 083 | 1.8 | 070 | 3.2 | 1  |
| 0600  | -7.9  | ***** | 1    | 080  | 2.3  | 084  | 3.8   | 1     | 0600  | -10.9 | ***** | 1    | 176  | .5    | 156   | 2.5   | 1    | 0600 | -11.8 | -12.6 | 94 | 088 | 2.2 | 088 | 4.4 | 1  |
| 0900  | -5.7  | -7.5  | 87   | 086  | 2.4  | 087  | 3.8   | 24    | 0900  | -7.9  | -10.3 | 83   | 062  | .3    | 061   | 3.2   | 27   | 0900 | -7.8  | -11.1 | 77 | 090 | 2.0 | 093 | 3.8 | 24 |
| 1200  | 2.0   | -4.5  | 62   | 075  | 1.6  | 110  | 4.4   | 38    | 1200  | .8    | -7.2  | 55   | 055  | 1.6   | 096   | 4.4   | 39   | 1200 | .9    | -7.1  | 55 | 056 | 1.6 | 063 | 3.8 | 40 |
| 1500  | 3.4   | -4.8  | 55   | 109  | 2.5  | 097  | 5.7   | 26    | 1500  | 2.7   | -7.6  | 47   | 105  | 2.0   | 099   | 4.4   | 26   | 1500 | 2.4   | -6.7  | 51 | 122 | 2.6 | 114 | 5.1 | 27 |
| 1800  | -.8   | ***** | 70   | 106  | 1.4  | 102  | 4.4   | 1     | 1800  | -1.3  | -8.0  | 60   | 133  | 1.7   | 119   | 4.4   | 1    | 1800 | -1.2  | -7.1  | 64 | 134 | 1.8 | 122 | 5.1 | 2  |
| 2100  | -3.0  | -5.6  | 82   | 140  | 1.2  | 106  | 2.5   | 1     | 2100  | -4.4  | -8.3  | 74   | 136  | 1.4   | 149   | 2.5   | 1    | 2100 | -4.7  | -8.1  | 77 | 148 | 1.1 | 157 | 2.5 | 1  |
| 2400  | -7.0  | -8.4  | 90   | 120  | 1.5  | 129  | 3.2   | 1     | 2400  | -7.5  | -10.2 | 81   | 110  | 1.5   | 132   | 3.2   | 1    | 2400 | -8.4  | -10.5 | 85 | 095 | 1.3 | 099 | 3.2 | 1  |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING March, 1983

### DAY 19

### DAY 20

### DAY 21

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR       | DEW   | WIND  | WIND  | GUST | MAX.               | HOUR | DEW   | WIND  | WIND  | GUST               | MAX. |
|------|-------|-------|------|------|------|------------|-------|-------|-------|------|--------------------|------|-------|-------|-------|--------------------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR.       | TEMP. | POINT | RH    | DIR. | SPD.               | DIR. | TEMP. | POINT | RH    | DIR.               | SPD. |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG.       |       | DEG C | DEG C | %    | DEG.               | M/S  | DEG.  | DEG C | DEG C | %                  | DEG. |
|      |       |       |      |      | M/S  | MW         |       |       |       |      |                    | MW   |       |       |       |                    |      |
| 0300 | -10.9 | -12.4 | 89   | 086  | 2.2  | 090 3.8 1  | 0300  | -5.6  | -9.6  | 73   | 105 1.6 093 3.2 1  | 0300 | -5.8  | ***** | 72    | 116 1.7 115 3.8 1  |      |
| 0600 | -13.1 | -13.9 | 94   | 088  | 2.5  | 094 3.8 1  | 0600  | -6.7  | ***** | 77   | 089 1.2 096 3.2 1  | 0600 | -6.5  | -10.4 | 74    | 077 1.3 062 3.2 1  |      |
| 0900 | -9.0  | -12.8 | 74   | 079  | 2.4  | 089 3.8 25 | 0900  | -1.9  | -8.2  | 62   | 072 1.2 096 3.2 26 | 0900 | -1.6  | -9.0  | 57    | 081 1.3 110 3.2 27 |      |
| 1200 | .3    | -8.4  | 52   | 056  | 1.6  | 072 5.1 40 | 1200  | .5    | -8.0  | 53   | 083 2.4 084 6.3 41 | 1200 | 1.6   | -9.7  | 43    | 080 2.3 064 5.1 41 |      |
| 1500 | 1.8   | -9.3  | 44   | 078  | 2.1  | 091 5.1 27 | 1500  | 1.1   | -8.2  | 50   | 092 2.7 100 5.7 27 | 1500 | 2.6   | -9.8  | 40    | 088 2.5 086 5.1 29 |      |
| 1800 | -2.3  | -9.2  | 59   | 088  | 1.7  | 086 3.8 2  | 1800  | -2.0  | -8.3  | 62   | 079 1.9 051 5.1 2  | 1800 | -2    | -11.1 | 44    | 097 2.1 092 4.4 2  |      |
| 2100 | -5.2  | -9.3  | 73   | 116  | 2.1  | 129 3.8 1  | 2100  | -3.2  | -8.8  | 65   | 088 2.1 078 4.4 1  | 2100 | -4.2  | ***** | 59    | 124 1.1 114 3.2 1  |      |
| 2400 | -5.3  | -9.4  | 73   | 103  | 1.4  | 111 3.2 1  | 2400  | -5.0  | -9.8  | 69   | 109 2.1 108 3.8 1  | 2400 | -7.5  | -11.3 | 74    | 117 1.0 142 2.5 1  |      |

### DAY 22

### DAY 23

### DAY 24

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND  | GUST  | MAX. |      |      |       |      |     |     |     |     |    |
|------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|-------|-------|------|------|------|-------|------|-----|-----|-----|-----|----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  | GUST | RAD |     |     |     |    |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %     | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG.  | M/S  | MW  |     |     |     |    |
| 0300 | -9.4  | -12.5 | 78   | 076  | 1.5  | 084  | 3.2  | 1     | 0300  | -9.3  | -12.9 | 75   | 089  | 1.4  | 086   | 2.5   | 1    | 0300 | -7.7 | -12.6 | 68   | 070 | 1.5 | 053 | 3.8 | 1  |
| 0600 | -10.5 | -13.1 | 81   | 075  | 1.5  | 081  | 3.2  | 1     | 0600  | -11.2 | -14.3 | 78   | 088  | 2.0  | 095   | 3.8   | 2    | 0600 | -9.2 | -14.0 | 68   | 098 | 1.9 | 106 | 3.8 | 2  |
| 0900 | -5.9  | -11.8 | 63   | 081  | 2.4  | 073  | 3.8  | 26    | 0900  | -6.1  | -12.6 | 60   | 058  | 1.3  | 076   | 3.2   | 26   | 0900 | -4.9 | -11.5 | 60   | 068 | 1.6 | 112 | 3.8 | 20 |
| 1200 | 1.5   | -9.8  | 43   | 062  | 1.8  | 093  | 4.4  | 43    | 1200  | .1    | -10.8 | 44   | 068  | 2.0  | 075   | 5.1   | 43   | 1200 | -.7  | -10.4 | 48   | 081 | 2.2 | 060 | 5.1 | 29 |
| 1500 | 3.0   | -9.1  | 41   | 094  | 2.6  | 106  | 5.7  | 29    | 1500  | 1.3   | -10.3 | 42   | 096  | 2.4  | 112   | 5.1   | 29   | 1500 | .1   | -7.2  | 58   | 079 | 2.1 | 083 | 4.4 | 26 |
| 1800 | -.3   | -10.9 | 45   | 117  | 1.9  | 108  | 4.4  | 2     | 1800  | -2.3  | -10.6 | 53   | 100  | 1.7  | 076   | 3.8   | 3    | 1800 | -1.6 | -6.0  | 72   | 089 | 1.8 | 061 | 4.4 | 2  |
| 2100 | -3.8  | -11.3 | 56   | 119  | 1.4  | 131  | 3.2  | 1     | 2100  | -5.2  | -11.5 | 61   | 148  | 2.3  | 152   | 3.8   | 1    | 2100 | -2.5 | -6.7  | 73   | 094 | 1.5 | 100 | 3.2 | 1  |
| 2400 | -6.8  | -12.4 | 64   | 136  | 1.4  | 158  | 2.5  | 1     | 2400  | -7.6  | -12.8 | 66   | 128  | 2.0  | 137   | 3.8   | 1    | 2400 | -2.6 | -7.7  | 68   | 123 | 1.2 | 121 | 2.5 | 1  |

### DAY 25

### DAY 26

### DAY 27

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR       | DEW   | WIND  | WIND  | GUST | MAX.               | HOUR | DEW  | WIND  | WIND  | GUST               | MAX. |
|------|-------|-------|------|------|------|------------|-------|-------|-------|------|--------------------|------|------|-------|-------|--------------------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR.       | TEMP. | POINT | RH    | DIR. | SPD.               | DIR. | NDNG | TEMP. | POINT | RH                 | DIR. |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG.       | DEG C | DEG C | %     | DEG. | M/S                | DEG. |      | DEG C | DEG C | %                  | DEG. |
|      |       |       |      |      |      | MW         |       |       |       |      |                    | MW   |      |       |       |                    |      |
| 0300 | -3.8  | -6.6  | 81   | 134  | 1.0  | 142 1.9 1  | 0300  | -5.0  | -10.0 | 68   | 150 1.3 153 2.5 1  | 0300 | -5.5 | -12.5 | 58    | 172 1.6 188 2.5 1  |      |
| 0600 | -5.6  | -9.6  | 73   | 144  | 1.3  | 102 2.5 2  | 0600  | -5.7  | -10.6 | 68   | 163 1.5 158 2.5 2  | 0600 | -6.0 | -13.1 | 57    | 141 1.6 123 3.8 3  |      |
| 0900 | -1.8  | -9.9  | 54   | 096  | .8   | 094 3.8 28 | 0900  | -.8   | -9.7  | 51   | 100 1.0 114 4.4 29 | 0900 | -2.4 | -12.0 | 48    | 107 2.0 099 5.1 29 |      |
| 1200 | .9    | -9.5  | 46   | 117  | 2.2  | 106 4.4 47 | 1200  | 1.6   | -9.1  | 45   | 106 3.0 120 7.0 43 | 1200 | -.8  | -11.6 | 44    | 107 3.5 108 7.0 45 |      |
| 1500 | 1.4   | -9.3  | 45   | 127  | 2.6  | 117 5.7 32 | 1500  | 1.3   | -9.7  | 44   | 108 3.0 105 6.3 25 | 1500 | .4   | -11.1 | 42    | 107 3.3 102 7.0 32 |      |
| 1800 | -1.2  | -10.3 | 50   | 099  | 1.9  | 120 5.7 3  | 1800  | -2.0  | -10.8 | 51   | 096 3.6 092 8.3 3  | 1800 | -1.7 | -11.1 | 49    | 105 2.8 107 5.7 3  |      |
| 2100 | -4.1  | -9.9  | 64   | 166  | 1.2  | 119 1.9 1  | 2100  | -2.2  | -11.0 | 51   | 110 2.8 104 7.6 1  | 2100 | -3.5 | -11.3 | 55    | 118 1.9 129 4.4 1  |      |
| 2400 | -5.6  | ***** | 70   | 176  | 1.3  | 183 2.5 1  | 2400  | -5.7  | -12.6 | 58   | 135 2.1 109 6.3 1  | 2400 | -5.0 | -11.8 | 59    | 115 1.1 124 3.2 1  |      |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING March, 1983

DAY 28

DAY 29

DAY 30

| HOUR |       |       |      |      |      |                |      |     | HOUR |       |       |      |      |      |                |      |     | HOUR |       |       |      |      |      |                |      |     |
|------|-------|-------|------|------|------|----------------|------|-----|------|-------|-------|------|------|------|----------------|------|-----|------|-------|-------|------|------|------|----------------|------|-----|
| DEW  |       |       | WIND |      |      | WIND GUST MAX. |      |     | DEW  |       |       | WIND |      |      | WIND GUST MAX. |      |     | 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 | -6.4  | -12.7 | 61   | 138  | 1.9  | 137            | 3.8  | 1   | 0300 | -10.0 | -11.9 | 86   | 079  | 2.1  | 085            | 4.4  | 1   | 0300 | -8.8  | -11.6 | 80   | 105  | 1.4  | 081            | 3.2  | 1   |
| 0600 | -7.5  | -13.5 | 62   | 122  | 1.6  | 132            | 3.2  | 3   | 0600 | -11.4 | -12.9 | 89   | 087  | 2.8  | 084            | 4.4  | 3   | 0600 | -10.8 | -12.6 | 87   | 088  | 2.2  | 090            | 3.8  | 3   |
| 0900 | -3.6  | -12.1 | 52   | 081  | 1.2  | 096            | 3.8  | 28  | 0900 | -5.2  | -10.7 | 65   | 082  | 2.1  | 090            | 3.8  | 30  | 0900 | -5.5  | -10.8 | 66   | 067  | 2.1  | 075            | 3.8  | 31  |
| 1200 | .1    | -10.2 | 46   | 084  | 2.2  | 068            | 5.7  | 42  | 1200 | 2.4   | -7.3  | 49   | 095  | 2.1  | 112            | 5.7  | 49  | 1200 | 1.4   | -7.9  | 50   | 077  | 2.0  | 100            | 5.7  | 49  |
| 1500 | 2.2   | -9.5  | 42   | 096  | 2.7  | 089            | 5.7  | 34  | 1500 | 2.8   | -8.0  | 45   | 091  | 2.6  | 071            | 5.1  | 33  | 1500 | 2.8   | -8.0  | 45   | 120  | 2.4  | 135            | 5.7  | 34  |
| 1800 | -3    | -9.5  | 50   | 100  | 2.0  | 081            | 5.1  | 3   | 1800 | -5    | -8.7  | 54   | 101  | 2.2  | 100            | 6.3  | 3   | 1800 | .3    | -8.7  | 51   | 123  | 2.2  | 143            | 5.1  | 4   |
| 2100 | -4.3  | -9.9  | 65   | 137  | 1.2  | 115            | 2.5  | 1   | 2100 | -4.3  | -8.9  | 70   | 111  | 1.4  | 095            | 2.5  | 1   | 2100 | -4.2  | -9.0  | 69   | 141  | 1.4  | 124            | 2.5  | 1   |
| 2400 | -7.6  | -10.9 | 77   | 110  | 1.3  | 102            | 3.8  | 1   | 2400 | -7.0  | -10.2 | 78   | 120  | 1.3  | 101            | 3.2  | 1   | 2400 | -6.4  | -9.9  | 76   | 129  | 1.4  | 136            | 2.5  | 1   |

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 | -7.1  | -10.4 | 79   | 093  | 1.4            | 089  | 2.5 1    |
| 0600 | -6.5  | -9.9  | 77   | 098  | 1.6            | 130  | 3.2 3    |
| 0900 | -3.0  | -7.6  | 60   | 050  | 1.1            | 064  | 2.5 27   |
| 1200 | 2.7   | -4.8  | 57   | 072  | 2.3            | 083  | 5.1 35   |
| 1500 | 4.4   | -4.1  | 54   | 086  | 2.1            | 087  | 4.4 24   |
| 1800 | 2.4   | -5.0  | 58   | 117  | 1.7            | 083  | 4.4 4    |
| 2100 | -1.9  | -5.6  | 76   | 145  | 2.0            | 149  | 3.8 1    |
| 2400 | -3.8  | -6.4  | 82   | 131  | 2.4            | 135  | 3.8 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

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

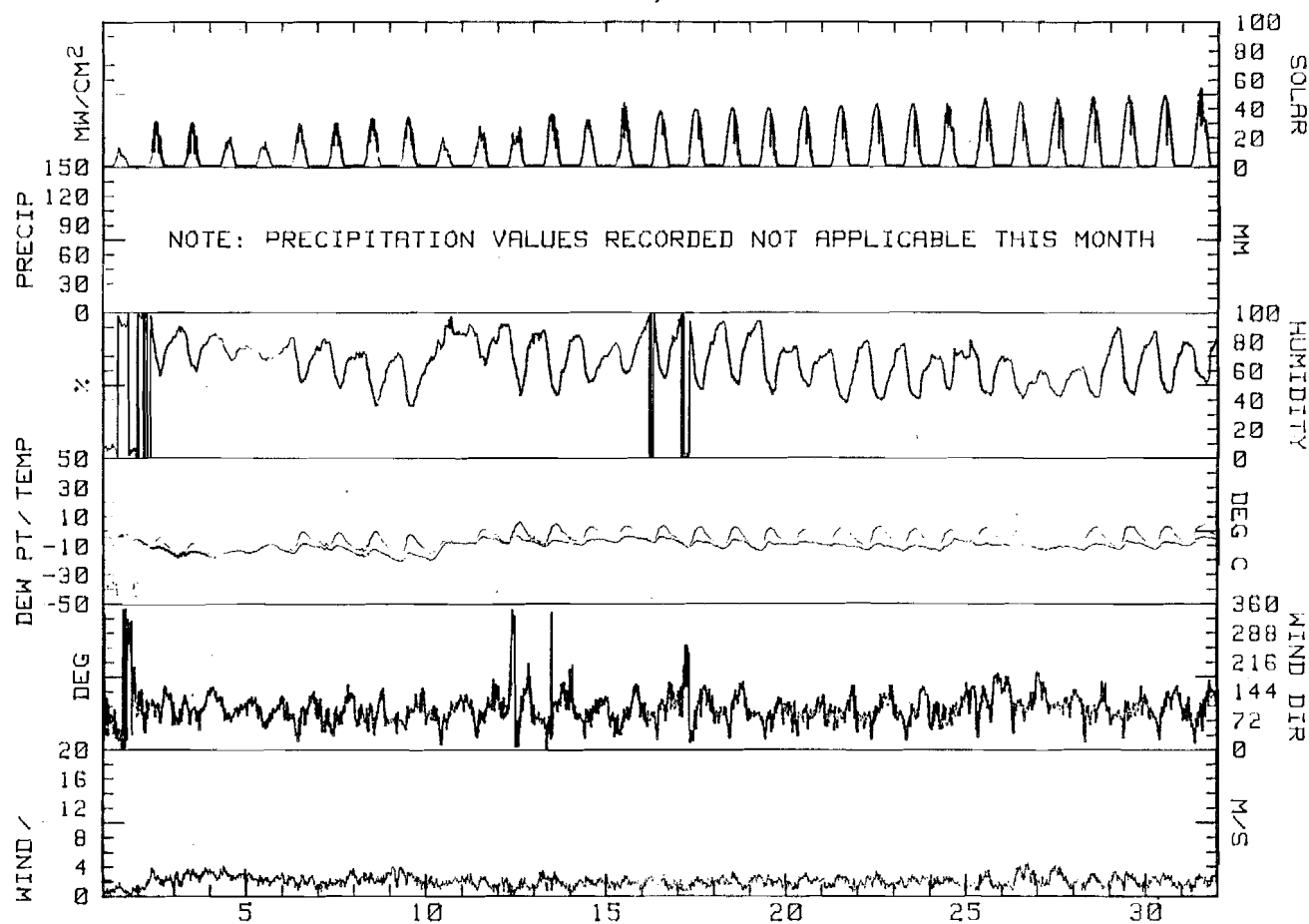
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SGH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | -2.0                   | -6.7                   | -4.4                   | 056                         | .5                          | .7                          | 069                         | 2.5                         | NE            |                 |                     | ****         | 813                                | 1   |
| 2     | -4.4                   | -14.1                  | -9.3                   | 113                         | 1.9                         | 2.0                         | 113                         | 5.7                         | ESE           |                 |                     | ****         | 1605                               | 2   |
| 3     | -8.1                   | -16.5                  | -12.3                  | 100                         | 2.6                         | 2.8                         | 100                         | 7.0                         | E             | 77              | -15.8               | ****         | 1628                               | 3   |
| 4     | -9.0                   | -16.7                  | -12.9                  | 108                         | 2.6                         | 2.9                         | 097                         | 7.0                         | E             | 77              | -15.3               | ****         | 1275                               | 4   |
| 5     | -4.4                   | -12.1                  | -8.3                   | 099                         | 2.2                         | 2.3                         | 121                         | 5.1                         | ESE           | 72              | -12.2               | ****         | 1093                               | 5   |
| 6     | -.8                    | -13.5                  | -7.2                   | 094                         | 1.8                         | 2.0                         | 096                         | 5.7                         | E             | 69              | -12.1               | ****         | 1765                               | 6   |
| 7     | -1.0                   | -10.7                  | -5.9                   | 096                         | 1.7                         | 2.0                         | 131                         | 5.7                         | ENE           | 67              | -12.2               | ****         | 1828                               | 7   |
| 8     | .1                     | -14.3                  | -7.1                   | 087                         | 2.1                         | 2.3                         | 084                         | 5.1                         | ENE           | 58              | -15.6               | ****         | 2069                               | 8   |
| 9     | -2.2                   | -17.1                  | -9.7                   | 086                         | 2.3                         | 2.5                         | 098                         | 6.3                         | ENE           | 55              | -18.3               | ****         | 2095                               | 9   |
| 10    | -6.4                   | -16.3                  | -11.4                  | 089                         | 1.7                         | 1.8                         | 105                         | 5.1                         | ENE           | 80              | -12.6               | ****         | 1180                               | 10  |
| 11    | 1.5                    | -7.3                   | -2.9                   | 103                         | 1.6                         | 1.8                         | 092                         | 5.7                         | ESE           | 80              | -6.7                | ****         | 1625                               | 11  |
| 12    | 6.4                    | -7.9                   | -.8                    | 108                         | 1.0                         | 1.3                         | 130                         | 5.1                         | E             | 74              | -6.9                | ****         | 1658                               | 12  |
| 13    | 5.0                    | -9.2                   | -2.1                   | 089                         | 1.6                         | 1.9                         | 066                         | 5.1                         | ENE           | 67              | -8.3                | ****         | 2378                               | 13  |
| 14    | 2.6                    | -7.8                   | -2.6                   | 094                         | 1.6                         | 1.7                         | 074                         | 5.1                         | E             | 67              | -7.5                | ****         | 2088                               | 14  |
| 15    | 3.4                    | -5.1                   | -.9                    | 095                         | 1.5                         | 1.7                         | 099                         | 5.7                         | E             | 71              | -5.9                | ****         | 2123                               | 15  |
| 16    | 3.5                    | -8.5                   | -2.5                   | 098                         | 1.7                         | 1.9                         | 097                         | 5.7                         | ESE           |                 |                     | ****         | 2675                               | 16  |
| 17    | 2.8                    | -11.8                  | -4.5                   | 111                         | 1.1                         | 1.4                         | 096                         | 4.4                         | ESE           |                 |                     | ****         | 2878                               | 17  |
| 18    | 2.6                    | -11.9                  | -4.7                   | 101                         | 1.6                         | 1.9                         | 114                         | 5.1                         | E             | 75              | -9.5                | ****         | 2783                               | 18  |
| 19    | 2.1                    | -13.4                  | -5.7                   | 087                         | 1.9                         | 2.0                         | 072                         | 5.1                         | E             | 71              | -10.7               | ****         | 2870                               | 19  |
| 20    | 1.4                    | -7.0                   | -2.8                   | 090                         | 1.9                         | 1.9                         | 084                         | 6.3                         | E             | 64              | -8.9                | ****         | 2913                               | 20  |
| 21    | 2.7                    | -7.5                   | -2.4                   | 095                         | 1.6                         | 1.7                         | 064                         | 5.1                         | E             | 56              | -10.2               | ****         | 3055                               | 21  |
| 22    | 3.2                    | -10.6                  | -3.7                   | 093                         | 1.7                         | 1.9                         | 106                         | 5.7                         | E             | 59              | -11.2               | ****         | 3050                               | 22  |
| 23    | 1.3                    | -11.2                  | -5.0                   | 100                         | 1.7                         | 1.9                         | 075                         | 5.1                         | E             | 59              | -11.9               | ****         | 3108                               | 23  |
| 24    | .7                     | -10.0                  | -4.7                   | 086                         | 1.6                         | 1.8                         | 060                         | 5.1                         | E             | 64              | -9.9                | ****         | 2575                               | 24  |
| 25    | 2.2                    | -6.0                   | -1.9                   | 130                         | 1.4                         | 1.6                         | 117                         | 5.7                         | ESE           | 59              | -9.3                | ****         | 3280                               | 25  |
| 26    | 1.8                    | -5.7                   | -2.0                   | 115                         | 2.1                         | 2.4                         | 092                         | 8.3                         | ESE           | 54              | -10.3               | ****         | 3133                               | 26  |
| 27    | .5                     | -7.1                   | -3.3                   | 117                         | 2.1                         | 2.3                         | 108                         | 7.0                         | ESE           | 52              | -12.0               | ****         | 3325                               | 27  |
| 28    | 2.6                    | -8.0                   | -2.7                   | 107                         | 1.7                         | 1.8                         | 068                         | 5.7                         | ESE           | 55              | -11.0               | ****         | 3455                               | 28  |
| 29    | 3.3                    | -11.5                  | -4.1                   | 094                         | 2.0                         | 2.1                         | 100                         | 6.3                         | E             | 67              | -9.9                | ****         | 3560                               | 29  |
| 30    | 3.4                    | -11.0                  | -3.8                   | 104                         | 1.7                         | 2.0                         | 100                         | 5.7                         | SE            | 65              | -9.8                | ****         | 3688                               | 30  |
| 31    | 5.3                    | -7.4                   | -1.1                   | 102                         | 1.6                         | 1.9                         | 083                         | 5.1                         | E             | 68              | -6.6                | ****         | 3278                               | 31  |
| MONTH | 6.4                    | -17.1                  | -4.9                   | 099                         | 1.7                         | 1.9                         | 092                         | 8.3                         | E             | 66M             | -11.0M              | ****         | 74842                              |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.1  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 6.3  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 7.0  
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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



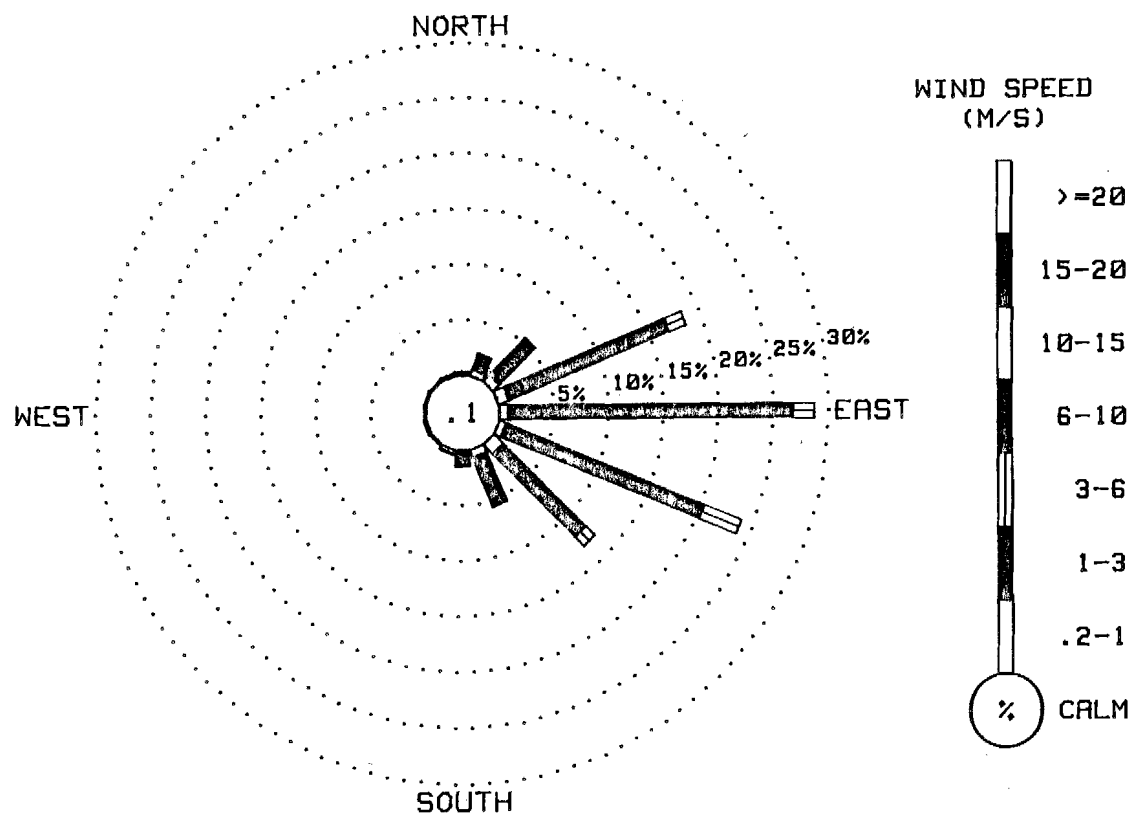
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING March, 1983

| DIRECTION | VELOCITY (M/S) |           |           |            |            |            |               | TOTAL  |
|-----------|----------------|-----------|-----------|------------|------------|------------|---------------|--------|
|           | 0.2            | 1.0       | 3.0       | 6.0        | 10.0       | 15.0       | 20.0          |        |
|           | TO<br>1.0      | TO<br>3.0 | TO<br>6.0 | TO<br>10.0 | TO<br>15.0 | TO<br>20.0 | OR<br>GREATER |        |
| N         | .13            | .20       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .34    |
| NNE       | .61            | 1.48      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.08   |
| NE        | .84            | 4.54      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 5.38   |
| ENE       | 1.04           | 15.73     | 1.61      | 0.00       | 0.00       | 0.00       | 0.00          | 18.39  |
| E         | .84            | 25.85     | 1.98      | 0.00       | 0.00       | 0.00       | 0.00          | 28.67  |
| ESE       | .71            | 19.43     | 3.66      | 0.00       | 0.00       | 0.00       | 0.00          | 23.80  |
| SE        | 1.21           | 10.52     | 1.18      | 0.00       | 0.00       | 0.00       | 0.00          | 12.91  |
| SSE       | .74            | 4.50      | .24       | 0.00       | 0.00       | 0.00       | 0.00          | 5.48   |
| S         | .27            | 1.14      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 1.41   |
| SSW       | .34            | .07       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .40    |
| SW        | .10            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .10    |
| WSW       | .17            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .17    |
| W         | .17            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .17    |
| WNW       | .20            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .20    |
| NW        | .17            | 0.00      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .17    |
| NNW       | .24            | .03       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | .27    |
| CALM      |                |           |           |            |            |            |               | .07    |
| TOTAL     | 7.76           | 83.50     | 8.67      | 0.00       | 0.00       | 0.00       | 0.00          | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2975 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



## R &amp; M CONSULTANTS, INC.

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR    ENDING

[illegible]

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING April, 1983

DAY 01

DAY 02

DAY 03

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300  | -7.0  | -8.1  | 92   | 117  | 2.2  | 136  | 4.4  | 1     | 0300  | -7.2  | -8.4  | 91   | 079  | 1.8  | 121  | 4.4  | 1    |
| 0600  | -9.0  | -9.7  | 95   | 087  | 1.9  | 099  | 3.8  | 3     | 0600  | -9.1  | -10.2 | 92   | 079  | 2.4  | 079  | 3.8  | 4    |
| 0900  | -4.0  | -8.3  | 72   | 070  | 2.1  | 091  | 3.8  | 33    | 0900  | -3.2  | -8.8  | 65   | 058  | 1.8  | 060  | 3.8  | 33   |
| 1200  | 4.4   | -4.4  | 53   | 075  | 1.8  | 113  | 5.7  | 50    | 1200  | 5.9   | -7.5  | 38   | 051  | 1.7  | 055  | 3.2  | 51   |
| 1500  | 5.3   | -4.6  | 49   | 126  | 2.6  | 127  | 5.1  | 35    | 1500  | 6.0   | -7.4  | 38   | 076  | 2.5  | 070  | 6.3  | 36   |
| 1800  | 3.4   | -5.3  | 53   | 099  | 1.4  | 109  | 3.8  | 4     | 1800  | 4.1   | -7.8  | 42   | 058  | 2.2  | 076  | 5.7  | 5    |
| 2100  | -2.5  | -5.8  | 78   | 143  | 1.4  | 135  | 3.2  | 1     | 2100  | -2.3  | -7.4  | 68   | 151  | 1.6  | 143  | 3.8  | 1    |
| 2400  | -3.9  | -6.5  | 82   | 107  | 1.5  | 117  | 3.8  | 1     | 2400  | -3.6  | -8.1  | 71   | 123  | 2.0  | 118  | 3.8  | 1    |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |      |      |       |      |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST  | RAD   |      |      |       |      |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %    | DEG. | M/S   | DEG. | M/S | MW  |     |     |    |
| 0300  | 3.2   | -3.1  | 63   | 123  | 3.6  | 118  | 8.9  | 1     | 0300  | -2.2  | ***** | 98   | 114  | .9   | 117  | 2.5   | 1     | 0300 | -5.3 | -46.9 | 1    | 135 | 1.4 | 140 | 3.2 | 1  |
| 0600  | 3.2   | -2.7  | 65   | 128  | 2.8  | 126  | 6.3  | 3     | 0600  | -3.1  | ***** | 92   | 119  | 1.2  | 119  | 3.2   | 4     | 0600 | -4.0 | ***** | 0    | 133 | 1.6 | 147 | 3.2 | 4  |
| 0900  | 4.3   | -1.5  | 66   | 109  | 2.5  | 099  | 6.3  | 15    | 0900  | 0.0   | -5.2  | 68   | 069  | 1.1  | 096  | 3.8   | 18    | 0900 | -.4  | -4.4  | 74   | 092 | 1.5 | 056 | 3.8 | 26 |
| 1200  | 4.3   | -.1   | 73   | 108  | 3.0  | 097  | 7.0  | 20    | 1200  | .1    | -1.5  | 89   | 070  | 1.6  | 061  | 3.8   | 29    | 1200 | 1.9  | -6.4  | 54   | 107 | 1.9 | 127 | 5.1 | 38 |
| 1500  | 4.2   | -.2   | 73   | 097  | 2.5  | 105  | 6.3  | 12    | 1500  | .8    | .1    | 95   | 075  | 1.7  | 071  | 3.8   | 22    | 1500 | 2.6  | -7.4  | 48   | 124 | .7  | 030 | 4.4 | 27 |
| 1800  | 0.0   | -.9   | 94   | 278  | 1.6  | 281  | 10.2 | 3     | 1800  | .7    | ***** | 86   | 026  | .9   | 016  | 2.5   | 2     | 1800 | .7   | -6.2  | 60   | 223 | 1.0 | 203 | 3.2 | 7  |
| 2100  | .1    | ***** | 91   | 280  | 2.0  | 286  | 8.9  | 1     | 2100  | -1.4  | ***** | 12   | 256  | .7   | 259  | 1.9   | 1     | 2100 | -2.2 | ***** | 0    | 141 | .6  | 158 | 3.2 | 1  |
| 2400  | -2.2  | -28.8 | 11   | 238  | .8   | 266  | 3.2  | 1     | 2400  | -3.1  | ***** | 5    | 134  | .6   | 104  | 2.5   | 1     | 2400 | -3.0 | -4.7  | 88   | 132 | 1.3 | 138 | 2.5 | 1  |

DAY 07

DAY 08

DAY 09

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |      |       |       |      |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-------|-------|------|-------|-------|------|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST  | RAD   |      |       |       |      |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %    | DEG.  | M/S   | DEG. | M/S | MW  |     |     |    |
| 0300  | -4.0  | -6.8  | 81   | 136  | 1.8  | 135  | 3.8  | 1     | 0300  | -5.7  | ***** | 80   | 107  | 1.4  | 134  | 3.2   | 1     | 0300 | -3.6  | ***** | 96   | 246 | .8  | 293 | 3.8 | 1  |
| 0600  | -5.1  | -7.7  | 82   | 126  | 1.9  | 123  | 3.8  | 6     | 0600  | -5.3  | -8.4  | 79   | 058  | 1.0  | 061  | 2.5   | 4     | 0600 | -4.3  | ***** | 2    | 175 | .6  | 113 | 1.3 | 2  |
| 0900  | -1.6  | -6.9  | 67   | 102  | 2.2  | 110  | 4.4  | 25    | 0900  | -2.5  | -8.0  | 66   | 035  | 1.4  | 028  | 3.2   | 24    | 0900 | -2.8  | -3.5  | 95   | 036 | .7  | 036 | 2.5 | 20 |
| 1200  | 2.1   | -7.3  | 50   | 062  | 1.7  | 038  | 3.8  | 54    | 1200  | 2.0   | -6.3  | 54   | 019  | 1.3  | 027  | 3.2   | 31    | 1200 | -1.6  | -4.1  | 83   | 322 | 1.7 | 324 | 4.4 | 39 |
| 1500  | 3.0   | -7.3  | 47   | 144  | 1.1  | 044  | 4.4  | 37    | 1500  | 1.6   | -5.8  | 58   | 284  | 1.3  | 291  | 3.8   | 23    | 1500 | -1.3  | -5.9  | 71   | 317 | 2.2 | 323 | 5.1 | 24 |
| 1800  | 0.0   | ***** | 57   | 171  | 1.2  | 203  | 3.8  | 4     | 1800  | -.4   | -3.9  | 77   | 310  | 1.9  | 328  | 4.4   | 3     | 1800 | -2.3  | -9.4  | 58   | 284 | 1.2 | 316 | 3.8 | 6  |
| 2100  | -3.7  | -8.5  | 69   | 123  | 1.4  | 156  | 3.2  | 1     | 2100  | -1.8  | ***** | 89   | 234  | .6   | 274  | 3.2   | 1     | 2100 | -8.8  | -10.6 | 87   | 149 | 1.8 | 070 | 2.5 | 1  |
| 2400  | -5.0  | -8.1  | 79   | 128  | 1.8  | 137  | 4.4  | 1     | 2400  | -3.3  | -43.2 | 2    | 296  | .9   | 312  | 3.8   | 1     | 2400 | -10.8 | ***** | 93   | 109 | 1.0 | 126 | 3.2 | 1  |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING April, 1983

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -10.9 | -11.0 | 99   | 109  | 1.1  | 086  | 3.2  | 1    | 0300  | -10.9 | ***** | 68   | 123  | 1.5  | 126  | 3.2  | 1    |
| 0600  | -10.1 | ***** | 0    | 120  | .7   | 110  | 2.5  | 6    | 0600  | -11.7 | -16.4 | 68   | 103  | 1.5  | 111  | 3.2  | 6    |
| 0900  | -4.4  | -8.5  | 73   | 050  | 1.5  | 055  | 3.8  | 30   | 0900  | -6.7  | -13.8 | 57   | 066  | 1.2  | 102  | 4.4  | 27   |
| 1200  | -2.5  | -13.5 | 43   | 087  | 1.6  | 045  | 5.1  | 64   | 1200  | -5.8  | -10.7 | 68   | 090  | 2.7  | 061  | 6.3  | 24   |
| 1500  | -1.8  | -13.7 | 40   | 016  | 3.1  | 011  | 6.3  | 40   | 1500  | -6.0  | -7.5  | 89   | 098  | 2.2  | 100  | 5.7  | 15   |
| 1800  | -3.3  | -14.8 | 41   | 051  | 1.6  | 016  | 4.4  | 10   | 1800  | -6.0  | ***** | 2    | 072  | 1.1  | 087  | 3.8  | 3    |
| 2100  | -8.6  | -14.6 | 62   | 142  | 1.7  | 135  | 3.8  | 1    | 2100  | -6.3  | ***** | 8    | 153  | .1   | 088  | 1.3  | 1    |
| 2400  | -9.9  | -14.8 | 67   | 127  | 1.2  | 140  | 3.8  | 1    | 2400  | -5.7  | ***** | 10   | 208  | .4   | 205  | 1.3  | 1    |

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  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | -2.8  | ***** | 12   | 111  | .8   | 113  | 1.9  | 1    | 0300  | -2.3  | ***** | 12   | 116  | .8   | 129  | 2.5  | 1    |
| 0600  | -2.4  | ***** | 6    | 119  | .8   | 143  | 2.5  | 5    | 0600  | -.9   | ***** | 8    | 092  | .7   | 075  | 2.5  | 4    |
| 0900  | .6    | -1.2  | 88   | 076  | 1.4  | 075  | 3.8  | 24   | 0900  | 2.3   | -.5   | 82   | 081  | 1.6  | 090  | 5.1  | 38   |
| 1200  | 2.8   | -2.1  | 70   | 095  | 1.4  | 048  | 3.8  | 40   | 1200  | 3.3   | 1.5   | 88   | 356  | 1.4  | 332  | 5.1  | 45   |
| 1500  | 2.5   | -.9   | 78   | 122  | 1.7  | 102  | 4.4  | 22   | 1500  | 2.2   | 1.5   | 95   | 318  | 2.9  | 329  | 6.3  | 17   |
| 1800  | 1.1   | ***** | 89   | 058  | .9   | 047  | 3.2  | 5    | 1800  | .7    | ***** | 12   | 302  | 1.1  | 321  | 3.2  | 3    |
| 2100  | -1.6  | ***** | 1    | 167  | .7   | 173  | 1.9  | 1    | 2100  | -.1   | ***** | 13   | 255  | .6   | 252  | 1.9  | 1    |
| 2400  | -1.6  | -33.1 | 7    | 124  | .7   | 076  | 2.5  | 1    | 2400  | -.8   | ***** | 8    | 273  | 1.8  | 281  | 3.2  | 1    |

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  |
| 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  | -34.3 | 6    | 131  | .7   | 150  | 2.5  | 1    | 0300  | -4.5  | -7.6  | 79   | 131  | 1.5  | 110  | 3.2  | 1    |
| 0600  | -1.5  | ***** | 8    | 113  | .3   | 156  | 1.9  | 4    | 0600  | -3.6  | -6.9  | 78   | 118  | 1.8  | 125  | 3.8  | 10   |
| 0900  | .7    | ***** | 99   | 019  | .5   | 014  | 1.9  | 14   | 0900  | 1.8   | -6.3  | 55   | 055  | 1.5  | 034  | 3.8  | 44   |
| 1200  | 4.1   | -1.0  | 69   | 019  | .9   | 012  | 2.5  | 44   | 1200  | 3.2   | -5.7  | 52   | 052  | .3   | 251  | 5.7  | 34   |
| 1500  | 4.7   | -3.8  | 54   | 033  | 1.3  | 013  | 5.7  | 30   | 1500  | 2.2   | -4.1  | 63   | 280  | 1.8  | 302  | 5.7  | 21   |
| 1800  | 3.4   | -2.7  | 64   | 061  | 1.7  | 029  | 7.6  | 9    | 1800  | -1.0  | ***** | 3    | 277  | 1.0  | 271  | 3.2  | 6    |
| 2100  | 2.0   | -4.1  | 64   | 118  | 1.1  | 139  | 5.1  | 1    | 2100  | -2.0  | ***** | 12   | 284  | .9   | 278  | 2.5  | 1    |
| 2400  | -1.5  | -5.0  | 77   | 143  | 1.2  | 127  | 4.4  | 1    | 2400  | -2.3  | ***** | 10   | 277  | .6   | 260  | 1.9  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING April, 1983

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | TEMP. | POINT | RH   | DIR. | SPD. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %    | DEG. | M/S  |
| 0300  | .3    | -2.9  | 79   | 107  | 2.5  | 097  | 7.0   | 1     | 0300 | -2.5 | ***** | 78   | 170   | .8    | 192  | 1.9  | 1    |
| 0600  | .7    | -3.7  | 72   | 132  | 1.2  | 126  | 5.7   | 9     | 0600 | -1.0 | ***** | 75   | 147   | .8    | 172  | 1.9  | 10   |
| 0900  | .2    | -2.9  | 77   | 307  | 1.6  | 323  | 4.4   | 17    | 0900 | 2.3  | -4.6  | 60   | 107   | .7    | 131  | 3.2  | 34   |
| 1200  | 3.7   | -4.8  | 54   | 290  | 1.6  | 224  | 5.1   | 68    | 1200 | 6.2  | -4.0  | 48   | 055   | 2.0   | 054  | 7.6  | 66   |
| 1500  | 3.5   | -6.5  | 48   | 224  | 1.1  | 347  | 5.7   | 60    | 1500 | 5.9  | -5.5  | 44   | 081   | 2.5   | 033  | 6.3  | 39   |
| 1800  | 3.4   | ***** | 47   | 029  | 1.9  | 022  | 5.1   | 12    | 1800 | 4.6  | -4.7  | 51   | 085   | 2.2   | 076  | 5.7  | 7    |
| 2100  | -6    | ***** | 61   | 152  | .7   | 116  | 3.2   | 1     | 2100 | .1   | -3    | 97   | 108   | .9    | 072  | 5.7  | 1    |
| 2400  | -1.7  | ***** | 75   | 138  | .7   | 101  | 1.9   | 1     | 2400 | -1.7 | -4.1  | 84   | 146   | 1.1   | 146  | 3.2  | 1    |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND  | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|-------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | .1    | ***** | 84   | 127  | .9   | 100  | 3.2   | 1     | 0300 | .1   | ***** | 11   | 199M  | .4M   | 228M  | 1.3M | 1    |
| 0600  | .9    | ***** | 89   | 117  | .6   | 129  | 1.9   | 13    | 0600 | .7   | ***** | 9    | 010M  | .2M   | 003M  | 1.3M | 9    |
| 0900  | 3.9   | .9    | 81   | 352  | 1.1  | 304  | 3.2   | 33    | 0900 | 2.2  | ***** | 5    | 029   | .8    | 037   | 2.5  | 15   |
| 1200  | 3.5   | 2.4   | 93   | 287  | 1.4  | 329  | 3.2   | 25    | 1200 | 3.3  | -32.6 | 5    | 301   | 1.3   | 296   | 3.8  | 27   |
| 1500  | 6.8   | 2.1   | 72   | 307  | 1.5  | 287  | 3.8   | 53    | 1500 | 3.9  | ***** | 94   | 302   | 1.6   | 323   | 4.4  | 25   |
| 1800  | 3.7   | 2.2   | 90   | 249  | 1.0  | 226  | 3.8   | 4     | 1800 | 2.8  | -29.8 | 7    | 277   | 1.1   | 271   | 3.2  | 10   |
| 2100  | 1.4   | ***** | 8    | 124  | .8   | 108  | 3.2   | 1     | 2100 | 1.7  | ***** | 11   | 140   | .5    | 269   | 1.9  | 1    |
| 2400  | .8    | ***** | 11   | 244  | .7   | 258  | 1.9   | 1     | 2400 | 1.3  | ***** | 11   | 108   | .8    | 105   | 1.9  | 1    |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND  | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|-------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %     | DEG. | M/S  |
| 0300  | 1.8   | ***** | 89   | 179  | .9   | 143  | 2.5   | 1     | 0300 | -1.6 | ***** | 0    | 147   | 1.0   | 141   | 3.2  | 1    |
| 0600  | 3.2   | -3    | 78   | 136  | .6   | 108  | 3.2   | 13    | 0600 | .1   | -8    | 94   | 158   | .7    | 153   | 3.2  | 14   |
| 0900  | 11.0  | .1    | 47   | 070  | 1.4  | 094  | 5.1   | 47    | 0900 | 7.3  | -4    | 58   | 013   | .7    | 358   | 2.5  | 47   |
| 1200  | 13.6  | -1.3  | 36   | 112  | 2.2  | 099  | 5.7   | 64    | 1200 | 11.0 | -5    | 45   | 291   | 1.2   | 317   | 3.8  | 63   |
| 1500  | 13.9  | -2.2  | 33   | 207  | 1.7  | 179  | 4.4   | 48    | 1500 | 11.1 | -1.1  | 43   | 286   | 1.6   | 296   | 3.8  | 48   |
| 1800  | 12.3  | -2.5  | 36   | 261  | 1.0  | 303  | 4.4   | 14    | 1800 | 9.7  | -1.4  | 46   | 278   | 1.4   | 281   | 3.2  | 13   |
| 2100  | 5.1   | .1    | 70   | 165  | .8   | 239  | 1.9   | 1     | 2100 | 2.8  | .2    | 83   | 206   | .7    | 280   | 2.5  | 1    |
| 2400  | .8    | -4    | 92   | 154  | 1.0  | 140  | 2.5   | 1     | 2400 | -1   | -5    | 97   | 164   | 1.1   | 182   | 1.9  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING April, 1983

DAY 28

DAY 29

DAY 30

| DAY 28 |       |                     |      |      |      |      |      |     |       | DAY 29 |       |                     |      |      |      |      |     |       |       | DAY 30 |      |                     |      |      |      |     |  |  |  |
|--------|-------|---------------------|------|------|------|------|------|-----|-------|--------|-------|---------------------|------|------|------|------|-----|-------|-------|--------|------|---------------------|------|------|------|-----|--|--|--|
| HOUR   | DEW   | WIND WIND GUST MAX. |      |      |      |      |      |     |       | HOUR   | DEW   | WIND WIND GUST MAX. |      |      |      |      |     |       |       | HOUR   | DEW  | WIND WIND GUST MAX. |      |      |      |     |  |  |  |
| NDNG   | TEMP. | POINT               | RH   | DIR. | SPD. | DIR. | 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   | -1.4  | *****               | 3    | 067  | 1.0  | 074  | 3.2  | 1   | 0300  | 1.5    | ***** | 9                   | 186  | .3   | 183  | .6   | 1   | 0300  | -1.3  | *****  | 9    | 171                 | .4   | 153  | 1.9  | 1   |  |  |  |
| 0600   | .4    | -.2                 | 96   | 072  | 1.4  | 058  | 3.8  | 12  | 0600  | 1.8    | ***** | 6                   | 151m | .2m  | 142m | .6m  | 4   | 0600  | .4    | *****  | 99   | 157                 | .1   | 219  | 1.9  | 20  |  |  |  |
| 0900   | 7.2   | 1.1                 | 65   | 037  | 1.5  | 044  | 3.2  | 30  | 0900  | 3.8    | ***** | 93                  | 016  | .4   | 007  | 1.3  | 20  | 0900  | 7.5   | -2.3   | 50   | 032                 | 1.1  | 017  | 5.7  | 48  |  |  |  |
| 1200   | 9.4   | .8                  | 55   | 035  | 1.1  | 008  | 3.8  | 39  | 1200  | 5.2    | ***** | 94                  | 343  | .6   | 349  | 1.9  | 36  | 1200  | 9.2   | -8.5   | 28   | 019                 | 3.5  | 021  | 6.3  | 68  |  |  |  |
| 1500   | 6.4   | 2.5                 | 76   | 320  | 2.2  | 323  | 5.1  | 29  | 1500  | 6.3    | 5.1   | 92                  | 294  | 1.1  | 295  | 2.5  | 31  | 1500  | 9.8   | -11.0  | 22   | 018                 | 3.5  | 012  | 6.3  | 52  |  |  |  |
| 1800   | 5.3   | 3.3                 | 87   | 306  | 1.7  | 327  | 3.8  | 8   | 1800  | 6.4    | ***** | 93                  | 300  | 1.0  | 277  | 2.5  | 10  | 1800  | 9.8   | -11.0  | 22   | 014                 | 2.8  | 018  | 5.7  | 17  |  |  |  |
| 2100   | 3.1   | *****               | 3    | 259  | .9   | 262  | 1.9  | 1   | 2100  | 2.6    | -31.4 | 6                   | 218  | .8   | 266  | 1.9  | 1   | 2100  | 3.3   | -5.1   | 54   | 116                 | 1.0  | 034  | 2.5  | 1   |  |  |  |
| 2400   | 2.1   | *****               | 7    | 209  | .6   | 212  | 1.3  | 1   | 2400  | .8     | -28.6 | 9                   | 163  | 1.0  | 118  | 3.2  | 1   | 2400  | .7    | -4.7   | 67   | 120                 | 1.6  | 126  | 3.2  | 1   |  |  |  |

# R & M CONSULTANTS, INC., SUSITNA HYDROELECTRIC PROJECT

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

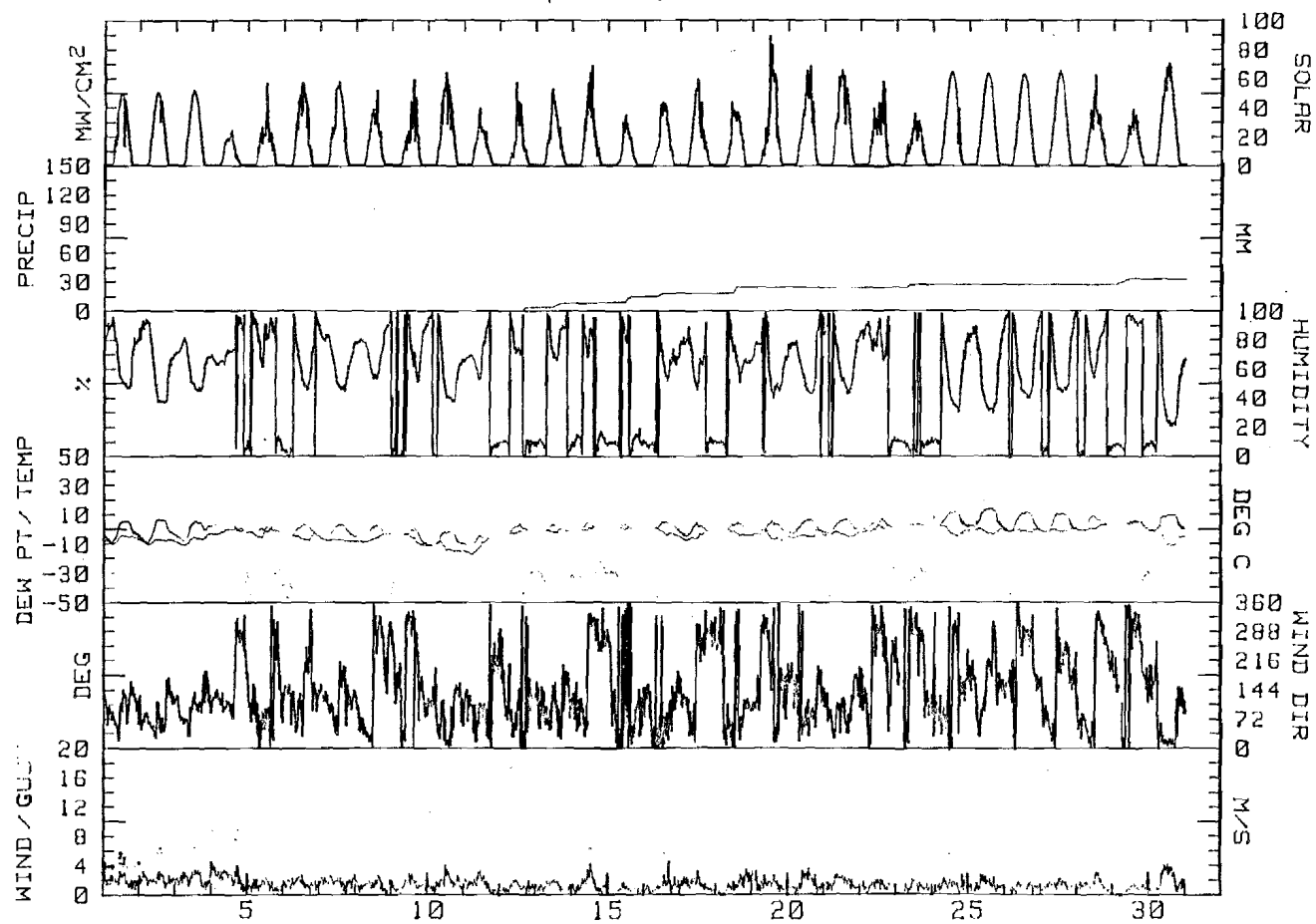
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SQ M | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|-------------------------------------|-----|
| 1     | 5.9                    | -9.0                   | -1.6                   | 103                         | 1.7                         | 2.0                         | 113                         | 5.7                         | SE            | 71              | -6.5                | 0.0          | 3710                                | 1   |
| 2     | 6.7                    | -9.2                   | -1.3                   | 081                         | 1.7                         | 2.1                         | 070                         | 6.3                         | ENE           | 64              | -8.0                | 0.0          | 3963                                | 2   |
| 3     | 5.1                    | -8.0                   | -1.5                   | 103                         | 1.9                         | 2.2                         | 109                         | 6.3                         | ESE           | 62              | -7.3                | 0.0          | 4068                                | 3   |
| 4     | 4.6                    | -2.5                   | 1.1                    | 123                         | 1.3                         | 2.5                         | 281                         | 10.2                        | ESE           |                 |                     | 0.0          | 1690                                | 4   |
| 5     | 1.6                    | -3.1                   | -.8                    | 084                         | .8                          | 1.2                         | 096                         | 3.8                         | E             |                 |                     | .2           | 2505                                | 5   |
| 6     | 3.5                    | -5.4                   | -1.0                   | 128                         | 1.0                         | 1.6                         | 127                         | 5.1                         | SE            |                 |                     | .2           | 4010                                | 6   |
| 7     | 3.6                    | -5.4                   | -.9                    | 121                         | 1.4                         | 1.8                         | 110                         | 4.4                         | ESE           | 67              | -7.3                | 0.0          | 4040                                | 7   |
| 8     | 2.6                    | -5.9                   | -1.7                   | 352                         | .5                          | 1.4                         | 328                         | 4.4                         | NE            |                 |                     | 0.0          | 2923                                | 8   |
| 9     | .5                     | -10.8                  | -5.2                   | 304                         | .4                          | 1.3                         | 323                         | 5.1                         | NW            |                 |                     | .2           | 2888                                | 9   |
| 10    | -1.2                   | -12.3                  | -6.8                   | 075                         | 1.1                         | 1.7                         | 011                         | 6.3                         | ESE           |                 |                     | 0.0          | 4403                                | 10  |
| 11    | -4.5                   | -12.3                  | -8.4                   | 096                         | 1.2                         | 1.5                         | 061                         | 6.3                         | E             |                 |                     | 0.0          | 2380                                | 11  |
| 12    | 3.4                    | -5.9                   | -1.3                   | 088                         | .6                          | 1.0                         | 062                         | 4.4                         | ESE           |                 |                     | 3.4          | 2445                                | 12  |
| 13    | 3.8                    | -3.1                   | .4                     | 105                         | .9                          | 1.2                         | 102                         | 4.4                         | ESE           |                 |                     | 4.0          | 3228                                | 13  |
| 14    | 4.4                    | -2.3                   | 1.1                    | 338                         | .5                          | 1.4                         | 329                         | 6.3                         | NW            |                 |                     | .8           | 3470                                | 14  |
| 15    | 3.4                    | -1.3                   | 1.1                    | 027M                        | .4M                         | .7M                         | 005M                        | 3.2M                        | N(M)          |                 |                     | 6.0          | 1970                                | 15  |
| 16    | 5.1                    | -1.8                   | 1.7                    | 077                         | .7                          | 1.2                         | 029                         | 7.6                         | NNE           |                 |                     | 3.2          | 3108                                | 16  |
| 17    | 4.6                    | -5.2                   | -.3                    | 115                         | .0                          | 1.5                         | 251                         | 5.7                         | W             |                 |                     | 0.0          | 3660                                | 17  |
| 18    | 5.0                    | -2.7                   | 1.2                    | 073                         | .9                          | 1.3                         | 054                         | 7.0                         | ESE           |                 |                     | 6.2          | 3018                                | 18  |
| 19    | 6.1                    | -1.7                   | 2.2                    | 103                         | .2                          | 1.6                         | 097                         | 7.0                         | ESE           |                 |                     | 0.0          | 4625                                | 19  |
| 20    | 6.8                    | -3.1                   | 1.9                    | 097                         | 1.2                         | 1.6                         | 054                         | 7.6                         | E             |                 |                     | 0.0          | 4563                                | 20  |
| 21    | 7.6                    | -3.3                   | 2.2                    | 094                         | 1.4                         | 1.7                         | 100                         | 5.1                         | ESE           |                 |                     | 0.0          | 5300                                | 21  |
| 22    | 7.2                    | -.6                    | 3.3                    | 282                         | .3                          | 1.2                         | 287                         | 3.8                         | WNW           |                 |                     | .4           | 3653                                | 22  |
| 23    | 4.3                    | 0.0                    | 2.2                    | 306M                        | .4M                         | .9M                         | 323M                        | 4.4M                        | WNW(M)        |                 |                     | 3.0          | 2600                                | 23  |
| 24    | 12.1                   | .9                     | 6.5                    | 083                         | .5                          | 1.3                         | 047                         | 5.7                         | ENE           |                 |                     | 0.0          | 5655                                | 24  |
| 25    | 14.3                   | .5                     | 7.4                    | 152                         | .7                          | 1.4                         | 099                         | 5.7                         | S             | 52              | -1.1                | 0.0          | 5638                                | 25  |
| 26    | 12.2                   | -1.6                   | 5.3                    | 245                         | .4                          | 1.1                         | 317                         | 3.8                         | SSE           |                 |                     | 0.0          | 5618                                | 26  |
| 27    | 11.1                   | -2.3                   | 4.4                    | 175                         | .2                          | 1.3                         | 188                         | 5.1                         | E             |                 |                     | 0.0          | 5708                                | 27  |
| 28    | 9.4                    | -1.4                   | 4.0                    | 358                         | .6                          | 1.4                         | 323                         | 5.1                         | ENE           |                 |                     | 0.0          | 3845                                | 28  |
| 29    | 6.9                    | .6                     | 3.8                    | 271M                        | .3M                         | .7M                         | 118M                        | 3.2M                        | S(M)          |                 |                     | 5.6          | 2908                                | 29  |
| 30    | 10.5                   | -1.6                   | 4.5                    | 034                         | 1.3                         | 1.8                         | 021                         | 6.3                         | NNE           |                 |                     | 0.0          | 6235                                | 30  |
| MONTH | 14.3                   | -12.3                  | .8                     | 090M                        | .6M                         | 1.5M                        | 281M                        | 10.2M                       | ESE(M)        | M               | M                   | 33.2         | 113821                              |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 5.1  
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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



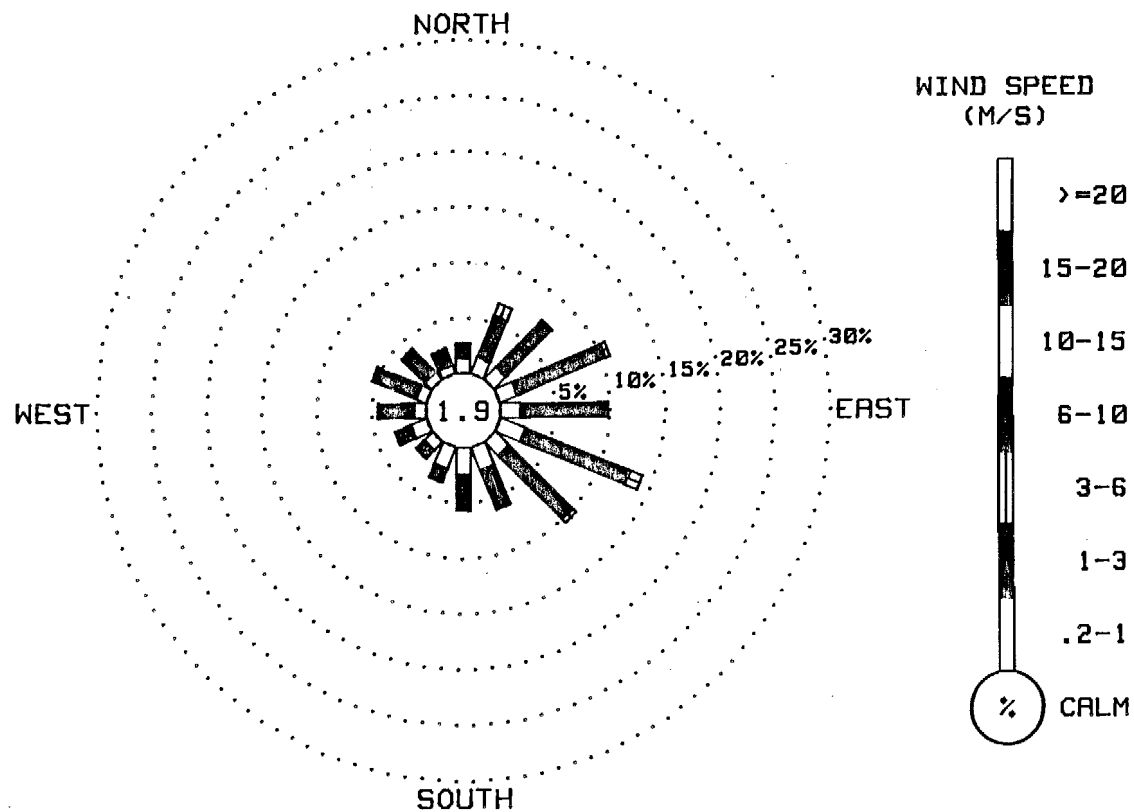
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING April, 1983

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | 1.37             | 1.16             | .14              | 0.00              | 0.00               | 0.00               | 0.00                  | 2.68   |
| NNE       | 1.62             | 3.95             | 1.16             | 0.00              | 0.00               | 0.00               | 0.00                  | 6.73   |
| NE        | 1.55             | 5.81             | .04              | 0.00              | 0.00               | 0.00               | 0.00                  | 7.40   |
| ENE       | 1.76             | 8.56             | .46              | 0.00              | 0.00               | 0.00               | 0.00                  | 10.78  |
| E         | 1.87             | 7.58             | .35              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.80   |
| ESE       | 2.50             | 10.22            | 1.23             | 0.00              | 0.00               | 0.00               | 0.00                  | 13.95  |
| SE        | 1.80             | 8.14             | .46              | 0.00              | 0.00               | 0.00               | 0.00                  | 10.39  |
| SSE       | 2.26             | 3.81             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 6.06   |
| S         | 2.47             | 3.2              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.67   |
| SSW       | 2.11             | 1.23             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 3.35   |
| SW        | 1.09             | .99              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.08   |
| WSW       | 1.62             | 1.48             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 3.10   |
| W         | 1.13             | 3.24             | .04              | 0.00              | 0.00               | 0.00               | 0.00                  | 4.40   |
| WNW       | 1.02             | 4.12             | .21              | 0.00              | 0.00               | 0.00               | 0.00                  | 5.36   |
| NW        | .92              | 2.78             | .18              | 0.00              | 0.00               | 0.00               | 0.00                  | 3.88   |
| NNW       | .85              | 1.44             | .14              | 0.00              | 0.00               | 0.00               | 0.00                  | 2.43   |
| CALM      |                  |                  |                  |                   |                    |                    |                       | 1.94   |
| TOTAL     | 25.93            | 67.72            | 4.40             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2838 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



WIND ROSE PLOT

## R &amp; M CONSULTANTS, INC.

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION

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  | 0.0  | 1  |
| 2    | .4   | .4   | .6   | .6   | .8   | .4   | .4   | .4   | .4   | .6   | .6   | .2   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | .2   | .2   | 0.0  | 0.0  | .2   | 0.0  | .2   | 0.0  | 2  |
| 3    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 1.6  | 0.0  | .2   | .2   | 0.0  | 0.0  | 0.0  | 0.0  | .2   | 0.0  | 0.0  | 6.0  | 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  | 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  | 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  | 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    | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 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  | 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  | .2   | .6   | .4   | .6   | .2   | .2   | 0.0  | 16 |
| 17   | .2   | .2   | 0.0  | 0.0  | 0.0  | .2   | .4   | .2   | .2   | .2   | 0.0  | .2   | 0.0  | 0.0  | 0.0  | 0.0  | .8   | 0.0  | .2   | .4   | .8   | .2   | .2   | 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  | .2   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 18 |
| 19   | 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  | 0.0  | 0.0  | 0.0  | 0.0  | .2   | 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  | 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  | 0.0  | 21 |
| 22   | 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  | .6   | .4   | 0.0  | 0.0  | .2   | 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  | .8   | .2   | 0.0  | 0.0  | 0.0  | 0.0  | .2   | 0.0  | 23 |
| 24   | 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  | 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  | 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  | .2   | 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  | .8   | 1.2  | 2.6  | .4   | .2   | 0.0  | .2   | 0.0  | .4   | .2   | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 0.0  | 31 |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING May, 1983

DAY 01

DAY 02

DAY 03

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST | MAX.  |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | 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 | -1.9  | -4.3  | 84   | 081  | 1.5  | 078  | 3.2  | 1   | 0300 | 1.0   | ***** | 9    | 140  | .6   | 112  | 1.9  | 1    | 0300 | .1    | ***** | 7  | 155  | .1   | 210  | 1.3  | 1   |
| 0600 | -.2   | -3.9  | 76   | 070  | 1.4  | 069  | 2.5  | 17  | 0600 | 1.6   | ***** | 6    | 082  | .2   | 120  | 1.3  | 8    | 0600 | .9    | ***** | 5  | 249  | .2   | 206  | 1.3  | 6   |
| 0900 | 7.0   | -3.0  | 49   | 043  | 1.3  | 090  | 4.4  | 48  | 0900 | 2.6   | ***** | 2    | 359  | .4   | 332  | 1.3  | 15   | 0900 | 1.9   | -39.7 | 2  | 297  | .9   | 271  | 3.2  | 28  |
| 1200 | 10.2  | -3.6  | 38   | 112  | 2.3  | 091  | 5.1  | 62  | 1200 | 3.5   | -34.3 | 4    | 317  | .6   | 026  | 2.5  | 29   | 1200 | 2.6   | 2.3   | 98 | 289  | 1.6  | 281  | 3.2  | 31  |
| 1500 | 10.4  | -4.5  | 35   | 085  | 1.9  | 052  | 5.1  | 41  | 1500 | 5.1   | 4.0   | 93   | 324  | .9   | 300  | 3.2  | 21   | 1500 | 4.5   | 2.0   | 84 | 327  | 1.4  | 335  | 3.8  | 24  |
| 1800 | 8.9   | -3.9  | 41   | 074  | .7   | 060  | 3.2  | 8   | 1800 | 3.4   | ***** | 97   | 284  | .6   | 324  | 2.5  | 6    | 1800 | 4.5   | ***** | 61 | 313  | .5   | 318  | 3.2  | 10  |
| 2100 | 4.3   | 2.1   | 86   | 262  | .9   | 238  | 2.5  | 1   | 2100 | .5    | ***** | 9    | 300  | 1.5  | 288  | 3.8  | 1    | 2100 | 1.5   | .5    | 93 | 141  | .3   | 120  | 1.9  | 1   |
| 2400 | 2.1   | ***** | 8    | 257  | 1.0  | 292  | 3.2  | 1   | 2400 | .3    | ***** | 7    | 272  | .8   | 291  | 3.2  | 1    | 2400 | -.2   | ***** | 98 | 107  | .8   | 129  | 1.9  | 1   |

DAY 04

DAY 05

DAY 06

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST | MAX.  |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW  |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW  |
| 0300 | -.5   | ***** | 2    | 099  | .7   | 103  | 2.5  | 1   | 0300 | .2    | ***** | 8    | 210  | .6   | 208  | 1.9  | 1    | 0300 | -.8   | -1.7  | 94 | 121  | 1.0  | 110  | 2.5  | 1   |
| 0600 | .6    | ***** | 99   | 066  | .9   | 084  | 1.9  | 15  | 0600 | 2.5   | ***** | 96   | 193  | .6   | 208  | 1.9  | 11   | 0600 | .5    | ***** | 88 | 092  | 1.3  | 122  | 2.5  | 17  |
| 0900 | 5.1   | .5    | 72   | 053  | 1.2  | 103  | 5.7  | 33  | 0900 | 6.5   | -1.4  | 57   | 075  | 1.6  | 089  | 6.3  | 67   | 0900 | 7.5   | -.4   | 57 | 055  | 1.1  | 106  | 3.8  | 52  |
| 1200 | 6.4   | -.5   | 61   | 061  | 1.8  | 044  | 5.1  | 32  | 1200 | 6.7   | -2.2  | 53   | 078  | 2.3  | 092  | 5.7  | 33   | 1200 | 8.8   | -2.6  | 45 | 044  | 2.3  | 027  | 6.3  | 75  |
| 1500 | 7.2   | -1.0  | 56   | 047  | 2.9  | 023  | 6.3  | 55  | 1500 | 8.4   | -3.9  | 42   | 027  | 2.3  | 016  | 6.3  | 26   | 1500 | 8.6   | -2.7  | 45 | 026  | 3.2  | 020  | 7.6  | 35  |
| 1800 | 6.0   | -.0   | 65   | 056  | 2.4  | 051  | 5.7  | 15  | 1800 | 6.3   | -2.6  | 53   | 027  | 1.1  | 051  | 5.1  | 12   | 1800 | 8.3   | -1.8  | 49 | 040  | 3.1  | 026  | 7.6  | 21  |
| 2100 | 2.2   | .2    | 87   | 092  | 1.2  | 043  | 4.4  | 1   | 2100 | 2.3   | -1.1  | 78   | 204  | 1.1  | 160  | 2.5  | 1    | 2100 | 3.0   | -.6   | 77 | 082  | 1.0  | 070  | 4.4  | 1   |
| 2400 | 1.1   | ***** | 98   | 186  | 1.1  | 189  | 1.9  | 1   | 2400 | .6    | -1.3  | 87   | 139  | 1.1  | 132  | 2.5  | 1    | 2400 | -.1   | ***** | 97 | 176  | 1.3  | 180  | 1.9  | 1   |

DAY 07

DAY 08

DAY 09

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST | MAX.  |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW  |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW  |
| 0300 | - .8  | ***** | 0    | 122  | .8   | 127  | 2.5  | 1   | 0300 | - .8  | ***** | 93   | 133  | .9   | 132  | 3.2  | 1    | 0300 | .1    | ***** | 3  | 112  | .4   | 055  | 2.5  | 1   |
| 0600 | 1.1   | - .4  | 90   | 075  | .9   | 104  | 3.8  | 18  | 0600 | 1.0   | -1.1  | 86   | 090  | 1.3  | 086  | 3.2  | 17   | 0600 | 3.3   | 1.3   | 87 | 023  | .7   | 039  | 3.2  | 22  |
| 0900 | 8.3   | -1.0  | 52   | 036  | 1.3  | 048  | 3.2  | 52  | 0900 | 9.2   | -1.0  | 49   | 043  | 1.6  | 044  | 3.2  | 54   | 0900 | 9.3   | ***** | 64 | 033  | 1.0  | 036  | 2.5  | 30  |
| 1200 | 10.7  | -2.1  | 41   | 018  | 2.2  | 018  | 5.7  | 75  | 1200 | 11.9  | -2.1  | 38   | 182  | .5   | 174  | 3.8  | 70   | 1200 | 9.7   | 2.4   | 60 | 321  | 1.9  | 332  | 5.1  | 62  |
| 1500 | 11.1  | -2.8  | 38   | 017  | 4.0  | 016  | 6.3  | 55  | 1500 | 13.5  | -2.2  | 34   | 212  | 1.9  | 227  | 4.4  | 57   | 1500 | 11.7  | 1.6   | 50 | 279  | 1.3  | 314  | 5.7  | 51  |
| 1800 | 10.5  | -3.3  | 38   | 017  | 3.3  | 009  | 6.3  | 16  | 1800 | 11.9  | -2.8  | 36   | 279  | 1.8  | 295  | 3.8  | 20   | 1800 | 10.3  | .6    | 51 | 230  | 1.4  | 227  | 3.8  | 21  |
| 2100 | 4.0   | -1.3  | 68   | 110  | .7   | 027  | 4.4  | 1   | 2100 | 4.5   | - .3  | 71   | 233  | .8   | 231  | 3.8  | 1    | 2100 | 5.1   | ***** | 82 | 182  | 1.0  | 217  | 2.5  | 1   |
| 2400 | .3    | ***** | 92   | 137  | .9   | 098  | 2.5  | 1   | 2400 | 1.5   | ***** | 98   | 176  | 1.1  | 184  | 2.5  | 1    | 2400 | 3.2   | 2.6   | 96 | 163  | 1.0  | 121  | 2.5  | 1   |

# R & M CONSULTANTS, INC.

## SUSTITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING May, 1983

### DAY 10

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 2.0  | ***** | 2  | 185 | .5  | 144 | 1.9 | 1  |
| 0600 | 4.3  | ***** | 90 | 188 | .1  | 140 | 1.3 | 22 |
| 0900 | 8.8  | 1.3   | 59 | 348 | .9  | 345 | 2.5 | 57 |
| 1200 | 9.8  | -1.6  | 45 | 229 | 1.5 | 215 | 4.4 | 68 |
| 1500 | 10.4 | -4.5  | 35 | 251 | 1.8 | 273 | 5.7 | 36 |
| 1800 | 10.8 | -5.4  | 32 | 265 | 1.2 | 241 | 3.8 | 18 |
| 2100 | 3.8  | -3.7  | 58 | 195 | .4  | 275 | 1.9 | 1  |
| 2400 | 1.5  | ***** | 76 | 162 | 1.0 | 151 | 1.9 | 1  |

### DAY 11

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | -5   | ***** | 94 | 158 | .7  | 173 | 1.9 | 1  |
| 0600 | 1.5  | -1.2  | 82 | 066 | .9  | 087 | 2.5 | 20 |
| 0900 | 9.5  | ***** | 44 | 038 | .9  | 035 | 2.5 | 53 |
| 1200 | 11.1 | -2.5  | 39 | 271 | .2  | 201 | 3.8 | 71 |
| 1500 | 12.8 | -4.0  | 31 | 214 | 1.7 | 210 | 3.8 | 52 |
| 1800 | 11.1 | -3.2  | 37 | 262 | 1.3 | 307 | 4.4 | 13 |
| 2100 | 6.7  | -1.4  | 56 | 235 | 1.0 | 295 | 3.2 | 1  |
| 2400 | 5.4  | -.8   | 64 | 207 | 1.1 | 193 | 2.5 | 1  |

### DAY 12

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 3.1  | ***** | 80 | 177 | .9  | 183 | 1.9 | 1  |
| 0600 | 4.2  | .7    | 78 | 056 | .3  | 041 | 2.5 | 18 |
| 0900 | 9.8  | .1    | 51 | 068 | 1.5 | 127 | 7.0 | 50 |
| 1200 | 10.2 | -1    | 49 | 079 | 2.5 | 045 | 6.3 | 30 |
| 1500 | 9.9  | .2    | 51 | 051 | 1.7 | 042 | 5.1 | 28 |
| 1800 | 10.2 | .8    | 52 | 019 | 2.5 | 018 | 5.7 | 11 |
| 2100 | 7.7  | 1.6   | 65 | 143 | .9  | 145 | 3.2 | 1  |
| 2400 | 6.0  | 2.1   | 76 | 139 | 1.5 | 134 | 3.2 | 1  |

### DAY 13

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 5.2  | 2.7   | 84 | 122 | 1.2 | 144 | 2.5 | 1  |
| 0600 | 5.4  | ***** | 84 | 072 | .6  | 060 | 2.5 | 15 |
| 0900 | 10.8 | 2.4   | 56 | 029 | 1.2 | 024 | 2.5 | 55 |
| 1200 | 12.5 | 2.1   | 49 | 296 | 1.5 | 286 | 3.8 | 48 |
| 1500 | 12.7 | 1.0   | 45 | 282 | 1.5 | 265 | 3.8 | 29 |
| 1800 | 11.6 | ***** | 49 | 295 | 1.4 | 287 | 3.2 | 7  |
| 2100 | 7.7  | 1.6   | 65 | 184 | .7  | 259 | 2.5 | 1  |
| 2400 | 5.1  | ***** | 79 | 160 | .9  | 167 | 1.9 | 1  |

### DAY 14

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 4.1  | 2.0   | 86 | 174 | .6  | 170 | 1.9 | 1  |
| 0600 | 5.1  | ***** | 88 | 192 | .4  | 185 | 1.9 | 11 |
| 0900 | 9.6  | 3.8   | 67 | 344 | .7  | 341 | 2.5 | 27 |
| 1200 | 11.2 | 3.8   | 60 | 323 | 1.7 | 294 | 3.8 | 50 |
| 1500 | 11.9 | 2.1   | 51 | 264 | 1.1 | 296 | 3.8 | 32 |
| 1800 | 10.9 | 3.7   | 61 | 242 | 1.5 | 202 | 3.8 | 20 |
| 2100 | 7.4  | 3.5   | 76 | 275 | 1.2 | 303 | 4.4 | 1  |
| 2400 | 4.6  | ***** | 99 | 184 | 1.1 | 237 | 1.9 | 1  |

### DAY 15

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 4.7  | ***** | 2  | 186 | .8  | 143 | 1.9 | 1  |
| 0600 | 4.8  | ***** | 0  | 187 | .4  | 179 | 1.9 | 4  |
| 0900 | 6.8  | 5.3   | 90 | 299 | .8  | 339 | 3.2 | 14 |
| 1200 | 9.4  | 4.8   | 73 | 320 | 1.4 | 299 | 3.8 | 58 |
| 1500 | 11.7 | 4.7   | 62 | 307 | 1.8 | 300 | 5.1 | 59 |
| 1800 | 11.0 | 2.6   | 56 | 287 | 1.5 | 286 | 5.1 | 15 |
| 2100 | 6.6  | 3.4   | 80 | 222 | 1.0 | 244 | 2.5 | 1  |
| 2400 | 2.6  | -44.4 | 0  | 154 | 1.1 | 175 | 1.9 | 1  |

### DAY 16

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | .3   | ***** | 7  | 123 | .7  | 138 | 2.5 | 1  |
| 0600 | 2.7  | ***** | 98 | 085 | .9  | 091 | 3.2 | 12 |
| 0900 | 9.9  | -.1   | 50 | 099 | 1.6 | 113 | 4.4 | 54 |
| 1200 | 12.4 | .1    | 43 | 050 | 1.8 | 024 | 5.7 | 57 |
| 1500 | 9.6  | ***** | 61 | 349 | 1.1 | 056 | 6.3 | 8  |
| 1800 | 6.9  | ***** | 87 | 267 | .8  | 329 | 3.8 | 6  |
| 2100 | 4.3  | ***** | 9  | 266 | .9  | 258 | 2.5 | 1  |
| 2400 | 3.4  | -26.7 | 9  | 142 | .6  | 093 | 2.5 | 1  |

### DAY 17

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |     |       |    |     |     |     |     |    |
|------|-----|-------|----|-----|-----|-----|-----|----|
| 0300 | 2.8 | -28.4 | 8  | 116 | 2.0 | 113 | 4.4 | 1  |
| 0600 | 3.1 | ***** | 10 | 077 | .7  | 120 | 3.2 | 7  |
| 0900 | 5.7 | -32.7 | 4  | 330 | .6  | 297 | 2.5 | 31 |
| 1200 | 6.6 | 6.3   | 98 | 314 | 1.4 | 305 | 3.8 | 34 |
| 1500 | 7.3 | 6.4   | 94 | 310 | 1.9 | 325 | 5.1 | 26 |
| 1800 | 3.7 | -30.6 | 6  | 293 | .8  | 294 | 4.4 | 4  |
| 2100 | 3.3 | ***** | 8  | 226 | .5  | 311 | 2.5 | 1  |
| 2400 | 3.5 | ***** | 4  | 138 | .8  | 092 | 2.5 | 1  |

### DAY 18

| HOUR       | DEW      | WIND   | WIND | GUST MAX. |
|------------|----------|--------|------|-----------|
| NDNG TEMP. | POINT RH | DIR.   | SPD. | DIR.      |
| DEG C      | DEG C    | % DEG. | M/S  | DEG. M/S  |

|      |     |       |    |     |     |     |     |    |
|------|-----|-------|----|-----|-----|-----|-----|----|
| 0300 | 3.4 | -43.9 | 0  | 179 | .9  | 187 | 2.5 | 1  |
| 0600 | 3.6 | ***** | 7  | 189 | .7  | 172 | 1.9 | 10 |
| 0900 | 5.8 | 2.5   | 79 | 323 | .8  | 274 | 4.4 | 44 |
| 1200 | 7.5 | 1.6   | 66 | 262 | 1.7 | 277 | 5.1 | 68 |
| 1500 | 7.0 | 2.9   | 75 | 310 | 2.6 | 320 | 5.7 | 21 |
| 1800 | 6.5 | 4.3   | 86 | 331 | .9  | 247 | 5.7 | 11 |
| 2100 | 4.2 | 3.7   | 97 | 094 | .5  | 035 | 3.2 | 1  |
| 2400 | 2.7 | ***** | 5  | 127 | .7  | 109 | 1.9 | 1  |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING May, 1983

DAY 19

DAY 20

DAY 21

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MM   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MM   |
| 0300 | 1.7   | ***** | 7    | 109  | .9   | 120  | 2.5  | 1    | 0300 | 4.3   | -35.8 | 3    | 172  | .5   | 112  | 2.5  | 1    |
| 0600 | 2.5   | -31.5 | 6    | 064  | .6   | 045  | 2.5  | 10   | 0600 | 5.5   | 3.5   | 87   | 271  | 1.2  | 308  | 3.8  | 22   |
| 0900 | 8.0   | 5.1   | 82   | 010  | .9   | 038  | 2.5  | 22   | 0900 | 8.6   | 4.3   | 74   | 329  | 2.1  | 347  | 5.1  | 59   |
| 1200 | 9.5   | -4    | 50   | 309  | 1.1  | 323  | 3.8  | 53   | 1200 | 11.5  | 3.8   | 59   | 298  | 2.3  | 287  | 6.3  | 35   |
| 1500 | 10.5  | 1.1   | 52   | 255  | 1.6  | 283  | 5.1  | 60   | 1500 | 13.8  | -0    | 39   | 317  | 3.2  | 309  | 7.0  | 58   |
| 1800 | 10.8  | 1.6   | 53   | 243  | 2.0  | 225  | 5.7  | 24   | 1800 | 13.0  | -1.1  | 38   | 295  | 2.7  | 306  | 7.0  | 19   |
| 2100 | 6.6   | 4.7   | 88   | 205  | .7   | 238  | 3.8  | 1    | 2100 | 8.8   | ***** | 55   | 248  | .7   | 311  | 5.7  | 1    |
| 2400 | 5.4   | 5.1   | 98   | 124  | 1.3  | 146  | 3.2  | 1    | 2400 | 8.0   | 1.4   | 63   | 196  | .5   | 084  | 3.8  | 1    |

DAY 22

DAY 23

DAY 24

| HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW  | WIND  | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|-------|------|------|-------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | GUST | RAD   | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S   | DEG. | M/S  | MW    |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | 3.9   | ***** | 10   | 192  | .3    | 263  | 1.3  | 1     | 0300 | 3.4   | 3.3   | 99   | 216  | .7   | 262  | 2.5  | 1    |
| 0600 | 5.1   | ***** | 3    | 324  | .1    | 096  | 1.3  | 11    | 0600 | 4.3   | 3.7   | 96   | 218  | .4   | 221  | 1.9  | 15   |
| 0900 | ***** | ***** | **   | ***  | ***** | 351M | 4.4  | ***** | 0900 | 7.3   | 2.0   | 69   | 355  | 1.1  | 348  | 3.2  | 60   |
| 1200 | 10.3  | 4.5   | 67   | 328  | 1.1   | 011  | 3.8  | 52    | 1200 | 8.4   | 1.6   | 62   | 231  | .2   | 203  | 3.8  | 35   |
| 1500 | 11.0  | 4.5   | 64   | 309  | 2.3   | 325  | 5.7  | 34    | 1500 | 9.4   | 2.3   | 61   | 334  | 1.2  | 046  | 3.8  | 19   |
| 1800 | 7.6   | 5.2   | 85   | 001  | 1.4   | 315  | 5.7  | 7     | 1800 | 5.8   | 4.7   | 93   | 013  | .6   | 013  | 5.1  | 8    |
| 2100 | 4.3   | ***** | 98   | 197  | .3    | 314  | 3.8  | 1     | 2100 | 4.5   | 4.0   | 97   | 204  | .5   | 271  | 2.5  | 1    |
| 2400 | 3.9   | ***** | 1    | 158  | .8    | 162  | 2.5  | 1     | 2400 | 3.6   | ***** | 97   | 192  | .7   | 215  | 1.9  | 1    |

DAY 25

DAY 26

DAY 27

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | -0.8  | -2.0  | 92   | 133  | .9   | 127  | 2.5  | 2    | 0300 | 5.1   | ***** | 95   | 295  | .9   | 306  | 3.8  | 1    |
| 0600 | 2.6   | .5    | 86   | 061  | .5   | 041  | 2.5  | 21   | 0600 | 5.1   | ***** | 97   | 289  | .5   | 282  | 1.9  | 8    |
| 0900 | 10.1  | 3.0   | 61   | 349  | 1.1  | 314  | 3.8  | 59   | 0900 | 6.5   | 5.1   | 91   | 315  | 1.3  | 318  | 4.4  | 25   |
| 1200 | 13.4  | .3    | 41   | 319  | 1.9  | 354  | 5.1  | 77   | 1200 | 8.2   | 3.9   | 74   | 315  | 1.8  | 275  | 4.4  | 47   |
| 1500 | 13.8  | 1.4   | 43   | 255  | 1.9  | 262  | 6.3  | 38   | 1500 | 11.6  | 1.5   | 50   | 324  | 1.0  | 268  | 4.4  | 48   |
| 1800 | 10.1  | 3.0   | 61   | 280  | 2.5  | 296  | 7.6  | 10   | 1800 | 7.7   | 4.7   | 81   | 088  | .4   | 237  | 5.7  | 6    |
| 2100 | 8.0   | 4.4   | 78   | 303  | 1.4  | 306  | 5.7  | 1    | 2100 | 4.3   | ***** | 93   | 333  | .7   | 295  | 6.3  | 2    |
| 2400 | 6.7   | 4.3   | 85   | 285  | 1.6  | 262  | 4.4  | 1    | 2400 | 2.2   | 1.9   | 98   | 137  | .9   | 093  | 3.2  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING May, 1983

DAY 28

DAY 29

DAY 30

| HOUR                                        | DEW                                         | WIND                                        | WIND                                        | GUST                                        | MAX.                                        | HOUR                                        | DEW                                         | WIND                                        | WIND                                        | GUST                                        | MAX.                                        | HOUR                                        | DEW                                         | WIND                                        | WIND                                        | GUST                                        | MAX.                                        |                                   |                                   |                                    |                                   |                                     |                                    |
|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|-----------------------------------|-------------------------------------|------------------------------------|
| NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD | NDNG TEMP. POINT RH DIR. SPD. DIR. GUST RAD |                                   |                                   |                                    |                                   |                                     |                                    |
| DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | DEG C DEG C % DEG. M/S DEG. M/S MW          | 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 3.6 ***** 97 169 1.2 181 2.5 2         | 0300 6.0 ***** 93 176 1.0 179 1.9 2         | 0300 8.9 ***** 90 154 .7 133 2.5 2          | 0600 9.3 5.9 79 243 .2 182 1.9 25           | 0600 11.7 ***** 80 213 .3 276 1.9 10        | 0600 11.9 8.9 82 065 .8 040 3.2 25          | 0900 12.8 5.8 62 076 1.9 100 5.7 20         | 0900 15.4 7.5 59 079 1.8 075 5.1 43         | 0900 18.4 9.0 54 066 1.6 114 4.4 39         | 1200 13.4 5.1 57 039 1.7 357 5.7 33         | 1200 18.5 7.3 48 080 2.5 063 6.3 40         | 1200 18.6 8.0 50 089 2.5 113 6.3 15         | 1500 15.7 5.0 49 330 1.5 359 5.7 35         | 1500 19.2 5.9 42 079 2.3 085 7.0 34         | 1500 19.5 10.6 56 097 1.4 095 8.9 38        | 1800 15.3 ***** 47 325 1.6 304 5.1 11       | 1800 18.0 6.8 48 085 1.7 086 4.4 14         | 1800 18.1 9.2 56 268 1.5 255 4.4 12         | 2100 12.2 5.2 62 019 .9 026 5.1 2 | 2100 14.8 7.9 63 108 .9 074 3.8 1 | 2100 14.6 8.8 68 235 1.1 250 4.4 1 | 2400 6.8 4.3 84 165 1.3 144 2.5 1 | 2400 10.5 ***** 88 240 .6 256 3.2 1 | 2400 11.9 7.3 73 256 1.2 264 4.4 1 |

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  | MM  |
| 0300 | 9.4   | 7.0   | 85   | 249  | 1.3  | 239  | 3.8  | 2   |
| 0600 | 9.2   | ***** | 85   | 227  | .6   | 223  | 3.2  | 6   |
| 0900 | 7.0   | ***** | 98   | 296  | 1.0  | 303  | 3.2  | 5   |
| 1200 | 9.1   | 8.2   | 94   | 057  | .6   | 048  | 1.9  | 55  |
| 1500 | 9.3   | ***** | 95   | 001  | .7   | 355  | 2.5  | 8   |
| 1800 | 10.1  | ***** | 90   | 265  | .9   | 252  | 4.4  | 12  |
| 2100 | 8.9   | ***** | 95   | 175  | .5   | 157  | 1.9  | 2   |
| 2400 | 6.5   | 5.7   | 95   | 150  | 1.0  | 136  | 3.2  | 1   |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

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

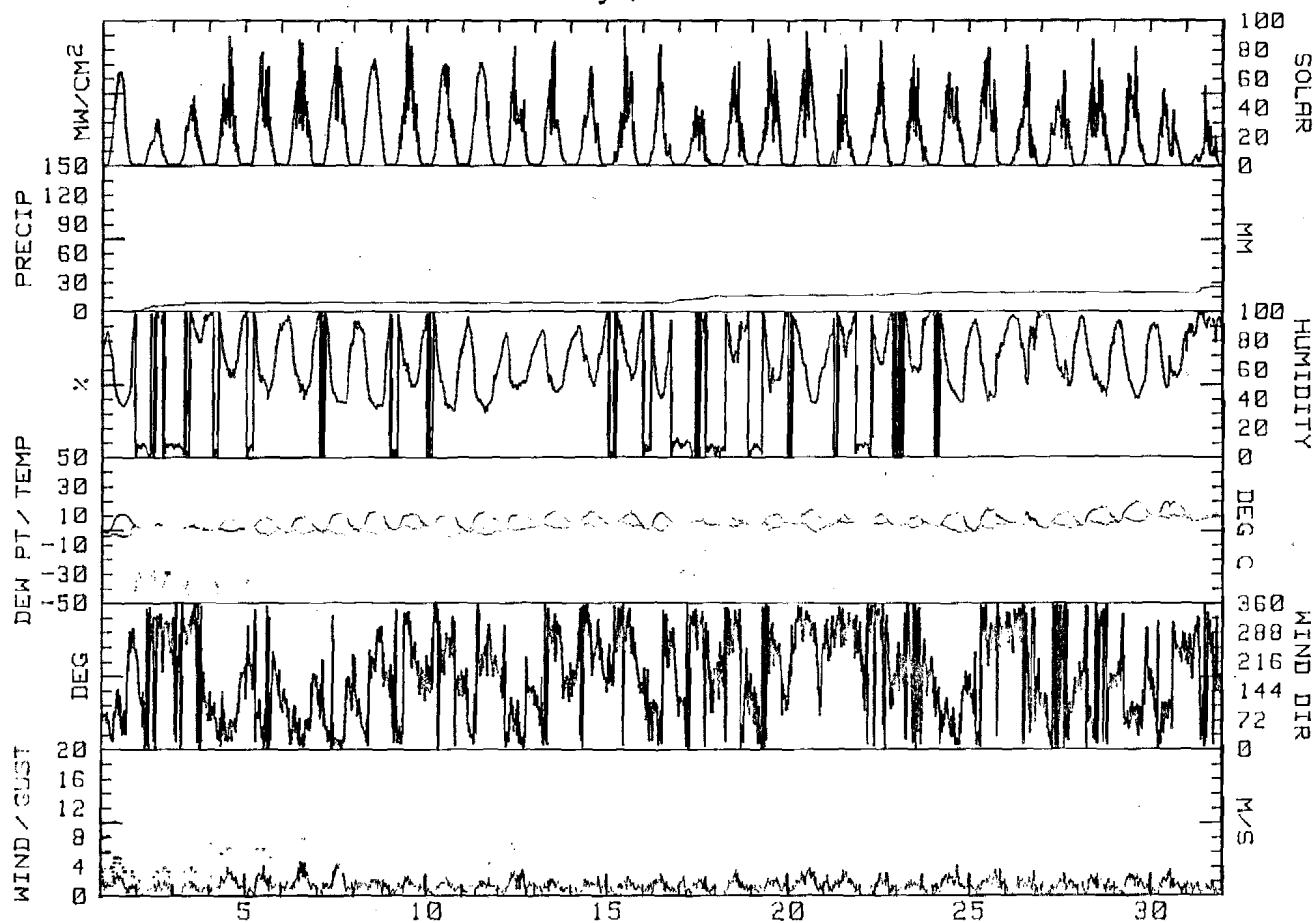
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SGH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 11.0                   | -2.2                   | 4.4                    | 083                         | .8                          | 1.5                         | 071                         | 5.1                         | ENE           |                 |                     | .2           | 5318                               | 1   |
| 2     | 5.1                    | .3                     | 2.7                    | 304                         | .5                          | .9                          | 288                         | 3.8                         | NW            |                 |                     | 6.6          | 2308                               | 2   |
| 3     | 4.9                    | -.2                    | 2.4                    | 305                         | .4                          | .9                          | 335                         | 3.8                         | WNW           |                 |                     | 2.2          | 3498                               | 3   |
| 4     | 7.7                    | -.8                    | 3.5                    | 066                         | 1.3                         | 1.7                         | 023                         | 6.3                         | ENE           |                 |                     | 0.0          | 4658                               | 4   |
| 5     | 9.4                    | -.8                    | 4.3                    | 080                         | .6                          | 1.6                         | 089                         | 6.3                         | SSW           |                 |                     | 0.0          | 4993                               | 5   |
| 6     | 9.7                    | -1.5                   | 4.1                    | 057                         | 1.4                         | 2.0                         | 020                         | 7.6                         | NNE           | 67              | -1.4                | 0.0          | 5523                               | 6   |
| 7     | 11.3                   | -2.1                   | 4.6                    | 035                         | 1.4                         | 1.9                         | 016                         | 6.3                         | NNE           |                 |                     | 0.0          | 6228                               | 7   |
| 8     | 13.5                   | -.8                    | 6.4                    | 185                         | .4                          | 1.5                         | 227                         | 4.4                         | S             | 58              | -1.4                | 0.0          | 6590                               | 8   |
| 9     | 11.9                   | 0.0                    | 6.0                    | 276                         | .3                          | 1.3                         | 314                         | 5.7                         | SSW           |                 |                     | 0.0          | 5373                               | 9   |
| 10    | 11.1                   | 1.5                    | 6.3                    | 236                         | .6                          | 1.1                         | 273                         | 5.7                         | WSW           |                 |                     | 0.0          | 6000                               | 10  |
| 11    | 12.8                   | -1.2                   | 5.8                    | 219                         | .4                          | 1.3                         | 307                         | 4.4                         | SSW           | 50              | -2.1                | 0.0          | 6328                               | 11  |
| 12    | 10.7                   | 2.5                    | 6.6                    | 076                         | 1.0                         | 1.6                         | 127                         | 7.0                         | NNE           | 59              | .6                  | 0.0          | 4688                               | 12  |
| 13    | 13.2                   | 4.5                    | 8.9                    | 291                         | .2                          | 1.2                         | 286                         | 3.8                         | WNW           | 61              | 2.1                 | 0.0          | 4578                               | 13  |
| 14    | 12.9                   | 4.1                    | 8.5                    | 261                         | .6                          | 1.2                         | 303                         | 4.4                         | S             | 67              | 3.5                 | 0.0          | 4460                               | 14  |
| 15    | 13.7                   | 2.2                    | 8.0                    | 272                         | .6                          | 1.2                         | 300                         | 5.1                         | WNW           |                 |                     | 0.0          | 4488                               | 15  |
| 16    | 12.7                   | .3                     | 6.5                    | 070                         | .4                          | 1.3                         | 056                         | 6.3                         | E             |                 |                     | 2.2          | 3993                               | 16  |
| 17    | 8.1                    | 2.6                    | 5.4                    | 328                         | .2                          | 1.3                         | 325                         | 5.1                         | NW            |                 |                     | 4.4          | 2798                               | 17  |
| 18    | 8.6                    | 2.6                    | 5.6                    | 283                         | .5                          | 1.4                         | 320                         | 5.7                         | NW            |                 |                     | .2           | 4253                               | 18  |
| 19    | 11.4                   | 1.2                    | 6.3                    | 236                         | .3                          | 1.4                         | 225                         | 5.7                         | ESE           |                 |                     | .6           | 5040                               | 19  |
| 20    | 14.5                   | 4.3                    | 9.4                    | 299                         | 1.4                         | 1.9                         | 309                         | 7.0                         | NW            |                 |                     | 0.0          | 6095                               | 20  |
| 21    | 10.7                   | 4.3                    | 7.5                    | 294                         | 1.5                         | 1.7                         | 330                         | 6.3                         | NW            |                 |                     | 0.0          | 3325                               | 21  |
| 22    | 11.3M                  | 3.8M                   | 7.6M                   | 322M                        | .6M                         | 1.2M                        | 325M                        | 5.7M                        | NW(M)         |                 |                     | 1.4          | 4111M                              | 22  |
| 23    | 10.5                   | 3.0                    | 6.8                    | 286                         | .2                          | 1.1                         | 013                         | 5.1                         | SW            |                 |                     | 1.2          | 4000                               | 23  |
| 24    | 12.4                   | .9                     | 6.7                    | 077                         | 1.2                         | 1.8                         | 084                         | 6.3                         | ENE           |                 |                     | .2           | 5280                               | 24  |
| 25    | 15.4                   | -.9                    | 7.3                    | 294                         | 1.0                         | 1.7                         | 296                         | 7.6                         | WNW           | 63              | 1.9                 | 0.0          | 5815                               | 25  |
| 26    | 12.7                   | 2.2                    | 7.5                    | 316                         | .6                          | 1.4                         | 295                         | 6.3                         | WNW           | 81              | 3.8                 | .2           | 4008                               | 26  |
| 27    | 12.7                   | 1.1                    | 6.9                    | 049                         | .6                          | 1.4                         | 002                         | 6.3                         | ESE           | 70              | 3.0                 | 0.0          | 4323                               | 27  |
| 28    | 16.3                   | 3.4                    | 9.9                    | 036                         | .4                          | 1.6                         | 100                         | 5.7                         | S             | 63              | 4.8                 | 0.0          | 5090                               | 28  |
| 29    | 20.1                   | 5.1                    | 12.6                   | 094                         | 1.1                         | 1.6                         | 085                         | 7.0                         | ENE           | 57              | 6.6                 | 0.0          | 4790                               | 29  |
| 30    | 19.7                   | 8.5                    | 14.1                   | 105                         | .3                          | 1.5                         | 095                         | 8.9                         | WSW           | 65              | 9.2                 | 0.0          | 3503                               | 30  |
| 31    | 11.9                   | 6.5                    | 9.2                    | 251                         | .3                          | 1.0                         | 252                         | 4.4                         | WNW           | 90              | 7.5                 | 6.0          | 2165                               | 31  |
| MONTH | 20.1M                  | -2.2M                  | 6.8M                   | 004M                        | .2M                         | 1.4M                        | 095M                        | 8.9M                        | WNW(M)        | M               | M                   | 25.4         | 143590M                            |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 5.7  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 5.7  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 6.3  
GUST VEL. AT MAX. GUST PLUS 2 INTERVALS 2.5

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

\*\*\*\* SEE NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



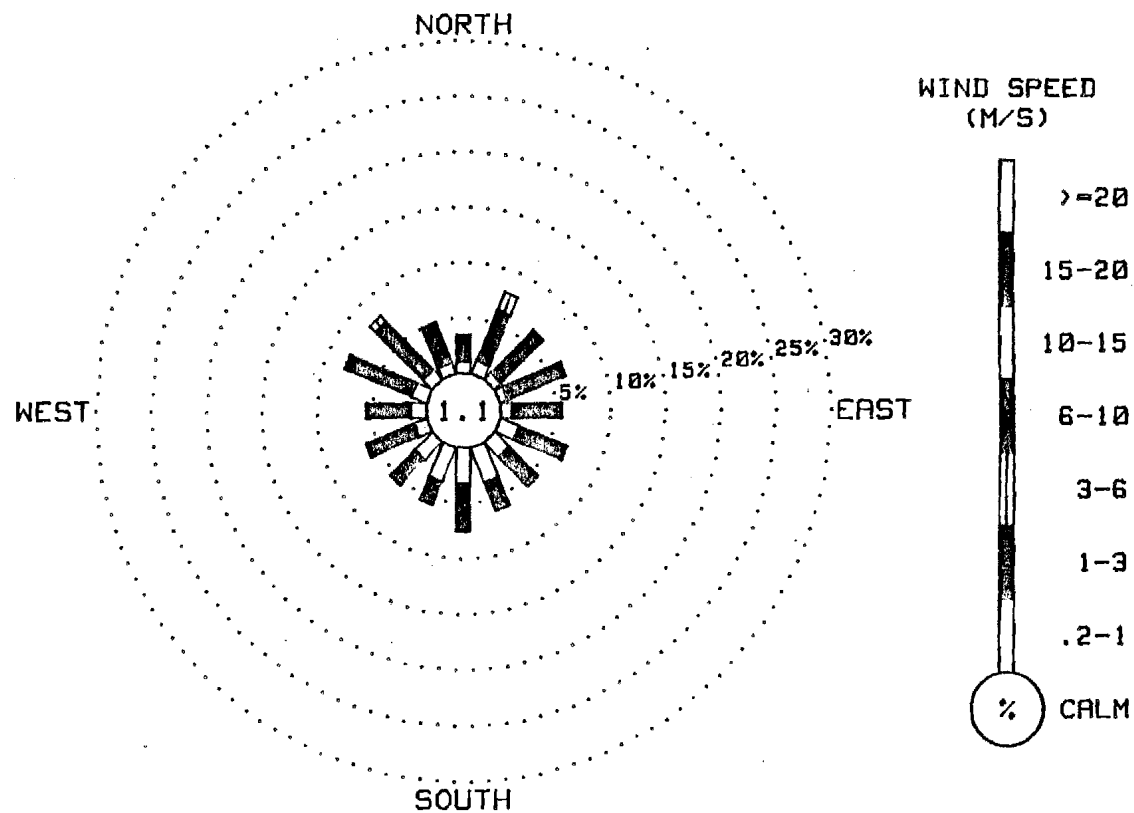
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING May, 1983

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | 1.08             | 2.15             | .24              | 0.00              | 0.00               | 0.00               | 0.00                  | 3.46   |
| NNE       | 1.31             | 4.88             | 1.75             | 0.00              | 0.00               | 0.00               | 0.00                  | 7.94   |
| NE        | .84              | 5.11             | .27              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.22   |
| ENE       | .77              | 5.38             | .27              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.42   |
| E         | 1.08             | 4.24             | .27              | 0.00              | 0.00               | 0.00               | 0.00                  | 5.58   |
| ESE       | 1.88             | 4.54             | .13              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.56   |
| SE        | 1.88             | 3.63             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 5.58   |
| SSE       | 3.36             | 2.72             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 6.09   |
| S         | 3.20             | 4.27             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 7.47   |
| SSW       | 3.30             | 2.22             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.52   |
| SW        | 2.29             | 3.13             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.42   |
| WSW       | 1.28             | 4.68             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.95   |
| W         | 1.45             | 4.04             | .03              | 0.00              | 0.00               | 0.00               | 0.00                  | 5.52   |
| WNW       | 1.55             | 6.26             | .30              | 0.00              | 0.00               | 0.00               | 0.00                  | 8.11   |
| NW        | 1.24             | 6.05             | .77              | 0.00              | 0.00               | 0.00               | 0.00                  | 8.07   |
| NNW       | 1.11             | 3.57             | .30              | 0.00              | 0.00               | 0.00               | 0.00                  | 4.98   |
| CALM      |                  |                  |                  |                   |                    |                    |                       | 1.11   |
| TOTAL     | 27.62            | 66.87            | 4.41             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2973 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



WIND ROSE PLOT

# SUSTINA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING June, 1983

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR ENDING

[illegible]

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING June, 1983

DAY 01

DAY 02

DAY 03

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |
| 0300 | 5.8   | ***** | 94   | 134  | .7   | 117  | 1.9  | 2    | 0300 | 4.3   | ***** | 97   | 202  | .7   | 204  | 1.9  | 1    |
| 0600 | 6.8   | ***** | 96   | 061  | .4   | 057  | 2.5  | 12   | 0600 | 6.6   | ***** | 93   | 275  | .5   | 258  | 1.9  | 14   |
| 0900 | 11.5  | 7.1   | 74   | 327  | 1.5  | 335  | 4.4  | 39   | 0900 | 8.3   | 6.1   | 86   | 297  | 1.1  | 280  | 3.2  | 22   |
| 1200 | 12.7  | 6.1   | 64   | 309  | 2.5  | 308  | 6.3  | 83   | 1200 | 11.7  | 8.2   | 79   | 303  | 1.7  | 304  | 5.1  | 11   |
| 1500 | 15.7  | 5.3   | 50   | 310  | 2.4  | 325  | 5.7  | 62   | 1500 | 10.2  | 7.4   | 83   | 300  | 2.4  | 303  | 5.1  | 20   |
| 1800 | 16.5  | 4.5   | 45   | 294  | 1.9  | 296  | 4.4  | 26   | 1800 | 7.5   | 7.2   | 98   | 289  | 2.2  | 298  | 5.7  | 9    |
| 2100 | 13.0  | ***** | 50   | 274  | 1.6  | 283  | 3.8  | 2    | 2100 | 6.0   | 5.8   | 99   | 290  | 1.7  | 290  | 3.8  | 1    |
| 2400 | 6.8   | 4.3   | 84   | 187  | 1.0  | 209  | 1.9  | 1    | 2400 | 6.0   | 5.4   | 96   | 309  | 1.5  | 307  | 3.8  | 1    |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |      |      |       |      |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST  | RAD   |      |      |       |      |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %     | DEG.  | M/S  | DEG. | M/S  | MW   | DEG C | DEG C | %    | DEG. | M/S   | DEG. | M/S | MW  |     |     |    |
| 0300  | 3.5   | ***** | 96   | 281  | .4   | 287  | 1.9  | 1     | 0300  | 4.4   | ***** | 96   | 136  | .5   | 130  | 1.3   | 2     | 0300 | 6.7  | ***** | 95   | 136 | .9  | 088 | 3.2 | 1  |
| 0600  | 3.8   | ***** | 95   | 246  | .5   | 274  | 1.9  | 7     | 0600  | 6.2   | ***** | 95   | 029  | .4   | 070  | 1.9   | 15    | 0600 | 6.6  | 5.4   | 92   | 121 | .9  | 141 | 2.5 | 8  |
| 0900  | 5.1   | 3.7   | 91   | 291  | .9   | 286  | 2.5  | 13    | 0900  | 8.4   | 6.0   | 85   | 315  | .8   | 354  | 1.9   | 23    | 0900 | 11.6 | 4.2   | 60   | 082 | 1.7 | 067 | 4.4 | 61 |
| 1200  | 6.2   | 4.0   | 86   | 306  | 1.6  | 305  | 3.8  | 18    | 1200  | 11.1  | 6.7   | 74   | 306  | 1.4  | 327  | 3.2   | 40    | 1200 | 14.6 | .3    | 38   | 026 | 1.5 | 355 | 5.1 | 41 |
| 1500  | 7.4   | 5.0   | 85   | 317  | 1.8  | 316  | 4.4  | 22    | 1500  | 12.1  | 6.4   | 68   | 317  | 2.1  | 330  | 5.1   | 39    | 1500 | 13.6 | -1.3  | 36   | 346 | 1.8 | 013 | 6.3 | 32 |
| 1800  | 7.0   | 5.0   | 87   | 316  | 1.7  | 305  | 3.8  | 9     | 1800  | 12.1  | 5.3   | 63   | 323  | 2.1  | 318  | 5.1   | 14    | 1800 | 13.9 | -1.8  | 34   | 016 | 2.5 | 012 | 7.0 | 27 |
| 2100  | 5.7   | ***** | 94   | 279  | .3   | 320  | 1.9  | 1     | 2100  | 8.6   | ***** | 93   | 214  | .5   | 337  | 2.5   | 1     | 2100 | 9.8  | -1.6  | 45   | 026 | 1.8 | 021 | 5.7 | 3  |
| 2400  | 4.8   | ***** | 96   | 194  | .5   | 165  | 1.3  | 1     | 2400  | 6.8   | 6.0   | 95   | 139  | .9   | 113  | 2.5   | 1     | 2400 | 6.7  | .2    | 63   | 142 | 1.2 | 150 | 2.5 | 1  |

DAY 07

DAY 08

DAY 09

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 2.3   | .8    | 90   | 139  | 1.4  | 158  | 3.2  | 3    | 0300  | 5.7   | .3    | 68   | 146  | 1.3  | 166  | 2.5  | 2    |
| 0600  | 7.2   | 3.5   | 77   | 048  | .7   | 026  | 2.5  | 31   | 0600  | 7.6   | 3.3   | 74   | 071  | 1.1  | 096  | 2.5  | 30   |
| 0900  | 12.5  | .5    | 44   | 074  | 1.7  | 058  | 4.4  | 59   | 0900  | 13.6  | .2    | 40   | 041  | 1.4  | 031  | 3.8  | 60   |
| 1200  | 14.6  | .7    | 39   | 343  | 1.2  | 011  | 4.4  | 66   | 1200  | 15.1  | ***** | 36   | 342  | 1.5  | 049  | 3.8  | 27   |
| 1500  | 15.4  | -5.3  | 34   | 300  | 1.7  | 278  | 4.4  | 24   | 1500  | 14.2  | -4.3  | 37   | 312  | 1.4  | 301  | 3.8  | 14   |
| 1800  | 15.3  | -2.3  | 35   | 316  | 1.8  | 320  | 4.4  | 20   | 1800  | 12.9  | .5    | 43   | 007  | 1.4  | 013  | 5.1  | 8    |
| 2100  | 12.7  | -1.7  | 37   | 321  | .8   | 322  | 3.2  | 3    | 2100  | 9.9   | 2.8   | 61   | 049  | 2.1  | 020  | 7.0  | 1    |
| 2400  | 8.8   | 1.5   | 60   | 137  | 1.3  | 136  | 3.2  | 1    | 2400  | 5.8   | 4.4   | 91   | 110  | .6   | 010  | 3.2  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING June, 1983

DAY 10

DAY 11

DAY 12

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      |
|------|-------|-------|------|------|------|------|------|-------|-------|------|------|------|------|------|-------|-------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |
| 0300 | 7.2   | -7    | 57   | 127  | 1.3  | 078  | 0300 | 5.2   | ***** | 96   | 114  | 1.0  | 136  | 0300 | 6.4   | ***** | 94   | 209  | .7   | 188  |
| 0600 | 9.6   | ***** | 65   | 144  | .9   | 125  | 0600 | 6.6   | ***** | 96   | 034  | .6   | 066  | 0600 | 8.9   | 5.3   | 78   | 308  | .5   | 323  |
| 0900 | 11.7  | -1.2  | 41   | 014  | 3.5  | 021  | 0900 | 7.1   | 6.6   | 97   | 307  | 1.4  | 300  | 0900 | 11.9  | 5.6   | 65   | 347  | 1.3  | 338  |
| 1200 | 13.7  | -1.2  | 36   | 042  | 2.6  | 004  | 1200 | 8.3   | 6.9   | 91   | 313  | 1.5  | 304  | 1200 | 13.5  | 4.7   | 55   | 310  | 1.3  | 309  |
| 1500 | 15.2  | -7    | 34   | 035  | 1.2  | 353  | 1500 | 11.6  | 8.5   | 81   | 320  | 1.3  | 296  | 1500 | 13.9  | 3.6   | 50   | 334  | 1.5  | 013  |
| 1800 | 13.6  | .8    | 42   | 024  | 1.9  | 084  | 1800 | 11.3  | 7.3   | 76   | 318  | 2.7  | 323  | 1800 | 14.2  | ***** | 57   | 296  | .6   | 310  |
| 2100 | 9.9   | 3.7   | 65   | 104  | 2.1  | 137  | 2100 | 9.4   | ***** | 85   | 296  | 1.1  | 318  | 2100 | 11.5  | ***** | 56   | 304  | .8   | 257  |
| 2400 | 7.1   | 5.7   | 91   | 132  | 1.2  | 115  | 2400 | 7.4   | ***** | 91   | 175  | .8   | 174  | 2400 | 5.5   | 3.3   | 86   | 172  | .9   | 089  |

DAY 13

DAY 14

DAY 15

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|-------|-------|-------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  |
| 0300  | 5.0   | ***** | 92   | 200  | .5   | 194  | 0300  | 6.5   | ***** | 95   | 198  | .6   | 175  | 0300  | 5.5   | ***** | 97   | 192  | .7   | 224  |
| 0600  | 8.6   | 5.9   | 83   | 004  | .6   | 010  | 0600  | 7.6   | ***** | 93   | 208  | .1   | 172  | 0600  | 8.1   | ***** | 94   | 014  | .0   | 207  |
| 0900  | 13.3  | 4.2   | 54   | 323  | 1.3  | 326  | 0900  | 12.7  | 6.4   | 65   | 026  | 1.3  | 062  | 0900  | 9.0   | ***** | 89   | 341  | .8   | 002  |
| 1200  | 15.3  | 2.7   | 43   | 304  | 1.7  | 257  | 1200  | 13.9  | 6.1   | 59   | 006  | 1.2  | 008  | 1200  | 10.0  | 8.4   | 90   | 328  | 1.1  | 304  |
| 1500  | 14.6  | 4.3   | 50   | 302  | 1.1  | 287  | 1500  | 12.1  | 8.4   | 78   | 288  | .6   | 284  | 1500  | 12.0  | ***** | 91   | 291  | 1.2  | 291  |
| 1800  | 15.9  | 2.9   | 42   | 319  | 1.5  | 336  | 1800  | 13.5  | 5.7   | 59   | 009  | 1.0  | 345  | 1800  | 12.6  | 8.5   | 76   | 318  | 1.7  | 297  |
| 2100  | 11.2  | 5.8   | 69   | 264  | 1.3  | 290  | 2100  | 8.8   | ***** | 96   | 060  | .3   | 007  | 2100  | 10.0  | ***** | 88   | 290  | .7   | 324  |
| 2400  | 7.7   | 5.7   | 87   | 209  | 1.1  | 235  | 2400  | 7.6   | ***** | 99   | 173  | .8   | 150  | 2400  | 7.8   | ***** | 96   | 214  | .7   | 237  |

DAY 16

DAY 17

DAY 18

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      |
|------|-------|-------|------|------|------|------|------|-------|-------|------|------|------|------|------|-------|-------|------|------|------|------|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |
| 0300 | 7.6   | 6.5   | 93   | 221  | .7   | 204  | 0300 | 3.2   | ***** | 97   | 128  | .8   | 138  | 0300 | 5.1   | ***** | 92   | 131  | .7   | 120  |
| 0600 | 8.8   | ***** | 91   | 244  | .4   | 237  | 0600 | 6.7   | 5.5   | 92   | 048  | .8   | 188  | 0600 | 8.7   | 6.1   | 84   | 069  | 1.0  | 204  |
| 0900 | 10.9  | 7.6   | 80   | 298  | 1.4  | 289  | 0900 | 14.4  | 7.3   | 62   | 343  | 1.0  | 316  | 0900 | 19.0  | 6.8   | 45   | 041  | 1.6  | 090  |
| 1200 | 13.2  | 6.4   | 63   | 314  | 2.0  | 316  | 1200 | 16.1  | 3.8   | 44   | 304  | 1.8  | 338  | 1200 | 21.5  | 3.1   | 30   | 055  | 1.8  | 088  |
| 1500 | 15.0  | 5.2   | 52   | 320  | 3.2  | 328  | 1500 | 17.2  | 2.7   | 38   | 313  | 1.4  | 319  | 1500 | 22.7  | 2.1   | 26   | 036  | 1.7  | 033  |
| 1800 | 14.7  | ***** | 52   | 307  | 2.2  | 319  | 1800 | 19.1  | 1.9   | 32   | 254  | .6   | 263  | 1800 | 21.6  | .1    | 24   | 327  | 1.3  | 314  |
| 2100 | 11.2  | 5.8   | 69   | 282  | 1.0  | 311  | 2100 | 15.5  | ***** | 42   | 304  | 1.2  | 311  | 2100 | 18.1  | 4.2   | 40   | 250  | 1.0  | 311  |
| 2400 | 5.3   | ***** | 94   | 161  | 1.0  | 184  | 2400 | 7.7   | ***** | 77   | 162  | .8   | 136  | 2400 | 14.4  | ***** | 59   | 146  | .9   | 235  |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING June, 1983

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 8.5   | ****  | 90   | 148  | .9   | 160  | 2.5  | 3    | 0300  | 4.8   | ****  | 97   | 132  | 1.1  | 151  | 2.5  | 3    |
| 0600  | 13.0  | ****  | 74   | 049  | .8   | 121  | 2.5  | 26   | 0600  | 10.2  | ****  | 90   | 006  | .2   | 152  | 1.9  | 25   |
| 0900  | 14.1  | 9.2   | 72   | 324  | 2.9  | 326  | 5.7  | 34   | 0900  | 14.9  | 8.2   | 64   | 334  | 1.5  | 297  | 3.8  | 61   |
| 1200  | 15.0  | 8.3   | 64   | 322  | 3.3  | 310  | 7.0  | 51   | 1200  | 17.2  | 7.3   | 52   | 321  | 1.6  | 349  | 4.4  | 80   |
| 1500  | 16.9  | 7.8   | 55   | 329  | 3.0  | 333  | 6.3  | 29   | 1500  | 19.5  | 5.8   | 41   | 303  | 2.0  | 290  | 5.1  | 63   |
| 1800  | 13.2  | 11.1  | 87   | 005  | 1.4  | 330  | 4.4  | 11   | 1800  | 19.8  | 6.1   | 41   | 307  | 2.4  | 318  | 5.7  | 32   |
| 2100  | 12.5  | ****  | 90   | 073  | .8   | 049  | 4.4  | 3    | 2100  | 16.2  | 4.5   | 46   | 298  | 1.5  | 318  | 5.1  | 3    |
| 2400  | 6.0   | 5.7   | 98   | 164  | .8   | 146  | 2.5  | 1    | 2400  | 11.3  | 7.8   | 79   | 210  | .9   | 259  | 4.4  | 1    |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 10.2  | 7.8   | 85   | 209  | 1.1  | 244  | 1.9  | 4    | 0300  | 9.7   | ****  | 93   | 197  | .7   | 163  | 1.9  | 2    |
| 0600  | 13.0  | 8.7   | 75   | 321  | .5   | 351  | 3.2  | 27   | 0600  | 12.2  | 8.9   | 80   | 261  | .7   | 317  | 3.2  | 18   |
| 0900  | 15.7  | 8.0   | 60   | 322  | 2.5  | 327  | 5.1  | 60   | 0900  | 12.3  | ****  | 80   | 307  | 1.6  | 311  | 4.4  | 19   |
| 1200  | 18.5  | 9.5   | 52   | 328  | 3.1  | 322  | 6.3  | 73   | 1200  | 17.0  | 10.9  | 67   | 313  | 1.1  | 350  | 3.2  | 47   |
| 1500  | 19.5  | 8.8   | 50   | 320  | 3.1  | 302  | 5.7  | 43   | 1500  | 17.9  | 6.1   | 46   | 328  | 1.9  | 339  | 5.1  | 34   |
| 1800  | 18.5  | 8.5   | 52   | 314  | 3.3  | 319  | 7.0  | 12   | 1800  | 19.3  | 4.1   | 37   | 315  | 2.4  | 321  | 5.1  | 36   |
| 2100  | 17.1  | ****  | 59   | 312  | .9   | 302  | 3.8  | 3    | 2100  | 15.7  | ****  | 50   | 279  | 1.2  | 321  | 4.4  | 3    |
| 2400  | 13.3  | 9.9   | 80   | 174  | .8   | 182  | 1.9  | 1    | 2400  | 11.8  | ****  | 75   | 176  | .8   | 170  | 1.9  | 1    |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 7.7   | ****  | 96   | 159  | .7   | 144  | 2.5  | 3    | 0300  | 10.6  | ****  | 82   | 249  | .9   | 277  | 3.2  | 1    |
| 0600  | 12.0  | 9.4   | 84   | 354  | .4   | 337  | 1.9  | 26   | 0600  | 10.4  | 9.0   | 91   | 267  | .7   | 241  | 2.5  | 10   |
| 0900  | 19.6  | 9.8   | 53   | 009  | 1.2  | 029  | 2.5  | 61   | 0900  | 11.6  | ****  | 92   | 301  | .7   | 318  | 2.5  | 11   |
| 1200  | 24.6  | 5.8   | 30   | 356  | 1.2  | 026  | 3.8  | 75   | 1200  | 14.7  | 10.9  | 78   | 317  | 1.3  | 323  | 3.8  | 39   |
| 1500  | 24.9  | 3.5   | 25   | 300  | 2.7  | 298  | 6.3  | 63   | 1500  | 16.8  | 10.9  | 68   | 311  | 2.3  | 310  | 5.1  | 62   |
| 1800  | 23.8  | 4.6   | 29   | 285  | 2.6  | 290  | 6.3  | 30   | 1800  | 17.4  | 11.1  | 66   | 304  | 3.0  | 299  | 5.7  | 23   |
| 2100  | 18.7  | 6.5   | 45   | 298  | 1.6  | 280  | 4.4  | 2    | 2100  | 12.9  | ****  | 82   | 289  | 1.5  | 287  | 5.1  | 3    |
| 2400  | 12.9  | 6.1   | 63   | 255  | 1.5  | 242  | 5.1  | 1    | 2400  | 8.1   | 7.5   | 96   | 168  | .9   | 133  | 2.5  | 1    |

# SUSTINA HYDROELECTRIC PROJECT

DATA TAKEN DURING June, 1983

DAY 30

|      |      |       |    |     |     |     |     |    |      |      |       |    |     |     |     |     |    |      |      |       |    |     |     |     |     |    |
|------|------|-------|----|-----|-----|-----|-----|----|------|------|-------|----|-----|-----|-----|-----|----|------|------|-------|----|-----|-----|-----|-----|----|
| 0300 | 9.2  | ***** | 96 | 111 | .8  | 113 | 2.5 | 2  | 0300 | 5.7  | 5.4   | 98 | 110 | 1.1 | 118 | 2.5 | 3  | 0300 | 7.6  | ***** | 96 | 160 | .9  | 120 | 1.9 | 3  |
| 0600 | 10.8 | ***** | 95 | 072 | .5  | 100 | 2.5 | 17 | 0600 | 9.7  | 8.3   | 91 | 059 | 1.4 | 082 | 3.2 | 30 | 0600 | 9.5  | ***** | 96 | 054 | .3  | 006 | 1.9 | 14 |
| 0900 | 15.3 | 9.7   | 69 | 027 | 1.0 | 051 | 3.2 | 54 | 0900 | 16.7 | 10.8  | 68 | 022 | 1.5 | 015 | 3.2 | 63 | 0900 | 14.5 | 10.7  | 78 | 333 | 1.0 | 333 | 3.8 | 62 |
| 1200 | 17.7 | 9.9   | 60 | 009 | 1.0 | 023 | 3.8 | 41 | 1200 | 17.0 | 11.1  | 68 | 353 | 1.5 | 340 | 5.7 | 31 | 1200 | 17.5 | 9.7   | 60 | 308 | 2.0 | 325 | 5.1 | 24 |
| 1500 | 11.7 | 10.6  | 93 | 289 | .5  | 086 | 5.1 | 11 | 1500 | 13.6 | 12.0  | 90 | 304 | 1.8 | 326 | 5.1 | 16 | 1500 | 19.3 | 9.2   | 52 | 298 | 2.1 | 290 | 5.1 | 23 |
| 1800 | 12.6 | 11.6  | 94 | 092 | 1.2 | 113 | 3.2 | 14 | 1800 | 11.8 | 10.8  | 94 | 304 | 1.3 | 317 | 3.8 | 10 | 1800 | 20.3 | 8.3   | 46 | 360 | 2.3 | 306 | 5.1 | 26 |
| 2100 | 12.0 | ***** | 95 | 031 | .5  | 016 | 1.9 | 2  | 2100 | 11.0 | ***** | 93 | 289 | 1.0 | 329 | 3.2 | 2  | 2100 | 16.6 | 8.1   | 57 | 259 | 1.4 | 276 | 4.4 | 2  |
| 2400 | 8.1  | 7.0   | 93 | 125 | .9  | 122 | 3.2 | 1  | 2400 | 8.9  | 8.3   | 96 | 162 | .6  | 131 | 1.9 | 1  | 2400 | 13.1 | ***** | 72 | 186 | .9  | 217 | 1.9 | 1  |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

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

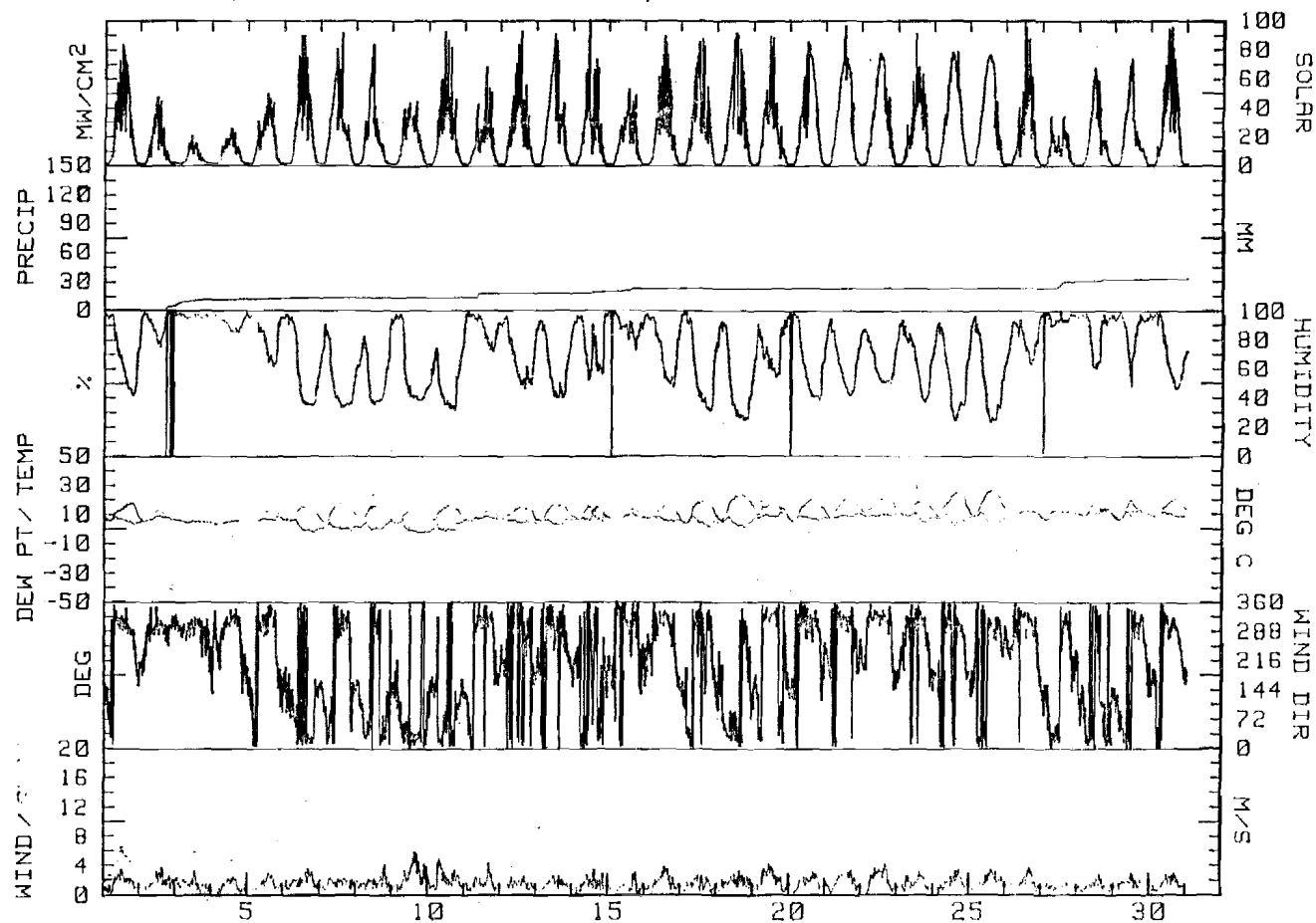
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/50M | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 16.7                   | 5.1                    | 10.9                   | 299                         | 1.0                         | 1.6                         | 308                         | 6.3                         | NW            | 62              | 5.2                 | 0.0          | 6070                               | 1   |
| 2     | 12.8                   | 4.3                    | 8.6                    | 293                         | 1.4                         | 1.5                         | 298                         | 5.7                         | WNW           | 82M             | 2.8M                | 5.0          | 2848                               | 2   |
| 3     | 6.0                    | 4.0                    | 5.0                    | 293                         | 1.3                         | 1.4                         | 321                         | 5.7                         | WNW           | 96              | 4.6                 | 5.8          | 1265                               | 3   |
| 4     | 7.5                    | 3.4                    | 5.5                    | 299                         | .8                          | 1.1                         | 316                         | 4.4                         | NW            | 88              | 4.3                 | .4           | 1958                               | 4   |
| 5     | 12.5                   | 4.4                    | 8.5                    | 314                         | .6                          | 1.2                         | 330                         | 5.1                         | WNW           | 76              | 6.0                 | .8           | 3818                               | 5   |
| 6     | 14.7                   | 5.6                    | 10.2                   | 046                         | .9                          | 1.7                         | 012                         | 7.0                         | NNE           | 54              | 1.0                 | .4           | 5978                               | 6   |
| 7     | 16.8                   | 1.9                    | 9.4                    | 007                         | .4                          | 1.5                         | 058                         | 4.4                         | NW            | 47              | .5                  | 0.0          | 5940                               | 7   |
| 8     | 15.3                   | 4.6                    | 10.0                   | 034                         | .8                          | 1.6                         | 020                         | 7.0                         | NNE           | 55              | 1.4                 | .2           | 4165                               | 8   |
| 9     | 11.9                   | 4.3                    | 8.1                    | 029                         | 2.1                         | 2.4                         | 024                         | 8.9                         | NNE           | 51              | -1.6                | 0.0          | 3890                               | 9   |
| 10    | 16.3                   | 5.4                    | 10.9                   | 058                         | 1.3                         | 2.1                         | 021                         | 7.0                         | SE            | 49              | .5                  | 0.0          | 5248                               | 10  |
| 11    | 12.1                   | 5.1                    | 8.6                    | 316                         | .8                          | 1.4                         | 323                         | 7.6                         | NW            | 86              | 7.0                 | 4.4          | 3425                               | 11  |
| 12    | 15.6                   | 5.4                    | 10.5                   | 307                         | .6                          | 1.2                         | 310                         | 4.4                         | NW            | 61              | 4.5                 | 0.0          | 5088                               | 12  |
| 13    | 17.3                   | 4.6                    | 11.0                   | 295                         | .8                          | 1.3                         | 257                         | 5.7                         | NW            | 56              | 4.2                 | 0.0          | 6085                               | 13  |
| 14    | 15.3                   | 5.9                    | 10.6                   | 011                         | .3                          | 1.2                         | 284                         | 5.7                         | NNE           | 74              | 6.7                 | 2.2          | 4948                               | 14  |
| 15    | 13.1                   | 5.5                    | 9.3                    | 299                         | .6                          | 1.0                         | 297                         | 5.1                         | NNW           | 86M             | 8.2M                | 2.8          | 3863                               | 15  |
| 16    | 15.8                   | 5.3                    | 10.6                   | 299                         | 1.1                         | 1.6                         | 328                         | 7.0                         | NW            | 67              | 6.1                 | 0.0          | 5548                               | 16  |
| 17    | 19.5                   | 3.2                    | 11.4                   | 313                         | .5                          | 1.3                         | 319                         | 5.7                         | NW            | 55              | 4.1                 | 0.0          | 6453                               | 17  |
| 18    | 23.4                   | 4.8                    | 14.1                   | 047                         | .7                          | 1.6                         | 088                         | 6.3                         | NNE           | 45              | 3.8                 | 0.0          | 6983                               | 18  |
| 19    | 17.3                   | 6.0                    | 11.7                   | 339                         | 1.1                         | 1.9                         | 310                         | 7.0                         | NW            | 70              | 8.4                 | 0.0          | 5090                               | 19  |
| 20    | 20.2                   | 4.3                    | 12.3                   | 307                         | 1.0                         | 1.6                         | 318                         | 5.7                         | NW            | 53M             | 4.2M                | 0.0          | 7385                               | 20  |
| 21    | 22.1                   | 7.0                    | 14.6                   | 302                         | 1.3                         | 1.8                         | 310                         | 5.7                         | NW            | 60              | 9.2                 | 0.0          | 7313                               | 21  |
| 22    | 20.3                   | 10.1                   | 15.2                   | 313                         | 1.5                         | 2.0                         | 319                         | 7.0                         | NW            | 63              | 8.8                 | 0.0          | 7160                               | 22  |
| 23    | 19.4                   | 9.4                    | 14.4                   | 298                         | 1.0                         | 1.4                         | 339                         | 5.1                         | NW            | 62              | 7.5                 | 0.0          | 5038                               | 23  |
| 24    | 24.3                   | 7.6                    | 16.0                   | 299                         | .7                          | 1.6                         | 306                         | 5.7                         | WNW           | 50              | 6.2                 | 0.0          | 7568                               | 24  |
| 25    | 25.7                   | 7.7                    | 16.7                   | 301                         | 1.1                         | 1.6                         | 298                         | 6.3                         | WNW           | 44              | 6.1                 | 0.0          | 7593                               | 25  |
| 26    | 18.3                   | 7.9                    | 13.1                   | 294                         | 1.1                         | 1.5                         | 299                         | 5.7                         | NW            | 78              | 10.0                | .2           | 4985                               | 26  |
| 27    | 12.9                   | 5.3                    | 9.1                    | 013                         | .2                          | .9                          | 137                         | 3.2                         | NNE           | 91M             | 8.0M                | 7.2          | 2255                               | 27  |
| 28    | 17.8                   | 8.1                    | 13.0                   | 063                         | .5                          | 1.1                         | 086                         | 5.1                         | NNE           | 81              | 10.0                | 1.6          | 4448                               | 28  |
| 29    | 19.8                   | 5.6                    | 12.7                   | 352                         | .6                          | 1.4                         | 340                         | 5.7                         | NW            | 85              | 9.5                 | .6           | 4693                               | 29  |
| 30    | 20.7                   | 7.4                    | 14.1                   | 291                         | .9                          | 1.4                         | 325                         | 5.1                         | WNW           | 61              | 9.1                 | 0.0          | 6788                               | 30  |
| MONTH | 25.7                   | 1.9                    | 11.2                   | 324                         | .7                          | 1.5                         | 024                         | 8.9                         | NW            | 65M             | 5.5M                | 31.6         | 153883                             |     |

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

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 NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



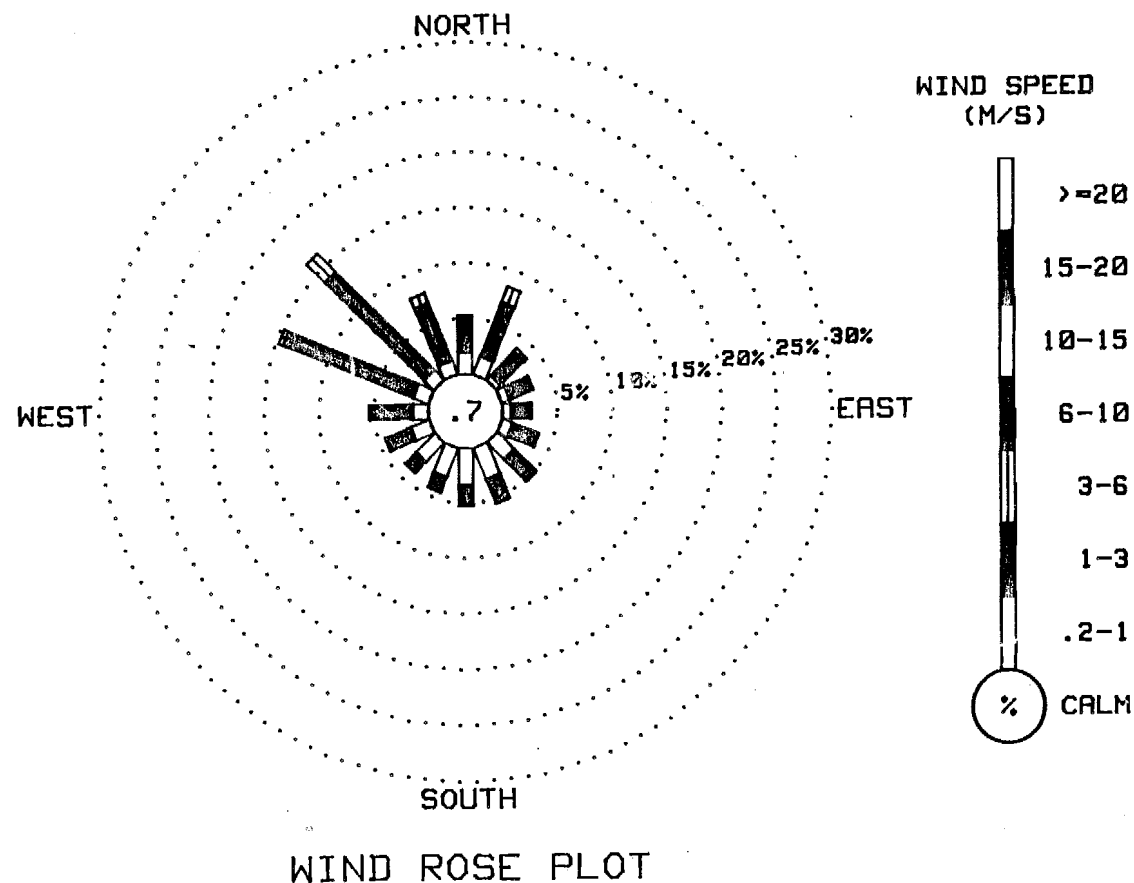
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING June, 1983

| DIRECTION | VELOCITY (M/S) |       |      |      |      |      |               | TOTAL  |
|-----------|----------------|-------|------|------|------|------|---------------|--------|
|           | 0.2            | 1.0   | 3.0  | 6.0  | 10.0 | 15.0 | 20.0          |        |
|           | TO             | TO    | TO   | TO   | TO   | TO   | OR<br>GREATER |        |
|           | 1.0            | 3.0   | 6.0  | 10.0 | 15.0 | 20.0 |               |        |
| N         | 1.98           | 3.13  | .21  | 0.00 | 0.00 | 0.00 | 0.00          | 5.31   |
| NNE       | 1.77           | 5.17  | 1.53 | 0.00 | 0.00 | 0.00 | 0.00          | 8.47   |
| NE        | .56            | 2.95  | .38  | 0.00 | 0.00 | 0.00 | 0.00          | 3.89   |
| ENE       | .83            | 2.22  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 3.06   |
| E         | .83            | 1.77  | .03  | 0.00 | 0.00 | 0.00 | 0.00          | 2.64   |
| ESE       | 1.04           | 2.53  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 3.58   |
| SE        | 2.22           | 2.85  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 5.07   |
| SSE       | 3.09           | 2.33  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 5.42   |
| S         | 3.30           | 1.88  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 5.17   |
| SSW       | 2.81           | 1.42  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 4.24   |
| SW        | 2.43           | 1.39  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 3.82   |
| WSW       | 1.84           | 2.43  | 0.00 | 0.00 | 0.00 | 0.00 | 0.00          | 4.27   |
| W         | 1.46           | 3.85  | .10  | 0.00 | 0.00 | 0.00 | 0.00          | 5.42   |
| WNW       | 1.56           | 12.67 | .49  | 0.00 | 0.00 | 0.00 | 0.00          | 14.72  |
| NW        | 1.28           | 12.60 | 2.36 | 0.00 | 0.00 | 0.00 | 0.00          | 16.25  |
| NNW       | 1.39           | 5.59  | .97  | 0.00 | 0.00 | 0.00 | 0.00          | 7.95   |
| CALM      |                |       |      |      |      |      |               | .73    |
| TOTAL     | 28.40          | 64.79 | 6.08 | 0.00 | 0.00 | 0.00 | 0.00          | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2880 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



[illegible]

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING July, 1983

DAY 01

DAY 02

DAY 03

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND | GUST | MAX. |      |      |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|------|------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | TEMP. | POINT | RH   | DIR. | SPD. | DIR. |      |       |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW    |    |     |     |     |     |    |
| 0300  | 11.8  | ***** | 86   | 125  | .7   | 119  | 3.2   | 1     | 0300 | 8.8  | 8.2   | 96   | 285   | 1.6   | 314  | 4.4  | 1    | 0300 | 9.1  | ***** | 95 | 176 | .7  | 164 | 1.9 | 2  |
| 0600  | 10.5  | 9.9   | 96   | 147  | .1   | 096  | 2.5   | 4     | 0600 | 9.1  | ***** | 95   | 265   | 1.0   | 302  | 3.2  | 4    | 0600 | 11.1 | 9.3   | 89 | 270 | .5  | 258 | 1.9 | 17 |
| 0900  | 10.0  | 9.5   | 97   | 300  | 1.3  | 307  | 3.8   | 5     | 0900 | 10.2 | 8.9   | 92   | 312   | 1.0   | 296  | 2.5  | 22   | 0900 | 12.9 | 9.4   | 79 | 310 | 1.4 | 294 | 3.2 | 32 |
| 1200  | 10.3  | 9.5   | 95   | 315  | 1.7  | 314  | 3.2   | 11    | 1200 | 13.5 | ***** | 82   | 298   | .9    | 309  | 2.5  | 31   | 1200 | 17.2 | 10.6  | 65 | 318 | 2.0 | 318 | 3.8 | 43 |
| 1500  | 11.7  | 10.6  | 93   | 316  | 1.6  | 321  | 3.8   | 20    | 1500 | 15.3 | 9.1   | 66   | 316   | 2.2   | 321  | 5.1  | 47   | 1500 | 19.5 | 10.6  | 56 | 307 | 2.0 | 329 | 4.4 | 38 |
| 1800  | 12.2  | ***** | 92   | 255  | .5   | 256  | 1.9   | 11    | 1800 | 15.6 | 9.6   | 67   | 308   | 2.1   | 307  | 5.1  | 13   | 1800 | 20.6 | 10.1  | 51 | 316 | 2.3 | 315 | 5.1 | 25 |
| 2100  | 11.3  | 10.0  | 92   | 275  | .9   | 296  | 2.5   | 2     | 2100 | 13.4 | ***** | 81   | 266   | .8    | 302  | 3.2  | 3    | 2100 | 17.9 | ***** | 62 | 292 | 1.6 | 319 | 4.4 | 3  |
| 2400  | 10.5  | 9.9   | 96   | 272  | .7   | 251  | 2.5   | 1     | 2400 | 10.8 | ***** | 91   | 201   | .9    | 190  | 1.9  | 1    | 2400 | 14.4 | ***** | 78 | 199 | .8  | 213 | 2.5 | 1  |

DAY 04

DAY 05

DAY 06

| HOUR |  |       |       |    |      |      |      |      | DEW  |       |    |       |       |     |      |      |      | WIND WIND GUST MAX. |      |      |  |       |       |    |      |      | HOUR  |      |      |      |     |       |       |      |      | DEW  |      |      |      |  |  |  |      |       | WIND WIND GUST MAX. |     |     |     |     |    |  |  |  |
|------|--|-------|-------|----|------|------|------|------|------|-------|----|-------|-------|-----|------|------|------|---------------------|------|------|--|-------|-------|----|------|------|-------|------|------|------|-----|-------|-------|------|------|------|------|------|------|--|--|--|------|-------|---------------------|-----|-----|-----|-----|----|--|--|--|
| NDNG |  | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | MAX. | NDNG  |    | TEMP. | POINT | RH  | DIR. | SPD. | DIR. | GUST                | MAX. | NDNG |  | TEMP. | POINT | RH | DIR. | SPD. | DIR.  | GUST | MAX. | NDNG |     | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | MAX. |  |  |  |      |       |                     |     |     |     |     |    |  |  |  |
|      |  | 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 |  |       |       |    |      |      |      |      | 12.7 | 10.4  | 86 | 142   | .7    | 184 | 2.5  | 2    | 0300 |                     |      |      |  |       |       |    |      | 11.2 | ***** | 92   | 222  | .5   | 241 | 1.3   | 1     | 0300 |      |      |      |      |      |  |  |  | 12.7 | 11.1  | 90                  | 292 | 1.4 | 311 | 3.8 | 2  |  |  |  |
| 0600 |  |       |       |    |      |      |      |      | 15.1 | 12.6  | 85 | 078   | .9    | 116 | 3.2  | 25   | 0600 |                     |      |      |  |       |       |    |      | 11.8 | ***** | 92   | 270  | .5   | 267 | 1.9   | 6     | 0600 |      |      |      |      |      |  |  |  | 12.7 | 11.1  | 90                  | 278 | 1.2 | 265 | 3.2 | 8  |  |  |  |
| 0900 |  |       |       |    |      |      |      |      | 18.8 | ***** | 70 | 039   | 1.1   | 040 | 3.2  | 38   | 0900 |                     |      |      |  |       |       |    |      | 13.6 | 11.0  | 84   | 328  | .8   | 335 | 2.5   | 23    | 0900 |      |      |      |      |      |  |  |  | 12.8 | 11.2  | 90                  | 302 | .9  | 283 | 2.5 | 8  |  |  |  |
| 1200 |  |       |       |    |      |      |      |      | 22.2 | 12.5  | 54 | 355   | 1.7   | 034 | 7.0  | 29   | 1200 |                     |      |      |  |       |       |    |      | 17.3 | 12.7  | 74   | 330  | 1.3  | 347 | 3.2   | 71    | 1200 |      |      |      |      |      |  |  |  | 12.6 | 10.8  | 89                  | 314 | 1.7 | 314 | 3.8 | 13 |  |  |  |
| 1500 |  |       |       |    |      |      |      |      | 16.3 | 13.1  | 81 | 279   | 1.1   | 314 | 5.7  | 19   | 1500 |                     |      |      |  |       |       |    |      | 21.7 | 15.4  | 67   | 317  | 1.9  | 305 | 3.8   | 57    | 1500 |      |      |      |      |      |  |  |  | 11.9 | 10.5  | 91                  | 308 | 2.2 | 303 | 5.1 | 8  |  |  |  |
| 1800 |  |       |       |    |      |      |      |      | 14.6 | 13.1  | 91 | 303   | 2.2   | 320 | 5.7  | 15   | 1800 |                     |      |      |  |       |       |    |      | 19.5 | 14.4  | 72   | 308  | 2.7  | 318 | 5.7   | 7     | 1800 |      |      |      |      |      |  |  |  | 10.9 | ***** | 93                  | 309 | 1.6 | 317 | 3.8 | 4  |  |  |  |
| 2100 |  |       |       |    |      |      |      |      | 12.7 | 11.1  | 90 | 253   | .9    | 298 | 3.2  | 2    | 2100 |                     |      |      |  |       |       |    |      | 16.1 | 13.6  | 85   | 292  | 1.7  | 303 | 3.8   | 3     | 2100 |      |      |      |      |      |  |  |  | 10.2 | ***** | 94                  | 259 | .8  | 292 | 2.5 | 1  |  |  |  |
| 2400 |  |       |       |    |      |      |      |      | 11.8 | ***** | 93 | 244   | .8    | 258 | 2.5  | 1    | 2400 |                     |      |      |  |       |       |    |      | 13.8 | 12.2  | 90   | 288  | 1.3  | 291 | 4.4   | 1     | 2400 |      |      |      |      |      |  |  |  | 9.3  | ***** | 98                  | 171 | .6  | 197 | 1.3 | 1  |  |  |  |

DAY 07

DAY 08

DAY 09

| HOUR | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |      |       |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|------|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW  |
| 0300 | 8.9   | ***** | 96   | 132  | .7   | 139  | 1.9  | 1    | 0300 | 10.3  | ***** | 96   | 184  | .6   | 204  | 1.3  | 2    | 0300 | 7.7   | 6.5   | 92 | 108  | 1.0  | 107  | 2.5  | 1   |
| 0600 | 9.5   | ***** | 96   | 069  | .3   | 073  | 1.9  | 9    | 0600 | 10.1  | 8.8   | 92   | 302  | 1.3  | 311  | 3.8  | 5    | 0600 | 10.2  | ***** | 88 | 127  | .6   | 123  | 2.5  | 11  |
| 0900 | 12.7  | 10.4  | 86   | 336  | .7   | 284  | 3.2  | 24   | 0900 | 11.9  | 10.0  | 88   | 317  | 1.8  | 324  | 3.8  | 35   | 0900 | 11.7  | ***** | 86 | 128  | 1.1  | 122  | 3.2  | 15  |
| 1200 | 14.6  | 11.2  | 80   | 307  | 1.3  | 296  | 3.2  | 27   | 1200 | 13.3  | 9.8   | 79   | 305  | 2.1  | 303  | 4.4  | 38   | 1200 | 13.9  | 8.6   | 70 | 069  | 1.6  | 060  | 5.1  | 33  |
| 1500 | 16.3  | 10.9  | 70   | 317  | 1.8  | 310  | 4.4  | 59   | 1500 | 14.5  | 8.1   | 65   | 309  | 3.0  | 318  | 5.7  | 35   | 1500 | 17.0  | 7.9   | 55 | 012  | 1.0  | 056  | 3.2  | 35  |
| 1800 | 16.2  | 11.0  | 71   | 302  | 2.0  | 311  | 3.8  | 13   | 1800 | 13.3  | 6.7   | 64   | 308  | 2.9  | 293  | 6.3  | 10   | 1800 | 12.3  | 10.4  | 88 | 251  | .9   | 196  | 3.8  | 8   |
| 2100 | 14.1  | ***** | 80   | 257  | 1.1  | 280  | 3.2  | 2    | 2100 | 11.3  | ***** | 78   | 260  | .8   | 290  | 3.2  | 2    | 2100 | 11.2  | 9.1   | 87 | 206  | .1   | 274  | 3.8  | 1   |
| 2400 | 11.4  | ***** | 94   | 250  | .8   | 256  | 2.5  | 1    | 2400 | 8.8   | ***** | 91   | 160  | .9   | 187  | 1.9  | 1    | 2400 | 8.8   | ***** | 98 | 146  | 1.1  | 150  | 3.2  | 1   |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING July, 1983

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW  | WIND | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| 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   | ****  | 96   | 233  | .5   | 218  | 1.9  | 1    | 0300  | 9.4   | 8.1   | 92   | 223  | 1.1  | 224  | 1.9  | 2    |
| 0600  | 9.6   | ****  | 98   | 227  | .5   | 237  | 1.9  | 8    | 0600  | 10.6  | 8.7   | 88   | 193  | .5   | 282  | 3.2  | 16   |
| 0900  | 11.9  | 10.0  | 88   | 290  | .9   | 296  | 2.5  | 45   | 0900  | 11.9  | 8.9   | 82   | 301  | 2.9  | 305  | 5.7  | 26   |
| 1200  | 14.8  | 9.0   | 68   | 315  | 2.0  | 327  | 4.4  | 43   | 1200  | 13.8  | 8.9   | 72   | 300  | 3.4  | 306  | 7.0  | 37   |
| 1500  | 17.1  | 7.8   | 54   | 314  | 2.6  | 320  | 6.3  | 61   | 1500  | 15.8  | 10.4  | 70   | 306  | 3.1  | 319  | 7.0  | 34   |
| 1800  | 17.8  | 7.5   | 51   | 311  | 2.8  | 312  | 6.3  | 32   | 1800  | 15.0  | 10.7  | 75   | 308  | 3.3  | 326  | 7.0  | 15   |
| 2100  | 14.5  | 9.0   | 69   | 277  | 1.3  | 318  | 4.4  | 2    | 2100  | 11.9  | 10.0  | 88   | 297  | 3.4  | 299  | 6.3  | 3    |
| 2400  | 11.7  | 9.1   | 84   | 252  | 1.2  | 278  | 4.4  | 1    | 2400  | 10.2  | 8.9   | 92   | 282  | 1.9  | 292  | 5.1  | 1    |

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  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 9.1   | 8.6   | 97   | 314  | 1.3  | 317  | 3.2  | 1    | 0300  | 7.9   | ****  | 97   | 152  | .6   | 087  | 2.5  | 1    |
| 0600  | 9.1   | ****  | 96   | 289  | .7   | 319  | 2.5  | 3    | 0600  | 9.4   | ****  | 95   | 079  | .6   | 115  | 1.9  | 11   |
| 0900  | 10.3  | ****  | 94   | 297  | .4   | 284  | 1.3  | 13   | 0900  | 12.5  | 10.6  | 88   | 357  | .9   | 038  | 2.5  | 25   |
| 1200  | 11.6  | 10.3  | 92   | 290  | 1.3  | 316  | 4.4  | 25   | 1200  | 12.7  | 10.1  | 84   | 319  | 1.6  | 325  | 4.4  | 13   |
| 1500  | 11.1  | ****  | 92   | 261  | .7   | 317  | 3.8  | 11   | 1500  | 15.3  | ****  | 77   | 301  | .6   | 251  | 3.2  | 39   |
| 1800  | 12.9  | ****  | 88   | 021  | .8   | 033  | 3.8  | 14   | 1800  | 13.5  | 11.2  | 86   | 039  | .7   | 022  | 3.8  | 6    |
| 2100  | 9.5   | ****  | 94   | 220  | .3   | 110  | 3.2  | 1    | 2100  | 11.7  | ****  | 95   | 114  | .6   | 119  | 2.5  | 1    |
| 2400  | 8.4   | 7.8   | 96   | 150  | .6   | 136  | 2.5  | 1    | 2400  | 10.2  | 9.4   | 95   | 141  | .7   | 215  | 2.5  | 1    |

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  |
| 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   | 8.4   | 94   | 149  | .8   | 153  | 1.9  | 2    | 0300  | 11.1  | ****  | 92   | 251  | 1.3  | 260  | 3.8  | 1    |
| 0600  | 11.2  | ****  | 89   | 112  | .3   | 137  | 1.9  | 30   | 0600  | 10.7  | 9.6   | 93   | 252  | .8   | 283  | 2.5  | 11   |
| 0900  | 14.4  | 9.7   | 73   | 323  | .9   | 001  | 2.5  | 35   | 0900  | 12.7  | 10.2  | 85   | 298  | 2.0  | 305  | 5.7  | 21   |
| 1200  | 16.0  | 10.8  | 71   | 326  | 2.2  | 314  | 5.1  | 34   | 1200  | 11.3  | 10.0  | 92   | 280  | 2.4  | 299  | 5.7  | 15   |
| 1500  | 17.1  | 11.4  | 69   | 323  | 2.9  | 338  | 6.3  | 32   | 1500  | 11.6  | ****  | 93   | 299  | .9   | 264  | 3.2  | 16   |
| 1800  | 15.6  | 11.8  | 78   | 317  | 2.5  | 322  | 5.7  | 6    | 1800  | 12.1  | 10.7  | 91   | 012  | .6   | 039  | 2.5  | 9    |
| 2100  | 14.2  | 11.4  | 83   | 291  | 1.7  | 310  | 4.4  | 1    | 2100  | 10.9  | ****  | 95   | 223  | .4   | 275  | 1.3  | 2    |
| 2400  | 13.4  | 10.6  | 83   | 255  | 1.1  | 287  | 3.8  | 1    | 2400  | 9.2   | 8.6   | 96   | 150  | .5   | 137  | 1.9  | 1    |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING July, 1983

DAY 19

DAY 20

DAY 21

| HOUR       | DEW      | WIND | WIND | GUST | MAX.        | HOUR       | DEW      | WIND | WIND | GUST | MAX.        | HOUR       | DEW      | WIND | WIND | GUST | MAX.        |
|------------|----------|------|------|------|-------------|------------|----------|------|------|------|-------------|------------|----------|------|------|------|-------------|
| NDNG TEMP. | POINT RH | DIR. | SPD. | DIR. | GUST RAD    | NDNG TEMP. | POINT RH | DIR. | SPD. | DIR. | GUST RAD    | NDNG TEMP. | POINT RH | DIR. | SPD. | DIR. | GUST RAD    |
| DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM |
| 0300       | 4.7      | 3.9  | 95   | 110  | 1.1         | 089        | 3.8      | 2    | 0300 | 8.1  | *****       | 96         | 200      | .7   | 223  | 1.9  | 2           |
| 0600       | 5.6      | 4.8  | 95   | 082  | 1.6         | 085        | 3.8      | 13   | 0600 | 9.4  | *****       | 98         | 202      | .1   | 176  | 1.3  | 6           |
| 0900       | 14.4     | 7.5  | 63   | 029  | 1.4         | 048        | 3.2      | 17   | 0900 | 12.6 | 9.4         | 81         | 316      | 1.3  | 323  | 3.8  | 25          |
| 1200       | 17.2     | 4.4  | 43   | 032  | 1.8         | 063        | 5.1      | 36   | 1200 | 15.1 | 9.9         | 71         | 320      | 2.2  | 332  | 5.1  | 25          |
| 1500       | 18.9     | 4.6  | 39   | 353  | .6          | 034        | 3.8      | 38   | 1500 | 16.3 | 9.3         | 63         | 314      | 2.6  | 336  | 7.0  | 26          |
| 1800       | 19.0     | 3.5  | 36   | 353  | .8          | 341        | 3.8      | 20   | 1800 | 16.1 | 8.9         | 62         | 295      | 1.7  | 287  | 5.7  | 13          |
| 2100       | 12.5     | 10.2 | 86   | 120  | 1.1         | 102        | 8.9      | 2    | 2100 | 12.3 | 9.3         | 82         | 295      | 1.8  | 311  | 5.7  | 1           |
| 2400       | 10.8     | 9.0  | 89   | 179  | 1.2         | 193        | 2.5      | 1    | 2400 | 10.1 | *****       | 92         | 237      | .7   | 310  | 3.2  | 1           |

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 MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM |
| 0300       | 5.4      | 4.8  | 97   | 084  | 1.2         | 122        | 2.5      | 1    | 0300 | 9.3  | *****       | 96         | 227      | .9   | 248  | 3.2  | 1           |
| 0600       | 6.6      | 5.7  | 94   | 074  | 1.2         | 082        | 3.2      | 18   | 0600 | 8.5  | *****       | 96         | 249      | .8   | 252  | 3.2  | 4           |
| 0900       | 15.3     | 10.7 | 75   | 023  | 1.3         | 049        | 3.2      | 56   | 0900 | 9.1  | *****       | 95         | 236      | .2   | 257  | 1.9  | 11          |
| 1200       | 18.0     | 7.9  | 49   | 324  | 2.2         | 343        | 4.4      | 72   | 1200 | 9.8  | 8.7         | 93         | 322      | .3   | 315  | 3.2  | 24          |
| 1500       | 21.1     | 8.0  | 43   | 313  | 2.6         | 323        | 6.3      | 59   | 1500 | 10.0 | *****       | 91         | 301      | .8   | 273  | 2.5  | 13          |
| 1800       | 20.5     | 6.7  | 41   | 296  | 2.7         | 310        | 6.3      | 26   | 1800 | 10.4 | *****       | 91         | 272      | .6   | 270  | 1.9  | 7           |
| 2100       | 16.7     | 10.2 | 65   | 292  | 1.5         | 290        | 5.1      | 1    | 2100 | 9.2  | *****       | 96         | 217      | .6   | 234  | 1.3  | 1           |
| 2400       | 12.8     | 9.8  | 82   | 254  | 1.3         | 311        | 3.2      | 1    | 2400 | 7.5  | 6.6         | 94         | 150      | .9   | 138  | 2.5  | 1           |

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 MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM | DEG C      | DEG C    | %    | DEG. | M/S  | DEG. M/S MM |
| 0300       | 5.8      | ***** | 96   | 138  | 1.1         | 113        | 2.5      | 1    | 0300 | 6.1  | *****       | 98         | 149      | .6   | 159  | 1.9  | 1           |
| 0600       | 8.3      | 6.6   | 89   | 061  | .8          | 078        | 2.5      | 21   | 0600 | 8.5  | 6.9         | 90         | 047      | .9   | 067  | 2.5  | 25          |
| 0900       | 14.1     | 7.9   | 66   | 005  | 1.1         | 351        | 3.2      | 57   | 0900 | 12.5 | 9.5         | 82         | 338      | 1.2  | 336  | 3.8  | 20          |
| 1200       | 16.2     | 8.2   | 59   | 302  | 2.1         | 317        | 5.1      | 54   | 1200 | 14.6 | 10.1        | 74         | 324      | 1.8  | 310  | 5.7  | 29          |
| 1500       | 16.1     | 6.8   | 54   | 315  | 3.3         | 325        | 6.3      | 68   | 1500 | 15.0 | 9.2         | 68         | 326      | 3.6  | 314  | 7.6  | 24          |
| 1800       | 15.7     | ***** | 58   | 301  | 2.0         | 328        | 6.3      | 12   | 1800 | 13.8 | 9.7         | 76         | 312      | 2.8  | 321  | 6.3  | 10          |
| 2100       | 11.7     | ***** | 81   | 224  | .8          | 248        | 3.2      | 2    | 2100 | 12.6 | 9.6         | 82         | 270      | 1.5  | 293  | 3.8  | 1           |
| 2400       | 7.6      | ***** | 93   | 146  | 1.0         | 187        | 1.9      | 1    | 2400 | 11.0 | 9.6         | 91         | 185      | .5   | 249  | 2.5  | 1           |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING July, 1983

DAY 28

DAY 29

DAY 30

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND  | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |       |      |      |      |      |      |     |
|-------|-------|-------|------|------|------|------|------|-----|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|-----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |     | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |     |
| 0300  | 7.5   | ***** | 95   | 145  | .3   | 134  | 2.5  | 1   | 0300  | 9.8   | 8.7   | 93   | 225  | 1.0  | 263  | 3.2  | 1    | 0300  | 10.7  | ***** | 95   | 185  | .5   | 190  | 1.9  | 1   |
| 0600  | 9.2   | 7.8   | 91   | 058  | .8   | 078  | 3.8  | 14  | 0600  | 11.6  | ***** | 89   | 161  | .5   | 172  | 1.3  | 17   | 0600  | 11.0  | ***** | 95   | 196  | .3   | 143  | 1.3  | 3   |
| 0900  | 16.9  | 11.5  | 70   | 016  | 1.1  | 052  | 2.5  | 49  | 0900  | 16.9  | 11.3  | 69   | 354  | 1.0  | 004  | 2.5  | 47   | 0900  | 11.8  | ***** | 93   | 318  | .1   | 263  | .6   | 10  |
| 1200  | 20.3  | 10.7  | 54   | 293  | 1.8  | 297  | 3.8  | 18  | 1200  | 19.1  | 11.0  | 59   | 319  | 2.2  | 330  | 5.1  | 55   | 1200  | 11.9  | 10.9  | 94   | 311  | 1.0  | 328  | 3.2  | 17  |
| 1500  | 21.8  | 5.1   | 34   | 311  | 3.3  | 333  | 7.0  | 50  | 1500  | 20.3  | 11.6  | 57   | 319  | 3.0  | 301  | 7.0  | 49   | 1500  | 12.4  | 11.6  | 95   | 303  | 1.2  | 308  | 2.5  | 19  |
| 1800  | 21.4  | 6.0   | 37   | 287  | 2.5  | 310  | 6.3  | 25  | 1800  | 15.8  | 9.5   | 66   | 276  | 2.0  | 288  | 5.7  | 5    | 1800  | 11.9  | ***** | 93   | 279  | 1.1  | 293  | 2.5  | 3   |
| 2100  | 17.2  | ***** | 56   | 283  | .9   | 289  | 5.1  | 1   | 2100  | 12.2  | 11.2  | 94   | 274  | .6   | 316  | 4.4  | 1    | 2100  | 10.8  | ***** | 95   | 252  | .5   | 277  | 1.9  | 1   |
| 2400  | 14.2  | 9.5   | 73   | 258  | 1.3  | 288  | 4.4  | 1   | 2400  | 11.2  | ***** | 94   | 197  | .5   | 211  | 1.9  | 1    | 2400  | 9.9   | ***** | 96   | 229  | .6   | 262  | 1.9  | 1   |

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 | 9.6   | ***** | 96   | 136  | .4   | 195  | 1.3  | 1   |
| 0600 | 10.4  | ***** | 94   | 163  | .1   | 193  | .6   | 4   |
| 0900 | 11.8  | ***** | 90   | 029  | .8   | 043  | 1.9  | 21  |
| 1200 | 13.3  | ***** | 88   | 331  | .8   | 331  | 1.9  | 23  |
| 1500 | 15.1  | 12.6  | 85   | 285  | 1.4  | 296  | 3.2  | 34  |
| 1800 | 15.3  | 12.8  | 85   | 300  | 1.5  | 299  | 4.4  | 12  |
| 2100 | 13.7  | ***** | 89   | 264  | .7   | 305  | 1.9  | 1   |
| 2400 | 12.2  | 11.2  | 94   | 239  | .7   | 238  | 1.9  | 1   |

# R & M CONSULTANTS, INC.

## SUSTITNA HYDROELECTRIC PROJECT

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

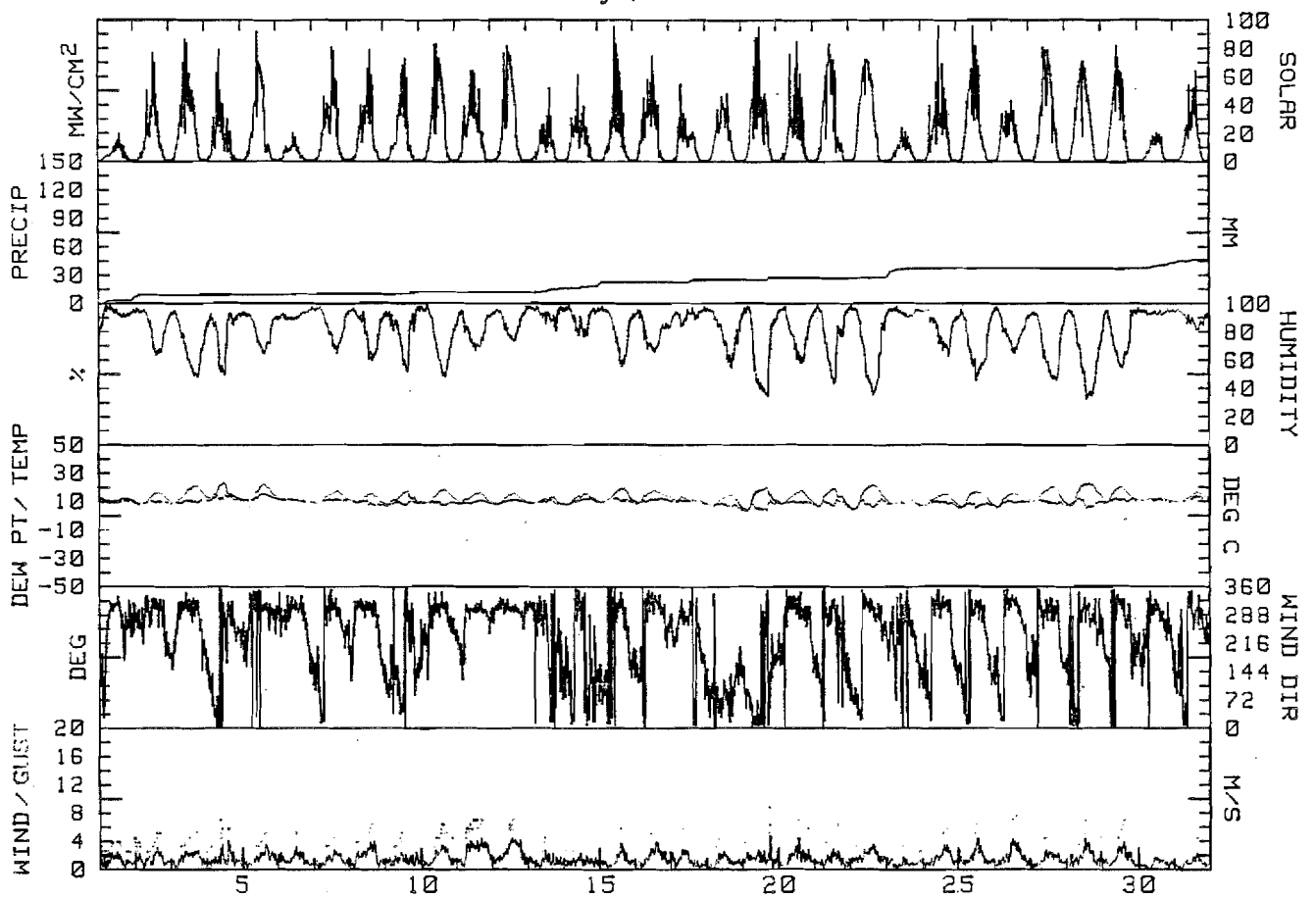
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SGH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 13.3                   | 10.0                   | 11.7                   | 297                         | .7                          | 1.1                         | 307                         | 3.8                         | NW            | 94              | 9.8                 | 4.6          | 1253                               | 1   |
| 2     | 16.9                   | 8.5                    | 12.7                   | 292                         | 1.1                         | 1.4                         | 321                         | 5.1                         | NW            | 82              | 9.1                 | 4.0          | 3733                               | 2   |
| 3     | 20.8                   | 9.1                    | 15.0                   | 300                         | 1.1                         | 1.5                         | 315                         | 5.1                         | NW            | 66              | 9.8                 | 0.0          | 5875                               | 3   |
| 4     | 23.3                   | 11.6                   | 17.5                   | 318                         | .5                          | 1.3                         | 334                         | 7.0                         | WSW           | 80              | 12.1                | .8           | 3428                               | 4   |
| 5     | 22.1                   | 11.1                   | 16.6                   | 304                         | 1.2                         | 1.4                         | 318                         | 5.7                         | NW            | 78              | 13.3                | 0.0          | 5278                               | 5   |
| 6     | 13.8                   | 9.3                    | 11.6                   | 296                         | 1.1                         | 1.4                         | 303                         | 5.1                         | WNW           | 91              | 10.8                | 0.0          | 1318                               | 6   |
| 7     | 17.9                   | 8.9                    | 13.4                   | 299                         | .8                          | 1.2                         | 310                         | 4.4                         | NW            | 79              | 10.8                | .6           | 4540                               | 7   |
| 8     | 15.3                   | 8.6                    | 12.0                   | 300                         | 1.3                         | 1.7                         | 293                         | 6.3                         | NW            | 80              | 8.7                 | 0.0          | 4220                               | 8   |
| 9     | 17.7                   | 7.4                    | 12.6                   | 106                         | .5                          | 1.2                         | 060                         | 5.1                         | ESE           | 79              | 8.5                 | 1.8          | 3783                               | 9   |
| 10    | 18.4                   | 8.9                    | 13.7                   | 296                         | 1.3                         | 1.5                         | 320                         | 6.3                         | NW            | 69              | 8.7                 | 0.0          | 5578                               | 10  |
| 11    | 16.1                   | 7.7                    | 11.9                   | 295                         | 2.3                         | 2.5                         | 306                         | 7.0                         | WNW           | 80              | 9.4                 | 0.0          | 4705                               | 11  |
| 12    | 15.7                   | 8.8                    | 12.3                   | 304                         | 2.3                         | 2.4                         | 298                         | 7.0                         | NW            | 86              | 9.7                 | 0.0          | 5648                               | 12  |
| 13    | 13.1                   | 8.4                    | 10.8                   | 295                         | .5                          | 1.0                         | 316                         | 4.4                         | NW            | 93              | 9.4                 | 3.8          | 2208                               | 13  |
| 14    | 15.4                   | 7.8                    | 11.6                   | 025                         | .2                          | 1.1                         | 325                         | 4.4                         | NNE           | 88              | 10.2                | 2.6          | 3180                               | 14  |
| 15    | 19.7                   | 9.5                    | 14.6                   | 300                         | .4                          | 1.2                         | 322                         | 5.7                         | NW            | 72              | 11.0                | 4.2          | 4255                               | 15  |
| 16    | 17.6                   | 8.6                    | 13.1                   | 311                         | 1.2                         | 1.7                         | 338                         | 6.3                         | NW            | 77              | 10.9                | 0.0          | 4558                               | 16  |
| 17    | 13.2                   | 9.0                    | 11.1                   | 279                         | .9                          | 1.2                         | 305                         | 5.7                         | W             | 90              | 10.1                | 2.2          | 2730                               | 17  |
| 18    | 14.7                   | 7.1                    | 10.9                   | 093                         | .9                          | 1.1                         | 075                         | 4.4                         | E             | 78              | 7.5                 | .4           | 3735                               | 18  |
| 19    | 20.2                   | 3.5                    | 11.9                   | 065                         | .7                          | 1.5                         | 102                         | 8.9                         | NNE           | 68              | 5.8                 | 1.8          | 5723                               | 19  |
| 20    | 18.0                   | 8.1                    | 13.1                   | 300                         | 1.2                         | 1.5                         | 336                         | 7.0                         | NW            | 75              | 9.5                 | 0.0          | 3873                               | 20  |
| 21    | 19.4                   | 6.4                    | 12.9                   | 277                         | .4                          | 1.2                         | 313                         | 6.3                         | WNW           | 71              | 8.5                 | .2           | 6023                               | 21  |
| 22    | 21.6                   | 4.8                    | 13.2                   | 320                         | 1.1                         | 1.8                         | 323                         | 6.3                         | NW            | 68              | 7.8                 | 0.0          | 7018                               | 22  |
| 23    | 12.2                   | 6.9                    | 9.6                    | 243                         | .4                          | .8                          | 248                         | 3.2                         | WSW           | 94              | 8.4                 | 10.0         | 1715                               | 23  |
| 24    | 15.8                   | 7.2                    | 11.5                   | 319                         | .8                          | 1.5                         | 316                         | 5.7                         | NW            | 78              | 9.2                 | 0.0          | 4468                               | 24  |
| 25    | 17.0                   | 5.8                    | 11.4                   | 310                         | .7                          | 1.6                         | 325                         | 6.3                         | NW            | 69              | 7.1                 | 0.0          | 5803                               | 25  |
| 26    | 15.7                   | 5.8                    | 10.8                   | 319                         | 1.2                         | 1.8                         | 314                         | 7.6                         | NW            | 78              | 9.2                 | 0.0          | 3493                               | 26  |
| 27    | 20.3                   | 9.4                    | 14.9                   | 293                         | .8                          | 1.3                         | 301                         | 4.4                         | WNW           | 60              | 9.2                 | 0.0          | 5958                               | 27  |
| 28    | 22.7                   | 7.5                    | 15.1                   | 302                         | 1.1                         | 1.7                         | 333                         | 7.0                         | WNW           | 59              | 8.6                 | 0.0          | 6365                               | 28  |
| 29    | 20.3                   | 9.0                    | 14.7                   | 297                         | .9                          | 1.5                         | 301                         | 7.0                         | S             | 70              | 10.6                | .2           | 5215                               | 29  |
| 30    | 12.8                   | 9.9                    | 11.4                   | 272                         | .5                          | .7                          | 328                         | 3.2                         | NW            | 94              | 10.9                | 5.4          | 1605                               | 30  |
| 31    | 16.8                   | 9.6                    | 13.2                   | 295                         | .5                          | .8                          | 299                         | 4.4                         | WNW           | 86              | 12.2                | 3.8          | 3505                               | 31  |
| MONTH | 23.3                   | 3.5                    | 12.8                   | 303                         | .8                          | 1.4                         | 102                         | 8.9                         | NW            | 77              | 9.6                 | 46.4         | 130781                             |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 3.2  
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 3.2

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

\*\*\*\* SEE NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



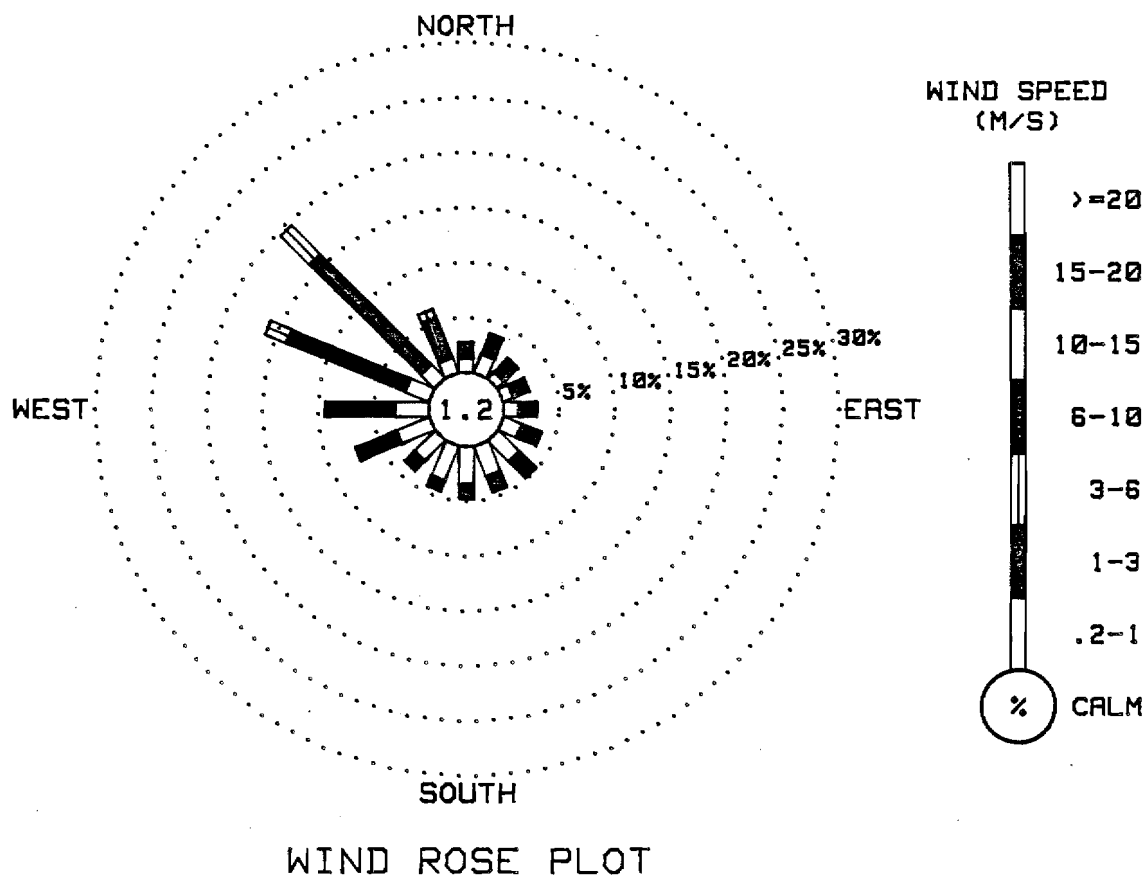
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING July, 1983

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | 1.31             | 1.44             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.76   |
| NNE       | 1.85             | 1.95             | .03              | 0.00              | 0.00               | 0.00               | 0.00                  | 3.83   |
| NE        | .84              | 1.75             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.59   |
| ENE       | 1.01             | 1.51             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.52   |
| E         | 1.38             | 1.61             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 2.99   |
| ESE       | 1.78             | 1.85             | .03              | 0.00              | 0.00               | 0.00               | 0.00                  | 3.66   |
| SE        | 2.69             | 2.08             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.77   |
| SSE       | 2.96             | 1.51             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.47   |
| S         | 3.43             | 1.31             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.74   |
| SSW       | 3.39             | 1.01             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.40   |
| SW        | 2.62             | 1.24             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 3.86   |
| WSW       | 3.19             | 4.00             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 7.19   |
| W         | 3.02             | 6.25             | .03              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.31   |
| WNW       | 2.35             | 11.49            | 2.08             | 0.00              | 0.00               | 0.00               | 0.00                  | 15.93  |
| NW        | 1.78             | 14.05            | 3.73             | 0.00              | 0.00               | 0.00               | 0.00                  | 19.56  |
| NNW       | 1.51             | 3.90             | .81              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.22   |
| CALM      |                  |                  |                  |                   |                    |                    |                       | 1.21   |
| TOTAL     | 35.11            | 56.96            | 6.72             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2976 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 1983

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR ENDING

[illegible]

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 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. |
|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      |
| 0300  | 11.3  | ***** | 94   | 249  | .8   | 239  | 1.9  | 1    | 0300  | 6.4   | 5.9   | 97   | 127  | 1.0  | 128  | 2.5  | 1    |
| 0600  | 11.1  | ***** | 93   | 311  | .2   | 284  | 1.9  | 6    | 0600  | 7.5   | 6.6   | 94   | 065  | 1.4  | 073  | 3.8  | 17   |
| 0900  | 14.4  | ***** | 85   | 287  | .7   | 273  | 1.9  | 26   | 0900  | 15.7  | 9.9   | 68   | 035  | 1.5  | 037  | 2.5  | 51   |
| 1200  | 18.1  | 9.5   | 57   | 319  | 1.6  | 276  | 3.8  | 63   | 1200  | 19.2  | 5.9   | 42   | 017  | 1.2  | 097  | 3.8  | 21   |
| 1500  | 16.7  | ***** | 70   | 272  | .5   | 308  | 3.2  | 18   | 1500  | 19.5  | 4.7   | 38   | 004  | 1.4  | 015  | 5.7  | 24   |
| 1800  | 18.8  | 9.6   | 55   | 310  | 1.1  | 301  | 3.8  | 24   | 1800  | 18.6  | 4.7   | 40   | 018  | 4.1  | 020  | 7.6  | 23   |
| 2100  | 14.3  | ***** | 72   | 265  | 1.3  | 273  | 3.2  | 1    | 2100  | 15.3  | 6.1   | 54   | 024  | 3.8  | 011  | 8.9  | 1    |
| 2400  | 10.8  | ***** | 87   | 182  | 1.0  | 180  | 1.9  | 1    | 2400  | 8.6   | 6.7   | 88   | 152  | 1.2  | 146  | 5.1  | 1    |

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  | 11.8  | ***** | 90   | 218  | .8   | 222  | 2.5  | 1    | 0300  | 10.2  | ***** | 96   | 201  | .1   | 140  | 1.3  | 1    |
| 0600  | 11.0  | ***** | 94   | 223  | .4   | 243  | 1.9  | 2    | 0600  | 10.3  | ***** | 95   | 113  | .4   | 093  | 1.9  | 4    |
| 0900  | 11.1  | ***** | 94   | 237  | .6   | 268  | 2.5  | 6    | 0900  | 11.6  | 10.0  | 90   | 028  | .7   | 028  | 1.9  | 26   |
| 1200  | 11.4  | ***** | 95   | 030  | .8   | 356  | 1.9  | 7    | 1200  | 12.1  | 10.2  | 88   | 039  | .8   | 056  | 2.5  | 20   |
| 1500  | 11.6  | 10.6  | 94   | 305  | 1.5  | 322  | 4.4  | 4    | 1500  | 12.0  | ***** | 92   | 077  | .6   | 111  | 1.9  | 13   |
| 1800  | 11.7  | ***** | 94   | 308  | 1.6  | 316  | 3.8  | 7    | 1800  | 11.1  | ***** | 91   | 008  | .3   | 083  | 2.5  | 5    |
| 2100  | 11.1  | ***** | 95   | 261  | .8   | 271  | 1.9  | 1    | 2100  | 9.7   | ***** | 93   | 270  | 1.1  | 291  | 2.5  | 1    |
| 2400  | 10.5  | ***** | 94   | 265  | .7   | 272  | 1.9  | 1    | 2400  | 8.8   | ***** | 95   | 190  | .5   | 201  | 1.3  | 1    |

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  | 9.4   | 8.3   | 93   | 144  | .7   | 116  | 1.9  | 1    | 0300  | 8.9   | ***** | 98   | 078  | .7   | 106  | 2.5  | 1    |
| 0600  | 8.5   | 7.4   | 93   | 081  | .8   | 119  | 1.9  | 10   | 0600  | 9.1   | ***** | 99   | 095  | .3   | 057  | 3.2  | 2    |
| 0900  | 12.7  | 9.9   | 83   | 014  | 1.0  | 052  | 2.5  | 18   | 0900  | 9.8   | ***** | 97   | 052  | .6   | 066  | 1.9  | 8    |
| 1200  | 14.1  | 9.2   | 72   | 315  | 1.5  | 303  | 3.2  | 44   | 1200  | 11.3  | ***** | 92   | 355  | .6   | 006  | 1.9  | 19   |
| 1500  | 12.4  | 9.2   | 81   | 311  | 1.4  | 334  | 3.2  | 11   | 1500  | 11.5  | 10.5  | 94   | 294  | 1.0  | 281  | 3.2  | 14   |
| 1800  | 10.5  | 9.2   | 92   | 285  | 1.1  | 293  | 3.2  | 3    | 1800  | 10.7  | 9.1   | 90   | 277  | 1.6  | 267  | 3.8  | 4    |
| 2100  | 9.7   | ***** | 94   | 215  | .5   | 244  | 1.9  | 1    | 2100  | 9.7   | 8.6   | 93   | 278  | 1.5  | 299  | 3.2  | 1    |
| 2400  | 9.0   | ***** | 94   | 116  | .5   | 120  | 1.9  | 1    | 2400  | 9.4   | ***** | 94   | 269  | 1.1  | 254  | 3.2  | 1    |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 1983

DAY 10

DAY 11

DAY 12

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |    |
| 0300  | 5.4   | ***** | 94   | 168  | .8   | 162  | 1.9   | 1     | 0300  | 6.5  | ***** | 95   | 154  | .4    | 169   | 1.9   | 1    | 0300 | 8.7  | ***** | 94 | 132 | .2  | 103 | 2.5 | 1  |
| 0600  | 8.2   | 6.0   | 86   | 155  | .7   | 137  | 2.5   | 20    | 0600  | 6.6  | ***** | 90   | 135  | .7    | 167   | 1.9   | 14   | 0600 | 8.9  | ***** | 94 | 191 | .4  | 222 | 1.9 | 2  |
| 0900  | 11.2  | 7.4   | 77   | 008  | .8   | 007  | 3.2   | 22    | 0900  | 13.0 | 7.5   | 69   | 349  | .6    | 277   | 2.5   | 49   | 0900 | 9.5  | ***** | 93 | 261 | .4  | 286 | 2.5 | 10 |
| 1200  | 13.3  | 6.7   | 64   | 316  | 1.3  | 317  | 4.4   | 33    | 1200  | 14.1 | 7.9   | 66   | 301  | 1.8   | 316   | 4.4   | 35   | 1200 | 10.5 | ***** | 87 | 267 | 1.1 | 267 | 2.5 | 12 |
| 1500  | 14.4  | 6.0   | 57   | 321  | 2.4  | 304  | 5.7   | 55    | 1500  | 15.4 | 7.0   | 57   | 316  | 2.7   | 309   | 5.1   | 56   | 1500 | 10.7 | 9.1   | 90 | 286 | 1.5 | 267 | 4.4 | 10 |
| 1800  | 14.7  | 6.6   | 58   | 311  | 2.5  | 331  | 5.1   | 20    | 1800  | 14.0 | 8.0   | 67   | 304  | 2.4   | 305   | 6.3   | 11   | 1800 | 9.5  | 7.8   | 89 | 255 | .8  | 280 | 3.2 | 3  |
| 2100  | 8.7   | ***** | 89   | 235  | .7   | 301  | 3.8   | 1     | 2100  | 11.0 | ***** | 84   | 200  | .7    | 251   | 1.9   | 1    | 2100 | 8.2  | ***** | 93 | 166 | .7  | 105 | 2.5 | 1  |
| 2400  | 6.2   | 5.3   | 94   | 148  | .9   | 130  | 2.5   | 1     | 2400  | 8.5  | ***** | 94   | 236  | .8    | 265   | 4.4   | 1    | 2400 | 7.8  | ***** | 92 | 130 | .6  | 076 | 2.5 | 1  |

DAY 13

DAY 14

DAY 15

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |    |
| 0300  | 6.3   | ***** | 93   | 167  | .6   | 279  | 3.2   | 1     | 0300  | 5.0  | ***** | 94   | 225  | .7    | 250   | 1.9   | 1    | 0300 | .9   | ***** | 97 | 143 | .8  | 160 | 1.9 | 1  |
| 0600  | 6.0   | ***** | 95   | 122  | .6   | 111  | 1.9   | 4     | 0600  | 4.5  | ***** | 94   | 131  | .9    | 092   | 3.8   | 4    | 0600 | 1.9  | ***** | 96 | 086 | .9  | 121 | 2.5 | 7  |
| 0900  | 7.7   | 5.8   | 88   | 063  | .8   | 073  | 3.2   | 15    | 0900  | 6.0  | 4.6   | 91   | 016  | .5    | 059   | 1.9   | 18   | 0900 | 6.2  | ***** | 89 | 030 | .7  | 082 | 1.9 | 18 |
| 1200  | 8.2   | 7.0   | 92   | 038  | 1.0  | 066  | 3.2   | 31    | 1200  | 10.7 | 6.3   | 74   | 320  | .9    | 309   | 3.8   | 83   | 1200 | 9.7  | 4.5   | 70 | 301 | 1.5 | 305 | 3.8 | 30 |
| 1500  | 9.4   | 8.1   | 94   | 350  | .6   | 316  | 2.5   | 24    | 1500  | 9.0  | 5.9   | 81   | 315  | 1.0   | 318   | 3.8   | 25   | 1500 | 9.8  | ***** | 73 | 302 | 1.6 | 303 | 3.8 | 18 |
| 1800  | 7.7   | 6.6   | 93   | 290  | .5   | 237  | 3.2   | 8     | 1800  | 11.4 | 3.5   | 58   | 329  | .6    | 009   | 3.2   | 17   | 1800 | 8.3  | 4.3   | 76 | 259 | 1.5 | 256 | 3.8 | 6  |
| 2100  | 7.6   | 6.2   | 91   | 132  | .6   | 094  | 3.2   | 1     | 2100  | 4.9  | ***** | 87   | 198  | .8    | 280   | 1.9   | 1    | 2100 | 5.8  | ***** | 94 | 233 | 1.3 | 232 | 3.2 | 1  |
| 2400  | 5.5   | 4.6   | 94   | 127  | 1.0  | 174  | 3.8   | 1     | 2400  | 1.4  | ***** | 95   | 156  | 1.1   | 166   | 1.9   | 1    | 2400 | 4.3  | ***** | 94 | 169 | .8  | 130 | 1.9 | 1  |

DAY 16

DAY 17

DAY 18

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|------|-------|-------|------|------|------|------|------|-------|-------|------|-------|------|------|------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. |      | DEG C | DEG C | %    | DEG.  | M/S  | DEG. |      | DEG C | DEG C | %    | DEG. | M/S  | DEG.  |    |     |     |     |     |    |
| 0300 | 1.6   | ***** | 96   | 158  | .8   | 175  | 1.9  | 1     | 0300  | 3.4  | 2.7   | 95   | 085  | .9   | 095   | 3.2   | 1    | 0300 | 2.0  | 1.4   | 96 | 112 | 1.1 | 133 | 3.2 | 1  |
| 0600 | 3.0   | ***** | 94   | 152  | .6   | 161  | 1.9  | 12    | 0600  | 3.4  | 2.7   | 95   | 089  | .5   | 074   | 2.5   | 7    | 0600 | 3.3  | 2.2   | 93 | 085 | 1.8 | 084 | 3.8 | 10 |
| 0900 | 8.4   | 5.7   | 83   | 341  | .6   | 301  | 2.5  | 45    | 0900  | 7.8  | 5.6   | 86   | 047  | 1.3  | 062   | 3.2   | 21   | 0900 | 11.1 | ***** | 79 | 042 | 1.3 | 061 | 3.8 | 45 |
| 1200 | 13.2  | 3.8   | 53   | 311  | 1.5  | 298  | 3.8  | 63    | 1200  | 13.0 | 7.5   | 69   | 312  | 1.6  | 303   | 4.4   | 72   | 1200 | 15.6 | 1.2   | 38 | 046 | 2.0 | 030 | 6.3 | 67 |
| 1500 | 15.2  | 4.8   | 50   | 312  | 2.0  | 310  | 3.8  | 48    | 1500  | 9.2  | 7.5   | 89   | 359  | .7   | 346   | 5.1   | 27   | 1500 | 17.1 | -3    | 31 | 035 | 1.9 | 039 | 5.7 | 48 |
| 1800 | 15.4  | 2.5   | 42   | 304  | 2.2  | 316  | 4.4  | 18    | 1800  | 11.9 | ***** | 77   | 009  | .3   | 164   | 1.9   | 8    | 1800 | 16.6 | -2.6  | 27 | 347 | 1.2 | 341 | 3.8 | 16 |
| 2100 | 7.5   | ***** | 88   | 204  | .8   | 288  | 2.5  | 1     | 2100  | 5.9  | ***** | 94   | 146  | 1.3  | 131   | 3.2   | 1    | 2100 | 7.9  | 3.4   | 73 | 078 | .8  | 018 | 4.4 | 1  |
| 2400 | 4.3   | ***** | 94   | 137  | .9   | 139  | 2.5  | 1     | 2400  | 4.0  | 3.2   | 95   | 124  | 1.3  | 138   | 3.8   | 1    | 2400 | 3.4  | ***** | 93 | 131 | 1.3 | 120 | 4.4 | 1  |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 1983

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |    |     |     |     |     |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|----|-----|-----|-----|-----|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |    |     |     |     |     |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |    |     |     |     |     |    |
| 0300  | 1.6   | .9    | 95   | 124  | .9   | 121  | 3.2   | 1     | 0300  | 6.7  | ***** | 89   | 209  | .5    | 216   | 1.9   | 1    | 0300 | 7.1  | 5.9   | 92 | 132 | .6  | 086 | 2.5 | 1  |
| 0600  | 2.3   | 1.6   | 95   | 083  | 1.3  | 093  | 3.8   | 12    | 0600  | 6.4  | ***** | 92   | 148  | .5    | 136   | 2.5   | 4    | 0600 | 6.8  | ***** | 95 | 099 | .3  | 124 | 1.9 | 4  |
| 0900  | 10.2  | 5.0   | 70   | 047  | 1.8  | 047  | 3.2   | 43    | 0900  | 8.8  | ***** | 89   | 252  | .5    | 315   | 3.2   | 8    | 0900 | 8.6  | ***** | 91 | 008 | .5  | 035 | 1.3 | 16 |
| 1200  | 16.6  | -3    | 32   | 022  | 1.0  | 039  | 3.2   | 61    | 1200  | 9.4  | 7.2   | 86   | 265  | 1.0   | 295   | 5.7   | 12   | 1200 | 9.3  | 8.0   | 92 | 333 | .7  | 358 | 2.5 | 12 |
| 1500  | 17.8  | .8    | 32   | 301  | 1.7  | 299  | 4.4   | 43    | 1500  | 9.5  | 6.4   | 81   | 273  | 2.3   | 277   | 7.0   | 13   | 1500 | 9.5  | 7.8   | 89 | 279 | 1.1 | 262 | 3.2 | 29 |
| 1800  | 16.5  | ***** | 30   | 296  | 2.2  | 316  | 6.3   | 14    | 1800  | 9.8  | 6.5   | 80   | 283  | 2.3   | 285   | 8.3   | 4    | 1800 | 8.9  | 7.8   | 93 | 272 | 1.1 | 267 | 2.5 | 9  |
| 2100  | 10.2  | ***** | 66   | 208  | .7   | 189  | 1.9   | 1     | 2100  | 7.7  | ***** | 94   | 266  | 1.6   | 291   | 5.7   | 1    | 2100 | 8.2  | ***** | 94 | 249 | .6  | 251 | 1.9 | 1  |
| 2400  | 7.7   | ***** | 85   | 190  | .8   | 191  | 2.5   | 1     | 2400  | 8.0  | ***** | 88   | 105  | .7    | 101   | 3.8   | 1    | 2400 | 7.9  | ***** | 94 | 186 | .3  | 161 | 1.3 | 1  |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND | GUST | MAX. |       |
|-------|-------|-------|------|------|------|------|-------|-------|-------|------|-------|------|------|-------|-------|-------|------|------|------|-------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR.  |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S   |
| 0300  | 7.4   | ***** | 93   | 117  | .6   | 132  | 1.9   | 1     | 0300  | 6.0  | ***** | 94   | 224  | .7    | 255   | 3.2   | 1    | 0300 | 3.9  | 3.0   |
| 0600  | 7.4   | 7.1   | 98   | 078  | .8   | 085  | 1.9   | 3     | 0600  | 5.9  | ***** | 94   | 192  | .5    | 270   | 2.5   | 4    | 0600 | 3.5  | ***** |
| 0900  | 9.1   | ***** | 92   | 040  | .9   | 035  | 1.9   | 14    | 0900  | 7.9  | 6.3   | 90   | 007  | .5    | 016   | 1.9   | 16   | 0900 | 5.6  | 3.4   |
| 1200  | 10.0  | 8.4   | 90   | 338  | .6   | 057  | 1.9   | 17    | 1200  | 10.1 | ***** | 75   | 028  | .5    | 295   | 2.5   | 22   | 1200 | 7.6  | 5.1   |
| 1500  | 11.1  | ***** | 84   | 301  | 1.1  | 337  | 2.5   | 18    | 1500  | 9.0  | 6.8   | 86   | 280  | 1.0   | 292   | 3.2   | 11   | 1500 | 8.5  | 4.7   |
| 1800  | 11.1  | 8.3   | 83   | 312  | .6   | 336  | 3.2   | 2     | 1800  | 8.0  | ***** | 91   | 113  | .3    | 104   | 1.9   | 3    | 1800 | 6.4  | ***** |
| 2100  | 8.3   | ***** | 92   | 265  | .8   | 274  | 3.8   | 1     | 2100  | 6.5  | ***** | 92   | 121  | .5    | 136   | 1.9   | 1    | 2100 | 5.2  | ***** |
| 2400  | 7.1   | ***** | 93   | 252  | .6   | 245  | 2.5   | 1     | 2400  | 4.5  | 3.4   | 93   | 139  | .7    | 089   | 3.2   | 1    | 2400 | 3.0  | 2.1   |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR  | DEW   | WIND  | WIND  | GUST | MAX.  |       |    |     |      |     |      |    |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|------|-------|-------|----|-----|------|-----|------|----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR. | SPD.  | DIR.  |    |     |      |     |      |    |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S   | DEG. | M/S  | DEG C | DEG C | %     | DEG.  | M/S  | DEG.  | M/S   |    |     |      |     |      |    |
| 0300  | 2.6   | ***** | 95   | 112  | 1.2  | 147  | 2.5   | 1     | 0300  | 6.4   | 5.5   | 94   | 151  | .8    | 117   | 2.5   | 1     | 0300 | ***** | ***** | ** | *** | **** | *** | **** | 1  |
| 0600  | 3.4   | 2.5   | 94   | 088  | 1.0  | 092  | 2.5   | 3     | 0600  | 6.5   | 5.7   | 95   | 130  | 1.0   | 116   | 2.5   | 6     | 0600 | ***** | ***** | ** | *** | **** | *** | **** | 6  |
| 0900  | 7.3   | 4.3   | 81   | 058  | 1.0  | 047  | 2.5   | 25    | 0900  | 12.2  | 7.0   | 70   | 043  | .7    | 067   | 3.2   | 53    | 0900 | ***** | ***** | ** | *** | **** | *** | **** | 44 |
| 1200  | 9.2   | 6.3   | 82   | 061  | 1.4  | 078  | 3.8   | 26    | 1200  | 16.1  | 5.4   | 49   | 085  | 2.1   | 106   | 5.7   | 25    | 1200 | ***** | ***** | ** | *** | **** | *** | **** | 65 |
| 1500  | 10.2  | 6.0   | 75   | 084  | 1.6  | 093  | 4.4   | 11    | 1500  | 11.9  | ***** | 86   | 002  | .7    | 320   | 7.6   | 16    | 1500 | ***** | ***** | ** | *** | **** | *** | **** | 22 |
| 1800  | 7.6   | ***** | 93   | 285  | .6   | 054  | 1.9   | 3     | 1800  | ***** | ***** | **   | ***  | ****  | 345M  | 1.3   | ***** | 1800 | ***** | ***** | ** | *** | **** | *** | **** | 11 |
| 2100  | 7.1   | ***** | 94   | 214  | .3   | 271  | 1.9   | 1     | 2100  | ***** | ***** | **   | 345M | .4    | ***** | ***** | 1     | 2100 | ***** | ***** | ** | *** | **** | *** | **** | 1  |
| 2400  | 6.2   | ***** | 95   | 135  | .7   | 149  | 1.9   | 1     | 2400  | ***** | ***** | **   | ***  | ****  | ***   | ****  | 1     | 2400 | ***** | ***** | ** | *** | **** | *** | **** | 1  |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 1983

DAY 28

DAY 29

DAY 30

| DAY 28 |       |       |      |      |                |      |      |       |       | DAY 29 |       |                |      |      |      |       |       |      |                | DAY 30 |       |       |     |       |       |      |      |     |      |     |    |  |
|--------|-------|-------|------|------|----------------|------|------|-------|-------|--------|-------|----------------|------|------|------|-------|-------|------|----------------|--------|-------|-------|-----|-------|-------|------|------|-----|------|-----|----|--|
| HOUR   | DEW   |       | WIND |      | WIND GUST MAX. |      | HOUR | DEW   |       | WIND   |       | WIND GUST MAX. |      | HOUR | DEW  |       | WIND  |      | WIND GUST MAX. |        |       |       |     |       |       |      |      |     |      |     |    |  |
| NDNG   | TEMP. | POINT | RH   | DIR. | SPD.           | DIR. |      | 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   | ***** | ***** | **   | ***  | ****           | ***  | **** | 1     | 0300  | 6.4    | ***** | 1              | 100  | .7   | 090  | 3.2   | 1     | 0300 | 11.5           | 9.2    | 86    | 221   | 1.3 | 206   | 8.3   | 1    |      |     |      |     |    |  |
| 0600   | ***** | ***** | **   | ***  | ****           | ***  | **** | 9     | 0600  | 7.2    | -36.1 | 2              | 059  | 1.2  | 075  | 3.8   | 6     | 0600 | 11.1           | 8.5    | 84    | 237   | 2.5 | 238   | 7.0   | 4    |      |     |      |     |    |  |
| 0900   | ***** | ***** | **   | ***  | ****           | ***  | **** | 22    | 0900  | 9.1    | ***** | 96             | 034  | .9   | 056  | 2.5   | 16    | 0900 | 10.2           | 8.6    | 90    | 248   | 2.5 | 243   | 7.0   | 11   |      |     |      |     |    |  |
| 1200   | ***** | ***** | **   | ***  | ****           | ***  | **** | 41    | 1200  | 9.1    | ***** | 4              | 285  | .6   | 246  | 2.5   | 7     | 1200 | 11.3           | 7.8    | 79    | 254   | 2.4 | 248   | 7.6   | 18   |      |     |      |     |    |  |
| 1500   | ***** | ***** | **   | ***  | ****           | ***  | **** | 202   | 1500  | 9.4    | ***** | 2              | 256  | .7   | 236  | 3.2   | 4     | 1500 | 12.2           | 6.7    | 69    | 251   | 2.5 | 220   | 7.6   | 11   |      |     |      |     |    |  |
| 1800   | 15.8  | ***** | 52   | ***  | ****           | 313  | 4.4  | 6     | 1800  | 10.1   | 9.8   | 98             | 070  | .4   | 072  | 3.2   | 2     | 1800 | 11.2           | 6.4    | 72    | 239   | 1.9 | 238   | 7.0   | 3    |      |     |      |     |    |  |
| 2100   | 9.5   | ***** | 76   | ***  | ****           | 249  | 2.5  | 1     | 2100  | 8.6    | -19.3 | 12             | 146  | .4   | 100  | 5.1   | 1     | 2100 | 6.9            | -21.7  | 11    | 250   | 1.4 | 265   | 3.8   | 1    |      |     |      |     |    |  |
| 2400   | 6.2   | ***** | 92   | ***  | ****           | 141  | 1.9  | 1     | 2400  | 8.8    | ***** | 17             | 080  | 1.0  | 063  | 3.2   | 1     | 2400 | 6.7            | *****  | 19    | 179   | .3  | 217   | 1.3   | 1    |      |     |      |     |    |  |

DAY 31

| HOUR  | DEW   |       | WIND |      | WIND GUST MAX. |      |      |     |
|-------|-------|-------|------|------|----------------|------|------|-----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD.           | DIR. | GUST | RAD |
| DEG C | DEG C | %     | DEG. | M/S  | DEG.           | M/S  | MW   |     |
| 0300  | 6.3   | ***** | 18   | 101  | .3             | 354  | 2.5  | 1   |
| 0600  | 6.5   | ***** | 20   | 007  | .4             | 156  | 2.5  | 3   |
| 0900  | 7.0   | ***** | 16   | 021  | .7             | 012  | 1.9  | 7   |
| 1200  | 9.1   | ***** | 6    | 332  | .5             | 018  | 1.9  | 16  |
| 1500  | 9.7   | ***** | 97   | 274  | .8             | 318  | 1.9  | 15  |
| 1800  | 9.5   | ***** | 98   | 250  | .9             | 257  | 2.5  | 5   |
| 2100  | 7.3   | -28.0 | 6    | 172  | .9             | 158  | 2.5  | 1   |
| 2400  | 6.7   | ***** | 13   | 114  | .8             | 126  | 2.5  | 1   |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

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

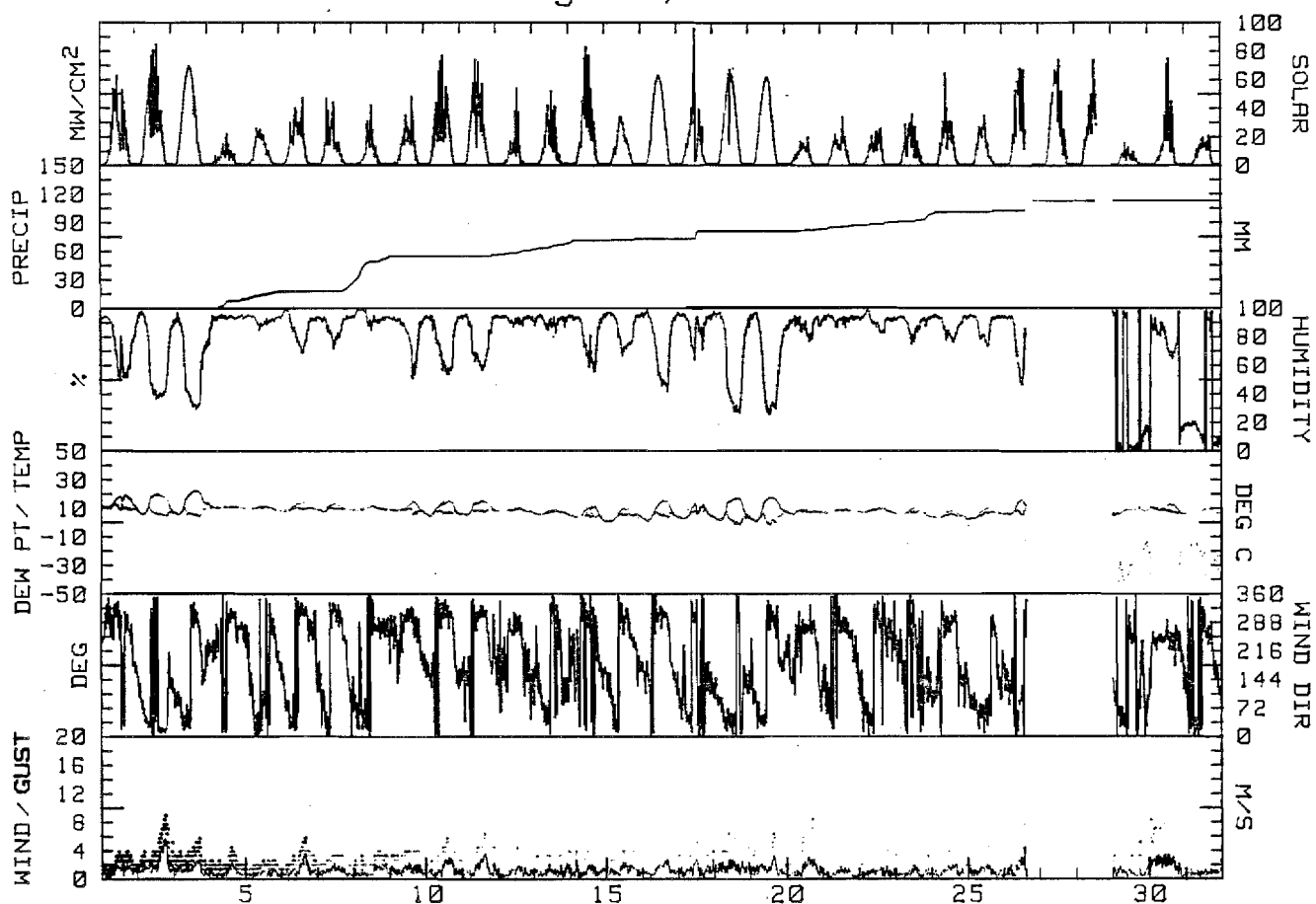
| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SGH | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 19.6                   | 10.8                   | 15.2                   | 280                         | .7                          | 1.1                         | 276                         | 3.8                         | NW            | 65              | 9.9                 | .2           | 3935                               | 1   |
| 2     | 20.9                   | 6.0                    | 13.5                   | 034                         | 1.5                         | 2.1                         | 011                         | 8.9                         | NNE           | 64              | 6.3                 | 0.0          | 5600                               | 2   |
| 3     | 22.9                   | 5.8                    | 14.4                   | 013                         | .3                          | 1.4                         | 278                         | 5.7                         | E             | 60              | 6.1                 | 0.0          | 6370                               | 3   |
| 4     | 14.2                   | 10.5                   | 12.4                   | 282                         | .6                          | .9                          | 322                         | 4.4                         | WNW           | 94              | 10.4                | 9.6          | 1180                               | 4   |
| 5     | 12.5                   | 8.8                    | 10.7                   | 034                         | .1                          | .7                          | 056                         | 2.5                         | NNE           | 90              | 9.8                 | 8.0          | 2023                               | 5   |
| 6     | 14.6                   | 7.7                    | 11.2                   | 325                         | .6                          | 1.3                         | 306                         | 5.7                         | NW            | 82              | 9.2                 | .6           | 2988                               | 6   |
| 7     | 14.1                   | 8.0                    | 11.1                   | 324                         | .4                          | 1.0                         | 303                         | 3.2                         | ESE           | 84              | 9.0                 | 7.2          | 2475                               | 7   |
| 8     | 12.9                   | 8.7                    | 10.8                   | 297                         | .5                          | 1.0                         | 267                         | 3.8                         | W             | 92              | 9.3                 | 27.4         | 1715                               | 8   |
| 9     | 15.5                   | 7.1                    | 11.3                   | 276                         | .8                          | 1.2                         | 298                         | 3.8                         | NW            | 81              | 8.0                 | 2.0          | 2488                               | 9   |
| 10    | 15.7                   | 4.7                    | 10.2                   | 304                         | .6                          | 1.4                         | 304                         | 5.7                         | NW            | 71              | 6.4                 | 0.0          | 4295                               | 10  |
| 11    | 15.9                   | 4.9                    | 10.4                   | 296                         | .8                          | 1.4                         | 305                         | 6.3                         | NW            | 71              | 7.5                 | 1.2          | 4558                               | 11  |
| 12    | 11.0                   | 7.7                    | 9.4                    | 244                         | .4                          | .9                          | 267                         | 4.4                         | W             | 91              | 8.4                 | 5.2          | 1428                               | 12  |
| 13    | 9.8                    | 5.5                    | 7.7                    | 090                         | .3                          | 1.0                         | 174                         | 3.8                         | E             | 90              | 6.3                 | 6.8          | 2498                               | 13  |
| 14    | 11.8                   | 1.4                    | 6.6                    | 245                         | .1                          | 1.1                         | 092                         | 3.8                         | WNW           | 79              | 3.5                 | 3.4          | 4085                               | 14  |
| 15    | 10.1                   | .7                     | 5.4                    | 268                         | .4                          | 1.2                         | 305                         | 3.8                         | WNW           | 82              | 3.9                 | 1.2          | 2463                               | 15  |
| 16    | 16.1                   | .8                     | 8.5                    | 291                         | .5                          | 1.3                         | 316                         | 4.4                         | NW            | 67              | 4.4                 | .2           | 5530                               | 16  |
| 17    | 13.8                   | 2.7                    | 8.3                    | 067                         | .4                          | 1.2                         | 346                         | 5.1                         | NE            | 88              | 5.2                 | 7.8          | 3318                               | 17  |
| 18    | 17.5                   | 1.8                    | 9.7                    | 060                         | 1.1                         | 1.6                         | 030                         | 6.3                         | NE            | 62              | 1.5                 | 0.0          | 5585                               | 18  |
| 19    | 17.8                   | .7                     | 9.3                    | 356                         | .3                          | 1.4                         | 316                         | 6.3                         | NE            | 61              | 1.5                 | 0.0          | 5305                               | 19  |
| 20    | 10.2                   | 6.0                    | 8.1                    | 263                         | .9                          | 1.3                         | 285                         | 8.3                         | W             | 86              | 6.7                 | 2.0          | 1385                               | 20  |
| 21    | 10.0                   | 6.6                    | 8.3                    | 279                         | .3                          | .8                          | 262                         | 3.2                         | W             | 92              | 7.7                 | 4.6          | 1918                               | 21  |
| 22    | 12.0                   | 7.1                    | 9.6                    | 329                         | .3                          | .9                          | 274                         | 3.8                         | WNW           | 91              | 7.8                 | 3.4          | 1748                               | 22  |
| 23    | 10.7                   | 4.3                    | 7.5                    | 186                         | .1                          | .8                          | 255                         | 3.2                         | SSW           | 85              | 5.9                 | 7.6          | 2075                               | 23  |
| 24    | 8.8                    | 2.6                    | 5.7                    | 277                         | .3                          | 1.1                         | 265                         | 3.8                         | WNW           | 86              | 4.2                 | 3.0          | 2583                               | 24  |
| 25    | 10.2                   | 2.2                    | 6.2                    | 086                         | .7                          | 1.1                         | 093                         | 4.4                         | E             | 87              | 4.5                 | 1.6          | 2863                               | 25  |
| 26    | 16.1m                  | 5.7m                   | 10.9m                  | 088m                        | .7m                         | 1.4m                        | 320m                        | 7.6m                        | ESE(m)        | 71m             | 6.2m                | 0.0          | 4657m                              | 26  |
| 27    | *****                  | *****                  | *****                  | ***                         | ****                        | ****                        | ***                         | ****                        | ***           | **              | *****               | 0.0          | 4986                               | 27  |
| 28    | 17.0m                  | 6.2m                   | 11.6m                  | ***                         | ****                        | 1.2m                        | 313m                        | 4.4m                        | ***           | 72m             | *****               | 0.0          | 3385m                              | 28  |
| 29    | 10.1                   | 5.1                    | 7.6                    | 065                         | .4                          | .9                          | 100                         | 5.1                         | ENE           | M               | M                   | 0.0          | 975                                | 29  |
| 30    | 13.6                   | 6.5                    | 10.1                   | 243                         | 1.8                         | 2.0                         | 206                         | 8.3                         | WSW           | M               | M                   | 0.0          | 2615                               | 30  |
| 31    | 11.5                   | 6.0                    | 8.8                    | 278                         | .1                          | .8                          | 354                         | 2.5                         | NNE           | M               | M                   | 0.0          | 1603                               | 31  |
| MONTH | 22.9m                  | .7m                    | 9.7m                   | 310m                        | .2m                         | 1.2m                        | 011m                        | 8.9m                        | WNW(m)        | 75m             | 4.7m                | 103.0        | 97826m                             |     |

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

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

\*\*\*\* SEE NOTES AT THE BACK OF THIS REPORT \*\*\*\*

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



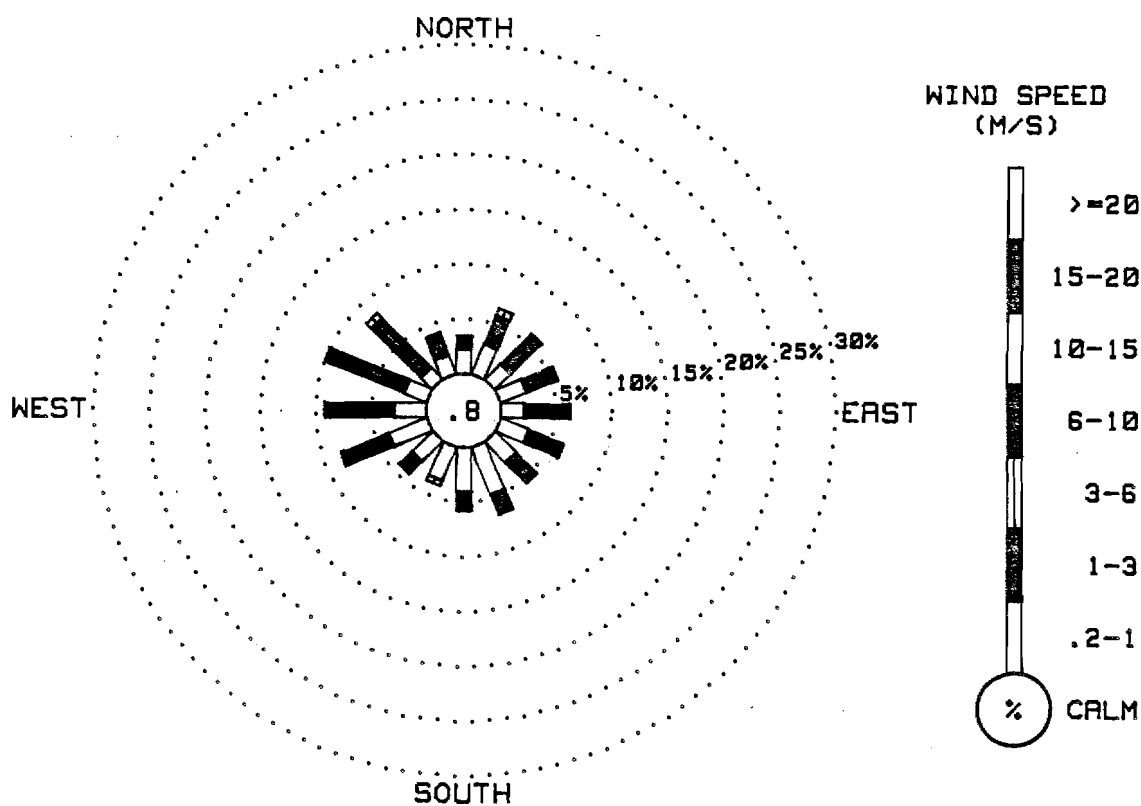
R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING August, 1983

| DIRECTION | VELOCITY (M/S)   |                  |                  |                   |                    |                    |                       | TOTAL  |
|-----------|------------------|------------------|------------------|-------------------|--------------------|--------------------|-----------------------|--------|
|           | 0.2<br>TO<br>1.0 | 1.0<br>TO<br>3.0 | 3.0<br>TO<br>6.0 | 6.0<br>TO<br>10.0 | 10.0<br>TO<br>15.0 | 15.0<br>TO<br>20.0 | 20.0<br>OR<br>GREATER |        |
| N         | 2.22             | 1.13             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 3.42   |
| NNE       | 2.95             | 2.77             | .69              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.41   |
| NE        | 2.00             | 3.79             | .04              | 0.00              | 0.00               | 0.00               | 0.00                  | 5.83   |
| ENE       | 2.51             | 3.06             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.57   |
| E         | 2.08             | 4.12             | .04              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.23   |
| ESE       | 2.73             | 3.32             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 6.12   |
| SE        | 2.66             | 2.70             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.36   |
| SSE       | 4.66             | 1.93             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 6.59   |
| S         | 4.04             | 1.71             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 5.76   |
| SSW       | 3.35             | .47              | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 3.83   |
| SW        | 2.62             | 1.53             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 4.23   |
| WSW       | 3.75             | 4.30             | .29              | 0.00              | 0.00               | 0.00               | 0.00                  | 8.34   |
| W         | 2.91             | 6.19             | .07              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.18   |
| WNW       | 2.22             | 7.61             | .04              | 0.00              | 0.00               | 0.00               | 0.00                  | 9.87   |
| NW        | 1.46             | 6.34             | .66              | 0.00              | 0.00               | 0.00               | 0.00                  | 8.45   |
| NNW       | 1.86             | 2.15             | 0.00             | 0.00              | 0.00               | 0.00               | 0.00                  | 4.01   |
| CALM      |                  |                  |                  |                   |                    |                    |                       | .80    |
| TOTAL     | 44.04            | 53.11            | 2.04             | 0.00              | 0.00               | 0.00               | 0.00                  | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2745 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY

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



## R &amp; M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

HOURLY PRECIPITATION SUMMARY FOR DEVIL CANYON WEATHER STATION

DATA TAKEN DURING September, 1983

PRECIPITATION VALUES ARE IN MILLIMETERS

HOUR    ENDING

[illegible]

## R &amp; M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

DAY 01

DAY 02

DAY 03

| HOUR | DEW   |       |    |      |      |      |      |     | WIND | WIND  | GUST  | MAX. | HOUR | DEW  |      |      |     |      |       |       |    | WIND | WIND | GUST | MAX. | HOUR | DEW  |       |       |    |      |      |      |      | WIND | WIND | GUST | MAX. |
|------|-------|-------|----|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|----|------|------|------|------|------|------|-------|-------|----|------|------|------|------|------|------|------|------|
| NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | 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 | 6.8   | -20.7 | 12 | 097  | .8   | 085  | 2.5  | 1   | 0300 | 4.3   | ***** | 7    | 139  | .6   | 081  | 2.5  | 1   | 0300 | 2.5   | -1.6  | 74 | 086  | 1.4  | 064  | 3.2  | 1    |      |       |       |    |      |      |      |      |      |      |      |      |
| 0600 | 6.3   | -18.5 | 15 | 078  | .8   | 070  | 2.5  | 2   | 0600 | 3.1   | -34.6 | 4    | 123  | 1.3  | 118  | 3.2  | 4   | 0600 | 1.6   | ***** | 81 | 087  | 1.6  | 075  | 3.8  | 5    |      |       |       |    |      |      |      |      |      |      |      |      |
| 0900 | 6.6   | ***** | 16 | 093  | .4   | 063  | 1.9  | 4   | 0900 | 7.4   | 1.9   | 68   | 070  | .6   | 126  | 2.5  | 39  | 0900 | 5.3   | ***** | 77 | 081  | .8   | 114  | 2.5  | 16   |      |       |       |    |      |      |      |      |      |      |      |      |
| 1200 | 8.4   | ***** | 10 | 041  | .5   | 055  | 1.9  | 10  | 1200 | 11.1  | ***** | 41   | 074  | .9   | 116  | 3.8  | 55  | 1200 | 9.6   | 2.7   | 62 | 033  | 1.2  | 027  | 2.5  | 27   |      |       |       |    |      |      |      |      |      |      |      |      |
| 1500 | 10.2  | 8.6   | 90 | 297  | .6   | 284  | 2.5  | 15  | 1500 | 11.9  | -3.6  | 34   | 281  | 1.1  | 069  | 3.2  | 39  | 1500 | 12.1  | 2.3   | 51 | 074  | 1.2  | 029  | 3.2  | 39   |      |       |       |    |      |      |      |      |      |      |      |      |
| 1800 | 7.7   | ***** | 11 | 264  | 1.0  | 274  | 5.1  | 2   | 1800 | 10.9  | -4.1  | 35   | 258  | 1.4  | 277  | 3.8  | 10  | 1800 | 11.7  | 2.4   | 53 | 045  | .3   | 056  | 3.2  | 9    |      |       |       |    |      |      |      |      |      |      |      |      |
| 2100 | 6.8   | ***** | 18 | 204  | .4   | 235  | 2.5  | 1   | 2100 | 2.8   | -3.9  | 61   | 152  | 1.2  | 138  | 3.8  | 1   | 2100 | 3.4   | ***** | 72 | 163  | .8   | 297  | 4.4  | 1    |      |       |       |    |      |      |      |      |      |      |      |      |
| 2400 | 5.6   | ***** | 9  | 229  | .8   | 237  | 2.5  | 1   | 2400 | 2.5   | ***** | 73   | 134  | .5   | 129  | 1.9  | 1   | 2400 | .9    | -2.7  | 77 | 130  | 1.2  | 122  | 3.2  | 1    |      |       |       |    |      |      |      |      |      |      |      |      |

DAY 04

DAY 05

DAY 06

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW   | WIND  | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST  | MAX.  |       |      |      |      |      |      |     |
|-------|-------|-------|------|------|------|------|------|-------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|------|------|------|------|------|-----|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD   | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |       | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | MW   |     |
| 0300  | -.3   | -3.0  | 82   | 108  | 1.5  | 093  | 3.2  | 1     | 0300  | -1.7  | -2.4  | 95   | 097  | 1.4  | 087  | 3.2  | 1    | 0300  | -1.5  | -39.8 | 3    | 092  | 1.5  | 083  | 3.2  | 1   |
| 0600  | -.3   | ***** | 92   | 094  | 1.4  | 103  | 3.8  | 4     | 0600  | -2.3  | -42.5 | 2    | 103  | 1.1  | 093  | 3.2  | 5    | 0600  | -1.8  | -38.0 | 4    | 092  | 1.4  | 093  | 2.5  | 4   |
| 0900  | ***** | ***** | **   | 075M | .6M  | 032M | 4.9M | ***** | 0900  | 2.9   | ***** | 75   | 036  | .5   | 073  | 2.5  | 30   | 0900  | 6.8   | -2.1  | 53   | 078M | .9M  | 103  | 9.4  | 38  |
| 1200  | 7.7   | -2.7  | 48   | 359M | 1.6M | 019M | 5.2M | 41    | 1200  | 9.6   | -3.5  | 40   | 337  | .7   | 266  | 2.5  | 55   | 1200  | 9.4   | -4.7  | 37   | 100  | 1.9  | 088  | 5.1  | 52  |
| 1500  | 8.3   | -3.0  | 45   | 029M | 1.5M | 009M | 5.1M | 15    | 1500  | 10.4  | -3.1  | 39   | 264  | 1.1  | 231  | 4.4  | 32   | 1500  | 10.9  | -4.9  | 33   | 030  | 1.5  | 064  | 5.1  | 36  |
| 1800  | 7.7   | ***** | 47   | 024  | .8   | 028  | 3.2  | 7     | 1800  | 6.4   | -1.5  | 57   | 230  | 1.2  | 222  | 3.8  | 4    | 1800  | 10.1  | -5.6  | 33   | 332  | .5   | 016  | 3.8  | 7   |
| 2100  | 2.9   | -2.2  | 69   | 137  | 1.3  | 105  | 3.2  | 1     | 2100  | 3.3   | -2.4  | 66   | 132  | 1.6  | 138  | 3.8  | 1    | 2100  | 3.8   | -4.9  | 53   | 127  | 1.3  | 133  | 3.8  | 1   |
| 2400  | .3    | -3.1  | 78   | 128  | 1.2  | 098  | 2.5  | 1     | 2400  | -.3   | -1.2  | 94   | 106  | 1.7  | 111  | 3.2  | 1    | 2400  | 1.5   | -3.7  | 68   | 107  | 1.1  | 140  | 3.2  | 1   |

DAY 07

DAY 08

DAY 09

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST | MAX.  |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW  |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW  |
| 0300 | -7    | -3.9  | 79   | 087  | 1.3  | 077  | 3.2  | 1   | 0300 | 4.7   | ***** | 87   | 150  | .6   | 122  | 2.5  | 1    | 0300 | 4.5   | ***** | 11 | 059  | .5   | 348  | 1.9  | 1   |
| 0600 | -7    | -3.1  | 84   | 079  | 1.1  | 081  | 3.2  | 3   | 0600 | 4.3   | -28.7 | 7    | 126  | .9   | 111  | 2.5  | 2    | 0600 | 4.4   | ***** | 13 | 060  | .8   | 063  | 1.9  | 2   |
| 0900 | 1.8   | -2.0  | 76   | 038  | 1.2  | 066  | 3.2  | 6   | 0900 | 5.2   | ***** | 8    | 052  | .6   | 088  | 1.9  | 12   | 0900 | 6.1   | -32.5 | 4  | 027  | .9   | 036  | 1.9  | 11  |
| 1200 | 6.9   | .2    | 62   | 024M | 1.4M | 020M | 3.2M | 29  | 1200 | 8.0   | 6.1   | 88   | 328  | .7   | 290  | 2.5  | 24   | 1200 | 9.4   | 5.2   | 75 | 306  | .8   | 286  | 2.5  | 30  |
| 1500 | 9.6   | 1.8   | 58   | 330  | .7   | 032  | 2.5  | 22  | 1500 | 9.3   | ***** | 74   | 280  | .6   | 294  | 2.5  | 13   | 1500 | 10.2  | 4.0   | 65 | 293  | 1.4  | 283  | 3.2  | 8   |
| 1800 | 10.0  | ***** | 56   | 062  | .8   | 115  | 2.5  | 3   | 1800 | 8.3   | 4.9   | 79   | 301  | .6   | 248  | 3.2  | 3    | 1800 | 9.8   | 3.4   | 64 | 305  | 1.2  | 300  | 3.8  | 3   |
| 2100 | 6.4   | 2.1   | 74   | 173  | .8   | 182  | 1.9  | 1   | 2100 | 5.6   | ***** | 99   | 103  | .3   | 066  | 2.5  | 1    | 2100 | 3.8   | ***** | 88 | 175  | .9   | 261  | 3.2  | 1   |
| 2400 | 5.1   | 2.3   | 82   | 122  | .7   | 082  | 2.5  | 1   | 2400 | 4.9   | ***** | 11   | 085  | .8   | 083  | 2.5  | 1    | 2400 | 3.7   | ***** | 2  | 067  | .2   | 109  | 1.9  | 1   |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

DAY 10

DAY 11

DAY 12

| HOUR | DEW   | WIND  | WIND | GUST | MAX. |      | HOUR | DEW | WIND | WIND  | GUST  | MAX. |      | HOUR | DEW  | WIND | WIND | GUST | MAX.  |       |    |      |      |      |      |     |
|------|-------|-------|------|------|------|------|------|-----|------|-------|-------|------|------|------|------|------|------|------|-------|-------|----|------|------|------|------|-----|
| NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD | NDNG | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | GUST | RAD  | NDNG | TEMP. | POINT | RH | DIR. | SPD. | DIR. | GUST | RAD |
|      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW  |      | DEG C | DEG C | %    | DEG. | M/S  | DEG. | M/S  | MW   |      | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW  |
| 0300 | 3.8   | ***** | 12   | 098  | .8   | 157  | 2.5  | 1   | 0300 | 4.3   | ***** | 98   | 106  | .7   | 089  | 2.5  | 1    | 0300 | 4.7   | 3.9   | 95 | 075  | .6   | 173  | 2.5  | 1   |
| 0600 | 4.2   | ***** | 14   | 119  | .3   | 118  | 2.5  | 2   | 0600 | 3.4   | -30.8 | 6    | 084  | 1.3  | 091  | 4.4  | 3    | 0600 | 4.2   | ***** | 95 | 064  | .8   | 071  | 2.5  | 2   |
| 0900 | 5.4   | ***** | 14   | 070  | .4   | 027  | 1.9  | 8   | 0900 | 7.1   | 4.2   | 82   | 052  | 1.2  | 076  | 3.2  | 21   | 0900 | 7.8   | ***** | 76 | 031  | .8   | 038  | 1.9  | 19  |
| 1200 | 9.5   | ***** | 76   | 320  | .5   | 012  | 1.3  | 32  | 1200 | 11.0  | 5.2   | 67   | 028  | 1.5  | 034  | 3.2  | 27   | 1200 | 9.8   | 3.1   | 63 | 304  | 1.7  | 294  | 4.4  | 16  |
| 1500 | 10.4  | ***** | 64   | 280  | .8   | 289  | 1.9  | 14  | 1500 | 12.9  | ***** | 50   | 042  | 1.1  | 046  | 3.2  | 13   | 1500 | 11.3  | 2.6   | 55 | 306  | 2.4  | 319  | 5.7  | 45  |
| 1800 | 8.2   | 3.5   | 72   | 233  | .4   | 207  | 1.9  | 3   | 1800 | 10.6  | ***** | 61   | 030  | .3   | 044  | 1.9  | 2    | 1800 | 8.8   | 3.3   | 68 | 287  | 1.2  | 314  | 4.4  | 2   |
| 2100 | 4.9   | 2.4   | 84   | 152  | 1.0  | 127  | 2.5  | 1   | 2100 | 6.0   | ***** | 80   | 166  | .8   | 185  | 1.9  | 1    | 2100 | 6.8   | ***** | 78 | 232  | .9   | 242  | 2.5  | 1   |
| 2400 | 3.8   | ***** | 93   | 139  | .6   | 100  | 2.5  | 1   | 2400 | 5.5   | ***** | 82   | 116  | .6   | 105  | 2.5  | 1    | 2400 | 5.5   | ***** | 97 | 238  | .8   | 296  | 2.5  | 1   |

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 | 3.6   | ***** | 10   | 128  | .7   | 103  | 2.5  | 1   | 0300 | 3.9   | ***** | 80   | 146  | .9   | 159  | 1.9  | 1    | 0300 | 2.1   | ***** | 18 | 254  | .4   | 288  | 1.3  | 1   |
| 0600 | 3.3   | -23.5 | 12   | 075  | 1.2  | 071  | 3.2  | 2   | 0600 | 3.6   | ***** | 84   | 140  | .8   | 105  | 2.5  | 3    | 0600 | 1.8   | ***** | 15 | 205  | .4   | 223  | 1.3  | 2   |
| 0900 | 4.9   | ***** | 98   | 069  | .7   | 083  | 2.5  | 11  | 0900 | 5.2   | 1.7   | 78   | 230  | .5   | 276  | 3.8  | 16   | 0900 | 4.4   | 3.6   | 95 | 348  | .2   | 305  | 1.9  | 27  |
| 1200 | 8.6   | 2.2   | 64   | 048  | 1.0  | 041  | 3.2  | 21  | 1200 | 5.1   | -23.1 | 11   | 290  | 1.3  | 283  | 3.2  | 9    | 1200 | 6.8   | 2.7   | 75 | 282  | 1.5  | 273  | 3.8  | 53  |
| 1500 | 10.9  | 1.7   | 53   | 066  | 1.5  | 055  | 4.4  | 16  | 1500 | 4.2   | -31.9 | 5    | 288  | 1.7  | 282  | 5.1  | 20   | 1500 | 7.4   | 2.3   | 70 | 260  | 1.3  | 270  | 3.2  | 18  |
| 1800 | 9.1   | ***** | 61   | 078  | 1.0  | 013  | 5.7  | 2   | 1800 | 3.7   | -27.7 | 8    | 257  | 1.1  | 287  | 3.2  | 2    | 1800 | 6.9   | -3.6  | 60 | 245  | .3   | 249  | 3.8  | 2   |
| 2100 | 6.3   | 1.1   | 69   | 130  | 1.1  | 125  | 2.5  | 1   | 2100 | 2.8   | ***** | 15   | 223  | .7   | 229  | 2.5  | 1    | 2100 | 1.1   | -2.3  | 78 | 110  | .7   | 009  | 4.4  | 1   |
| 2400 | 3.3   | ***** | 81   | 161  | 1.3  | 132  | 3.2  | 1   | 2400 | 2.6   | ***** | 18   | 154  | .3   | 175  | 1.3  | 1    | 2400 | -7    | -1.6  | 94 | 137  | 1.1  | 100  | 3.8  | 1   |

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 | -2.1  | ***** | 4    | 089  | 1.2  | 084  | 3.8  | 1   | 0300 | -1.5  | -2.8  | 91   | 113M | 1.2M | 122M | 2.5M | 1    | 0300 | -1.8  | -2.5  | 95 | 084  | 1.1  | 087  | 2.5  | 1   |
| 0600 | -2.6  | -31.3 | 9    | 096M | 1.0M | 087M | 3.2M | 3   | 0600 | -2.2  | -2.5  | 98   | 100  | 1.0  | 094  | 3.2  | 3    | 0600 | -2.5  | -2.9  | 97 | 069M | 1.4M | 069M | 3.2M | 3   |
| 0900 | ***** | ***** | **   | 064M | 1.2M | 071M | 2.5M | *** | 0900 | 2.1   | -2.2  | 73   | 049M | 1.3M | 077M | 3.2M | 30   | 0900 | .9    | -2.0  | 81 | 063  | 2.0  | 058  | 3.8  | 17  |
| 1200 | 9.8   | -.7   | 48   | 033M | .9M  | 039M | 3.2M | 44  | 1200 | 8.9   | .6    | 56   | 302  | .7   | 256  | 3.2  | 44   | 1200 | 9.1   | .5    | 55 | 053  | 1.6  | 068  | 3.2  | 29  |
| 1500 | 12.2  | ***** | 41   | 145  | .5   | 112  | 3.2  | 29  | 1500 | 9.9   | .2    | 51   | 279  | 1.7  | 276  | 4.4  | 28   | 1500 | 11.2  | -1.7  | 41 | 087  | 1.3  | 085  | 3.8  | 26  |
| 1800 | 9.0   | -2.7  | 44   | 216  | 1.4  | 219  | 3.2  | 2   | 1800 | 6.7   | -1.4  | 56   | 258  | 1.4  | 303  | 4.4  | 2    | 1800 | 8.0   | -3.9  | 43 | 122  | 1.1  | 159  | 2.5  | 2   |
| 2100 | 2.5   | ***** | 68   | 140  | 1.0  | 141  | 2.5  | 1   | 2100 | .8    | ***** | 82   | 160  | 1.1  | 174  | 1.9  | 1    | 2100 | 4.5   | -4.0  | 54 | 148  | 1.3  | 160  | 2.5  | 1   |
| 2400 | 0.0   | -2.1  | 86   | 098  | 1.2  | 105  | 3.2  | 1   | 2400 | -1.0  | ***** | 88   | 103  | .7   | 162  | 2.5  | 1    | 2400 | .9    | ***** | 70 | 148  | .9   | 097  | 2.5  | 1   |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

DAY 19

DAY 20

DAY 21

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND | GUST | MAX. |
|-------|-------|-------|------|------|------|------|-------|-------|------|------|-------|------|-------|-------|------|------|------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | TEMP. | POINT | RH   | DIR. | SPD. |
| DEG C | DEG C | %     | DEG. | M/S  | DEG. | M/S  | DEG C | DEG C | %    | DEG. | M/S   | DEG. | DEG C | DEG C | %    | DEG. | M/S  |
| 0300  | 1.5   | -3.2  | 71   | 123  | 1.4  | 125  | 3.2   | 1     | 0300 | 3.6  | ***** | 17   | 134   | .7    | 141  | 1.9  | 1    |
| 0600  | 1.8   | ***** | 75   | 153  | .7   | 137  | 2.5   | 2     | 0600 | 4.2  | ***** | 17   | 176   | .4    | 154  | 1.3  | 1    |
| 0900  | 6.0   | ***** | 65   | 103M | .3M  | 058M | 1.9M  | 12    | 0900 | 5.6  | ***** | 15   | 089   | .3    | 053  | 1.9  | 4    |
| 1200  | 8.4   | .4    | 57   | 092  | 1.7  | 094  | 5.1   | 17    | 1200 | 8.1  | ***** | 10   | 342   | .4    | 049  | 1.3  | 11   |
| 1500  | 9.4   | 1.6   | 58   | 107  | 2.1  | 108  | 5.1   | 16    | 1500 | 7.7  | ***** | 13   | 278   | .3    | 018  | 1.9  | 4    |
| 1800  | 8.5   | 1.2   | 60   | 100  | 2.0  | 109  | 5.1   | 1     | 1800 | 7.7  | ***** | 16   | 035   | .3    | 041  | 1.9  | 1    |
| 2100  | 5.9   | 3.4   | 84   | 097  | 1.9  | 109  | 5.1   | 1     | 2100 | 7.1  | ***** | 17   | 145   | .3    | 103  | 1.9  | 1    |
| 2400  | 4.0   | ***** | 8    | 134  | 1.1  | 103  | 3.2   | 1     | 2400 | 6.4  | ***** | 16   | 112   | .5    | 139  | 1.3  | 1    |

DAY 22

DAY 23

DAY 24

| HOUR  | DEW   | WIND  | WIND | GUST | MAX. | HOUR | DEW   | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  |
|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    |
| 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.  |
| 0300  | 5.4   | ***** | 16   | 125  | 1.0  | 135  | 2.5   | 1     | 0300  | -1.9  | ***** | 7    | 184  | .6    | 162   | 3.2   | 1     |
| 0600  | 3.7   | ***** | 16   | 135  | .8   | 139  | 1.9   | 1     | 0600  | ***** | ***** | 25   | 101M | .6M   | 115M  | 2.5M  | ***** |
| 0900  | 6.1   | ***** | 17   | 159  | .1   | 153  | 1.3   | 12    | 0900  | ***** | ***** | 87   | 093M | 1.0M  | 121M  | 3.2M  | 7     |
| 1200  | 7.0   | -21.6 | 11   | 268  | 1.0  | 258  | 3.8   | 24    | 1200  | -.6   | -5.7  | 68   | 117M | 1.4M  | 145M  | 5.1M  | 18    |
| 1500  | 5.2   | -17.9 | 17   | 273  | 1.3  | 298  | 4.4   | 14    | 1500  | -.8   | -11.6 | 44   | 101  | 3.3   | 098   | 7.0   | 8     |
| 1800  | 3.0   | -19.1 | 18   | 256  | 1.6  | 247  | 4.4   | 1     | 1800  | -2.8  | -13.2 | 45   | 065M | 3.3M  | 041M  | 8.9M  | 2     |
| 2100  | .3    | -20.7 | 19   | 232  | .9   | 263  | 4.4   | 1     | 2100  | -4.1  | -14.4 | 45   | 053M | 2.7M  | 060M  | 7.6M  | 1     |
| 2400  | -.8   | ***** | 15   | 103  | .9   | 033  | 5.1   | 1     | 2400  | -5.7  | -12.6 | 58   | 058M | 2.9M  | 043M  | 7.6M  | 1     |

DAY 25

DAY 26

DAY 27

| HOUR  | DEW   | WIND  | WIND | GUST | MAX.  | HOUR | DEW   | WIND  | WIND  | GUST  | MAX.  | HOUR | DEW  | WIND  | WIND  | GUST  | MAX.  |
|-------|-------|-------|------|------|-------|------|-------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|
| NDNG  | TEMP. | POINT | RH   | DIR. | SPD.  | DIR. | NDNG  | TEMP. | POINT | RH    | DIR.  | SPD. | DIR. | NDNG  | TEMP. | POINT | RH    |
| 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.  |
| 0300  | -5.6  | -15.2 | 47   | 064  | 1.8   | 008  | 8.9   | 1     | 0300  | -9.7  | ***** | **   | ***  | ***** | **    | ***   | ***** |
| 0600  | ***** | ***** | 48   | 052M | 1.5M  | 015M | 10.2M | 2     | 0600  | ***** | ***** | **   | ***  | ***** | **    | ***   | ***** |
| 0900  | -4.3  | -14.5 | 45   | 055M | 2.9M  | 019M | 10.2M | 27    | 0900  | ***** | ***** | **   | ***  | ***** | **    | ***   | ***** |
| 1200  | -2.2  | -13.2 | 43   | 057  | 2.8   | 049  | 7.6   | 39    | 1200  | -2.1  | -12.0 | 47   | 110M | 2.2M  | 108M  | 6.3M  | 38    |
| 1500  | -.8   | -12.5 | 41   | 113  | 2.3   | 104  | 6.3   | 10    | 1500  | 0.0   | -10.9 | 44   | 131  | 2.2   | 110   | 5.1   | 8     |
| 1800  | -3.6  | -13.9 | 45   | 107  | 1.7   | 101  | 5.1   | 1     | 1800  | -3.3  | -12.5 | 49   | 125  | 1.6   | 120   | 3.8   | 1     |
| 2100  | -6.5  | -15.3 | 50   | 12M  | 2.3M  | 108M | 5.1M  | 1     | 2100  | -5.7  | -12.9 | 57   | 157M | 1.4M  | 157M  | 2.5M  | 1     |
| 2400  | ***** | ***** | 53   | ***  | ***** | ***  | ***** | 1     | 2400  | -7.3  | -13.1 | 63   | ***  | ***** | ***   | ***** | 1     |

R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

THREE HOUR SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

DAY 28

DAY 29

DAY 30

| STATION 1 |       |       |    |      |      |      |      |           |      | STATION 2 |       |     |      |      |      |      |     |           |       |
|-----------|-------|-------|----|------|------|------|------|-----------|------|-----------|-------|-----|------|------|------|------|-----|-----------|-------|
| 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. |
|           | DEG C | DEG C | %  | DEG. | M/S  | DEG. | M/S  | MW        |      | DEG C     | DEG C | %   | DEG. | M/S  | DEG. | M/S  | MW  |           | DEG C |
| 0300      | -2.2  | -3.4  | 92 | 086  | 1.5  | 081  | 5.1  | 1         | 0300 | 1.8       | -32.0 | 6   | 123  | 2.0  | 116  | 3.2  | 1   | 0300      | 3.5   |
| 0600      | -1.6  | -2.5  | 94 | 080  | 1.4  | 080  | 3.2  | 1         | 0600 | 2.1       | 1.7   | 97  | 135  | 1.9  | 112  | 3.2  | 1   | 0600      | 3.1   |
| 0900      | -.3   | -1.0  | 95 | 102  | 1.3  | 108  | 3.8  | 10        | 0900 | .1        | ***** | 14  | 104  | .7   | 122  | 1.9  | 3   | 0900      | 3.8   |
| 1200      | 1.1   | -.5   | 89 | 077  | 1.6  | 075  | 3.8  | 13        | 1200 | 1.8       | ***** | 18  | 136  | .5   | 145  | 1.9  | 7   | 1200      | 6.0   |
| 1500      | 1.2   | ***** | 95 | 072  | 1.1  | 073  | 3.8  | 6         | 1500 | 2.9       | ***** | 19  | 124  | .1   | 192  | 1.3  | 6   | 1500      | 7.0   |
| 1800      | .5    | ***** | 15 | 098  | .8   | 071  | 1.9  | 1         | 1800 | 3.4       | -19.4 | 17  | 115  | .4   | 184  | 2.5  | 1   | 1800      | 6.0   |
| 2100      | .7    | -22.3 | 16 | 106  | 1.1  | 114  | 2.5  | 1         | 2100 | 3.4       | -17.5 | 20  | 090  | .9   | 122  | 3.2  | 1   | 2100      | 5.1   |
| 2400      | 1.4   | -26.0 | 11 | 121  | 1.4  | 125  | 3.2  | 1         | 2400 | 2.9       | -19.1 | 18  | 113  | .8   | 117  | 2.5  | 1   | 2400      | 5.2   |

# R & M CONSULTANTS, INC.

## SUSITNA HYDROELECTRIC PROJECT

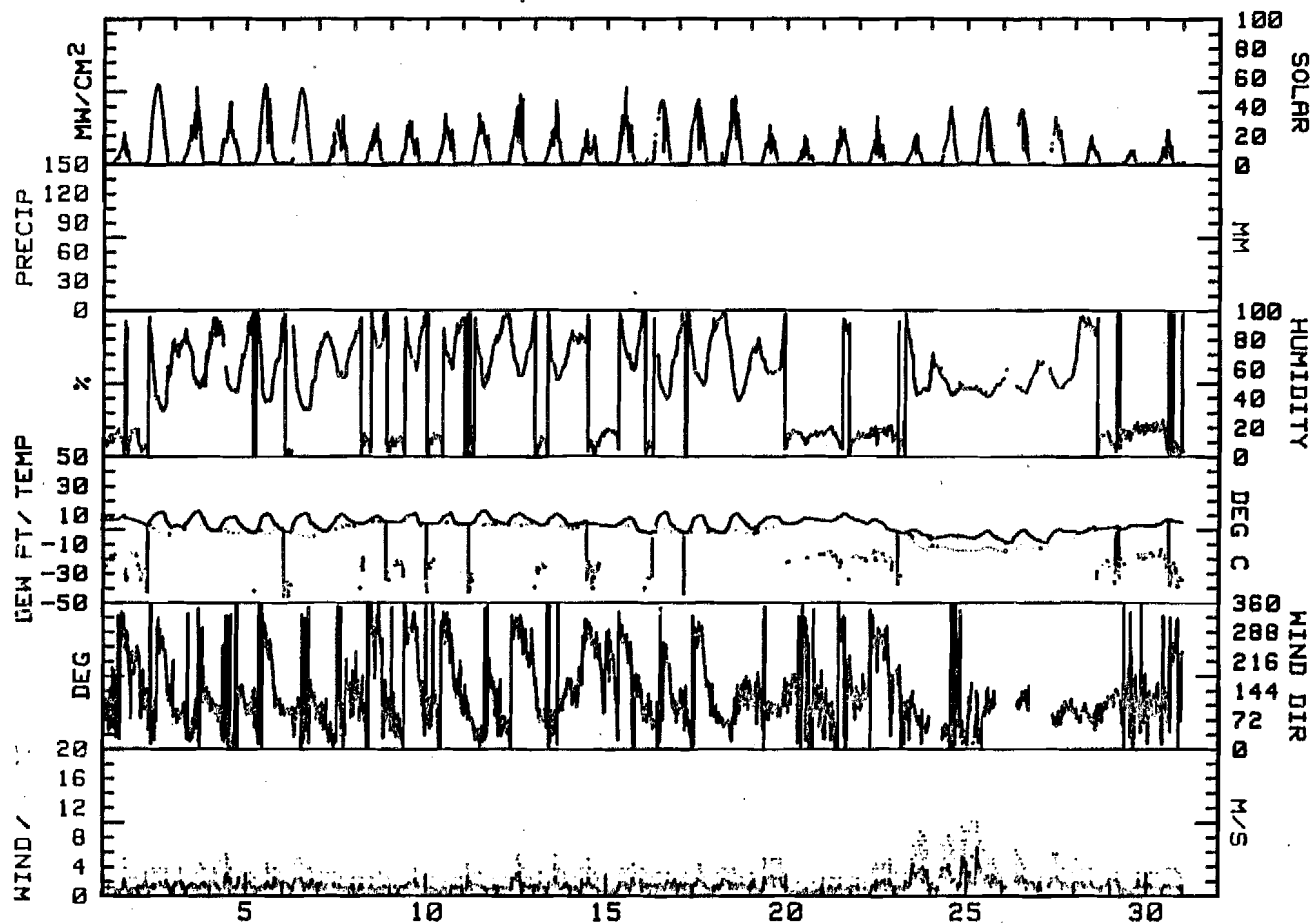
MONTHLY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

| DAY   | MAX.<br>TEMP.<br>DEG C | MIN.<br>TEMP.<br>DEG C | MEAN<br>TEMP.<br>DEG C | RES.<br>WIND<br>DIR.<br>DEG | RES.<br>WIND<br>SPD.<br>M/S | AVG.<br>WIND<br>SPD.<br>M/S | MAX.<br>GUST<br>DIR.<br>DEG | MAX.<br>GUST<br>SPD.<br>M/S | P'VAL<br>DIR. | MEAN<br>RH<br>% | MEAN<br>DP<br>DEG C | PRECIP<br>MM | DAY'S<br>SOLAR<br>ENERGY<br>WH/SQM | DAY |
|-------|------------------------|------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|---------------------|--------------|------------------------------------|-----|
| 1     | 10.2                   | 5.6                    | 7.9                    | 173                         | .0                          | .8                          | 274                         | 5.1                         | ENE           |                 |                     | 0.0          | 1080                               | 1   |
| 2     | 12.1                   | 1.0                    | 6.6                    | 146                         | .3                          | 1.1                         | 116                         | 3.8                         | SE            |                 |                     | 0.0          | 4495                               | 2   |
| 3     | 13.0                   | .6                     | 6.8                    | 088                         | .9                          | 1.3                         | 297                         | 4.4                         | E             | 66              | .0                  | 0.0          | 2748                               | 3   |
| 4     | 8.9M                   | -1.1M                  | 3.9M                   | 079M                        | .8M                         | 1.3M                        | 019M                        | 5.7M                        | ESE(M)        | 69M             | -2.4M               | 0.0          | 2264M                              | 4   |
| 5     | 11.6                   | -3.0                   | 4.3                    | 119M                        | .5                          | 1.3                         | 231                         | 4.4                         | E             |                 |                     | 0.0          | 3498                               | 5   |
| 6     | 11.4                   | -2.1                   | 4.7                    | 087M                        | 1.0M                        | 1.5M                        | 088M                        | 5.1M                        | E (M)         |                 |                     | 0.0          | 4280                               | 6   |
| 7     | 11.1                   | -1.4                   | 4.9                    | 065M                        | .6M                         | 1.1M                        | 077M                        | 3.2M                        | NE (M)        | 72              | -1.1                | 0.0          | 2001                               | 7   |
| 8     | 9.6                    | 3.8                    | 6.7                    | 070                         | .1                          | .8                          | 248                         | 3.2                         | ESE           |                 |                     | 0.0          | 1668                               | 8   |
| 9     | 11.8                   | 3.5                    | 7.7                    | 333                         | .3                          | .9                          | 300                         | 3.8                         | WNW           |                 |                     | 0.0          | 1895                               | 9   |
| 10    | 11.7                   | 3.7                    | 7.7                    | 144                         | .2                          | .7                          | 157                         | 2.5                         | SE            |                 |                     | 0.0          | 1895                               | 10  |
| 11    | 13.0                   | 3.2                    | 8.1                    | 069                         | .7                          | 1.0                         | 091                         | 4.4                         | ENE           | 56              | -4.7                | 0.0          | 2143                               | 11  |
| 12    | 11.5                   | 3.7                    | 7.6                    | 306                         | .6                          | 1.3                         | 319                         | 5.7                         | WNW           | 71              | 3.2                 | 0.0          | 2183                               | 12  |
| 13    | 11.0                   | 2.7                    | 6.9                    | 093                         | .9                          | 1.2                         | 013                         | 5.7                         | E             |                 |                     | 0.0          | 2010                               | 13  |
| 14    | 6.4                    | 2.6                    | 4.5                    | 245                         | .5                          | 1.0                         | 282                         | 5.1                         | SSE           |                 |                     | 0.0          | 1403                               | 14  |
| 15    | 8.9                    | -1.6                   | 3.7                    | 238                         | .3                          | 1.0                         | 009                         | 4.4                         | W             |                 |                     | 0.0          | 2385                               | 15  |
| 16    | 12.5M                  | -3.0M                  | 4.8M                   | 110M                        | .6M                         | 1.2M                        | 084M                        | 3.8M                        | E (M)         |                 |                     | 0.0          | 3173M                              | 16  |
| 17    | 10.0                   | -2.6                   | 3.7                    | 158M                        | .1M                         | 1.3M                        | 276M                        | 4.4M                        | E (M)         |                 |                     | 0.0          | 3085                               | 17  |
| 18    | 11.3                   | -2.7                   | 4.3                    | 090M                        | 1.1M                        | 1.4M                        | 058M                        | 3.8M                        | ENE(M)        | 68              | -2.5                | 0.0          | 2705                               | 18  |
| 19    | 9.4                    | -.2                    | 4.6                    | 109M                        | 1.3M                        | 1.5M                        | 094M                        | 5.1M                        | ESE(M)        |                 |                     | 0.0          | 1443                               | 19  |
| 20    | 8.7                    | 3.6                    | 6.2                    | 121                         | .2                          | .5                          | 141                         | 1.9                         | E             |                 |                     | 0.0          | 903                                | 20  |
| 21    | 11.3                   | 5.7                    | 8.5                    | 089                         | .3                          | .8                          | 138                         | 2.5                         | E             |                 |                     | 0.0          | 1608                               | 21  |
| 22    | 7.3                    | -.9                    | 3.2                    | 223                         | .4                          | 1.1                         | 033                         | 5.1                         | W             |                 |                     | 0.0          | 1295                               | 22  |
| 23    | -.1                    | -5.8                   | -3.0                   | 085M                        | 1.6M                        | 2.0M                        | 041M                        | 8.9M                        | ENE (M)       |                 |                     | 0.0          | 1228                               | 23  |
| 24    | -3.7M                  | -6.7M                  | -5.2M                  | 030M                        | 2.2M                        | 2.4M                        | 028M                        | 9.5M                        | NNE (M)       | 50M             | -13.6M              | 0.0          | 2351M                              | 24  |
| 25    | -.8M                   | -7.5M                  | -4.2M                  | 079M                        | 2.0M                        | 2.6M                        | 015M                        | 10.2M                       | ESE (M)       | 55M             | -14.2M              | 0.0          | 2847M                              | 25  |
| 26    | 0.0M                   | -9.7M                  | -4.9M                  | 123M                        | 2.0M                        | 1.8M                        | 108M                        | 6.3M                        | ESE (M)       | 50M             | -12.4M              | 0.0          | 3048M                              | 26  |
| 27    | .6M                    | -9.4M                  | -4.4M                  | 087M                        | 1.7M                        | 1.7M                        | 061M                        | 5.7M                        | E (M)         | 53M             | -10.5M              | 0.0          | 2183M                              | 27  |
| 28    | 2.1                    | -2.8                   | -.4                    | 092M                        | 1.2M                        | 1.3M                        | 081M                        | 5.1M                        | E (M)         |                 |                     | 0.0          | 1015                               | 28  |
| 29    | 3.7                    | .1                     | 1.9                    | 120                         | .9                          | 1.1                         | 116                         | 3.2                         | ESE           |                 |                     | 0.0          | 638                                | 29  |
| 30    | 7.3                    | 2.4                    | 4.9                    | 108                         | .4                          | 1.0                         | 121                         | 3.8                         | E             |                 |                     | 0.0          | 1090                               | 30  |
| MONTH | 13.0M                  | -9.7M                  | 3.7M                   | 091M                        | .5M                         | 1.2M                        | 015M                        | 10.2M                       | E (M)         | M               | M                   | 0.0          | 64543M                             |     |

GUST VEL. AT MAX. GUST MINUS 2 INTERVALS 7.0  
GUST VEL. AT MAX. GUST MINUS 1 INTERVAL 8.9  
GUST VEL. AT MAX. GUST PLUS 1 INTERVAL 9.5  
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.

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



R & M CONSULTANTS, INC.  
SUSITNA HYDROELECTRIC PROJECT

WIND FREQUENCY SUMMARY FOR DEVIL CANYON WEATHER STATION  
DATA TAKEN DURING September, 1983

| DIRECTION | VELOCITY (M/S) |           |           |            |            |            |               | TOTAL  |
|-----------|----------------|-----------|-----------|------------|------------|------------|---------------|--------|
|           | 0.2            | 1.0       | 3.0       | 6.0        | 10.0       | 15.0       | 20.0          |        |
|           | TO<br>1.0      | TO<br>3.0 | TO<br>6.0 | TO<br>10.0 | TO<br>15.0 | TO<br>20.0 | OR<br>GREATER |        |
| N         | 1.72           | .94       | .15       | 0.00       | 0.00       | 0.00       | 0.00          | 2.81   |
| NNE       | 2.40           | 3.26      | .71       | .04        | 0.00       | 0.00       | 0.00          | 6.40   |
| NE        | 2.70           | 2.88      | .64       | 0.00       | 0.00       | 0.00       | 0.00          | 6.22   |
| ENE       | 3.82           | 6.78      | .60       | 0.00       | 0.00       | 0.00       | 0.00          | 11.20  |
| E         | 4.16           | 10.75     | .26       | 0.00       | 0.00       | 0.00       | 0.00          | 15.17  |
| ESE       | 4.01           | 10.15     | .26       | 0.00       | 0.00       | 0.00       | 0.00          | 14.42  |
| SE        | 3.78           | 6.10      | .04       | 0.00       | 0.00       | 0.00       | 0.00          | 9.93   |
| SSE       | 3.30           | 2.85      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 6.14   |
| S         | 2.13           | 1.31      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 3.45   |
| SSW       | 2.02           | .86       | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.88   |
| SW        | 1.57           | 1.39      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 2.96   |
| WSW       | 1.50           | 2.17      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 3.67   |
| W         | 1.12           | 3.41      | 0.00      | 0.00       | 0.00       | 0.00       | 0.00          | 4.53   |
| WNW       | 1.35           | 3.22      | .04       | 0.00       | 0.00       | 0.00       | 0.00          | 4.61   |
| NW        | 1.80           | 1.09      | .11       | 0.00       | 0.00       | 0.00       | 0.00          | 3.00   |
| NNW       | 1.57           | .41       | .04       | 0.00       | 0.00       | 0.00       | 0.00          | 2.02   |
| CALM      |                |           |           |            |            |            |               | .60    |
| TOTAL     | 38.95          | 57.57     | 2.85      | .04        | 0.00       | 0.00       | 0.00          | 100.00 |

NOTE: ALL FREQUENCIES ARE EXPRESSED IN PERCENT  
2670 VALID WIND OBSERVATIONS USED TO DEVELOP FREQUENCY SUMMARY  
2880 WIND OBSERVATIONS WOULD HAVE BEEN CORRECT FOR 15 MINUTE DATA.

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

