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EVALUATION OF THE SOLAR BUILDING
ALBUQUERQUE, NEW MEXICO

DISTRIBUTIONAL FORM OF DATA ACQUIRED

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This report describes the distribution form of data acquired during the project. The data are distributed on computer magnetic tapes. Information is given for the two test periods; viz., portions of the 1974-75 and 1975-76 winter heating periods. Additional information can be obtained from the sources in the BIBLIOGRAPHY.

DEFINITION OF TERMS

Analog Input (AI)	:	a voltage reading between -5.12v and +5.12v from a monitoring device such as a pyranometer, a thermister, etc.
Digital Input (DI)	:	a count reading indicating the number of pulses from a monitoring device such as a door closing counter, a power meter, etc.
Data Point	:	a value representing an average of voltage readings (AI point) or a total count (DI point) for a six-minute period of time for a particular monitoring device.
Six Minute Sample	:	an entire set of data points for all monitoring devices throughout the HVAC systems and the building for a six minute period of time.
Period of Operation	:	an interval of time consisting of an integral number hours for which six minute samples are contiguous without a break in the data acquisition.
Data Acquisition Period	:	a complete heating and/or cooling season for which a particular HVAC system configuration is established, instrumentation for monitoring is installed and data acquisition software is written.
Reference Voltage	:	a standard voltage for a group of analog inputs (thermistors) that when applied in a calibration procedure produces actual temperatures for each AI point which is part of that group.

DESCRIPTION OF DATA

All data on the distribution tapes are in their appropriate English units. These units are indicated in Tables 1A, 1B, 2A and 2B.

All data on distribution tapes are in their most basic form - each is a six minute sample which is the smallest unit of time collected. Each six minute sample contains a number of values referred to as data points; this number depends on the number of points throughout the HVAC system and the building which were monitored in a particular data acquisition period.

The data points are also divided into analog input (AI) points and digital input (DI) points, depending on the monitoring device type. The first two data points in each six minute sample are the date in the Julian Calendar (AI-00) and the time at which the six minute sample ended, in 2400 hour rotation (AI-00).

Although continuous monitoring and acquisition of data is desired, breaks in this process were necessary for testing, calibrating and replacing instrumentation, testing acquisition software, maintenance of the HVAC system and transmission failures from Albuquerque, N.M. to University Park, PA. The periods of operation between these breaks have durations of integral number of hours (ten six-minute samples). Appendices A and B show the breaks and periods of operation for each data acquisition period.

DATA ACQUISITION PERIODS

Two data acquisition periods are available. Each period is characterized as being a heating season for which a particular HVAC system configuration (Figures 1 and 2) is established, instrumentation for monitoring is installed, and data acquisition software is written.

The data acquisition periods are:

- (1) DATA 72: Data acquired 1974/1975 :10:36 PM November 14, 1974 to 4:24 AM June 5, 1975 (37,920 six minute samples acquired - 3,792 hours out of approximately 4877 hours).
- (2) DATA165: Data acquired 1975/1976 :10:18 PM December 16, 1975 to 5:38.47 PM April 30, 1976 (30,850 six minute samples acquired - 3,085 hours out of approximately 3,234 hours).

DESCRIPTION OF DISTRIBUTION TAPES

The distribution tapes are supplied by the CAD LAB at cost or may be user supplied. All tapes regardless of their origin are to be nine track, EBCDIC, labelled and 1600 bpi. The file names and record information are given in subsequent sections.

All data for a data acquisition period are contained in a single file. These data for both data acquisition periods are contained in two files. The tape name is ERDATA. The files are loaded on to the tape in ascending chronological order: the oldest data to the latest.

DESCRIPTION OF DATA ACQUIRED 1974/1975 (DATA72)

For this data acquisition period, six minute samples of 72 data points were collected. The actual sequence of these data points in each six minute sample is given in Tables 1A and 1B. Date (AI-00) and time (AI-00) of the six minute sample are the first and second data points respectively. The monitoring location of each 72 data point is shown in Figure 1.

72 Point Data

○ AI

▽ DI

- ③ HORIZ. SOLAR
② DIFFUSE SOLAR
① SOLAR COLLECTORS

- ②⑤ DB (0.1A)
②⑥ DP (0.1A)
④ DIRECTION
②⑨ MPH

165 Point Data

○ AI

▽ DI

25 DB (O.A.)

26 DP (O.A.)

4 DIRECTION

29 MPH

Fig. 2 Location of Analog and Digital Inputs (AI & DI) for DATA165 in the HVAC Systems

Tape file specifications for DATA 72:

- (1) File name: DATA 72
- (2) Record format: FB
- (3) Logical record length: 288 bytes - equivalent to 1 six-minute sample
- (4) Blocksize: 5760 bytes - equivalent to 2 hours or
20 six-minute samples

Additional information concerning DATA 72 is the flow rates for heat flow calculations in various components in the HVAC system. These are given in Table 2.

Table 3 documents the important data losses found in DATA72. This Table was adapted from tables in item 7 in the BIBLIOGRAPHY.

Table 1A. Description of Analog Input (AI) Points in DATA72

1.	AI-00	DATE	
2.	AI-00	ENDING TIME OF SAMPLE	
3.	AI-01	COLLECTOR SOLAR	-BTUH/SQFT
4.	AI-02	DIFFUSE SOLAR	-BTUH/SQFT
5.	AI-03	HORIZ. SOLAR	-BTUH/SQFT
6.	AI-04	WIND DIRECTION	-DEGREES
7.	AI-06	EVAP. WATER COOLER EWT	-F
8.	AI-07	EVAP. WATER COOLER LWT	-F
9.	AI-08	W/W HP CHILLER EWT	-F
10.	AI-09	W/W HP CHILLER LWT	-F
11.	AI-10	W/W HP CONDENSER EWT	-F
12.	AI-11	W/W HP CONDENSER LWT	-F
13.	AI-12	STORAGE TANK EWT	-F
14.	AI-13	STORAGE TANK LWT	-F
15.	AI-14	W/A HP LOOP EWT	-F
16.	AI-15	W/A HP LOOP LWT	-F
17.	AI-16	AIR HANDLING UNIT EWT	-F
18.	AI-17	AIR HANDLING UNIT LWT	-F
19.	AI-18	HX GLYCOL SIDE EGT	-F
20.	AI-19	HX GLYCOL SIDE LGT	-F
21.	AI-20	HX WATER SIDE EWT	-F
22.	AI-21	HX WATER SIDE LWT	-F
23.	AI-22	COLL. AIR TEMP.	-F
24.	AI-23	COLL. SURFACE TEMP.	-F
25.	AI-29	WIND VELOCITY	-MPH
26.	AI-25	OUTDOOR DRY BULB TEMP.	-F
27.	AI-26	OUTDOOR DEW PT. TEMP.	-F
28.	AI-27	INDOOR DEW PT. TEMP.	-F
29.	AI-28	VOLTAGE SOURCE	-MV
30.	AI-30	VOLTAGE REF.	-MV
31.	AI-05	PUMP #1	-GPM
32.	AI-05	PUMP #2	-GPM
33.	AI-05	HX WATER SIDE	-GPM
34.	AI-05	COLLECTOR CIRCUIT	-GPM
35.	AI-24	DRAFT RM NORTH TEMP.	-F
36.	AI-24	DRAFT RM ATTIC TEMP.	-F
37.	AI-24	PRINT RM TEMP.	-F
38.	AI-24	COMPUTER ROOM TEMP.	-F
39.	AI-24	RECEPTION ROOM TEMP.	-F
40.	AI-24	IGNORE	

Table 1B. Description of Digital Input (DI) Points in DATA72

41.	DI-01	WHR-MTR BLDG. 3 PHASE	-KWH
42.	DI-02	WHR-MTR WATER HEATER	-KWH
43.	DI-03	WHR-MTR BLDG. 1 PHASE	-KWH
44.	DI-04	WHR-MTR B&P IBM 1130	-KWH
45.	DI-05	WHR-MTR SYSTEM 7	-KWH
46.	DI-06	WHR-MTR AHU	-KWH
47.	DI-07	WHR-MTR EWC	-KWH
48.	DI-08	WHR-MTR PUMP #1	-KWH
49.	DI-09	WHR-MTR PUMP #2	-KWH
50.	DI-10	WHR-MTR PUMP #3	-KWH
51.	DI-11	WHR-MTR PUMP #4	-KWH
52.	DI-12	WHR-MTR PUMP #5	-KWH
53.	DI-13	WHR-MTR HP#1 W/W	-KWH
54.	DI-14	WHR-MTR HP#2 W/A	-KWH
55.	DI-15	WHR-MTR HP#3 W/A	-KWH
56.	DI-16	WHR-MTR HP#4 W/A	-KWH
57.	DI-17	WHR-MTR HP#5 W/A	-KWH
58.	DI-18	WHR-MTR HP#6 W/A	-KWH
59.	DI-19	WHR-MTR B&P GEN AUTO	-KWH
60.	DI-20	FRONT EXT DOOR OPEN	-KWH
61.	DI-21	ELEC ENG OFF DR OPEN	-KWH
62.	DI-22	CENTER EXT DOOR OPEN	
63.	DI-23	E.E. PRINT ROOM DOOR OPEN	
64.	DI-24	DRAFT RM. EXT DR OPEN	-SEC
65.	DI-25	DIRECT HEATING	-SEC
66.	DI-26	WINTER HP HEATING	-SEC
67.	DI-27	WINTER HP COOLING	-SEC
68.	DI-28	COLLECTOR OPERATION	-SEC
69.	DI-29	MAX TANK TEMP CONTROL	-SEC
70.	DI-30	WINTER EVAP. COOLING	-SEC
71.	DI-31	W/W HP OPERATION	-SEC
72.	DI-32		

Table 2. Flow Rates (gpm) for Heat Flow Calculation in DATA72

<u>Components</u>	MODES		
	<u>Heat Pump Heating</u>	<u>Heat Pump Cooling</u>	<u>Direct Heating</u>
Air Handling Unit	20.80 (20.80)*	23.50 (23.50)*	16.00 (15.70)*
Heat pump Loop	17.50 (17.50)*	17.50 (17.50)*	17.50 (17.50)*
Heat Exchanger	35.60 (36.00)*	36.10 (36.00)*	33.8 (34.70)*
Condenser	20.80 (20.80)*	18.60 (18.60)*	-
Evaporator	22.60 (18.40)*	23.50 (23.50)*	-
Evaporative Water Cooler	-	18.60 (18.60)*	-

*(Flow rates on or after 78/1975)

Table 3. Documentation of Data Loss in Data Acquired 1974/1975 (DATA72)

<u>Data Point</u>	<u>Comments</u>
AI-02 AI-03	1/1/75 (1) Unusually high readings. Ordered replacement pyranometers.
	2/28/75 to 3/11/75 (59 to 70) Installed and compared new pyranometers with PSP from Sandia.
AI-12 AI-17	2/8/75, 9:00 AM (39/900) Replaced after constant temperature bath check.
AI-21	3/23/75 to 3/31/75 (82 to 90) Out of tolerance. Replaced.
AI-24 (Room Temp. Array)	Corrected as of 1/22/75 (22)
DI-18	1/7/75 to 1/8/75 (7 to 8) not operating continuously.

DESCRIPTION OF DATA ACQUIRED 1975/1976 (DATA165)

For this data acquisition period, six minute samples of 165 data points were collected. The actual sequence of these data points in each six minute sample is given in Tables 4A and 4B. Date (AI-00) and time (AI-00) of the six minute sample are the first and second data points respectively. The monitoring location of each 165 data point is shown in Fig. 2.

Tape file specifications for DATA165:

- (1) File name: DATA165
- (2) Record format: FB
- (3) Logical record length: 660 bytes - equivalent to 1 six-minute sample.
- (4) Blocksize: 6600 bytes - equivalent to 1 hour or 10 six-minute samples.

Additional information concerning DATA165 is the flow rates for heat flow calculations in various components in the HVAC system. These are given in Table 5.

Table 6 documents the important data losses in DATA165. This table was adapted from tables in item 7 of the BIBLIOGRAPHY.

After 64/1219 (12:19 PM March 4, 1976) until the end of the data acquisition period, six minute samples have variable durations from 5.75 to 6.00 minutes. The six minute sample ending times have been appropriately modified to reflect these irregular durations.

Table 4A. Description of Analog Inputs (AI Points) in DATA165

1.	AI-00	DATE	
2.	AI-00	ENDING TIME OF SAMPLE	
3.	AI-01	COLLECTOR SOLAR	-BTUH/SQFT
4.	AI-02	DIFFUSE SOLAR	-BTUH/SQFT
5.	AI-03	HORIZ. SOLAR	-BTUH/SQFT
6.	AI-04	WIND DIRECTION	-DEGREES
7.	AI-06	HP#6 DELTA TA	-F
8.	AI-07	HP CHILLER LWT	-F
9.	AI-08	HP CONDENSER LWT	-F
10.	AI-09	AIR HANDLING UNIT LWT	-F
11.	AI-10	HP#2 DELTA TW	-F
12.	AI-11	HP#4 DELTA TW	-F
13.	AI-12	HP#2 EAT	-F
14.	AI-13	HP#2 DELTA TA	-F
15.	AI-14	HP#3 EAT	-F
16.	AI-15	HP#3 DELTA TA	-F
17.	AI-16	HP#4 EAT	-F
18.	AI-17	EVAP. WATER COOLER LWT	-F
19.	AI-18	HP#4 EWT	-F
20.	AI-19	HP CHILLER EWT	-F
21.	AI-20	HP#3 DELTA TW	-F
22.	AI-21	HP CONDENSER EWT	-F
23.	AI-22	HP#5 DELTA TW	-F
24.	AI-23	HP#6 DELTA TW	-F
25.	AI-33	STORAGE TANK EWT	-F
26.	AI-34	STORAGE TANK LWT	-F
27.	AI-35	W/A HP LOOP EWT	-F
28.	AI-36	W/A HP LOOP LWT	-F
29.	AI-37	AIR HANDLING UNIT EWT	-F
30.	AI-38	HP#4 DELTA TA	-F
31.	AI-39	HP#5 EAT	-F
32.	AI-40	HP#5 DELTA TA	-F
33.	AI-41	HP#6 EAT	-F
34.	AI-42	EVAP. WATER COOLER EWT	-F
35.	AI-43	AIR HANDLING UNIT EAT	-F
36.	AI-44	AIR HANDLING UNIT LAT	-F
37.	AI-46	W/A HP#6 DHC EWT	-F
38.	AI-47	W/A HP#6 DHC LWT	-F
39.	AI-48	STORAGE TNKS 2&3 EWT/AHU	-F
40.	AI-49	STORAGE TNKS 2&3 LWT/AHU	-F
41.	AI-50	STORAGE TNKS 2&3 EWT/EGX	-F
42.	AI-51	STORAGE TNKS 2&3 LWT/EGX	-F
43.	AI-52	FMTR1 TNKS 2&3 LWT/AHU	-GPM
44.	AI-53	FMTR2 TNKS 2&3 LWT/EGX	-GPM
45.	AI-54	HX GLYCOL SIDE EGT	-F
46.	AI-55	HX GLYCOL SIDE LGT	-F
47.	AI-56	HX WATER SIDE EWT	-F
48.	AI-57	HX WATER SIDE LWT	-F
49.	AI-29	WIND VELOCITY	-MPH
50.	AI-45	STATIC PRESSURE DIFF.	-WG

Table 4A. Description of Analog Inputs (AI Points) in DATA165 (cont'd)

51.	AI-31	TANK #2 TEMP VOL. REF.	-F
52.	AI-31	TANK #2 TEMP PROBE 1	-F
53.	AI-31	TANK #2 TEMP PROBE 2	-F
54.	AI-31	TANK #2 TEMP PROBE 3	-F
55.	AI-31	TANK #2 TEMP PROBE 4	-F
56.	AI-31	TANK #2 TEMP PROBE 5	-F
57.	AI-31	TANK #2 TEMP PROBE 6	-F
58.	AI-31	TANK #2 TEMP PROBE 7	-F
59.	AI-31	TANK #2 TEMP PROBE 8	-F
60.	AI-31	TANK #2 TEMP PROBE 9	-F
61.	AI-31	TANK #2 TEMP PROBE 10	-F
62.	AI-31	TANK #2 TEMP PROBE 11	-F
63.	AI-31	TANK #2 TEMP PROBE 12	-F
64.	AI-31	TANK #2 TEMP PROBE 13	-F
65.	AI-31	TANK #2 TEMP PROBE 14	-F
66.	AI-31	TANK #2 TEMP PROBE 15	-F
67.	AI-31	TANK #2 TEMP PROBE 16	-F
68.	AI-31	TANK #2 TEMP PROBE 17	-F
69.	AI-31	TANK #2 TEMP PROBE 18	-F
70.	AI-31	TANK #2 TEMP PROBE 19	-F
71.	AI-31	TANK #2 TEMP PROBE 20	-F
72.	AI-31	TANK #2 TEMP PROBE 21	-F
73.	AI-31	TANK #2 TEMP PROBE 22	-F
74.	AI-31	TANK #2 TEMP PROBE 23	-F
75.	AI-32	TANK #2 TEMP VOL. REF.	-F
76.	AI-32	TANK #3 TEMP PROBE 1	-F
77.	AI-32	TANK #3 TEMP PROBE 2	-F
78.	AI-32	TANK #3 TEMP PROBE 3	-F
79.	AI-32	TANK #3 TEMP PROBE 4	-F
80.	AI-32	TANK #3 TEMP PROBE 5	-F
81.	AI-32	TANK #3 TEMP PROBE 6	-F
82.	AI-32	TANK #3 TEMP PROBE 7	-F
83.	AI-32	TANK #3 TEMP PROBE 8	-F
84.	AI-32	TANK #3 TEMP PROBE 9	-F
85.	AI-32	TANK #3 TEMP PROBE 10	-F
86.	AI-32	TANK #3 TEMP PROBE 11	-F
87.	AI-32	TANK #3 TEMP PROBE 12	-F
88.	AI-32	TANK #3 TEMP PROBE 13	-F
89.	AI-32	TANK #3 TEMP PROBE 14	-F
90.	AI-32	TANK #3 TEMP PROBE 15	-F
91.	AI-32	TANK #3 TEMP PROBE 16	-F
92.	AI-32	TANK #3 TEMP PROBE 17	-F
93.	AI-32	TANK #3 TEMP PROBE 18	-F
94.	AI-32	TANK #3 TEMP PROBE 19	-F
95.	AI-32	TANK #3 TEMP PROBE 20	-F
96.	AI-32	TANK #3 TEMP PROBE 21	-F

Table 4A. Description of Analog Inputs (AI Points) in DATA165 (cont'd)

97.	AI-32	TANK #3 TEMP PROBE 22	-F
98.	AI-32	TANK #3 TEMP PROBE 23	-F
99.	AI-25	OUTDOOR DRY BULB TEMP.	-F
100.	AI-26	OUTDOOR DEW PT. TEMP.	-F
101.	AI-27	INDOOR DEW PT. TEMP.	-F
102.	AI-28	VOLTAGE SOURCE	-MV
103.	AI-30	VOLTAGE REF.	-MV
104.	AI-05	TANK #1 TEMP VOL. REF.	-F
105.	AI-05	TANK #1 TEMP PROBE 1	-F
106.	AI-05	TANK #1 TEMP PROBE 2	-F
107.	AI-05	TANK #1 TEMP PROBE 3	-F
108.	AI-05	TANK #1 TEMP PROBE 4	-F
109.	AI-05	TANK #1 TEMP PROBE 5	-F
110.	AI-05	TANK #1 TEMP PROBE 6	-F
111.	AI-05	TANK #1 TEMP PROBE 7	-F
112.	AI-05	TANK #1 TEMP PROBE 8	-F
113.	AI-05	TANK #1 TEMP PROBE 9	-F
114.	AI-05	TANK #1 TEMP PROBE 10	-F
115.	AI-05	TANK #1 TEMP PROBE 11	-F
116.	AI-05	TANK #1 TEMP PROBE 12	-F
117.	AI-05	TANK #1 TEMP PROBE 13	-F
118.	AI-05	TANK #1 TEMP PROBE 14	-F
119.	AI-05	TANK #1 TEMP PROBE 15	-F
120.	AI-05	TANK #1 TEMP PROBE 16	-F
121.	AI-05	TANK #1 TEMP PROBE 17	-F
122.	AI-05	TANK #1 TEMP PROBE 18	-F
123.	AI-05	TANK #1 TEMP PROBE 19	-F
124.	AI-05	TANK #1 TEMP PROBE 20	-F
125.	AI-05	TANK #1 TEMP PROBE 21	-F
126.	AI-05	TANK #1 TEMP PROBE 22	-F
127.	AI-05	TANK #1 TEMP PROBE 23	-F
128.	AI-24	DRAFT RM NORTH TEMP.	-F
129.	AI-24	DRAFT RM ATTIC TEMP.	-F
130.	AI-24	PRINT RM TEMP.	-F
131.	AI-24	RECEPTION ROOM TEMP.	-F
132.	AI-24	COMPUTER ROOM TEMP.	-F
133.	AI-24	IGNORE	-F

Table 4B. Description of Digital Inputs (DI Points) in DATA165

134.	DI-01	WHR-MTR BLDG. 3 PHASE		-KWH
135.	DI-02	WHR-MTR WATER HEATER		-KWH
136.	DI-03	WHR-MTR BLDG. 1 PHASE		-KWH
137.	DI-04	WHR-MTR B&P GEN AUTO		-KWH
138.	DI-05	WHR-MTR SYSTEM 7		-KWH
139.	DI-06	WHR-MTR AHU		-KWH
140.	DI-07	WHR-MTR EWC		-KWH
141.	DI-08	WHT-MTR PUMP #1		-KWH
142.	DI-09	WHR-MTR PUMP #2		-KWH
143.	DI-10	WHR-MTR PUMP #3		-KWH
144.	DI-11	WHR-MTR PUMP #4		-KWH
145.	DI-12	WHR-MTR PUMP #5		-KWH
146.	DI-13	WHR-MTR HP #1	W/W	-KWH
147.	DI-14	WHR-MTR HP #2	W/A	-KWH
148.	DI-15	WHR-MTR HP #3	W/A	-KWH
149.	DI-16	WHR-MTR HP #4	W/A	-KWH
150.	DI-17	WHR-MTR HP #5	W/A	-KWH
151.	DI-18	WHR-MTR HP #6	W/A	-KWH
152.	DI-19	WHR-MTR #7 POWER		-KWH
153.	DI-20	WHR-MTR #8 POWER		-KWH
154.	DI-21	FRESH AIR FAN		-KWH
155.	DI-22	COLLECTION TO NEW TNKS		-SEC
156.	DI-23	OVERRIDE TO HP HEATING		-SEC
157.	DI-24	DRAFT RM. EXT DR OPEN		-SEC
158.	DI-25	DIRECT HEATING		-SEC
159.	DI-26	WINTER HP HEATING		-SEC
160.	DI-27	WINTER HP COOLING		-SEC
161.	DI-28	COLLECTOR OPERATION		-SEC
162.	DI-29	MAX TANK TEMP CONTROL		-SEC
163.	DI-30	WINTER EVAP. COOLING		-SEC
164.	DI-31	W/W HP OPERATION		-SEC
165.	DI-32	DIRECT HEATING T2 & T3		-SEC

Table 5. Flow Rates (gpm) for Heat Flow Calculations in DATA165

MODES

<u>Components</u>	<u>Heat Pump Heating</u>	<u>Heat Pump Cooling</u>	<u>Direct Heating</u>	<u>Solar Collection</u>
Air Handling Unit.....	20.40	22.30	22.30	-
Heat Pump Loop.....	21.54 (20.68) [20.28] <21.84>	21.54 (20.68) [20.28] <21.84>	- - - -	- - - -
Heat Pump #2.....	2.10 (2.28) [2.02] <2.23>	2.10 (2.28) [2.02] <2.23>	- - - -	- - - -
Heat Pump #3.....	3.90 (3.42) [3.72] <3.98>	3.90 (3.42) [3.72] <3.98>	- - - -	- - - -
Heat Pump #4.....	4.01 (4.60) [3.70] <4.02>	4.01 (4.60) [3.70] <4.02>	- - - -	- - - -
Heat Pump #5.....	2.09 (1.78) [1.94] <2.11>	2.09 (1.78) [1.94] <2.11>	- - - -	- - - -
Heat Pump #6.....	9.44 (8.60) [8.90] <9.50>	9.44 (8.60) [8.90] <9.50>	- - - -	- - - -
Heat Exchanger (water side)..	-	0	-	32.60
Condenser.....	20.40	18.20*	-	-
Evaporative Water Cooler.....	-	31.80**	-	-
Heat from Tanks 2 & 3.....	-	-	22.30	-
Heat to Tanks 2 & 3.....	-	-	-	32.60
Heat to Tank 1.....	-	28.00	-	-
Chiller.....	18.50	23.30	-	-

NOTES:

(Flow rate between 47/1400/1976 and 91/1100/1976)

[Flow rate between 91/1100/1976 and 113/1100/1976)

<Flow rate after 113/1100/1976>

*When DI-07 is greater than 0.05 kwh the flow rate is 17.00 gpm is DI-09 and DI-12 are greater than 0.01 kwh the flow rate is 8.60 gpm.

**When DI-07 is greater than 0.05 kwh and DI-13 is greater than 0.1 kwh the flow rate is 17.00 gpm.

Table 6. Documentation of Data Loss in Data Acquired 1975/1976 (DATA165)

<u>Data Point</u>	<u>Comments</u>
AI-05 (Tank #1 Temp. Array)	1/22/76 (22) Began acquiring good data.
AI-09	12/20/75 (354) Replaced.
AI-11	2/7/76, 12:49 PM (38/1249) Failed. 2/16/76, 1:50 PM (47/1350) Replaced, but out of tolerance with the rest of the data. Operative on cooling only.
AI-17	1/6/76 (6) Replaced. 2/2/76 to 3/3/76 (33 to 63) Out of tolerance with the rest of the data.
AI-18	12/17/75 (351) Replaced. 2/7/76, 12:49 PM (38/1249) Failed. 2/16/76, 1:50 PM (47/1350) Replaced, but out of tolerance with the rest of the data. Inoperative.
AI-23	1/28/76, 1:54 PM to 2/2/76 (28/1354 to 33/-) Failed and replaced.
AI-24 (Room Temp. Array)	2/2/76 (33) Replaced (reception room). 2/16/76 (47) Began acquiring good data.
AI-26	1/7/76 to 1/8/76 (7 to 8) Dew point probes removed and replaced after 'bake-out'.
AI-27	1/7/76 to 1/8/76 (7 to 8) Dew point probes removed and replaced after 'bake-out'.
AI-31 (Tank #2 Temp. Array)	1/20/76 (20) Replaced. 3/4/76 (64) Began acquiring good data.
AI-32 (Tank #3 Temp. Array)	2/16/76 (47) Began acquiring good data.
AI-57	4/6/76, 1:10 AM (96/110) Failed to end of data acquisition period.
Equipment Room Thermisters	4/21/76, 9:30 AM to 1:30 PM (111/930 to 111/1330) Constant temperature bath checks.
DI-04	2/9/76 (40) Meter removed for rest of data acquisition period.
DI-11	2/4/76 (35) Meter removed.
DI-12	1/9/76 (9) Meter removed. 2/6/76 (37) Meter removed.
DI-13	1/2/76 to 1/8/76 (2 to 8) Meter failed replaced.
DI-17	4/23/76 (113) Meter replaced.
DI-21	1/21/76 (21) Meter now operating.

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APPENDIX A

PERIODS OF OPERATION FOR DATA ACQUIRED 1974/1975 (DATA72)

The following computer generated directory of periods of operation shows a breakdown of the number of six minute samples (periods) on a daily basis and a total number of hours of continuous operation.

MONITORING

DATE- 318. TIME- 2236.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 14

DATE- 319. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 320. TIME- 0.0
 TIME- 1030.00 NUMBER OF SIX MINUTE PERIODS: 106

BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS

MONITORING

DATE- 320. TIME- 1356.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 101

DATE- 321. TIME- 2.00
 TIME- 150.00 NUMBER OF SIX MINUTE PERIODS: 19

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 321. TIME- 1441.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 94

DATE- 322. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 323. TIME- 5.00
 TIME- 1435.00 NUMBER OF SIX MINUTE PERIODS: 146

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 323. TIME- 1701.00
 TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 70

DATE- 324. TIME- 1.00
 TIME- 455.00 NUMBER OF SIX MINUTE PERIODS: 50

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 324. TIME- 1528.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 86

DATE- 325. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 326. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 327. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 328. TIME- 4.00
 TIME- 1522.00 NUMBER OF SIX MINUTE PERIODS: 154

BREAK AFTER 960 CONTIGUOUS SIX MINUTE PERIODS - 96.00 HOURS

MONITORING

DATE- 328. TIME- 1716.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 68

DATE- 329. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 330. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 331. TIME- 4.00
 TIME- 510.00 NUMBER OF SIX MINUTE PERIODS: 52

BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS

MONITORING

DATE- 331. TIME- 1444.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 93

DATE- 332. TIME- 2.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 333. TIME- 2.00
 TIME- 1438.00 NUMBER OF SIX MINUTE PERIODS: 147

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 333. TIME- 1536.00

DATE- 334. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 84
 TIME- 0.0

DATE- 335. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 TIME- 0.0

DATE- 335. TIME- 330.00 NUMBER OF SIX MINUTE PERIODS: 36
 TIME- 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS

BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS

MONITORING

DATE- 335. TIME- 1622.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 77

DATE- 336. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 337. TIME- 4.00
 TIME- 416.00 NUMBER OF SIX MINUTE PERIODS: 43

BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS

MONITORING

DATE- 337. TIME- 938.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 144

DATE- 338. TIME- 2.00
 TIME- 932.00 NUMBER OF SIX MINUTE PERIODS: 96

BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS

MONITORING

DATE- 338. TIME- 2136.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 24

DATE- 339. TIME- 0.0
 TIME- 930.00 NUMBER OF SIX MINUTE PERIODS: 96

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 339. TIME- 1529.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 86

DATE- 340. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 341. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 342. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 343. TIME- 5.00
 TIME- 323.00 NUMBER OF SIX MINUTE PERIODS: 34

BREAK AFTER 840 CONTIGUOUS SIX MINUTE PERIODS - 84.00 HOURS

MONITORING

DATE- 343. TIME- 1633.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 75

DATE- 344. TIME- 3.00
 TIME- 427.00 NUMBER OF SIX MINUTE PERIODS: 45

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 344. TIME- 1812.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 58

DATE- 345. TIME- 0.0
 TIME- 606.00 NUMBER OF SIX MINUTE PERIODS: 62

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 345. TIME- 1650.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 72

DATE- 346. TIME- 2.00
 TIME- 444.00 NUMBER OF SIX MINUTE PERIODS: 48

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 346. TIME- 1654.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 71

DATE- 347. TIME- 0.0

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 146
 DATE- 22. TIME- 2.00
 TIME- 2120.00 NUMBER OF SIX MINUTE PERIODS: 214
 BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS
 MONITORING
 DATE- 23. TIME- 926.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 146
 DATE- 24. TIME- 2.00
 TIME- 920.00 NUMBER OF SIX MINUTE PERIODS: 94
 BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS
 MONITORING
 DATE- 24. TIME- 1210.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 119
 DATE- 25. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 26. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 27. TIME- 4.00
 TIME- 1204.00 NUMBER OF SIX MINUTE PERIODS: 121
 BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
 MONITORING
 DATE- 27. TIME- 1221.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 117
 DATE- 28. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 29. TIME- 3.00
 TIME- 15.00 NUMBER OF SIX MINUTE PERIODS: 3
 BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS
 MONITORING
 DATE- 29. TIME- 1244.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 113
 DATE- 30. TIME- 2.00
 TIME- 1238.00 NUMBER OF SIX MINUTE PERIODS: 127
 BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS
 MONITORING
 DATE- 30. TIME- 1330.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 105
 DATE- 31. TIME- 0.0
 TIME- 124.00 NUMBER OF SIX MINUTE PERIODS: 15
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 31. TIME- 336.00
 TIME- 1530.00 NUMBER OF SIX MINUTE PERIODS: 120
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 32. TIME- 36.00
 TIME- 1230.00 NUMBER OF SIX MINUTE PERIODS: 120
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 32. TIME- 1436.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 94
 DATE- 33. TIME- 0.0
 TIME- 1430.00 NUMBER OF SIX MINUTE PERIODS: 146
 BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS
 MONITORING
 DATE- 33. TIME- 1739.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 64
 DATE- 34. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 35. TIME- 3.00

TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 36. TIME- 3.00
 TIME- 533.00 NUMBER OF SIX MINUTE PERIODS: 56
 BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS
 MONITORING
 DATE- 36. TIME- 1809.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 59
 DATE- 37. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 38. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 39. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 40. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 41. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 42. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 43. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 44. TIME- 3.00
 TIME- 603.00 NUMBER OF SIX MINUTE PERIODS: 61
 BREAK AFTER 1800 CONTIGUOUS SIX MINUTE PERIODS - 180.00 HOURS
 MONITORING
 DATE- 44. TIME- 1512.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 88
 DATE- 45. TIME- 0.0
 TIME- 306.00 NUMBER OF SIX MINUTE PERIODS: 32
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 45. TIME- 1342.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 103
 DATE- 46. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 47. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 48. TIME- 0.0
 TIME- 136.00 NUMBER OF SIX MINUTE PERIODS: 17
 BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS
 MONITORING
 DATE- 48. TIME- 1056.00
 TIME- 2250.00 NUMBER OF SIX MINUTE PERIODS: 120
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 49. TIME- 1149.00
 TIME- 2343.00 NUMBER OF SIX MINUTE PERIODS: 120
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 50. TIME- 1651.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 72
 DATE- 51. TIME- 3.00
 TIME- 445.00 NUMBER OF SIX MINUTE PERIODS: 48
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 51. TIME- 1458.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 91
 DATE- 52. TIME- 4.00
 TIME- 252.00 NUMBER OF SIX MINUTE PERIODS: 29
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 52. TIME- 756.00
TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 161

DATE- 53. TIME- 2.00
TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 54. TIME- 2.00
TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 55. TIME- 2.00
TIME- 750.00 NUMBER OF SIX MINUTE PERIODS: 79

BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
MONITORING

DATE- 55. TIME- 1530.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 85

DATE- 56. TIME- 0.0
TIME- 324.00 NUMBER OF SIX MINUTE PERIODS: 35

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 56. TIME- 1500.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 90

DATE- 57. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 58. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 59. TIME- 0.0
TIME- 254.00 NUMBER OF SIX MINUTE PERIODS: 30

BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS
MONITORING

DATE- 59. TIME- 1652.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 72

DATE- 60. TIME- 4.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 61. TIME- 4.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 62. TIME- 4.00
TIME- 446.00 NUMBER OF SIX MINUTE PERIODS: 48

BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS
MONITORING

DATE- 62. TIME- 1549.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 82

DATE- 63. TIME- 1.00
TIME- 343.00 NUMBER OF SIX MINUTE PERIODS: 38

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 63. TIME- 1619.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 77

DATE- 64. TIME- 1.00
TIME- 413.00 NUMBER OF SIX MINUTE PERIODS: 43

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 65. TIME- 1354.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 101

DATE- 66. TIME- 0.0
TIME- 148.00 NUMBER OF SIX MINUTE PERIODS: 19

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 66. TIME- 807.00
TIME- 2001.00 NUMBER OF SIX MINUTE PERIODS: 120

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 67. TIME- 936.00

DATE- 68. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 144
TIME- 0.0

DATE- 69. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
TIME- 0.0

DATE- 70. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
TIME- 0.0

DATE- 70. TIME- 930.00 NUMBER OF SIX MINUTE PERIODS: 96
TIME- 930.00

BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
MONITORING

DATE- 70. TIME- 1525.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 86

DATE- 71. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 72. TIME- 1.00
TIME- 319.00 NUMBER OF SIX MINUTE PERIODS: 34

BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS
MONITORING

DATE- 72. TIME- 831.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 155

DATE- 73. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 74. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 75. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 76. TIME- 1.00
TIME- 825.00 NUMBER OF SIX MINUTE PERIODS: 85

BREAK AFTER 960 CONTIGUOUS SIX MINUTE PERIODS - 96.00 HOURS
MONITORING

DATE- 76. TIME- 901.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 150

DATE- 77. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 78. TIME- 1.00
TIME- 855.00 NUMBER OF SIX MINUTE PERIODS: 90

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS
MONITORING

DATE- 78. TIME- 1517.00
TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 88

DATE- 79. TIME- 5.00
TIME- 311.00 NUMBER OF SIX MINUTE PERIODS: 32

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 79. TIME- 906.00
TIME- 2100.00 NUMBER OF SIX MINUTE PERIODS: 120

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
MONITORING

DATE- 79. TIME- 2137.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 24

DATE- 80. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 81. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 82. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 83. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 84. TIME- 1.00
TIME- 931.00 NUMBER OF SIX MINUTE PERIODS: 96

BREAK AFTER 1080 CONTIGUOUS SIX MINUTE PERIODS - 108.00 HOURS

MONITORING

DATE- 85.	TIME- 836.00		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	154
DATE- 86.	TIME- 0.0		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 87.	TIME- 0.0		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 88.	TIME- 0.0		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 89.	TIME- 0.0		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 90.	TIME- 0.0		
	TIME- 830.00	NUMBER OF SIX MINUTE PERIODS:	86
BREAK AFTER 1200 CONTIGUOUS SIX MINUTE PERIODS - 120.00 HOURS			
MONITORING			
DATE- 92.	TIME- 858.00		
	TIME- 2358.00	NUMBER OF SIX MINUTE PERIODS:	151
DATE- 93.	TIME- 4.00		
	TIME- 2358.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 94.	TIME- 4.00		
	TIME- 2358.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 95.	TIME- 4.00		
	TIME- 2358.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 96.	TIME- 4.00		
	TIME- 852.00	NUMBER OF SIX MINUTE PERIODS:	89
BREAK AFTER 960 CONTIGUOUS SIX MINUTE PERIODS - 96.00 HOURS			
MONITORING			
DATE- 96.	TIME- 1457.00		
	TIME- 2357.00	NUMBER OF SIX MINUTE PERIODS:	91
DATE- 97.	TIME- 3.00		
	TIME- 2357.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 98.	TIME- 3.00		
	TIME- 1451.00	NUMBER OF SIX MINUTE PERIODS:	149
BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS			
MONITORING			
DATE- 98.	TIME- 1837.00		
	TIME- 2355.00	NUMBER OF SIX MINUTE PERIODS:	54
DATE- 99.	TIME- 1.00		
	TIME- 2355.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 100.	TIME- 1.00		
	TIME- 631.00	NUMBER OF SIX MINUTE PERIODS:	66
BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS			
MONITORING			
DATE- 100.	TIME- 836.00		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	154
DATE- 101.	TIME- 0.0		
	TIME- 2354.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 102.	TIME- 0.0		
	TIME- 830.00	NUMBER OF SIX MINUTE PERIODS:	86
BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS			
MONITORING			
DATE- 102.	TIME- 1639.00		
	TIME- 2357.00	NUMBER OF SIX MINUTE PERIODS:	74
DATE- 103.	TIME- 3.00		
	TIME- 2357.00	NUMBER OF SIX MINUTE PERIODS:	240
DATE- 104.	TIME- 3.00		
	TIME- 433.00	NUMBER OF SIX MINUTE PERIODS:	46
BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS			
MONITORING			
DATE- 104.	TIME- 950.00		

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 142

DATE- 105. TIME- 2.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 106. TIME- 2.00

TIME- 944.00 NUMBER OF SIX MINUTE PERIODS: 98

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 107. TIME- 936.00

TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 144

DATE- 108. TIME- 0.0

TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 109. TIME- 0.0

TIME- 2130.00 NUMBER OF SIX MINUTE PERIODS: 216

BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS

MONITORING

DATE- 110. TIME- 936.00

TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 144

DATE- 111. TIME- 0.0

TIME- 930.00 NUMBER OF SIX MINUTE PERIODS: 96

BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS

MONITORING

DATE- 113. TIME- 1326.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 106

DATE- 114. TIME- 2.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 115. TIME- 2.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 116. TIME- 2.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 117. TIME- 2.00

TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 118. TIME- 2.00

TIME- 1320.00 NUMBER OF SIX MINUTE PERIODS: 134

BREAK AFTER 1200 CONTIGUOUS SIX MINUTE PERIODS - 120.00 HOURS

MONITORING

DATE- 118. TIME- 1739.00

TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 64

DATE- 119. TIME- 3.00

TIME- 533.00 NUMBER OF SIX MINUTE PERIODS: 56

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 119. TIME- 843.00

TIME- 2037.00 NUMBER OF SIX MINUTE PERIODS: 120

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 119. TIME- 2305.00

TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 10

DATE- 120. TIME- 5.00

TIME- 1059.00 NUMBER OF SIX MINUTE PERIODS: 110

BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 121. TIME- 1940.00

TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 44

DATE- 122. TIME- 4.00

TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 123. TIME- 4.00

TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 124. TIME- 4.00

TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240

DATE- 125. TIME- 4.00

TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 126. TIME- 4.00
 TIME- 734.00 NUMBER OF SIX MINUTE PERIODS: 76
 BREAK AFTER 1080 CONTIGUOUS SIX MINUTE PERIODS - 108.00 HOURS
 MONITORING
 DATE- 127. TIME- 946.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 143
 DATE- 128. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 129. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 130. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 131. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 132. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 133. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 134. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 135. TIME- 4.00
 TIME- 940.00 NUMBER OF SIX MINUTE PERIODS: 97
 BREAK AFTER 1920 CONTIGUOUS SIX MINUTE PERIODS - 192.00 HOURS
 MONITORING
 DATE- 135. TIME- 2215.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 18
 DATE- 136. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 137. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 138. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 139. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 140. TIME- 3.00
 TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 141. TIME- 3.00
 TIME- 1009.00 NUMBER OF SIX MINUTE PERIODS: 102
 BREAK AFTER 1320 CONTIGUOUS SIX MINUTE PERIODS - 132.00 HOURS
 MONITORING
 DATE- 141. TIME- 1558.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 81
 DATE- 142. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 143. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 144. TIME- 4.00
 TIME- 1552.00 NUMBER OF SIX MINUTE PERIODS: 159
 BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
 MONITORING
 DATE- 146. TIME- 1401.00
 TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 100
 DATE- 147. TIME- 1.00
 TIME- 155.00 NUMBER OF SIX MINUTE PERIODS: 20
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 MONITORING
 DATE- 147. TIME- 1331.00
 TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 105
 DATE- 148. TIME- 1.00

TIME- 1325.00 NUMBER OF SIX MINUTE PERIODS: 135
 BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS
 MONITORING
 DATE- 148. TIME- 1536.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 84
 DATE- 149. TIME- 0.0
 TIME- 1530.00 NUMBER OF SIX MINUTE PERIODS: 156
 BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS
 MONITORING
 DATE- 155. TIME- 1631.00
 TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 75
 DATE- 156. TIME- 1.00
 TIME- 425.00 NUMBER OF SIX MINUTE PERIODS: 45
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS
 TOTAL NUMBER OF SIX MINUTE PERIODS ON THIS TAPE: 37920

APPENDIX B

PERIODS OF OPERATION FOR DATA ACQUIRED 1975/1976 (DATA165)

The following computer generated director of periods of operation shows a breakdown of the number of six minute samples (periods) on a daily basis and a total number of hours of continuous operation

MONITORING

DATE- 350. TIME- 2218.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 17
DATE- 351. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 352. TIME- 0.0
TIME- 1012.00 NUMBER OF SIX MINUTE PERIODS: 103
BREAK AFTER 360 CONTIGUOUS SIX MINUTE PERIODS - 36.00 HOURS
MONITORING
DATE- 352. TIME- 1051.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 132
DATE- 353. TIME- 3.00
TIME- 1345.00 NUMBER OF SIX MINUTE PERIODS: 138
BREAK AFTER 270 CONTIGUOUS SIX MINUTE PERIODS - 27.00 HOURS
MONITORING
DATE- 353. TIME- 1647.00
TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 73
DATE- 354. TIME- 5.00
TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 355. TIME- 5.00
TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 356. TIME- 5.00
TIME- 741.00 NUMBER OF SIX MINUTE PERIODS: 77
BREAK AFTER 630 CONTIGUOUS SIX MINUTE PERIODS - 63.00 HOURS
MONITORING
DATE- 356. TIME- 921.00
TIME- 1215.00 NUMBER OF SIX MINUTE PERIODS: 30
BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS
MONITORING
DATE- 356. TIME- 1439.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 94
DATE- 357. TIME- 3.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 358. TIME- 3.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 359. TIME- 3.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 360. TIME- 3.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 361. TIME- 3.00
TIME- 2357.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 362. TIME- 3.00
TIME- 2333.00 NUMBER OF SIX MINUTE PERIODS: 236
BREAK AFTER 1530 CONTIGUOUS SIX MINUTE PERIODS - 153.00 HOURS
MONITORING
DATE- 363. TIME- 847.00
TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 153
DATE- 364. TIME- 5.00
TIME- 1141.00 NUMBER OF SIX MINUTE PERIODS: 117
BREAK AFTER 270 CONTIGUOUS SIX MINUTE PERIODS - 27.00 HOURS
MONITORING
DATE- 364. TIME- 1154.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 121
DATE- 365. TIME- 0.0
TIME- 848.00 NUMBER OF SIX MINUTE PERIODS: 89
BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS
MONITORING
DATE- 365. TIME- 1328.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 106
DATE- 1. TIME- 4.00

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DATE- 2. TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
TIME- 4.00
DATE- 2. TIME- 1322.00 NUMBER OF SIX MINUTE PERIODS: 134
BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS
MONITORING
DATE- 2. TIME- 1416.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 98
DATE- 3. TIME- 4.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 4. TIME- 4.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 5. TIME- 4.00
TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 6. TIME- 4.00
TIME- 1410.00 NUMBER OF SIX MINUTE PERIODS: 142
BREAK AFTER 960 CONTIGUOUS SIX MINUTE PERIODS - 96.00 HOURS
MONITORING
DATE- 6. TIME- 1712.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 69
DATE- 7. TIME- 0.0
TIME- 1106.00 NUMBER OF SIX MINUTE PERIODS: 112
BREAK AFTER 180 CONTIGUOUS SIX MINUTE PERIODS - 18.00 HOURS
MONITORING
DATE- 7. TIME- 1807.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 59
DATE- 8. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 9. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 10. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 11. TIME- 1.00
TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 12. TIME- 1.00
TIME- 901.00 NUMBER OF SIX MINUTE PERIODS: 91
BREAK AFTER 1110 CONTIGUOUS SIX MINUTE PERIODS - 111.00 HOURS
MONITORING
DATE- 12. TIME- 1118.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 127
DATE- 13. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 14. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 15. TIME- 0.0
TIME- 1412.00 NUMBER OF SIX MINUTE PERIODS: 143
BREAK AFTER 750 CONTIGUOUS SIX MINUTE PERIODS - 75.00 HOURS
MONITORING
DATE- 15. TIME- 1630.00
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 75
DATE- 16. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 17. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 18. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 19. TIME- 0.0
TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
DATE- 20. TIME- 0.0
TIME- 1024.00 NUMBER OF SIX MINUTE PERIODS: 105
BREAK AFTER 1140 CONTIGUOUS SIX MINUTE PERIODS - 114.00 HOURS

MONITORING

DATE- 20. TIME- 1129.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 126
 DATE- 21. TIME- 5.00
 TIME- 823.00 NUMBER OF SIX MINUTE PERIODS: 84
 BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS

MONITORING

DATE- 21. TIME- 1436.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 94
 DATE- 22. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 23. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 24. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 25. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 26. TIME- 0.0
 TIME- 830.00 NUMBER OF SIX MINUTE PERIODS: 86
 BREAK AFTER 1140 CONTIGUOUS SIX MINUTE PERIODS - 114.00 HOURS

MONITORING

DATE- 26. TIME- 1154.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 121
 DATE- 27. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 28. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 29. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 30. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 31. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 32. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 33. TIME- 0.0
 TIME- 848.00 NUMBER OF SIX MINUTE PERIODS: 89
 BREAK AFTER 1650 CONTIGUOUS SIX MINUTE PERIODS - 165.00 HOURS

MONITORING

DATE- 33. TIME- 1336.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 104
 DATE- 34. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 35. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 36. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 37. TIME- 0.0
 TIME- 1030.00 NUMBER OF SIX MINUTE PERIODS: 106
 BREAK AFTER 930 CONTIGUOUS SIX MINUTE PERIODS - 93.00 HOURS

MONITORING

DATE- 37. TIME- 1608.00
 TIME- 2356.00 NUMBER OF SIX MINUTE PERIODS: 79
 DATE- 38. TIME- 2.00
 TIME- 702.00 NUMBER OF SIX MINUTE PERIODS: 71
 BREAK AFTER 150 CONTIGUOUS SIX MINUTE PERIODS - 15.00 HOURS

MONITORING

DATE- 38. TIME- 926.00
 TIME- 1220.00 NUMBER OF SIX MINUTE PERIODS: 30
 BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS

MONITORING

DATE- 38. TIME- 1249.00
 TIME- 2355.00 NUMBER OF SIX MINUTE PERIODS: 112
 DATE- 39. TIME- 1.00
 TIME- 1543.00 NUMBER OF SIX MINUTE PERIODS: 158
 BREAK AFTER 270 CONTIGUOUS SIX MINUTE PERIODS - 27.00 HOURS

MONITORING

DATE- 39. TIME- 1853.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 52
 DATE- 40. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 41. TIME- 5.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 42. TIME- 5.00
 TIME- 647.00 NUMBER OF SIX MINUTE PERIODS: 68

BREAK AFTER 600 CONTIGUOUS SIX MINUTE PERIODS - 60.00 HOURS

MONITORING

DATE- 42. TIME- 1042.00
 TIME- 1336.00 NUMBER OF SIX MINUTE PERIODS: 30
 BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS

MONITORING

DATE- 42. TIME- 1512.00
 TIME- 1806.00 NUMBER OF SIX MINUTE PERIODS: 30
 BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS

MONITORING

DATE- 42. TIME- 1836.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 54
 DATE- 43. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 44. TIME- 0.0
 TIME- 1230.00 NUMBER OF SIX MINUTE PERIODS: 126
 BREAK AFTER 420 CONTIGUOUS SIX MINUTE PERIODS - 42.00 HOURS

MONITORING

DATE- 44. TIME- 1324.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 106
 DATE- 45. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 46. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 47. TIME- 0.0
 TIME- 718.00 NUMBER OF SIX MINUTE PERIODS: 74
 BREAK AFTER 660 CONTIGUOUS SIX MINUTE PERIODS - 66.00 HOURS

MONITORING

DATE- 47. TIME- 1136.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 124
 DATE- 48. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 49. TIME- 0.0
 TIME- 1130.00 NUMBER OF SIX MINUTE PERIODS: 116
 BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 49. TIME- 1212.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 118
 DATE- 50. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 51. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 52. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 53. TIME- 0.0

DATE- 54. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 TIME- 0.0
 DATE- 55. TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 TIME- 0.0
 TIME- 606.00 NUMBER OF SIX MINUTE PERIODS: 62
 BREAK AFTER 1380 CONTIGUOUS SIX MINUTE PERIODS - 138.00 HOURS
 MONITORING
 DATE- 55. TIME- 1011.00
 TIME- 2359.00 NUMBER OF SIX MINUTE PERIODS: 139
 DATE- 56. TIME- 5.00
 TIME- 705.00 NUMBER OF SIX MINUTE PERIODS: 71
 BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS
 MONITORING
 DATE- 56. TIME- 930.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 145
 DATE- 57. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 58. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 59. TIME- 0.0
 TIME- 924.00 NUMBER OF SIX MINUTE PERIODS: 95
 BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
 MONITORING
 DATE- 59. TIME- 1022.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 137
 DATE- 60. TIME- 4.00
 TIME- 2358.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 61. TIME- 4.00
 TIME- 1016.00 NUMBER OF SIX MINUTE PERIODS: 103
 BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS
 MONITORING
 DATE- 61. TIME- 1100.00
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 130
 DATE- 62. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 63. TIME- 0.0
 TIME- 2354.00 NUMBER OF SIX MINUTE PERIODS: 240
 DATE- 64. TIME- 0.0
 TIME- 1054.00 NUMBER OF SIX MINUTE PERIODS: 110
 BREAK AFTER 720 CONTIGUOUS SIX MINUTE PERIODS - 72.00 HOURS
 MONITORING
 DATE- 64. TIME- 1219.00
 TIME- 2355.80 NUMBER OF SIX MINUTE PERIODS: 122
 DATE- 65. TIME- 1.55
 TIME- 2355.66 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 66. TIME- 1.41
 TIME- 2356.89 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 67. TIME- 2.64
 TIME- 2357.59 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 68. TIME- 3.34
 TIME- 1118.05 NUMBER OF SIX MINUTE PERIODS: 118
 BREAK AFTER 990 CONTIGUOUS SIX MINUTE PERIODS - 99.00 HOURS
 MONITORING
 DATE- 69. TIME- 1535.75
 TIME- 2357.47 NUMBER OF SIX MINUTE PERIODS: 88
 DATE- 69. TIME- 3.22
 TIME- 1140.43 NUMBER OF SIX MINUTE PERIODS: 122
 BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS
 MONITORING
 DATE- 70. TIME- 1050.75

TIME- 1337.50 NUMBER OF SIX MINUTE PERIODS: 30
 BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS
 MONITORING
 DATE- 70. TIME- 1453.75
 TIME- 2354.33 NUMBER OF SIX MINUTE PERIODS: 95
 DATE- 71. TIME- 0.08
 TIME- 1057.92 NUMBER OF SIX MINUTE PERIODS: 115
 BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS
 MONITORING
 DATE- 71. TIME- 1258.75
 TIME- 2356.09 NUMBER OF SIX MINUTE PERIODS: 115
 DATE- 72. TIME- 1.84
 TIME- 903.47 NUMBER OF SIX MINUTE PERIODS: 95
 BREAK AFTER 210 CONTIGUOUS SIX MINUTE PERIODS - 21.00 HOURS
 MONITORING
 DATE- 72. TIME- 936.00
 TIME- 2354.78 NUMBER OF SIX MINUTE PERIODS: 150
 DATE- 73. TIME- 0.53
 TIME- 2354.88 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 74. TIME- 0.63
 TIME- 2355.70 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 75. TIME- 1.45
 TIME- 2358.32 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 76. TIME- 4.07
 TIME- 2355.25 NUMBER OF SIX MINUTE PERIODS: 249
 DATE- 77. TIME- 1.00
 TIME- 1035.78 NUMBER OF SIX MINUTE PERIODS: 111
 BREAK AFTER 1260 CONTIGUOUS SIX MINUTE PERIODS - 126.00 HOURS
 MONITORING
 DATE- 77. TIME- 1617.75
 TIME- 2359.46 NUMBER OF SIX MINUTE PERIODS: 81
 DATE- 78. TIME- 5.21
 TIME- 1321.55 NUMBER OF SIX MINUTE PERIODS: 139
 BREAK AFTER 220 CONTIGUOUS SIX MINUTE PERIODS - 22.00 HOURS
 MONITORING
 DATE- 78. TIME- 1638.75
 TIME- 2357.20 NUMBER OF SIX MINUTE PERIODS: 77
 DATE- 79. TIME- 3.12
 TIME- 2359.98 NUMBER OF SIX MINUTE PERIODS: 250
 DATE- 80. TIME- 5.81
 TIME- 2356.83 NUMBER OF SIX MINUTE PERIODS: 249
 DATE- 81. TIME- 2.66
 TIME- 1934.04 NUMBER OF SIX MINUTE PERIODS: 204
 BREAK AFTER 780 CONTIGUOUS SIX MINUTE PERIODS - 78.00 HOURS
 MONITORING
 DATE- 82. TIME- 1447.75
 TIME- 2356.11 NUMBER OF SIX MINUTE PERIODS: 96
 DATE- 83. TIME- 1.86
 TIME- 800.99 NUMBER OF SIX MINUTE PERIODS: 84
 BREAK AFTER 180 CONTIGUOUS SIX MINUTE PERIODS - 18.00 HOURS
 MONITORING
 DATE- 83. TIME- 1022.00
 TIME- 1855.54 NUMBER OF SIX MINUTE PERIODS: 90
 BREAK AFTER 90 CONTIGUOUS SIX MINUTE PERIODS - 9.00 HOURS
 MONITORING
 DATE- 83. TIME- 2221.75
 TIME- 2359.91 NUMBER OF SIX MINUTE PERIODS: 18
 DATE- 84. TIME- 5.66
 TIME- 948.35 NUMBER OF SIX MINUTE PERIODS: 102
 BREAK AFTER 120 CONTIGUOUS SIX MINUTE PERIODS - 12.00 HOURS

MONITORING

DATE- 84. TIME- 1042.75
TIME- 2359.09 NUMBER OF SIX MINUTE PERIODS: 139

DATE- 85. TIME- 4.92
TIME- 2355.94 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 86. TIME- 1.77
TIME- 846.88 NUMBER OF SIX MINUTE PERIODS: 92

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 86. TIME- 1206.00
TIME- 2355.68 NUMBER OF SIX MINUTE PERIODS: 124

DATE- 87. TIME- 1.43
TIME- 2358.36 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 88. TIME- 4.11
TIME- 2355.21 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 89. TIME- 0.96
TIME- 2357.90 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 90. TIME- 3.65
TIME- 917.68 NUMBER OF SIX MINUTE PERIODS: 97

BREAK AFTER 970 CONTIGUOUS SIX MINUTE PERIODS - 97.00 HOURS

MONITORING

DATE- 90. TIME- 1317.75
TIME- 2358.26 NUMBER OF SIX MINUTE PERIODS: 112

DATE- 91. TIME- 4.01
TIME- 2355.13 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 92. TIME- 0.88
TIME- 1121.81 NUMBER OF SIX MINUTE PERIODS: 119

BREAK AFTER 480 CONTIGUOUS SIX MINUTE PERIODS - 48.00 HOURS

MONITORING

DATE- 92. TIME- 1617.75
TIME- 2359.45 NUMBER OF SIX MINUTE PERIODS: 81

DATE- 93. TIME- 5.20
TIME- 930.91 NUMBER OF SIX MINUTE PERIODS: 99

BREAK AFTER 180 CONTIGUOUS SIX MINUTE PERIODS - 18.00 HOURS

MONITORING

DATE- 93. TIME- 1107.75
TIME- 1355.14 NUMBER OF SIX MINUTE PERIODS: 30

BREAK AFTER 30 CONTIGUOUS SIX MINUTE PERIODS - 3.00 HOURS

MONITORING

DATE- 93. TIME- 1444.75
TIME- 2358.85 NUMBER OF SIX MINUTE PERIODS: 97

DATE- 94. TIME- 4.60
TIME- 2355.71 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 95. TIME- 1.46
TIME- 2358.40 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 96. TIME- 4.15
TIME- 705.27 NUMBER OF SIX MINUTE PERIODS: 74

BREAK AFTER 670 CONTIGUOUS SIX MINUTE PERIODS - 67.00 HOURS

MONITORING

DATE- 96. TIME- 1016.00
TIME- 2355.42 NUMBER OF SIX MINUTE PERIODS: 143

DATE- 97. TIME- 1.17
TIME- 2358.11 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 98. TIME- 3.86
TIME- 2354.97 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 99. TIME- 0.72
TIME- 822.75 NUMBER OF SIX MINUTE PERIODS: 88

BREAK AFTER 730 CONTIGUOUS SIX MINUTE PERIODS - 73.00 HOURS

MONITORING

DATE- 99. TIME- 1145.75

TIME- 2019.45 NUMBER OF SIX MINUTE PERIODS: 90

BREAK AFTER 90 CONTIGUOUS SIX MINUTE PERIODS - 9.00 HOURS

MONITORING

DATE- 99. TIME- 2345.75
TIME- 2357.25 NUMBER OF SIX MINUTE PERIODS: 3

DATE- 100. TIME- 3.08
TIME- 819.28 NUMBER OF SIX MINUTE PERIODS: 87

BREAK AFTER 90 CONTIGUOUS SIX MINUTE PERIODS - 9.00 HOURS

MONITORING

DATE- 100. TIME- 921.75
TIME- 2358.74 NUMBER OF SIX MINUTE PERIODS: 153

DATE- 101. TIME- 4.66
TIME- 2355.68 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 102. TIME- 1.51
TIME- 2358.36 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 103. TIME- 4.19
TIME- 923.88 NUMBER OF SIX MINUTE PERIODS: 98

BREAK AFTER 750 CONTIGUOUS SIX MINUTE PERIODS - 75.00 HOURS

MONITORING

DATE- 103. TIME- 1118.75
TIME- 2354.75 NUMBER OF SIX MINUTE PERIODS: 132

DATE- 104. TIME- 0.50
TIME- 2357.45 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 105. TIME- 3.20
TIME- 629.99 NUMBER OF SIX MINUTE PERIODS: 68

BREAK AFTER 450 CONTIGUOUS SIX MINUTE PERIODS - 45.00 HOURS

MONITORING

DATE- 105. TIME- 1216.75
TIME- 2354.93 NUMBER OF SIX MINUTE PERIODS: 122

DATE- 106. TIME- 0.68
TIME- 2357.63 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 107. TIME- 3.38
TIME- 2354.48 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 108. TIME- 0.23
TIME- 2357.16 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 109. TIME- 2.91
TIME- 2359.84 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 110. TIME- 5.59
TIME- 735.72 NUMBER OF SIX MINUTE PERIODS: 79

BREAK AFTER 1200 CONTIGUOUS SIX MINUTE PERIODS - 120.00 HOURS

MONITORING

DATE- 110. TIME- 1036.75
TIME- 2358.92 NUMBER OF SIX MINUTE PERIODS: 140

DATE- 111. TIME- 4.67
TIME- 935.78 NUMBER OF SIX MINUTE PERIODS: 100

BREAK AFTER 240 CONTIGUOUS SIX MINUTE PERIODS - 24.00 HOURS

MONITORING

DATE- 111. TIME- 1234.00
TIME- 2354.85 NUMBER OF SIX MINUTE PERIODS: 119

DATE- 112. TIME- 0.68
TIME- 2357.53 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 113. TIME- 3.28
TIME- 2354.48 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 114. TIME- 0.23
TIME- 649.94 NUMBER OF SIX MINUTE PERIODS: 72

BREAK AFTER 690 CONTIGUOUS SIX MINUTE PERIODS - 69.00 HOURS

MONITORING

DATE- 115. TIME- 1256.83
TIME- 2354.59 NUMBER OF SIX MINUTE PERIODS: 115

DATE- 116. TIME- 0.34

TIME- 609.64 NUMBER OF SIX MINUTE PERIODS: 65
BREAK AFTER 180 CONTIGUOUS SIX MINUTE PERIODS - 18.00 HOURS
MONITORING

DATE- 116. TIME- 956.75
TIME- 2359.49 NUMBER OF SIX MINUTE PERIODS: 147
DATE- 117. TIME- 5.24

TIME- 1149.17 NUMBER OF SIX MINUTE PERIODS: 123
BREAK AFTER 270 CONTIGUOUS SIX MINUTE PERIODS - 27.00 HOURS
MONITORING

DATE- 117. TIME- 1316.00
TIME- 2356.51 NUMBER OF SIX MINUTE PERIODS: 112

DATE- 118. TIME- 2.34
TIME- 2359.19 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 119. TIME- 4.94
TIME- 2356.14 NUMBER OF SIX MINUTE PERIODS: 249

DATE- 120. TIME- 1.89
TIME- 2358.74 NUMBER OF SIX MINUTE PERIODS: 250

DATE- 121. TIME- 4.49
TIME- 929.94 NUMBER OF SIX MINUTE PERIODS: 99

BREAK AFTER 960 CONTIGUOUS SIX MINUTE PERIODS - 96.00 HOURS
MONITORING

DATE- 121. TIME- 1157.75
TIME- 1738.47 NUMBER OF SIX MINUTE PERIODS: 60

BREAK AFTER 60 CONTIGUOUS SIX MINUTE PERIODS - 6.00 HOURS

TOTAL NUMBER OF SIX MINUTE PERIODS ON THIS TAPE: 30850 *128.5 days*

15
120
135 x 24

1.7 hrs
9.9
11.6 hrs