FILE -
50-298

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION
SEMI-ANNUAL OPERATING REPORT
RADIOACTIVE EFFLUENTS
DOCKET NUMBER 50-298

January 1, 1981 — June 30, 1981

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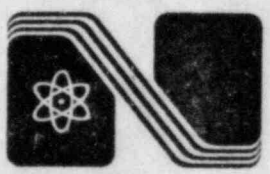

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Nebraska Public Power District

GENERAL OFFICE
P. O. BOX 499, COLUMBUS, NEBRASKA 68601
TELEPHONE (402) 564-8561

September 1, 1981

Mr. Karl V. Seyfrit, Director
U.S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011

Subject: Semi-Annual Operating Report - Radioactive Effluents
Cooper Nuclear Station
January 1, 1981 through June 30, 1981
NRC Docket No. 50-298, DPR-46

Dear Mr. Seyfrit:

In accordance with Paragraph 5.4.1.b of the Cooper Nuclear Station Environmental Technical Specifications, the Nebraska Public Power District submits the Cooper Nuclear Station Semi-Annual Operating Report - Radioactive Effluents for the period January 1, 1981 through June 30, 1981.

We are enclosing one signed original and one copy of the report for your use and, additionally, are transmitting 20 copies to the Director, Office of Inspection and Enforcement, and two copies to the Director, Office of Management Information and Program Control.

Should you have any questions or comments regarding this report, please contact me.

Sincerely,

Jay M. Pilant
Division Manager of Licensing
and Quality Assurance

JMP:ACM:cmk

Enclosures

cc: Director
Office of Inspection & Enforcement w/20 encl.

Director
Office of Management Information & Program Control w/2 encl.

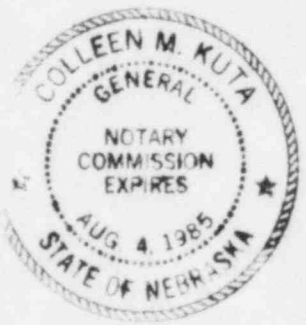
STATE OF NEBRASKA)
) ss
PLATTE COUNTY)

Jay M. Pilant, being first duly sworn, deposes and says that he is an authorized representative of the Nebraska Public Power District, a public corporation and political subdivision of the State of Nebraska; that he is duly authorized to submit this information on behalf of Nebraska Public Power District; and that the statements in said application are true to the best of his knowledge and belief.

Jay M. Pilant

Subscribed in my presence and sworn to before me this 1st day of September, 1981.

Colleen M. Kuta
NOTARY PUBLIC



EA Report NPP11-2

Revision 0

COOPER NUCLEAR STATION
BROWNVILLE, NEBRASKA
SEMI-ANNUAL OPERATING REPORT
JANUARY THROUGH JUNE 1981

Prepared for
Nebraska Public Power District
P.O. Box 499
Columbus, Nebraska 68601

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20 August 1981

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SECTION 1.0

INTRODUCTION

1.0 INTRODUCTION

Ecological Analysts, Inc. (EA) has prepared this semi-annual operating report for the Nebraska Public Power District to comply with the Cooper Nuclear Station Environmental Technical Specifications to the NRC (Section 5.4.1.b).

The purpose of this report is to estimate the radiological doses to the area surrounding the Cooper nuclear facility from routine radiation effluent releases. The dose estimates are based upon the atmosphere dispersion as monitored at the facility.

The report provides a summary of the meteorological data collected during the first 6 months of 1981. This is followed by estimates of the dispersion characteristics for the period based on the computer model XOQDOQ.

Section 4 reports on the effluent releases and waste disposal at the facility. Dose estimates of gamma radiation due to gaseous releases are presented in Section 5, and individual and population dosages from liquid effluents in Section 6.

Four appendices are included in the report. The appendices present in tabular form the data used in the report tables and figures. Additional tables of radiological doses not found in the body of the report are also presented.

SECTION 2.0

METEOROLOGICAL DATA SUMMARY

2.0 METEOROLOGICAL DATA SUMMARY

The meteorological data collected at the Cooper Nuclear Station during the first half of 1981 are summarized in Tables 2-1 and 2-2. These tables were compiled from the monthly data tables presented in Appendix A. Table 2-1 summarizes the data recovery for each of the meteorological parameters. Table 2-2 summarizes the meteorological data.

2.1 FIRST QUARTER (January - March 1981)

Data recovery for the first quarter was greater than 96% for each parameter except precipitation. The quarterly data recovery for precipitation was 88.9%. The majority of lost data was due to charts running off and recorder pens not inking. The precipitation recorder experienced notable losses of data due to pen problems and inking problems. The 318-ft wind direction had a translator malfunction on 20 February which resulted in 7 hours of lost data.

Meteorological Summary: The prevailing wind direction for the first quarter of 1981 was from the NW-N and SSE-SSW directions. The 35-ft wind direction was from the NW-N 30.9% of the time and from the SSE-SSW 26.5% of the time. The 318-ft wind direction was from the NW-N 33.7% of the time and from the SSE-SSW 19.8% of the time. The 35-ft wind speed was between 4-13 mph 57.7% of the time and less than 4 mph 19.8% of the time. The 318-ft wind speed was between 8-19 mph 54.8% of the time and less than 8 mph 21.1% of the time. The first quarter of 1981 was warmer and drier than the climatological normal for Auburn, Nebraska, the closest National Weather Service climatic station (10 miles west of the plant site).

Atmospheric Stability: Atmospheric stability is derived from the 318-ft differential temperature data and is reduced to the seven Pasquill stability categories for use in the joint frequency of wind speed and wind direction analyses. The grand total joint frequency of occurrence given in the lower right hand corner of the joint frequency of occurrence by atmospheric stability tables is used to determine the frequency of occurrence of each stability class. The grand total joint frequency of occurrence for the 318-ft wind speed vs. 318-ft wind direction by stability class are normalized to 100% for reporting. The atmosphere was unstable 28.7% of the time (12.8% of the time extremely unstable), neutral 32.4% of the time, and stable 38.9% of the time (21.1% of the time slightly stable) for the first quarter of 1981.

2.2 SECOND QUARTER (April - June 1981)

Data recovery for the second quarter was greater than 90% for each parameter. The ambient temperature parameter had the lowest quarterly recovery due to problems with the reference channel voltage in June. The 35-ft wind direction parameter lost data in June due to the recorder pen sticking. Charts running off and pens not inking were the major causes of lost data except for the conditions mentioned above.

Meteorological Summary: The prevailing wind direction was from the SSE-SSW and NNW-NE directions. The 35-ft wind direction was from the SSE-SSW 33.6% of the time and from the N-NE 26.8% of the time. The 318 ft wind direction was from the SSE-SSW 32.4% of the time and from the NNW-NNE 21.4% of the time. The 35-ft wind speed was between 4-13 mph 58.3% of the time and less than 4 mph 17.8% of the time. The 318-ft wind speed was between 8-19 mph 60.1% of the time and less than 8 mph 16.1% of the time. The second quarter of 1981 was normal for temperature but drier than the climatological normal for Auburn, Nebraska, the closest National Weather Service Climatic Station (10 miles west of the plant site).

Atmospheric Stability: The atmosphere was unstable 32.5% of the time (17.6% of the time extremely unstable), neutral 34.9% of the time, and stable 32.6% of the time (24.1% of the time slightly stable) for the second quarter of 1981.

2.3 SEMI-ANNUAL PERIOD (January - June 1981)

Data recovery for the first half of the year was 91% or greater for each parameter. Reasons for data loss were given under the quarterly headings.

Meteorological Summary: The prevailing wind direction was from the SSE-SW and NW-NNE directions. The 35-ft wind direction was from the SSE-SSW 30.0% of the time and from the NNW-NNE 27.1% of the time. The 318-ft wind direction was from the S-SW 26.5% of the time and from the NW-N 26.5% of the time. The 35-ft wind speed was between 4-13 mph 58.0% of the time and less than 4 mph 18.8% of the time. The 318-ft wind speed was between 8-19 mph 57.4% of the time and less than 8 mph 18.7% of the time. The first half of 1981 was slightly warmer and drier than the climatological normals for Auburn, Nebraska, the closest National Weather Service climatic station to the plant site.

Atmospheric Stability: The atmosphere was unstable 30.6% of the time (15.2% of the time extremely unstable), neutral 33.6% of the time, and stable 35.8% of the time (22.6% of the time slightly stable).

TABLE 2-1 RECOVERY STATISTICS FOR MEEOROLOGICAL DATA COLLECTED AT COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY - JUNE 1981 (PERCENT DATA RECOVERED)

Parameter	Jan	Feb	Mar	Jan-Mar	Apr	May	Jun	Apr-Jun	Jan-Jun
Wind speed									
318-ft	99.2%	97.6%	95.3%	97.4%	98.3%	97.4%	93.7%	96.5%	96.9%
35-ft	99.3%	99.6%	98.7%	99.2%	99.3%	98.5%	93.6%	97.2%	98.2%
Wind Direction									
318-ft	98.4%	96.6%	95.3%	96.8%	98.2%	97.4%	99.9%	98.5%	97.6%
35-ft	98.8%	99.4%	93.8%	97.3%	98.8%	96.5%	84.4%	93.3%	95.3%
35-ft Ambient Temperature	99.7%	99.6%	99.9%	99.7%	98.2%	99.1%	76.1%	91.2%	95.4%
Differential Temperature									
318-35 ft	99.2%	99.7%	99.5%	99.4%	100.0%	98.4%	99.4%	99.3%	99.4%
318-155 ft	99.3%	99.9%	98.4%	99.2%	100.0%	98.4%	99.4%	99.3%	99.2%
Precipitation	82.1%	91.4%	93.5%	88.9%	93.9%	97.8%	92.9%	94.9%	91.9%

TABLE 2-2 SUMMARY OF METEOROLOGICAL DATA MEASURED AT THE COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

Parameter	Jan	Feb	Mar	Jan-Mar	Apr	May	Jun	Apr-Jun	Jan-Jun
318-ft Wind									
Mean speed	11 mph	17 mph	14 mph	14 mph	16 mph	14 mph	13 mph	14 mph	14 mph
Maximum speed	28 mph	39 mph	33 mph	39 mph	38 mph	31 mph	37 mph	38 mph	39 mph
Direction of maximum speed	NNW	N	SSW	N	SSW	S	SSW	SSW	N
Date of maximum speed	6 Jan	10 Feb	28,29 Mar	10 Feb	3 Apr	22 May	13 Jun	3 Apr	10 Feb
Prevailing[a] direction				NW-N, SSE-SSW				NNW-NNE, SSE-SSW	NW-N, S-SW
35-ft Wind									
Mean speed	8 mph	11 mph	9 mph	9 mph	11 mph	9 mph	9 mph	10 mph	9 mph
Maximum speed	22 mph	30 mph	30 mph	30 mph	31 mph	23 mph	30 mph	31 mph	31 mph
Direction of maximum speed	NNW	N	WSW	N,WSW	SSW	SSW,SSE,S	SSW	SSW	SSW
Date of maximum speed	6 Jan	10 Feb	31 Mar	10 Feb, 31 Mar	3 Apr	3, 16, 21 May	13 Jun	3 Apr	3 Apr
Prevailing[a] direction				NW-N, SSE-SSW				N-NE, SSE-SSW	NW-N, SSE-SSW
35 ft Ambient Temperature									
Mean	-1.9 C	-0.5 C	6.3 C	1.4 C	15.1 C	15.6 C	22.6 C	17.4 C	9.0 C
Departure from Normal[b]	1.9 C	0.2 C	2.2 C	1.5 C	3.0 C	-2.0 C	0.0 C	0.0 C	0.3 C
Maximum	18.4 C	19.0 C	23.1 C	23.1 C	30.6 C	27.9 C	33.4 C	33.4 C	33.4 C
Date of Maximum	24 Jan	25 Feb	30 Mar	30 Mar	26 Apr	29 May	8 Jun	8 Jun	8 Jun
Minimum	-15.8 C	-25.9 C	-7.5 C	-25.9 C	1.6 C	-1.4 C	11.9 C	-1.4 C	-25.9 C
Date of Minimum	17 Jan	11 Feb	8 Mar	11 Feb	6 Apr	11 May	1 Jun	11 May	11 Feb
Precipitation									
Total	0.22 in	0.00 in	0.94 in	1.16 in	1.68 in	2.37 in	1.75 in	5.80 in	6.96 in
Departure from Normal[b]	-0.66 in	-1.05 in	-1.30 in	-3.01 in	-1.33 in	-2.30 in	-4.31 in	-7.94 in	-10.94 in
Rain days[c]	1	0	7	8	7		12	27	35
Maximum in a single day	0.22 in		0.63 in	0.63 in	0.46 in	0.93 in	0.59 in	0.93 in	0.93 in
Date	31 Jan		4 Mar	4 Mar	12 Apr	18 May	15 Jun	18 May	18 May
Maximum in a single hour	0.11 in		0.21 in	0.21 in	0.46 in	0.17 in	0.23 in	0.46 in	0.46 in
Date	31 Jan		4 Mar	4 Mar	12 Apr	17,18 May	25 Jun	12 Apr	12 Apr

(a) Prevailing direction is derived from the quarterly joint frequency tables and is reported for the quarterly period only.
(b) The climatological normals were derived from NOAA climatological data for Auburn, Nebraska.
(c) Rain days are defined as a day in which 0.01 in. of rain or rain equivalent of frozen precipitation has fallen.

SECTION 3.0

DISPERSION CHARACTERISTICS

(X/Q) ISOPLETHS

3.0 DISPERSION CHARACTERISTICS (X/Q) ISOPLETHS

Estimates of the atmospheric dispersion characteristics (X/Q) for the first half of 1981 were made using the NRC supplied model XOQDOQ. Key input to the model is the joint frequency distribution (JFT) of atmospheric stability, wind speed and wind direction. The JFT was determined from the meteorological data and is presented in Appendix B. This section presents the model calculated locations of equal dispersion for both the 5 and 50 mile radius circles from the Cooper Nuclear Station. The periods covered are January - March, April - June, and January - June. Separate figures are given for the vent stack and elevated release options.

The data tables from which the isopleth figures were derived are presented in Appendix C and the XOQDOQ computer model is discussed in Appendix D.

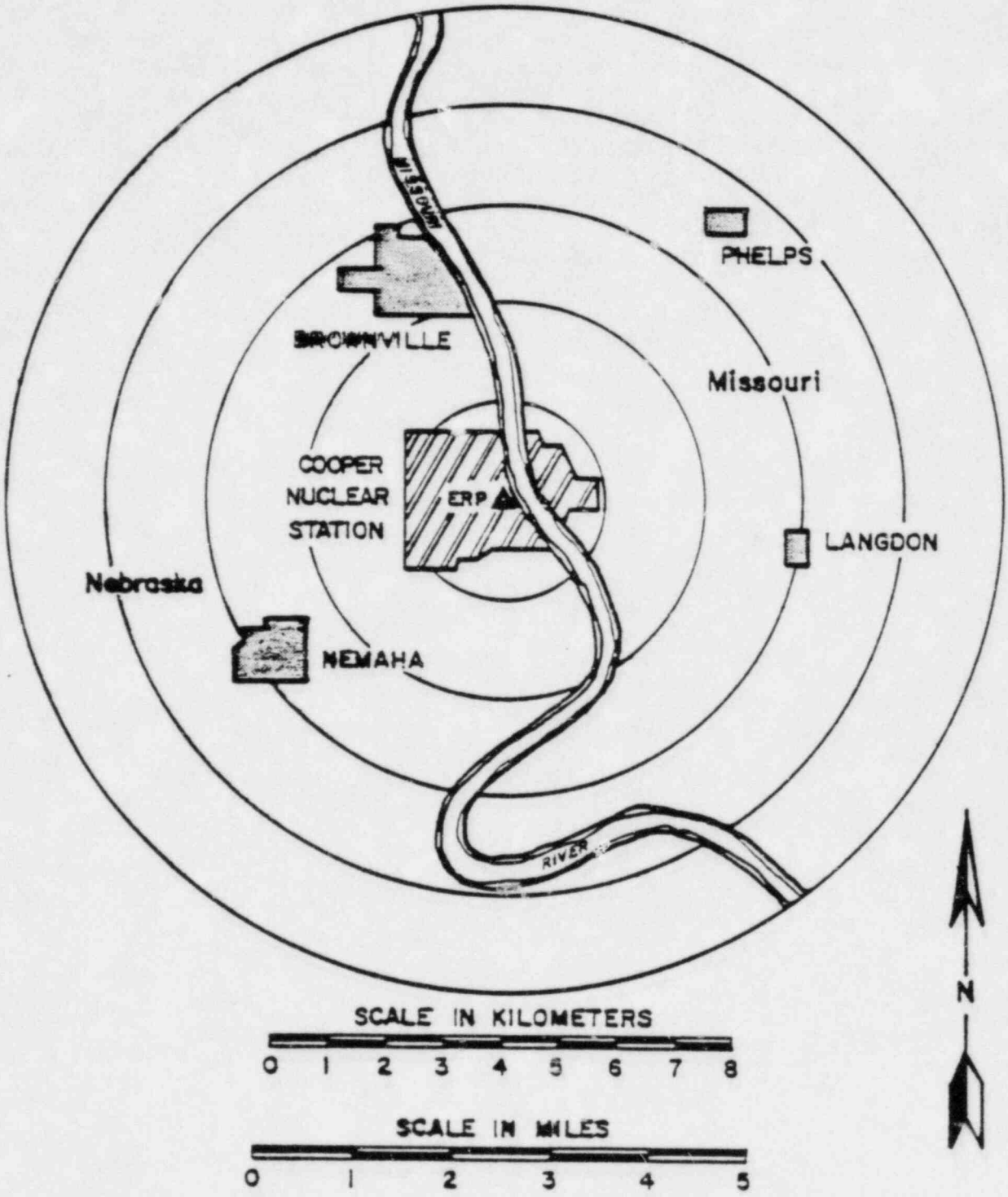

Figure 3-1. Cooper Nuclear Station, Brownville, Nebraska and surrounding area in the range of 0-5 miles.

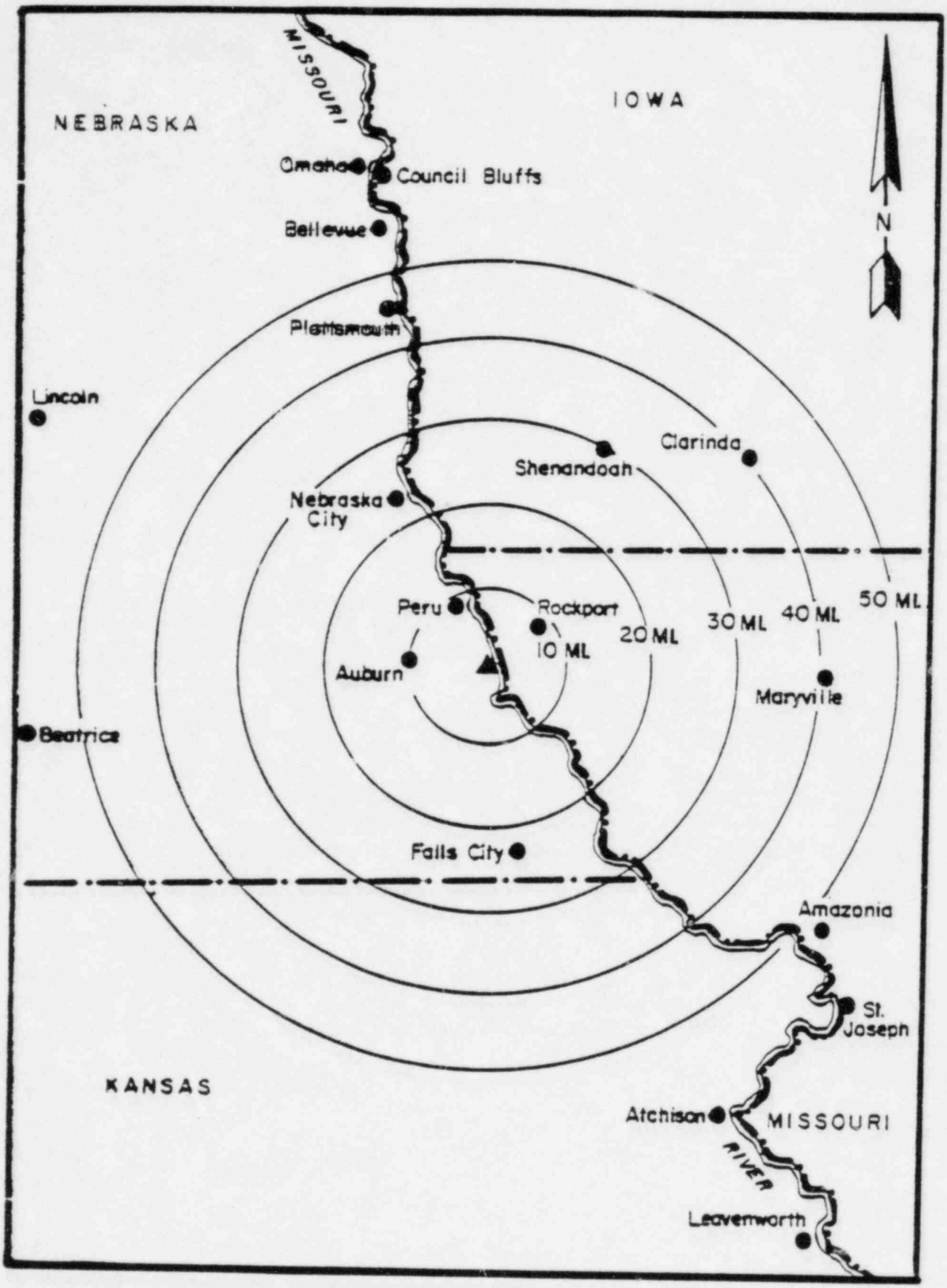

Figure 3-2. Cooper Nuclear Station, Brownville, Nebraska and surrounding area in the range of 0-50 miles.

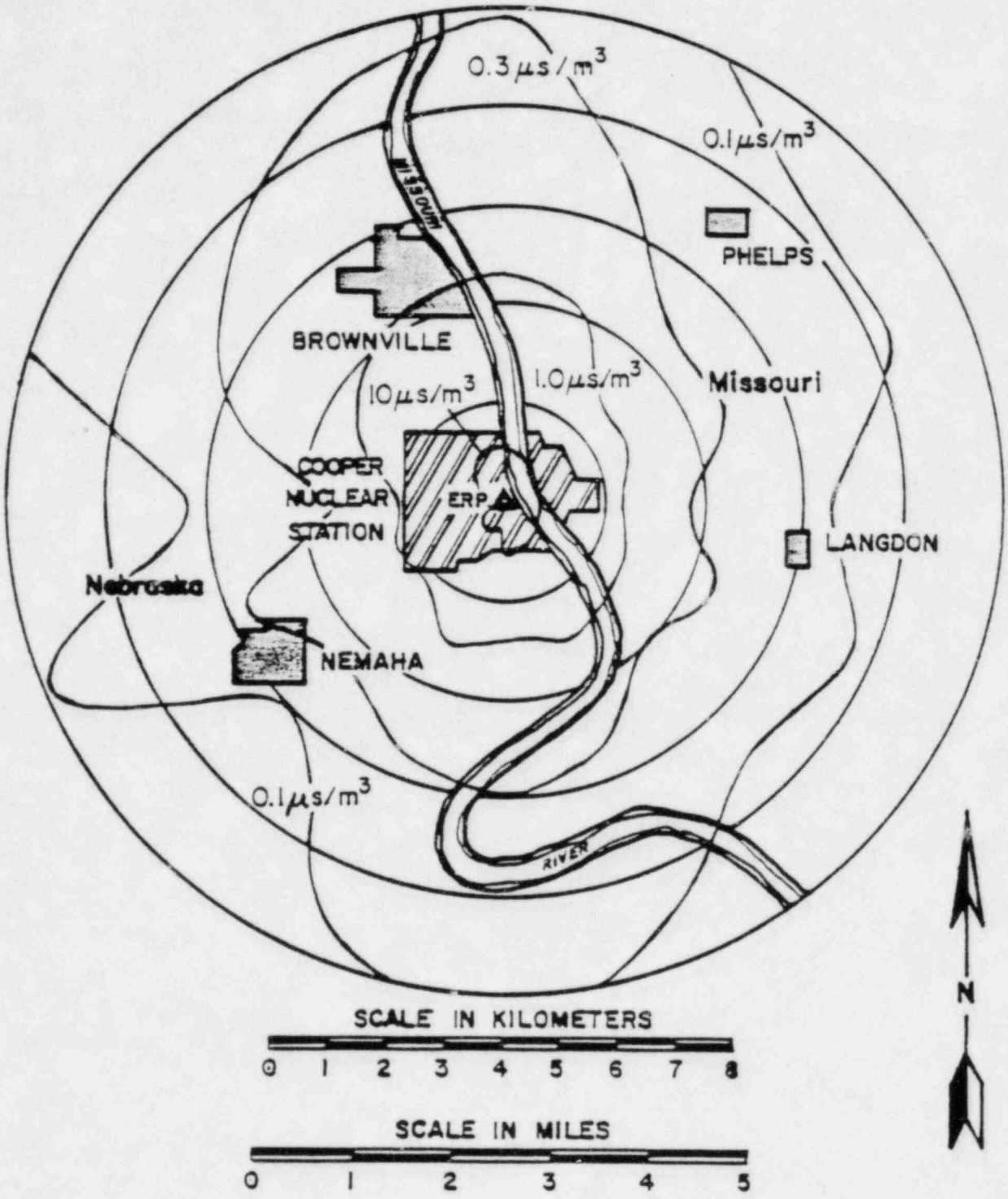

Figure 3-3. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-March 1981.

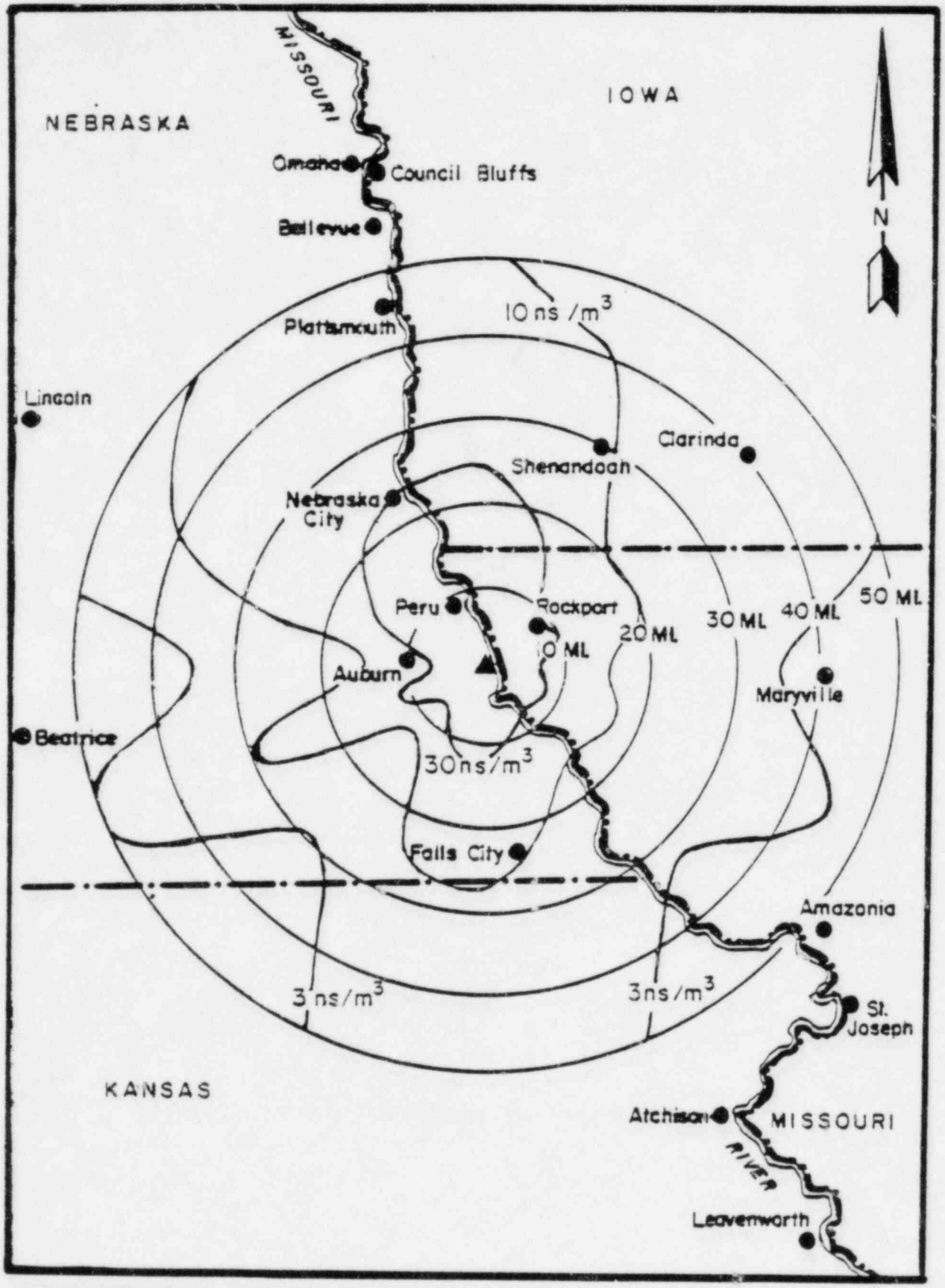

Figure 3-4. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-March 1981.

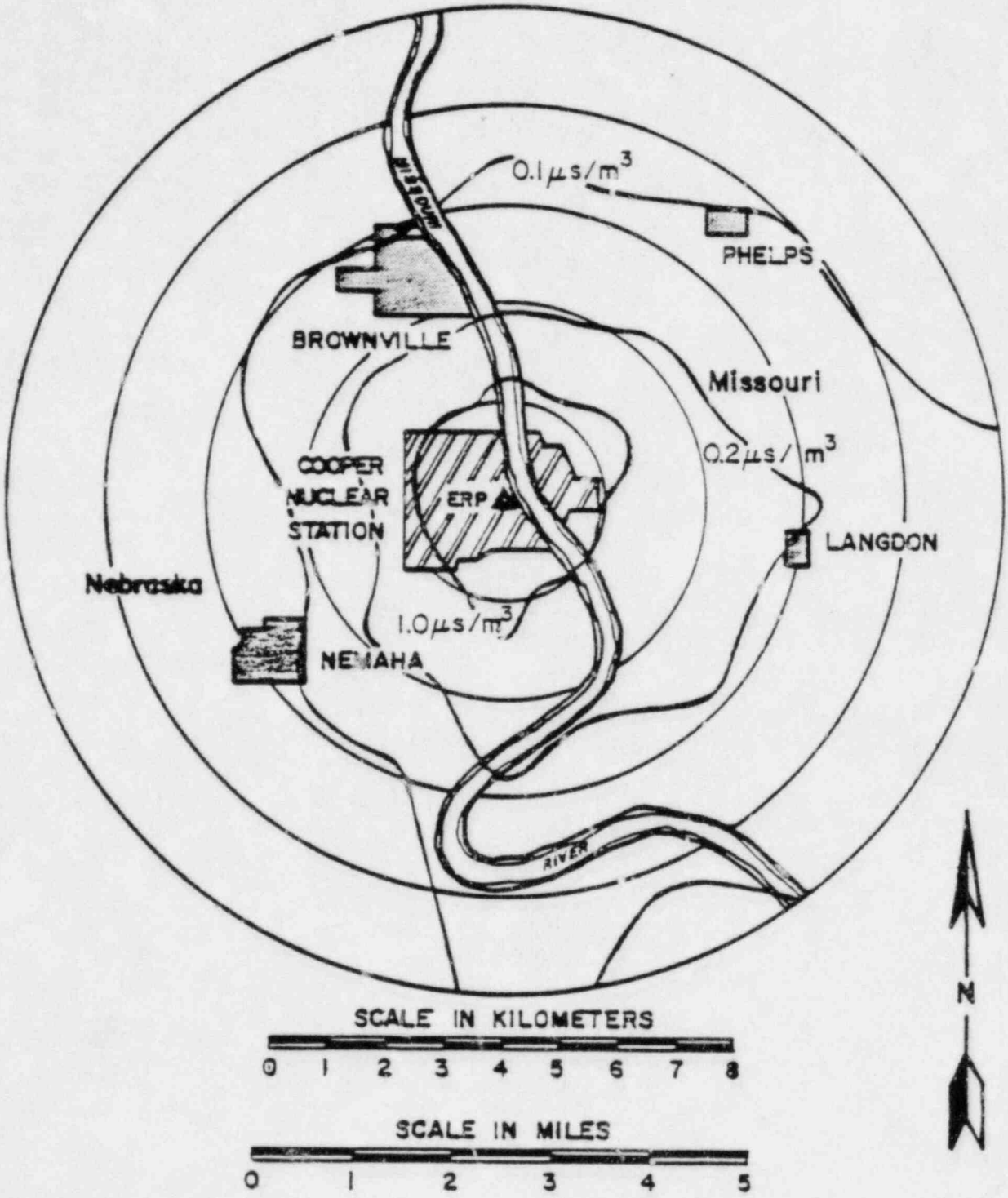

Figure 3-5. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-March 1981.

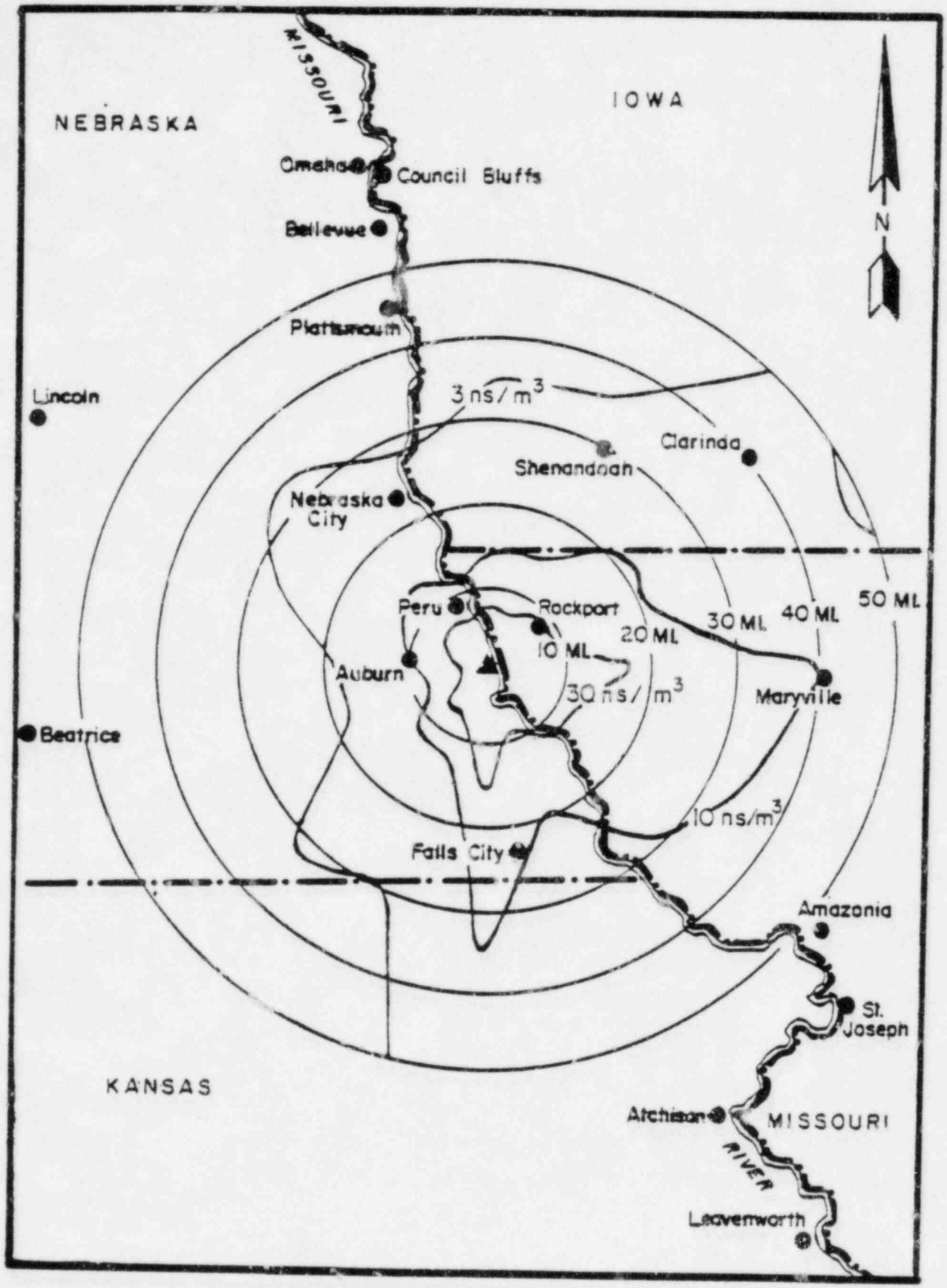

Figure 3-6. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-March 1981.

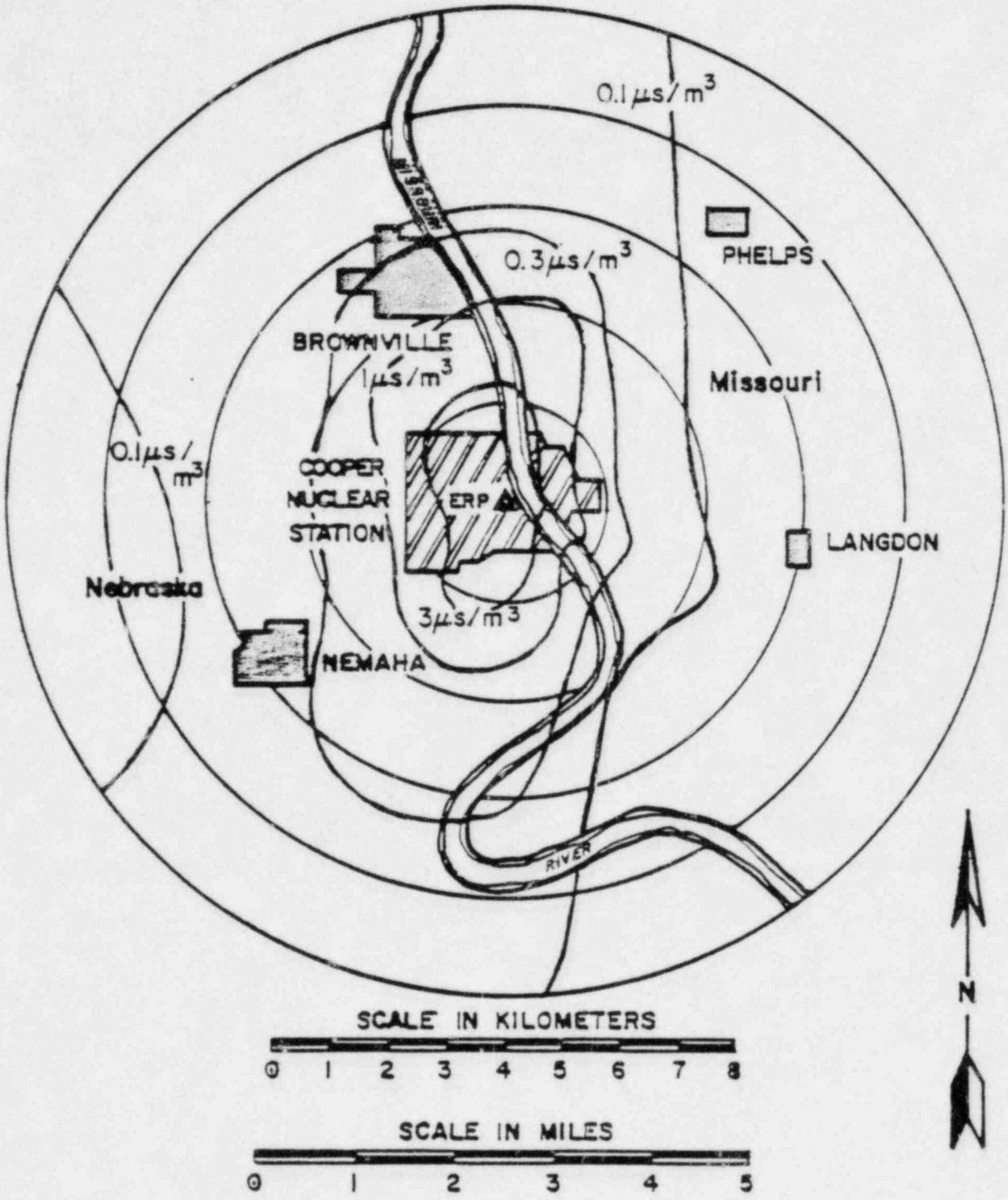

Figure 3-7. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5miles, April-June 1981.

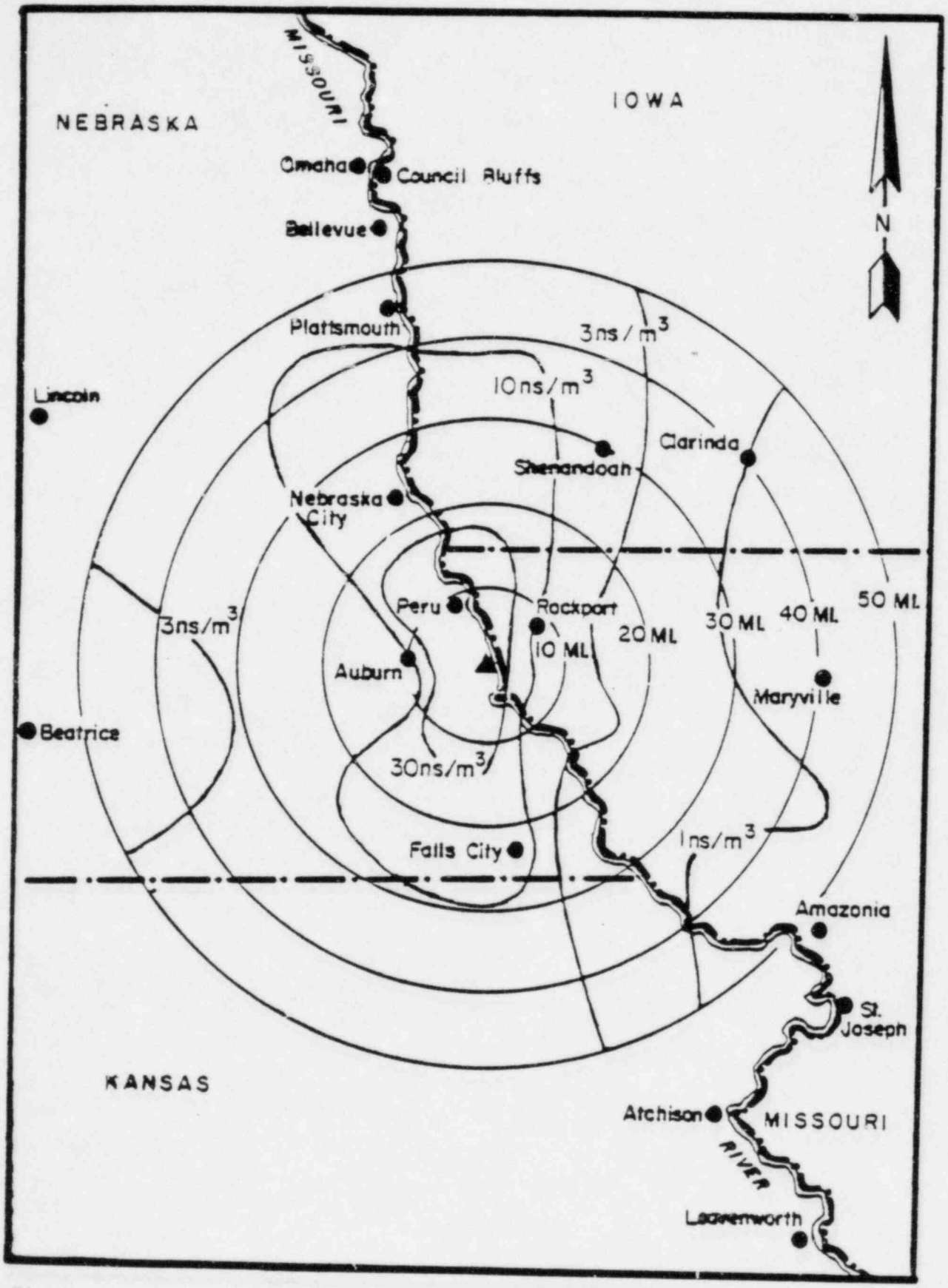

Figure 3-8. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, April-June 1981.

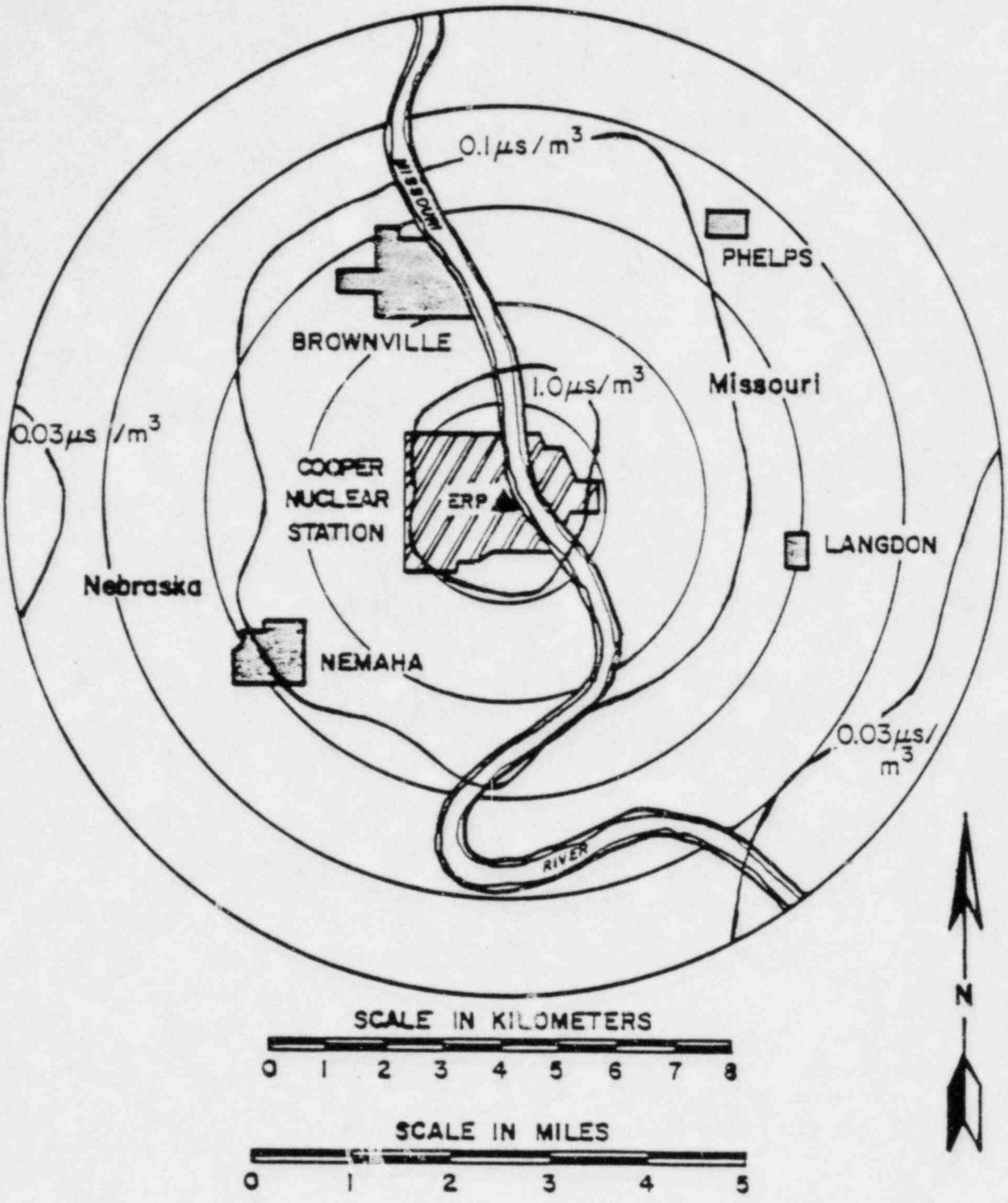

Figure 3-9. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, April-June 1981.

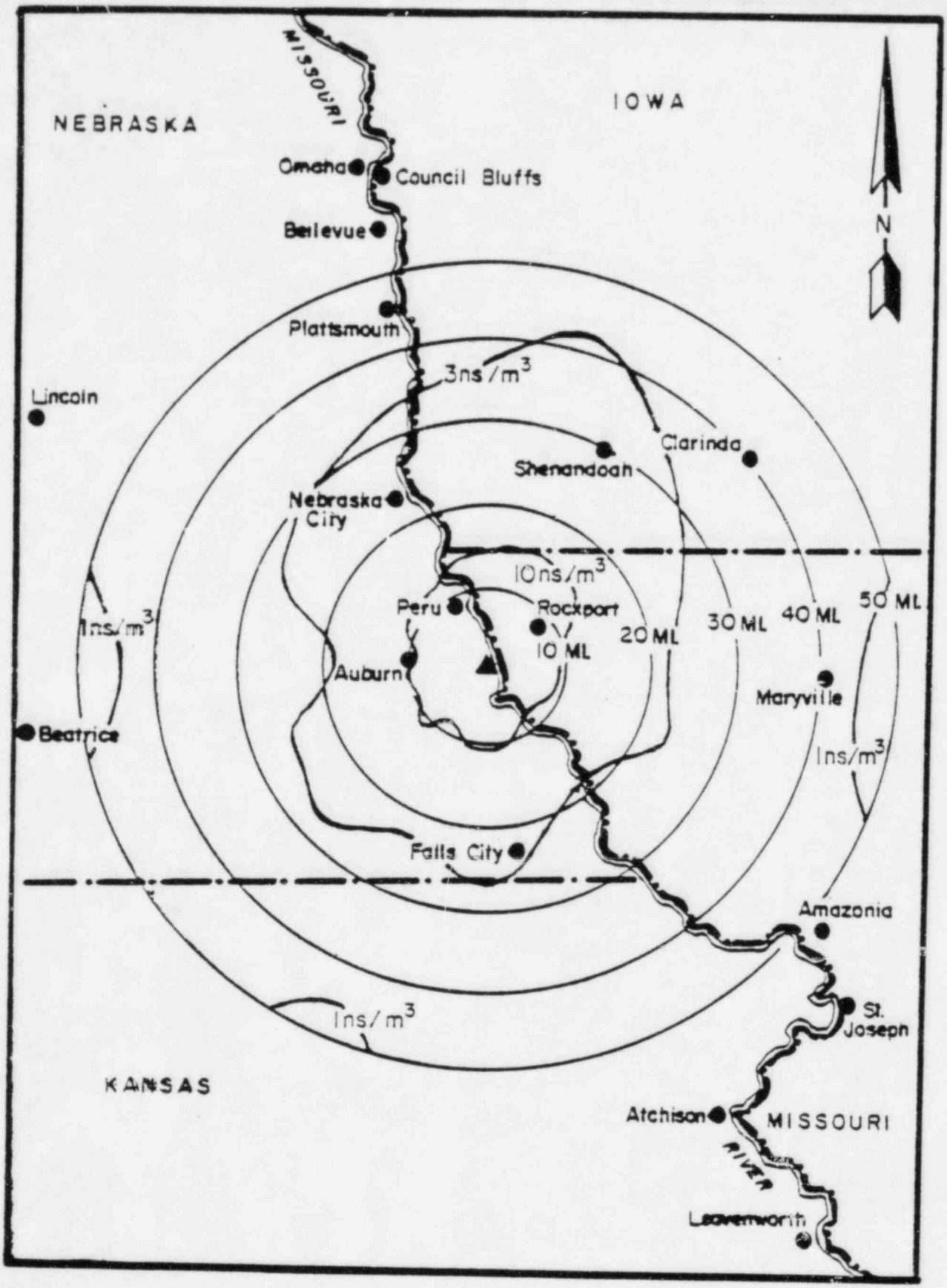

Figure 3-10. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, April-June 1981.

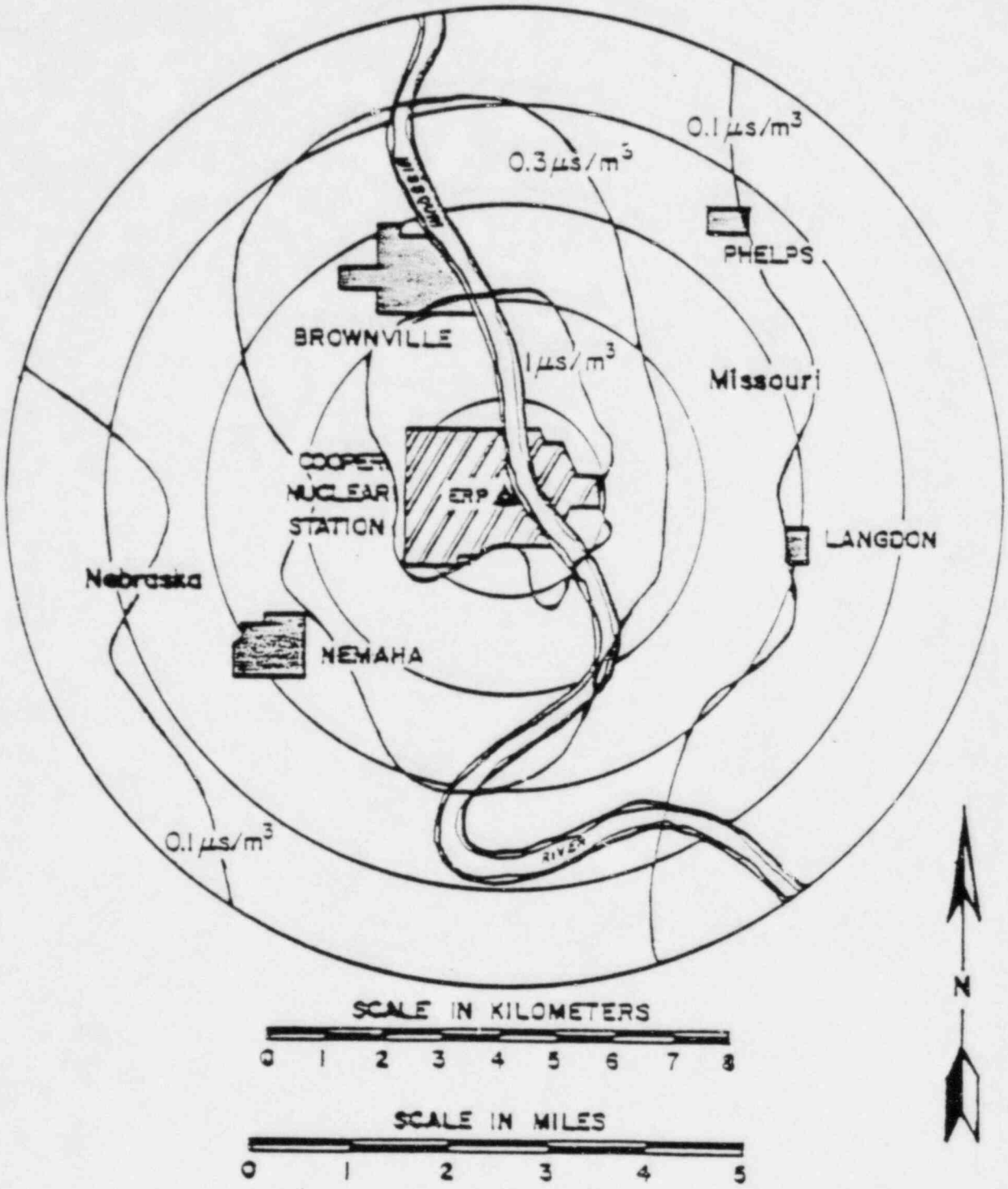

Figure 3-11. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-June 1981.

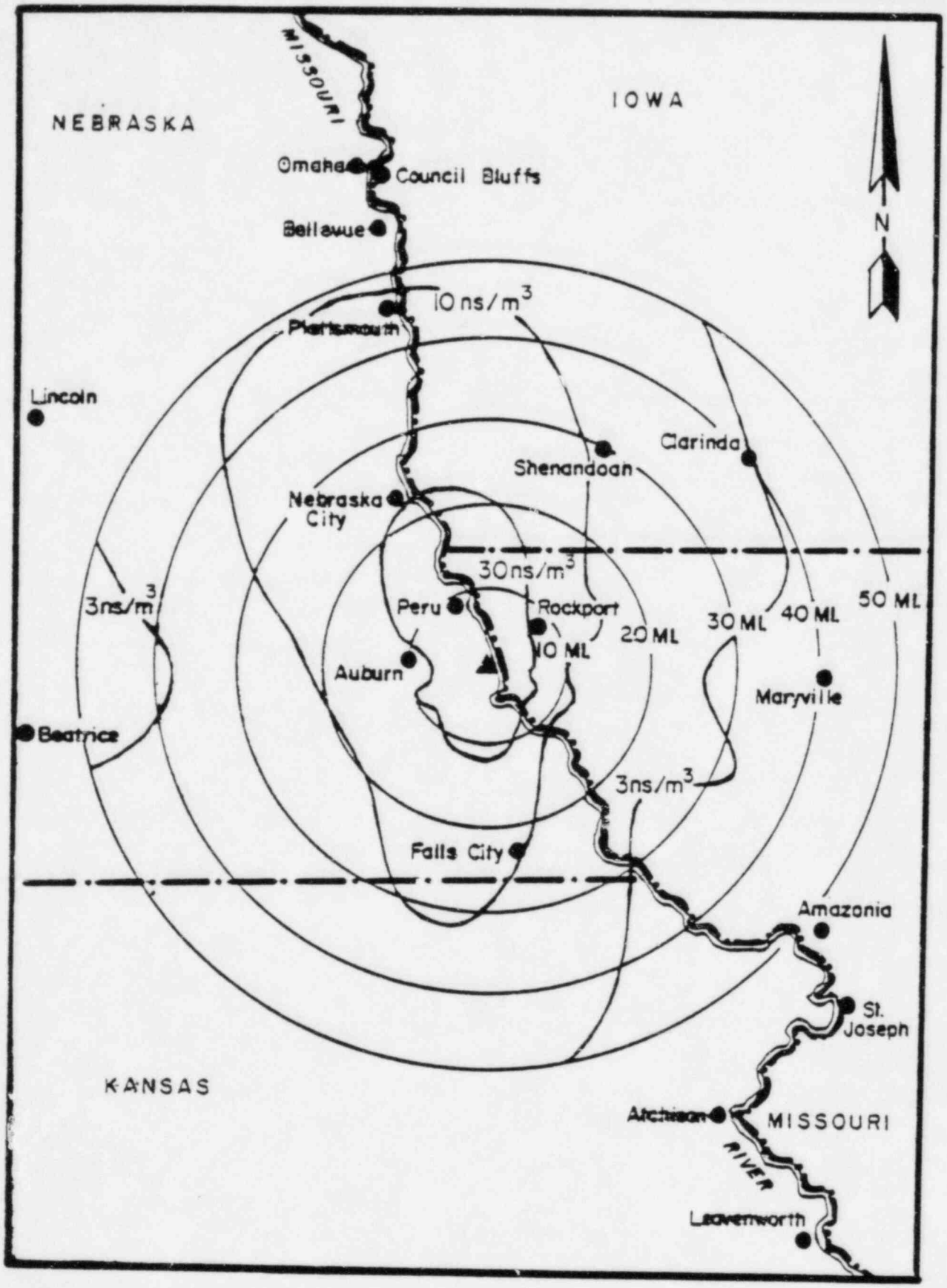

Figure 3-12. Estimated concentration to emission ratio, vent release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-June 1981.

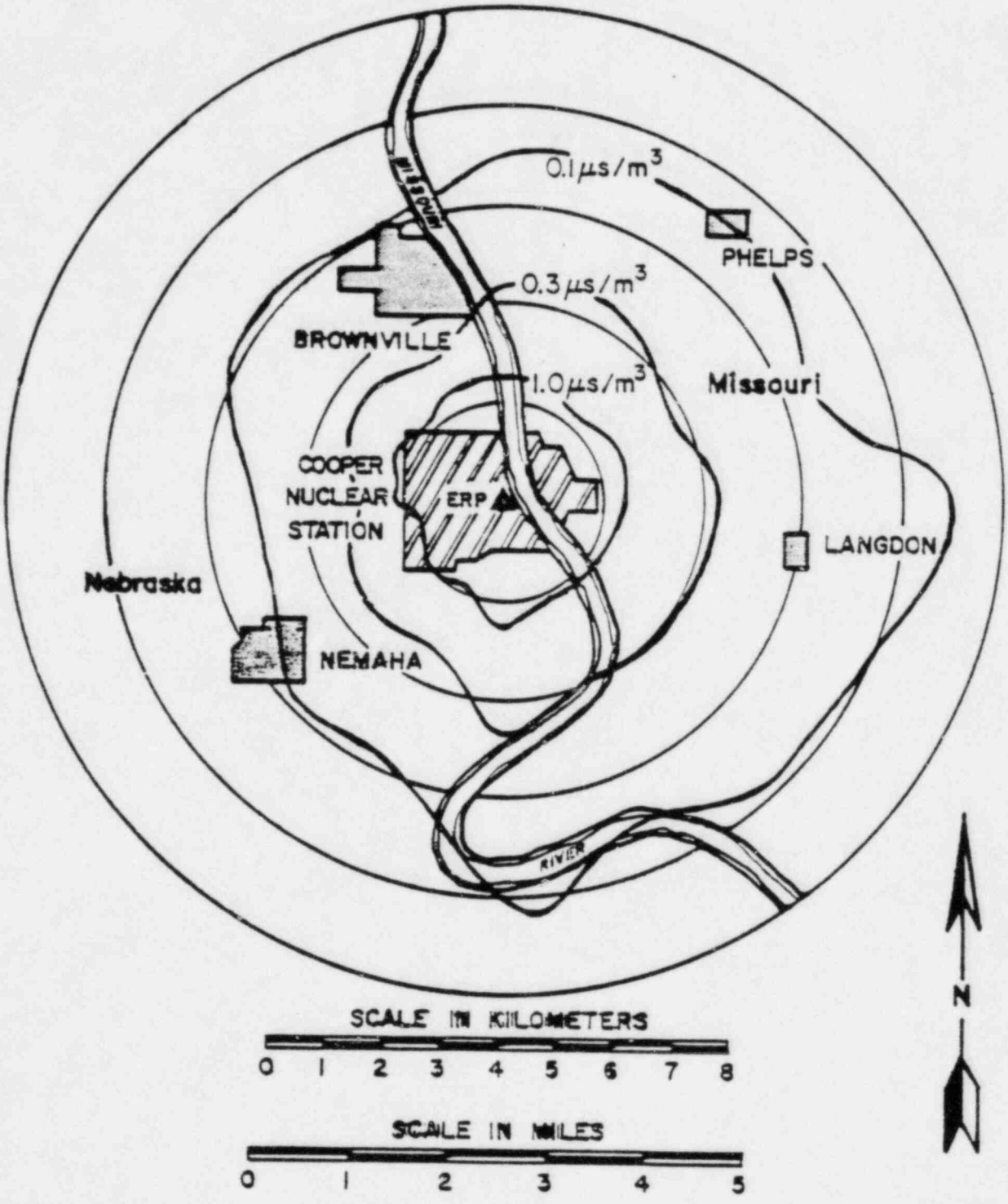

Figure 3-13. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-June 1981.

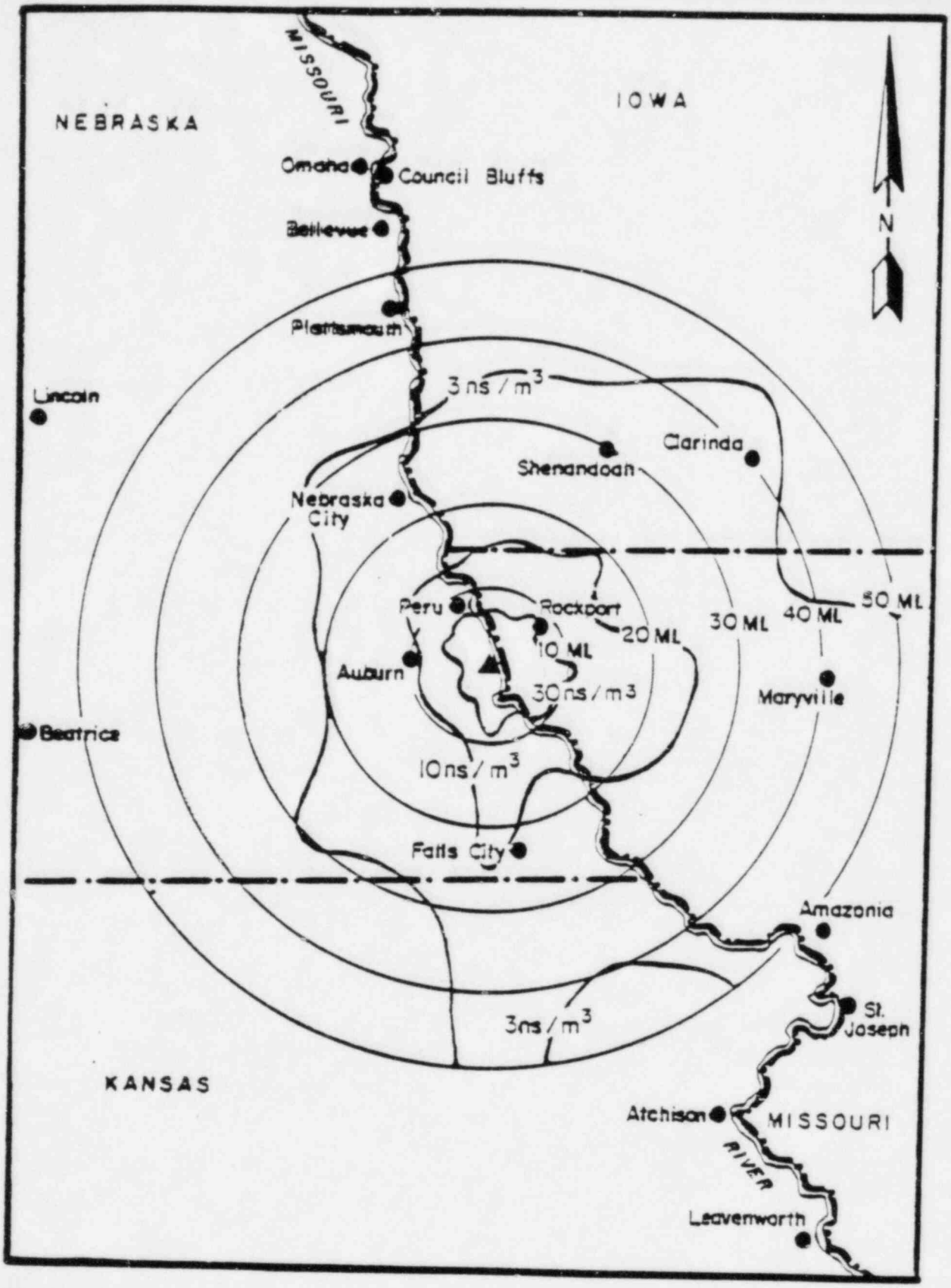

Figure 3-14. Estimated concentration to emission ratio, elevated release point, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-June 1981.

SECTION 4.0

EFFLUENT AND WASTE DISPOSAL

4.0 EFFLUENT AND WASTE DISPOSAL
(January-June 1981)

Cooper Nuclear Station effluent and waste disposal data are presented in the format prescribed by Regulatory Guide 1.21. Meteorological data required by Table 4A&B of Regulatory Guide 1.21 are in Appendix B.

Facility - Cooper Nuclear Station License - DPR-46

4.1 Regulatory Limits

a. Fission and activation gases

Restrictions on gaseous activity release:

Maximum release rate of noble gases and tritium (except for halogens and particulates with half-lives >8 days):

$$Qs(2.5\overline{E}\gamma s + 1.25\overline{E}\beta s) + Qv\ (7.3\overline{E}\gamma v + 77\overline{E}\beta v) \leq 0.16$$

When averaged over a calendar quarter.

γ - gamma
β - beta

Where Qs and Qv are the quarterly release rates in curies/second of radioisotopes from the stack, reactor building and turbine building vents; $\overline{E}\gamma s$ and $\overline{E}\gamma v$ are the average gamma energies per disintegration of stack and vent effluents; $\overline{E}\beta s$ and $\overline{E}\beta v$ are the average beta energies from stack and vent effluents.

b. & c. Iodines and Particulates with half-lives >8 days.

The release rates of I-131 and particulates with half-lives greater than eight days released to the environs as part of airborne effluents shall not exceed:

$$\frac{Qs}{7.7 \times 10^{-6}} + \frac{Qv}{2.1 \times 10^{-6}} \leq 0.08$$

when averaged over a calendar quarter.

Where Qs and Qv are the quarterly release rates in curies per second of I-131 and particulates with half-lives longer than eight days from the stack, reactor building and turbine building vents.

d. Liquid Effluents

Maximum calendar quarter release rate of radioactive liquid effluents (excluding tritium and noble gases): 25 curies.

Maximum activity of discharged liquid radwaste tank (sample tank only): 10 curies.

Maximum radioactivity release concentration of discharge channel liquid effluents shall not exceed the values specified in 10 CFR 20, Appendix B, Table II, Column 2, for unrestricted areas.

4.2 MAXIMUM PERMISSIBLE CONCENTRATIONS

No MPC values are required specifically in Cooper Nuclear Station Environmental Technical Specifications for:

a. Fission and activation gases,
b. Iodines, or
c. Particulates with half lives >8 days.

The equation in 4.1a under Regulatory Limits provides a method to be used in summing the gaseous airborne effluents from the main stack and vents which will assure that the release rate does not exceed 10 CFR Part 20 for unrestricted areas.

The equation presented in 4.1b and 4.1c under Regulatory Limits provides a method to be used in summing airborne halogens and particulates with half-lives greater than eight days released from the stack and vents to assure that the release rate does not exceed 10 CFR Part 20, Appendix B, Table II, Column 1, for unrestricted areas.

d. Liquid Effluents:

The maximum permissible concentrations (MPC) used to calculate permissible liquid release rates are from 10 CFR 20, Appendix B, Table II, Column 2, and applicable notes to Appendix B.

4.3 AVERAGE ENERGY

The average energy ($\overline{E}$) of the radionuclide mixtures of fission and activation gases released is as follows:

First Quarter:	Second Quarter:
$\overline{E}_{\beta s}$ = 0.18 Mev/disintegration	$\overline{E}_{\beta s}$ = 0.28 Mev/disintegration
$\overline{E}_{\gamma s}$ = 0.12 Mev/disintegration	$\overline{E}_{\gamma s}$ = 0.45 Mev/disintegration
$\overline{E}_{\beta v}$(Rx) = 0.32 Mev/disintegration	$\overline{E}_{\beta v}$(Rx) = 0.36 Mev/disintegration
$\overline{E}_{\gamma v}$(Rx) = 0.59 Mev/disintegration	$\overline{E}_{\gamma v}$(Rx) = 0.66 Mev/disintegration
$\overline{E}_{\beta v}$(TG) = 0.31 Mev/disintegration	$\overline{E}_{\beta v}$(TG) = 0.33 Mev/disintegration
$\overline{E}_{\gamma v}$(TG) = 0.56 Mev/disintegration	$\overline{E}_{\gamma v}$(TG) = 0.63 Mev/disintegration
$\overline{E}_{\beta v}$(ARW) = 0.36 Mev/disintegration	$\overline{E}_{\beta v}$(ARW) = 0.37 Mev/disintegration
$\overline{E}_{\gamma v}$(ARW) = 0.64 Mev/disintegration	$\overline{E}_{\gamma v}$(ARW) = 0.68 Mev/disintegration

4.4 MEASUREMENTS AND APPROXIMATIONS OF TOTAL RADIOACTIVITY

The methods used to measure or approximate the total radioactivity in effluents and to determine radionuclide composition are as follows:

a. Fission and activation gases:

Radioactivity and radionuclide composition is determined by laboratory GeLi detector analysis in correlation with continuous gross radioactivity monitoring by a gaseous channel detector in the release pathway.

b. Iodines:

Charcoal cartridges provide continuous sample collection. These cartridges are analyzed for radioactivity and radionuclide composition in the laboratory by a GeLi detector gamma spectrometer. Continuous radioactivity monitoring of the charcoal cartridge is also provided by a NaI detector in-line with the release pathway.

c. Particulates:

Particulate filters provide continuous sample collection. These filters are analyzed for radioactivity and radionuclide composition in the laboratory by a GeLi detector gamma spectrometer. Continuous gross radioactivity monitoring of the particulate filter is provided by a NaI detector in-line with the release pathway.

d. Liquid effluents:

Each batch of liquid effluent is analyzed for radioactivity and radionuclide composition in the laboratory by a GeLi detector gamma spectrometer. Each batch is also analyzed for gross radioactivity by both gross beta and gamma. In addition, each batch is monitored for gross radioactivity by an NaI detector in-line with the release pathway.

4.5 BATCH RELEASES

The following information relates to batch releases of radioactive materials in liquid and gaseous effluents:

a. Liquid

1.	Number of batch releases:	88
2.	Total time period for batch releases:	1.74 E+04 min.
3.	Maximum time period for a batch release:	3.57 E+02 min.
4.	Average time period for batch releases:	1.98 E+02 min.
5.	Minimum time period for a batch release:	1.29 E+02 min.
6.	Average stream flow during periods of release of effluent into a flowing stream:	6.72 E+07 liters/min.

b. Gaseous

1.	Number of batch releases:	None
2.	Total time period for batch releases:	N/A
3.	Maximum time period for a batch release:	N/A
4.	Average time period for batch releases:	N/A
5.	Minimum time period for a batch release:	N/A

4.6 ABNORMAL RELEASE

a. Liquid

1.	Number of releases:	0
2.	Total activity released:	None

b. Gaseous

1.	Number of releases:	0
2.	Total activity released:	None

TABLE 4-1A EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY - JUNE 1981

	Unit	First Quarter	Second Quarter	Est. Total Error, %
A. Fission α activation gases				
1. Total release	Ci	1.74 E+02	3.46 E+02	2.0 E+01
2. Average release rate for period	Ci/sec	2.24 E+01	4.40 E+01	
3. Percent of Technical Specification limit	%	*	*	
B. Iodines				
1. Total iodine-131	Ci	≤3.74 E-04	≤2.83 E-03	3.0 E+01
2. Average release rate for period	Ci/sec	≤4.81 E-05	≤3.60 E-04	
3. Percent of Technical Specification limit	%	**	**	
C. Particulates				
1. Particulates with half-lives >8 days	Ci	≤9.10 E-04	≤2.92 E-03	5.0 E+01
2. Average release rate for period	Ci/sec	≤1.17 E-04	≤3.71 E-04	
3. Percent of Technical Specification limit	%	**	**	
4. Gross alpha radioactivity	Ci	2.20 E-6	1.60 E-05	
D. Tritium				
1. Total release	Ci	8.11 E-01	1.88 E+00	3.0 E+01
2. Average release rate for period	Ci/sec	1.04 E-01	2.39 E-01	
3. Percent of Technical specification limit	%	*	*	

* The noble gases and tritium are combined in the Technical Specification discharge limit. The first quarter releases were 1.81 E-01% of the allowable limit while the second quarter releases were 7.12 E-01% of the allowable limit.

** The iodine-131 and particulates with half-lives longer than 8 days are combined into one Technical Specification. The first quarter releases were 6.41 E-02% of the allowable limit while the second quarter releases were 3.57 E-01% of the allowable limit.

TABLE 4-1B EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, GASEOUS EFFLUENTS-ELEVATED RELEASE, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE 1st QUARTER	CONTINUOUS MODE 2nd QUARTER	BATCH MODE*
1. Fission gases.				
krypton-85	Ci	2.72 E+01	4.69 E+00	
krypton-85m	Ci	3.46 E+01	1.89 E+01	
krypton-87	Ci	6.05 E+03	4.66 E+00	
krypton-88	Ci	1.12 E+01	1.33 E+01	
xenon-133	Ci	2.86 E+01	1.78 E+01	
xenon-135	Ci		1.32 E+01	
xenon-135m	Ci		4.90 E-01	
xenon-138	Ci		2.36 E+00	
krypton-89	Ci		5.03 E-04	
krypton-83m	Ci	8.69 E-02	1.17 E+00	
xenon-137	Ci		3.85 E-03	
xenon-133m	Ci	7.89 E-04	2.78 E-01	
xenon-131m	Ci	1.24 E+00	3.94 E-01	
Total for period	Ci	1.03 E+02	7.72 E+01	
2. Iodines.				
iodine-131	Ci	≤2.59 E-04	≤1.17 E-03	
iodine-133	Ci	1.16 E-03	≤1.53 E-03	
iodine-135	Ci	≤8.71 E-04	≤5.11 E-04	
Total for period	Ci	≤2.29 E-03	≤3.21 E-03	
3. Particulates.				
strontium-89	Ci	6.12 E-05	1.34 E-07	
strontium-90	Ci	3.33 E-06	9.72 E-09	
cesium-134	Ci	≤1.03 E-06	≤4.60 E-06	
cesium-137	Ci	≤1.27 E-06	≤8.43 E-06	
barium-lanthanum-140	Ci	2.45 E-04	≤1.92 E-04	
iodine-131	Ci	≤3.21 E-06	≤6.23 E-06	
cobalt-58	Ci	2.89 E-06	2.26 E-06	
cobalt-60	Ci	1.21 E-05	1.80 E-05	
manganese-54	Ci	1.39 E-05	1.84 E-05	
chromium-51	Ci	7.67 E-06	4.24 E-06	
zinc-65	Ci	9.36 E-07	1.19 E-06	
Total for period	Ci	≤3.53 E-04	≤2.55 E-04	

* No batch discharges were made.

TABLE 4-1C EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, GASEOUS EFFLUENTS-BUILDING VENT RELEASE, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE 1st QUARTER	2nd QUARTER
1. Fission gases.			
krypton-85	Ci	8.02 E-02	1.21 E-01
krypton-85m	Ci	4.13 E+00	1.68 E+01
krypton-87	Ci	6.86 E+00	3.11 E+01
krypton-88	Ci	1.13 E+01	4.79 E+01
xenon-133	Ci	1.62 E+01	4.71 E+01
xenon-135	Ci	2.02 E+01	7.63 E+01
xenon-135m	Ci	1.42 E+00	6.38 E+00
xenon-138	Ci	7.59 E+00	3.34 E+01
krypton-89	Ci	1.88 E-01	2.03 E-01
krypton-83m	Ci	1.62 E+00	7.14 E+00
xenon-137	Ci	4.92 E-01	7.48 E-01
xenon-133m	Ci	4.91 E-01	1.56 E+00
xenon-131m	Ci	3.69 E-02	9.89 E-02
Total for period	Ci	7.06 E+01	2.69 E+02
2. Iodines.			
iodine-131	Ci	≤1.15 E-04	≤1.66 E-03
iodine-133	Ci	≤7.52 E-04	≤4.58 E-04
iodine-135	Ci	≤2.78 E-02	≤2.93 E-02
Total for period	Ci	≤2.87 E-02	≤3.14 E-02
3. Particulates.			
strontium-89	Ci	9.93 E-06	1.85 E-06
strontium-90	Ci	2.65 E-06	2.16 E-06
cesium-134	Ci	≤2.68 E-05	≤8.64 E-05
cesium-137	Ci	≤3.18 E-05	≤1.35 E-04
barium-lanthanum-140	Ci	≤2.06 E-04	≤2.23 E-04
iodine-131	Ci	≤5.93 E-05	≤1.29 E-04
cobalt-58	Ci	3.00 E-06	1.68 E-04
cobalt-60	Ci	1.48 E-04	8.98 E-04
manganese-54	Ci	3.42 E-05	5.34 E-04
chromium-51	Ci	3.56 E-05	4.35 E-04
zinc-65	Ci		4.44 E-05
Total for period	Ci	≤5.57 E-04	≤2.66 E-03

TABLE 4-2A EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

	Unit	1st Quarter	2nd Quarter	Est. Total Error %
A. Fission and activation products.				
1. Total release (not including tritium, gases, alpha)	Ci	≤6.44 E-01	≤1.11 E+00	2.0 E+01
2. Average diluted concentration during period	Ci/ml	≤5.50 E-08	≤8.22 E-08	
3. Percent of applicable limit	%	2.58 E+00	4.44 E+00	
B. Tritium				
1. Total release	Ci	≤2.22 E+00	≤3.12 E+00	2.0 E+01
2. Average diluted concentration during period	Ci/ml	≤1.90 E-07	≤2.31 E-07	
3. Percent of applicable limit	%	6.33 E-03	7.70 E-03	
C. Dissolved and entrained gases.				
1. Total release	Ci	≤5.91 E-03	≤3.58 E-02	5.0 E+01
2. Average diluted concentration during period	Ci/ml	≤5.05 E-10	≤2.65 E-09	
3. Percent of applicable limit	%	*	*	
D. Gross alpha radioactivity.				
1. Total release	Ci	≤4.40 E-05	≤5.69 E-04	5.0 E+01
E. Volume of waste released (prior to dilution)	liters	1.87 E+06	3.73 E+06	1.0 E+01
F. Volume of dilution water used during period	liters	1.17 E+10	1.35 E+10	1.0 E+01

* None applicable

TABLE 4-2B EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, LIQUID EFFLUENTS, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

NUCLIDES RELEASED	UNIT	CONTINUOUS MODE*	BATCH MODE 1st QUARTER	BATCH MODE 2nd QUARTER
strontium-89	Ci		7.69 E-03	9.14 E-03
strontium-90	Ci		1.70 E-04	6.27 E-04
cesium-134	Ci		6.49 E-02	≤1.71 E-01
cesium-136	Ci		7.35 E-05	1.32 E-03
cesium-137	Ci		8.22 E-02	≤2.18 E-01
iodine-131	Ci		≤1.72 E-03	≤2.13 E-02
cobalt-58	Ci		≤1.08 E-02	≤3.94 E-02
cobalt-60	Ci		7.81 E-02	≤3.09 E-01
iron-59	Ci		≤1.21 E-03	≤2.36 E-03
zinc-65	Ci		≤2.14 E-03	≤6.71 E-03
manganese-54	Ci		5.47 E-02	≤2.01 E-01
chromium-51	Ci		3.04 E-01	≤7.35 E-02
antimony-124	Ci		3.63 E-03	4.97 E-03
zirconium-niobium-95	Ci		≤2.98 E-03	≤7.55 E-03
molybdenum-99	Ci		8.31 E-04	6.70 E-04
technetium-99m	Ci		≤1.71 E-03	≤3.70 E-03
barium-lanthanum-140	Ci		≤3.78 E-03	≤7.18 E-03
cerium-141	Ci		≤2.82 E-03	≤5.69 E-03
silver-110m	Ci		≤1.23 E-04	≤2.81 E-03
sodium-24	Ci		7.35 E-03	3.00 E-03
unidentified	Ci		≤1.27 E-02	≤2.17 E-02
Total for Period Above	Ci		≤6.44 E-01	≤1.11 E+00
xenon-133	Ci		≤4.65 E-03	≤3.19 E-02
xenon-135	Ci		≤1.26 E-03	≤3.88 E-03

* No continuous mode discharges made.

TABLE 4-3 EFFLUENT AND WASTE DISPOSAL SEMI-ANNUAL REPORT, SOLID WASTE AND IRRADIATED FUEL SHIPMENTS, COOPER NUCLEAR STATION, BROWNVILLE, NEBRASKA, JANUARY-JUNE 1981

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (not irradiated fuel)

		Unit	6-Month Period	Estimated Total Error (%)
1.	Type of waste			
a.	Spent resins, filter sludges, evaporator bottoms, etc.	m^3	6.96 E+01	
		Ci	2.53 E+02	15%
b.	Dry compressible waste, contaminated equip., etc.	m^3	1.66 E+02	
		Ci	1.40 E+00	25%
c.	Irradiated components, control rods, etc.	m^3		
		Ci	none	
d.	Other	m^3		
		Ci	none	

2. Estimate of major nuclide composition (by type of waste), percent (%)

a.	chromium-51	2.43 E+01
	cobalt-60	2.49 E+01
	cobalt-58	3.35 E+00
	manganese-54	1.37 E+01
	zinc-65	1.06 E+00
	silver-110m	2.09 E+00
	iodine-131	1.69 E-01
	cesium-137	1.71 E+01
	cesium-134	1.23 E+01
	iron-59	4.49 E-01
	zirconium-niobium-95	4.29 E-01
b.	chromium-51	2.29 E+01
	cobalt-60	2.57 E+01
	cobalt-58	1.43 E+00
	manganese-54	1.14 E+01
	zinc-65	9.57 E-01
	silver-110m	1.60 E+00
	iodine-131	6.31 E-01
	cesium-137	2.03 E+01
	cesium-134	1.46 E+01
	zirconium-niobium-95	1.43 E-01

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
3	Sole use vehicle	Richland, Washington
31	Sole use vehicle	Beatty, Nevada

B. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
none	N/A	N/A

SECTION 5.0

GAMMA DOSE ISOPLETHS

5.0 GAMMA DOSE ISOPLETHS

Estimated gamma radiation doses were calculated from the effluent releases presented in Section 4 and the dispersion characteristics presented in Section 3. The NRC supplied computer model GASPAR was used to calculate locations of equal dosage (isopleths). The isopleth figures are presented for both a 5 mile and a 50 mile radius area centered on the Cooper Nuclear Power Station. The periods covered by the figures are January - March, April - June, and January - June. Each figure is for a combined release with the vent stack and elevated release point data being used together to estimate the gamma dose at each grid point.

The data tables from which the isopleths figures were derived are presented in Appendix C and the GASPAR computer model is discussed in Appendix D.

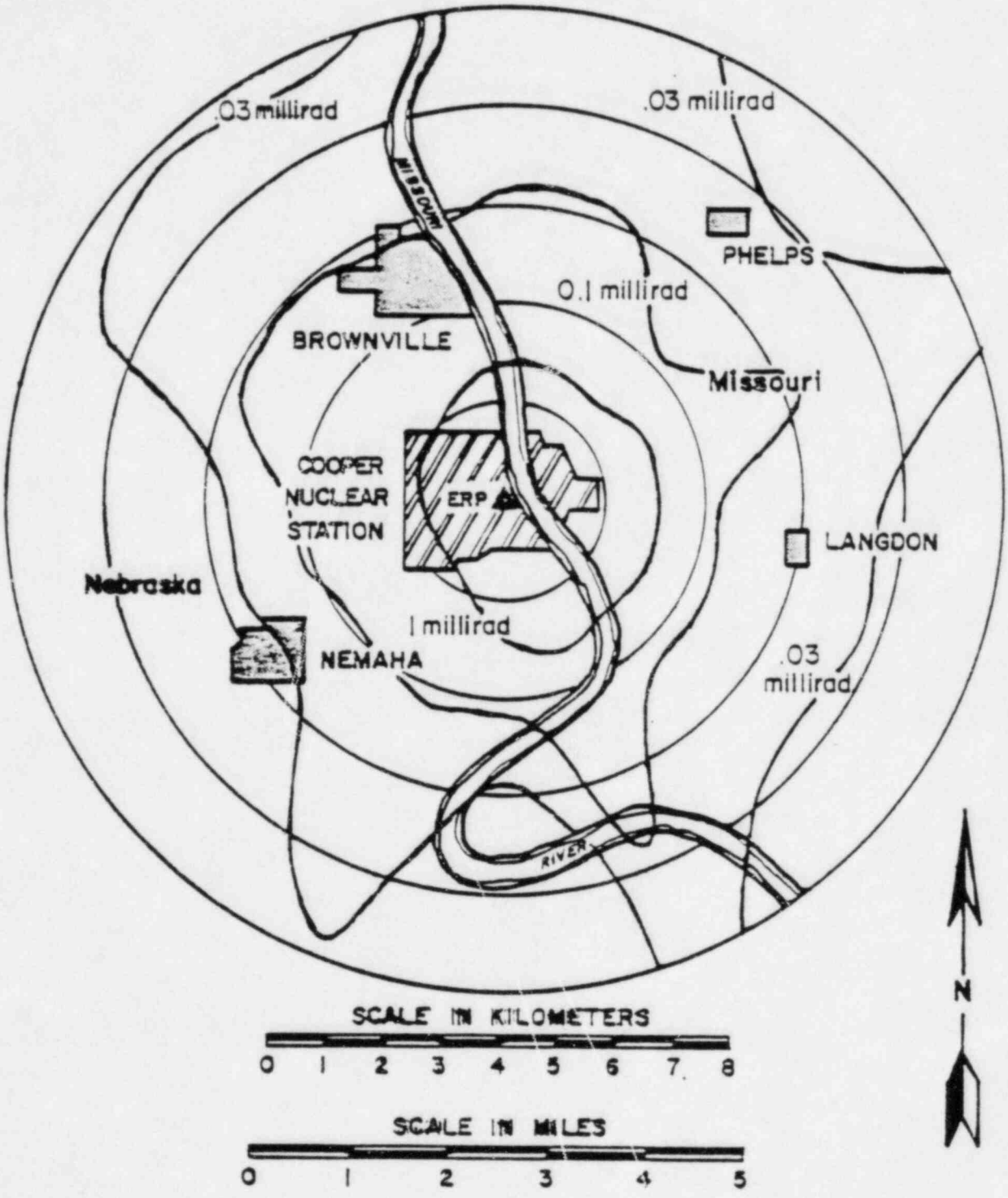

Figure 5-1. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-March 1981.

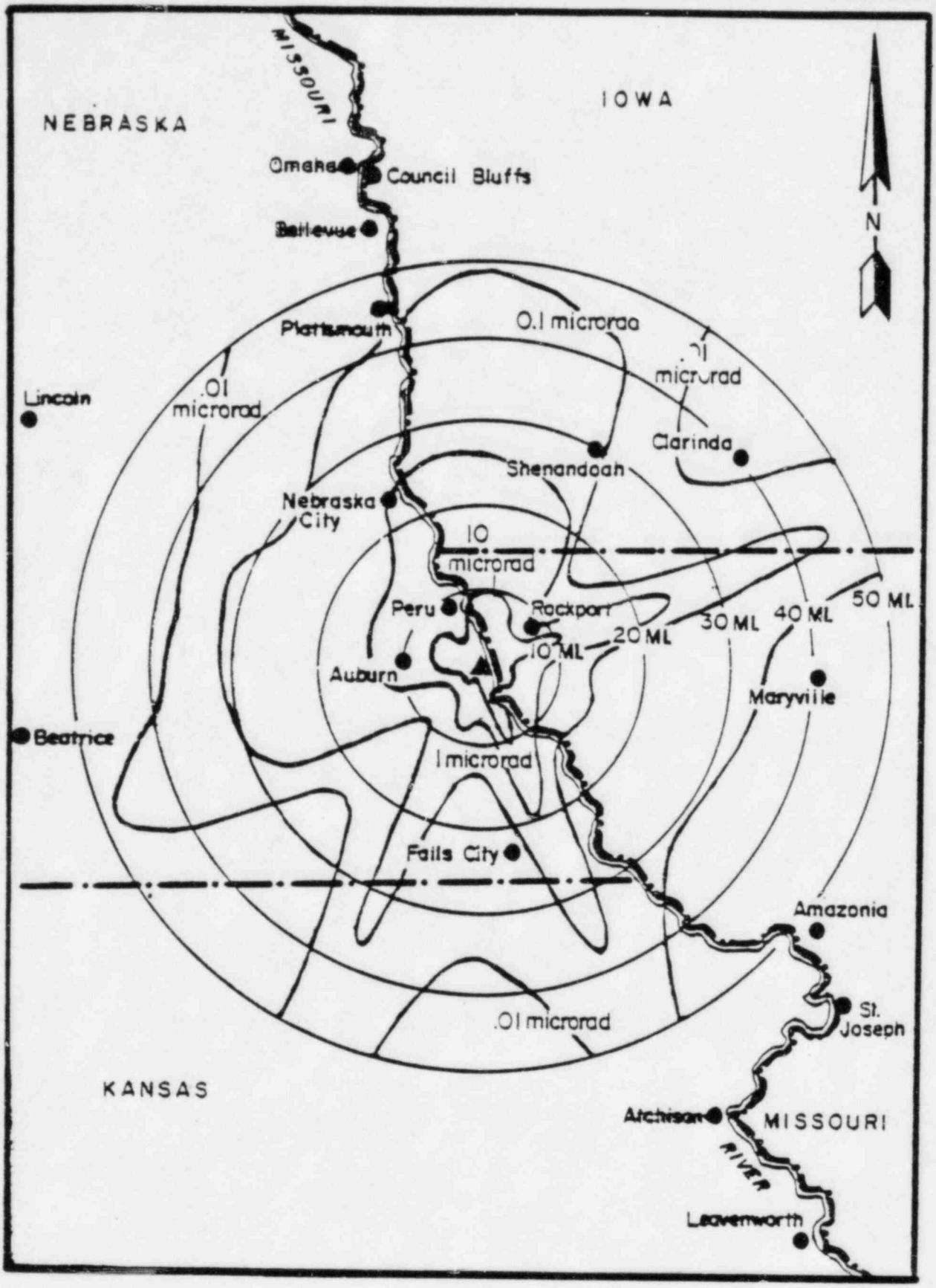

Figure 5-2. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-March 1981.

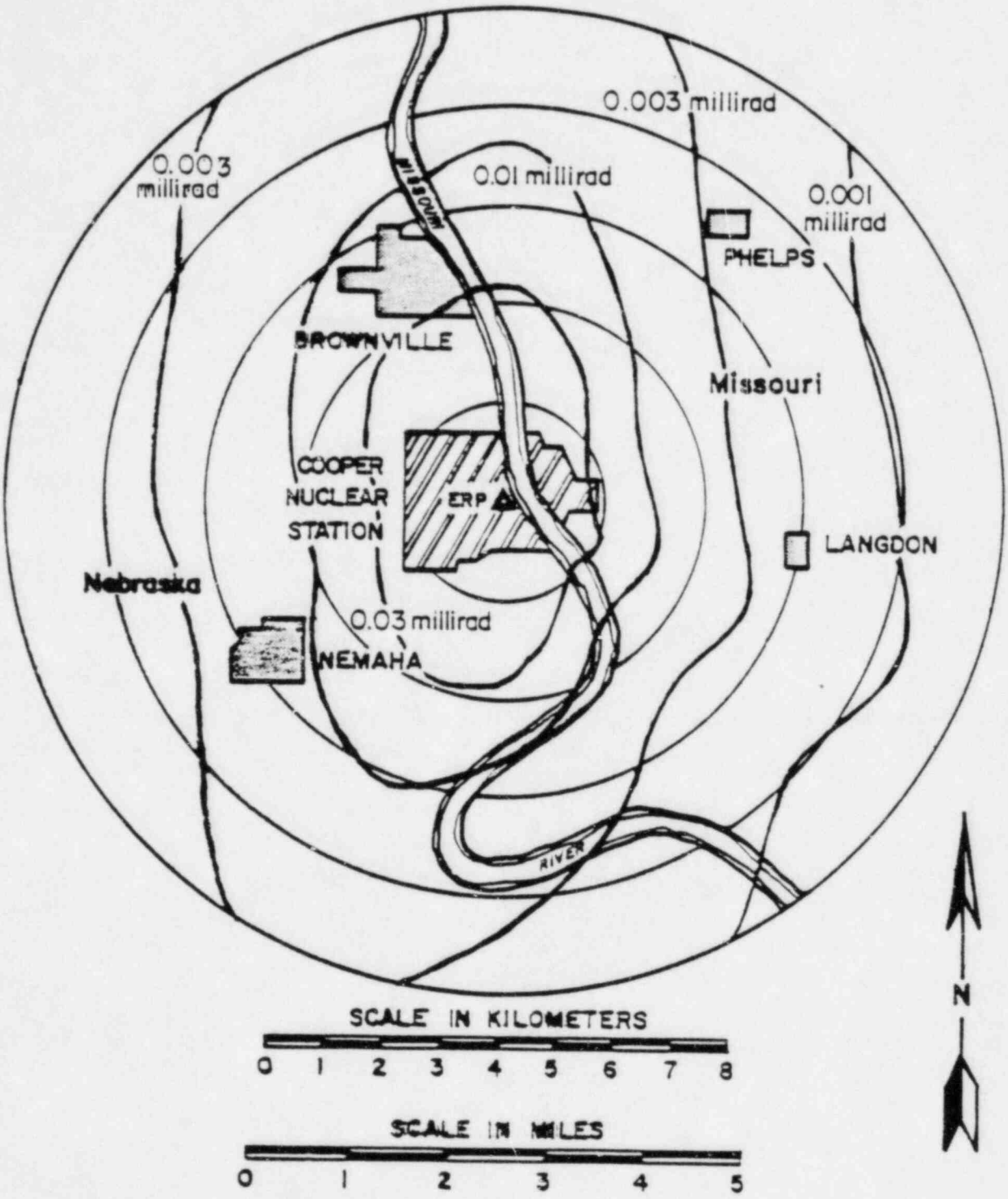

Figure 5-3. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, April-June 1981.

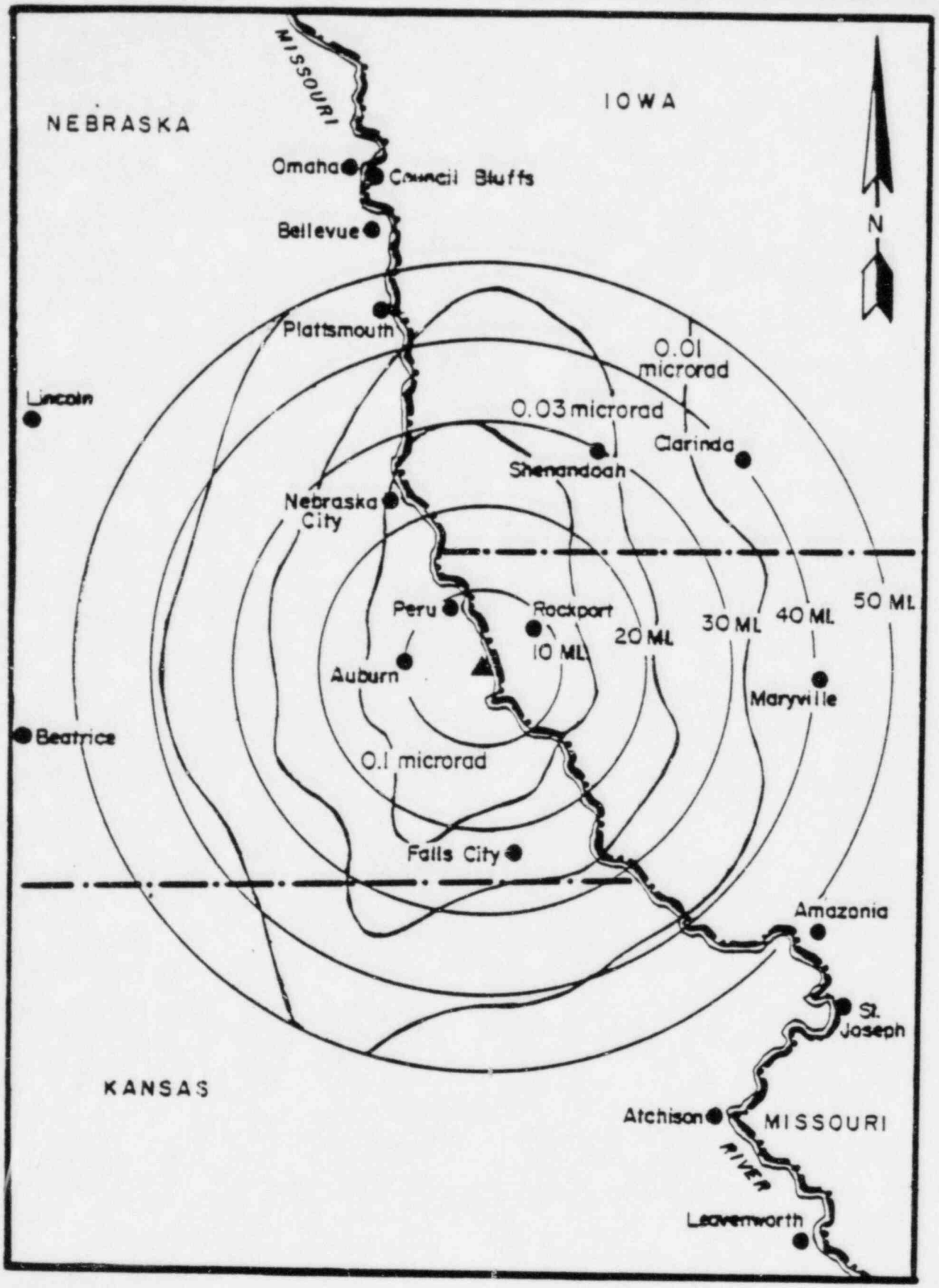

Figure 5-4. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, April-June 1981.

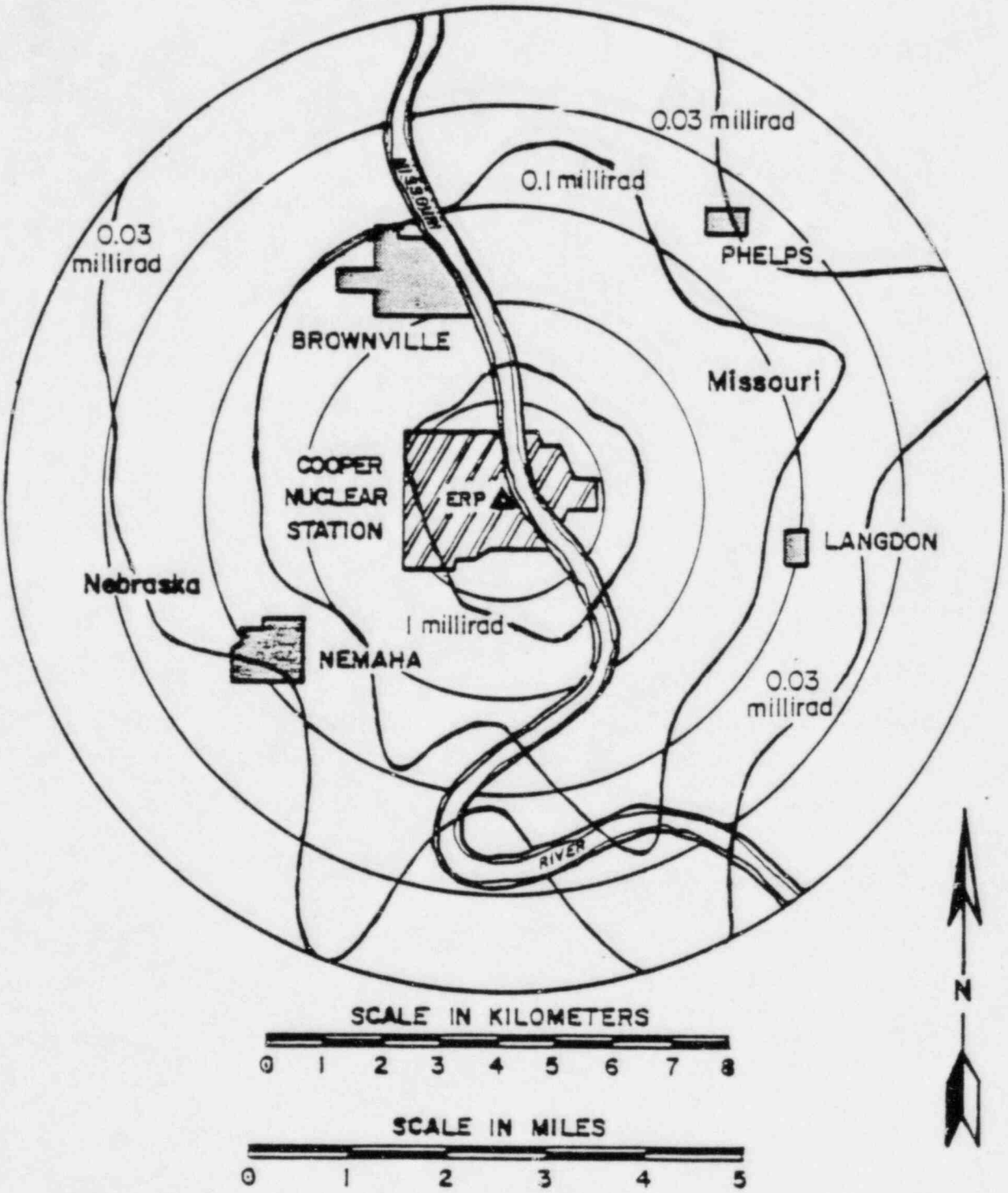

Figure 5-5. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-5 miles, January-June 1981.

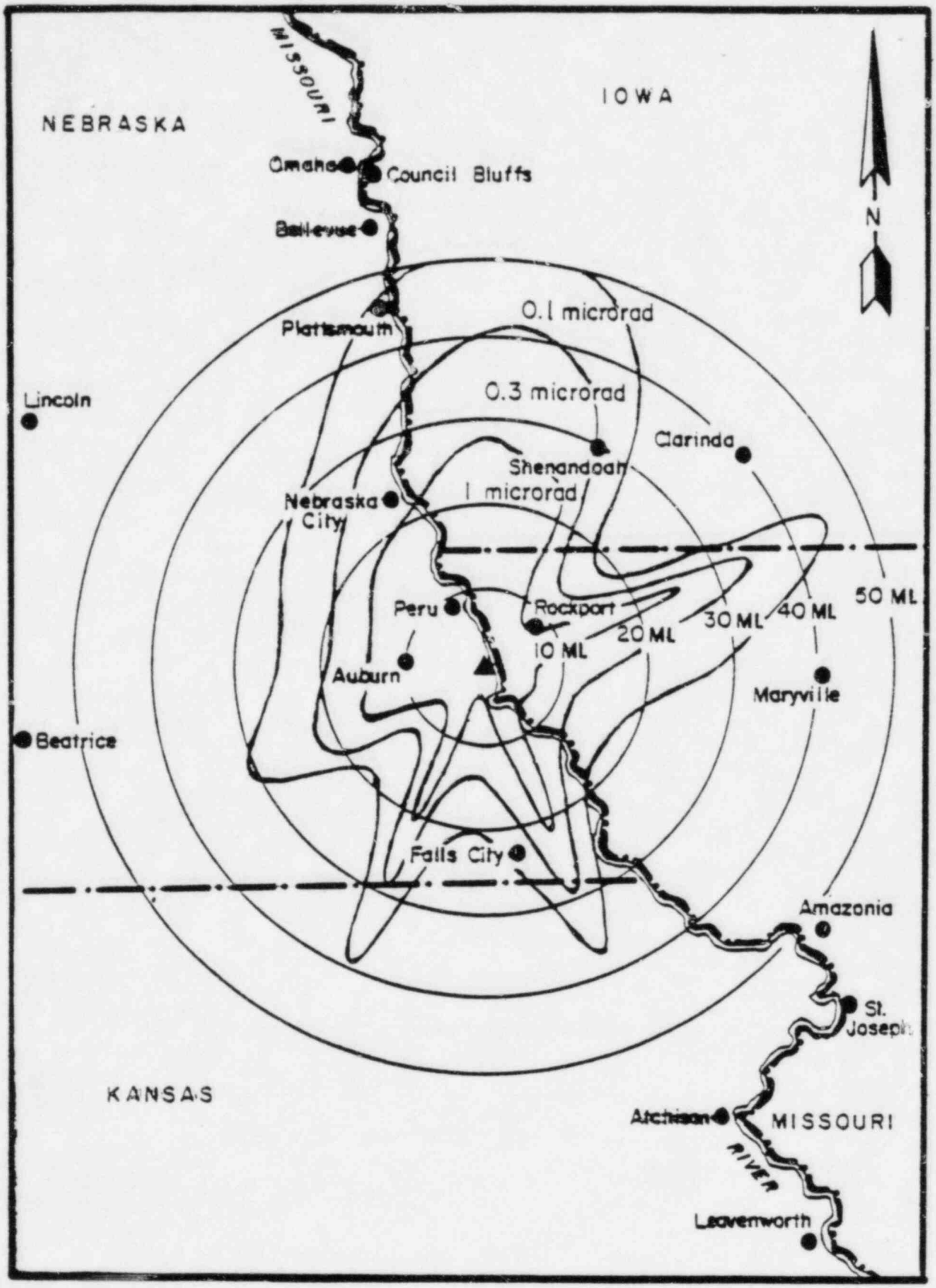

Figure 5-6. Estimated gamma dose, combined vent and elevated release, Cooper Nuclear Station, Brownville, Nebraska, 0-50 miles, January-June 1981.

SECTION 6.0

RADIOLOGICAL DOSE CALCULATIONS FROM WATERBORNE SOURCES

6.0 RADIOLOGICAL DOSE CALCULATIONS FROM WATERBORNE SOURCES

In calculating doses to an individual and population due to the release of radioactive material via liquid effluent from Cooper Nuclear Power Station, the LADTAP II computer program was used. The LADTAP II program implements the radiological impact models of Regulatory Guide 1.109 for determining the radiation exposure to man from four principal exposure pathways in the aquatic environment - potable water, aquatic foods, shoreline deposits, and irrigated foods. Doses for both the maximum individual and the general population are calculated as a function of age group and pathway for appropriate body organs. The input data are obtained from the effluent release report presented in Section 4.0

Table 6-1 Doses to individual at the site boundary, resulting from exposure to radioactivity discharged in liquid effluents, January-June 1981, Cooper Nuclear Power Station.

Period and Pathway	Dose to individual, mrem[a]							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
1st Quarter								
Drinking Water		2.72E-03	3.83E-03	2.91E-03	6.58E-04	1.29E-03	4.55E-04	1.22E-03
Shoreline	3.01E-04	2.57E-04	2.57E-04	2.57E-04	2.57E-04	2.57E-04	2.57E-04	2.57E-04
Total	3.01E-04	2.97E-03	4.08E-03	3.17E-03	9.15E-04	1.55E-03	7.12E-04	1.47E-03
2nd Quarter								
Eating Fish		4.29E-01	7.54E-01	5.55E-01	4.36E-03	2.50E-01	8.24E-02	6.43E-02
Drinking Water		8.85E-03	1.36E-02	1.04E-02	1.02E-02	4.53E-03	1.52E-03	5.20E-03
Shoreline	1.36E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03	1.16E-03
Swimming	0.00E+00	2.55E-06	2.55E-06	2.55E-06	2.55E-06	2.55E-06	2.55E-06	2.55E-06
Boating	0.00E+00	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05	3.61E-05
Total	1.36E-03	4.39E-01	7.68E-01	5.67E-01	1.57E-02	2.56E-01	8.51E-02	7.07E-02
Total for 1st and 2nd Quarters	1.66E-03	4.42E-01	7.72E-01	5.70E-01	1.66E-02	2.58E-01	8.58E-02	7.22E-02

[a] Calculated doses are based on the following periods of exposures:
Fishing and boating: from April through November
Drinking water and shoreline: from January through December
Swimming: from June through September.
Other assumptions are listed in Table 6-3.

Table 6-2 Doses to population within 50 miles radius, resulting from exposure to radioactivity discharged in liquid effluents, January-June 1981. Cooper Nuclear Power Stations.

Period and Pathway	Dose to population, man-rem[a]							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
1st Quarter								
Drinking water[b]		3.67E-03	4.54E-03	2.60E-03	7.30E-04	1.51E-03	5.47E-04	1.09E-03
Shoreline	7.95E-04	6.78E-03	6.78E-03	6.78E-04	6.78E-04	6.78E-04	6.78E-04	6.78E-04
Total	7.95E-04	1.04E-02	1.13E-02	3.28E-03	1.41E-03	2.19E-03	1.22E-03	1.77E-03
2nd Quarter								
Eating Fish		2.54E-04	4.14E-04	2.52E-04	1.03E-06	1.36E-04	4.63E-05	2.70E-05
Drinking Water[b]		5.26E-03	7.10E-03	4.11E-03	5.00E-03	2.34E-03	8.12E-04	2.05E-03
Shoreline	1.59E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03
Swimming	0.00E+00	3.18E-06	3.18E-06	3.18E-06	3.18E-06	3.18E-06	3.18E-06	3.18E-06
Boating	0.00E+00	3.50E-05	3.50E-05	3.50E-05	3.50E-05	3.50E-05	3.50E-05	3.50E-05
Total	1.59E-03	6.90E-03	8.90E-03	5.75E-03	6.39E-03	3.86E-03	2.25E-03	3.47E-03
Total for 1st and 2nd Quarters	2.39E-03	1.73E-02	2.02E-02	9.03E-03	7.80E-03	6.05E-03	3.47E-03	5.24E-03

[a] Calculated doses are based on the following periods of exposures: Fishing and boating: from April through November. Drinking water and shoreline: from January through December. Swimming: from June through September.

[b] Exposure from drinking water is calculated for the city of St. Joseph, Missouri, nearest public water intake from the Missouri River, 84 river miles down the river, population 85,000.

Other assumptions are listed in Table 6-3.

Table 6-3 Values of parameters used to make dose estimates resulting from liquid discharges by Cooper Nuclear Power Station, January-June 1981.

Parameter	Value Assigned		Source of Reference
	Individual	Population	
Population at St. Joseph, Missouri		85,000[a]	
Cooling Flow Rate	1,026; 770 ft/sec[b]	1,026; 770 ft/sec[b]	Station data
Dilution Factor	1	53.1; 102.7	Station data
Shorewidth Factor	0.2	0.2	USNRC (1977), p.15
Usage:			
(drinking water)	730 l/yr	370 l/yr/person	USNRC (1977), p. 12,40,69
(fish)	21 Kg/yr	6.9 Kg/yr	USNRC (1977), p. 12,40,69
(shoreline exposure)	12 hr/yr	8.3 hr/yr	USNRC (1977), p. 40
(swimming)	8 hr/yr	6 hr/yr	Oak Ridge (1980), p. 144
(boating)	76 hr/yr	44 hr/yr	Oak Ridge (1980), p. 144
Holding time:			
(drinking water)	12 hr	22.4 hr[c]	USNRC (1977), p. 40
(fish)	24 hr	168 hr	USNRC (1977), p. 40
(shoreline exposure)	0 hr	22.4[c] hr	USNRC (1977), p. 12, 69
(swimming)	0 hr	22.4[c] hr	USNRC (1977), p. 12, 69
(boating)	0 hr	22.4[c] hr	USNRC (1977), p. 12, 69

[a]Assumed populations for 1974. Last available population data is 69,673 persons for 1964.
[b]First and second quarters for 1981, respectively.
[c]Based on an average Missouri River water flow at 5.5 ft/sec. 84 river miles down the river.
For definitions of parameters, refer to Oak Ridge (1980) and USNRC (1977).

7.0 REFERENCES

Briggs, G. A. 1969. "Plume Rise". TID-25075, National Technical Information Service, U.S. Department of Commerce.

Oak Ridge National Laboratory. 1980. "Users Manual for LADTAP II-A Computer Program for Calculating Radiation Exposure to Man from Routine Release of Nuclear Reactor Liquid Effluents." Prepared for the U.S. Nuclear Regulatory Commission, February 1980.

U.S. Nuclear Regulatory Commission (USNRC). 1977. Calculation of Annual Doses to Man from Routine Release of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR 50, Appendix I, USNRC Guide 1.109.

_____. 1976. Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactor. USNRC Guide 1.111.

_____. 1975. Information for Safety Analysis Reports Meteorology. USNRC Guide 1.70.29.

_____. 1974. Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants. USNRC Guide 1.21.

_____. 1972. Onsite Meteorological Programs. USNRC Guide 1.23.

APPENDIX A

MONTHLY DATA TABLES

MONTHLY DATA TABLES

Data from the continuously monitored meteorological parameters collected at the Cooper Nuclear Station were reduced to hourly averages, reviewed for errors, scaled for calibration, and prepared for further analysis by computer. The hourly average values are presented in the monthly data tables in this section. Each table contains one month of data for one parameter. The tables are captioned with the parameter name, unit of measurement, site name, month and year. The mean hourly average for each hour of the day is shown in the last row of the main table. The mean hourly average, maximum hourly average and minimum hourly average for the month are shown beneath the main table. The number of valid observations and the percentage of data recovered are also shown beneath the main table. Daily statistics are shown at the foot of the page. These statistics are the daily maximum, daily minimum and daily mean hourly averages. Beneath the daily statistics table, the mean daily maximum and mean daily minimum hourly averages are shown. Totals, rather than means, are reported for precipitation data. Only the hourly average values, number of valid observations, and the percentage of data recovered are reported for wind direction data.

The notation "-M-" in the tables indicates a missing data value. The value may be missing due to any of the following reasons: equipment failure, power failure, calibrations, recorder inking problems, or sensor icing.

ARRANGEMENT OF MONTHLY DATA TABLES

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318-ft Wind Speed	
January 1981	A-5
February 1981	A-6
March 1981	A-7
April 1981	A-8
May 1981	A-9
June 1981	A-10
318-ft Wind Direction	
January 1981	A-11
February 1981	A-12
March 1981	A-13
April 1981	A-14
May 1981	A-15
June 1981	A-16
35-ft Wind Speed	
January 1981	A-17
February 1981	A-18
March 1981	A-19
April 1981	A-20
May 1981	A-21
June 1981	A-22
35-ft Wind Direction	
January 1981	A-23
February 1981	A-24
March 1981	A-25
April 1981	A-26
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June 1981	A-28
35-ft Ambient Temperature	
January 1981	A-29
February 1981	A-30
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April 1981	A-32
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ARRANGEMENT OF MONTHLY DATA TABLES (CONT.)

Title	Page
318-35 ft Differential Temperature	
January 1981	A-35
February 1981	A-36
March 1981	A-37
April 1981	A-38
May 1981	A-39
June 1981	A-40
318-155 ft Differential Temperature	
January 1981	A-41
February 1981	A-42
March 1981	A-43
April 1981	A-44
May 1981	A-45
June 1981	A-46
Precipitaiton	
January 1981	A-47
February 1981	A-48
March 1981	A-49
April 1981	A-50
May 1981	A-51
June 1981	A-52

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981

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

MAXIMUM = 28 MINIMUM = 0 MEAN = 11 738 VALID OBSERVATIONS (99.2%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	27	19	27	14	17	28	13	14	21	11	18	20	17	26	20	16
MIN	12	3	4	2	7	5	3	3	1	2	3	6	5	5	9	7
MEAN	19	10	14	8	12	16	8	7	12	7	9	12	10	15	15	11

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	20	24	16	21	17	14	9	15	26	23	13	14	17	22	21
MIN	4	6	5	2	2	0	0	0	6	6	1	1	11	3	4
MEAN	11	14	11	14	9	6	6	8	16	15	9	6	14	11	13

MEAN MAXIMUM = 19 MEAN MINIMUM = 4.

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	16	22	22	25	22	20	22	23	22	21	23	26	23	25	27	28	27	26	26	21	23	23	24	27
2	25	22	21	21	20	21	22	19	18	16	15	16	19	20	20	18	14	13	11	12	15	18	17	17
3	16	18	16	11	7	6	8	7	8	8	5	5	2	3	3	5	6	7	11	14	19	20	14	10
4	17	21	22	25	23	17	12	17	16	12	13	7	5	7	5	2	3	3	7	9	12	14	12	13
5	14	13	13	12	10	13	15	17	15	16	19	21	16	13	11	10	15	17	15	15	15	11	13	12
6	10	10	4	3	10	11	11	5	5	5	9	6	11	16	18	17	18	15	16	13	15	19	19	17
7	22	19	21	20	23	24	22	21	25	23	21	23	25	27	28	27	27	25	19	19	19	18	20	19
8	24	23	25	15	14	16	12	12	10	10	7	2	7	10	10	11	9	10	10	8	8	11	9	10
9	7	5	12	14	16	18	17	18	12	12	11	10	7	8	9	10	9	13	14	13	14	14	12	12
10	15	17	19	26	28	28	27	31	28	31	33	35	38	39	38	34	35	35	34	29	30	27	27	24
11	20	19	18	17	16	17	15	13	14	11	5	6	8	9	11	12	13	12	11	13	13	13	15	12
12	17	17	19	23	22	22	21	19	20	19	20	19	14	13	13	13	13	10	8	12	12	17	17	16
13	17	15	13	12	12	11	13	14	17	19	18	15	15	17	18	20	19	18	15	13	15	13	16	18
14	16	16	13	13	13	12	14	15	16	16	17	17	16	18	19	20	19	19	20	21	19	21	20	24
15	25	25	22	21	20	21	19	21	21	19	18	22	23	22	24	24	22	22	17	13	15	13	11	11
16	11	13	18	14	11	5	7	10	8	5	6	7	6	7	10	13	14	17	19	21	20	-M-	-M-	-M-
17	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	21	22	20	25	22	21	18	18	16	17	18
18	12	19	16	15	11	9	11	12	13	8	3	6	7	8	8	6	9	10	10	11	11	11	13	18
19	17	16	22	22	22	21	23	22	22	20	18	24	26	28	27	26	21	16	13	11	8	6	3	2
20	3	6	10	12	9	12	15	14	16	14	12	17	16	22	25	23	22	23	21	19	23	22	17	22
21	20	19	17	6	6	17	16	15	17	18	20	20	18	21	19	23	26	28	24	25	31	31	27	25
22	24	26	27	28	27	24	23	25	25	25	25	27	31	32	31	33	30	28	27	25	24	25	24	22
23	25	28	26	27	24	23	23	20	24	22	21	21	23	23	25	27	28	22	18	16	18	16	18	10
24	10	14	8	3	5	5	9	9	12	9	9	13	16	14	14	15	16	15	16	20	23	24	19	15
25	14	12	12	13	10	12	8	9	11	7	9	7	4	4	5	4	5	11	19	17	14	14	16	17
26	16	16	15	16	14	15	15	15	19	16	16	15	14	15	16	18	17	16	17	16	17	21	27	25
27	24	20	27	25	18	18	18	16	16	20	17	15	19	19	19	19	19	18	17	15	18	18	22	16
28	15	15	18	23	20	20	21	19	16	16	17	17	15	16	14	16	14	15	16	14	11	11	12	8
HOURLY MEAN	17	17	18	17	16	16	16	16	17	16	15	16	16	17	17	18	18	17	17	16	17	17	17	16

MAXIMUM = 39 MINIMUM = 2 MEAN = 17 656 VALID OBSERVATIONS (97.6%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	28	25	20	25	21	19	28	25	18	39	20	23	20	24
MIN	16	11	2	2	10	3	18	2	5	15	5	8	11	12
MEAN	23	18	9	12	14	12	22	12	12	30	13	16	16	17

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	25	21	25	19	28	25	31	33	28	24	19	27	27	23
MIN	11	5	16	3	2	3	6	22	10	3	4	14	15	8
MEAN	20	12	20	11	18	16	20	27	22	13	11	17	19	16

MEAN MAXIMUM = 25 MEAN MINIMUM = 9.

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	7	10	10	11	4	3	5	6	7	2	4	5	3	6	7	8	8	10	11	14	16	15	15	15
2	11	11	16	15	11	13	12	15	13	13	11	10	9	7	7	5	3	3	3	4	5	7	10	13
3	14	15	14	13	14	12	15	12	12	11	10	10	12	12	13	12	14	13	11	13	14	14	15	13
4	12	13	15	14	15	16	14	11	10	15	17	13	16	18	19	19	20	20	10	6	12	16	19	20
5	16	17	16	16	14	12	-M-	-M-	-M-	-M-	-M-	-M-	-M-	10	8	7	6	5	9	9	7	9	8	7
6	4	4	4	2	4	7	12	11	13	13	11	11	10	9	9	11	10	11	12	15	16	15	14	14
7	14	12	15	12	13	13	12	11	7	6	6	8	10	10	8	7	9	12	10	9	8	8	8	5
8	3	5	4	1	0	0	1	2	3	3	2	3	0	2	1	3	5	6	7	11	12	12	12	12
9	10	9	13	14	13	12	15	18	15	14	16	17	19	21	19	19	20	17	14	6	2	10	12	15
10	14	13	7	3	0	3	7	9	7	5	5	8	10	11	12	13	16	17	17	15	14	15	15	17
11	19	17	15	13	12	11	10	9	5	3	4	7	8	10	11	10	11	9	8	9	7	10	18	18
12	17	18	19	17	17	17	17	18	14	14	18	23	23	20	18	15	14	10	10	12	10	12	9	9
13	14	13	11	10	11	15	13	15	11	5	7	13	17	16	-M-	16	16	14	14	14	14	10	9	8
14	5	1	5	5	4	5	7	6	9	7	9	12	12	12	13	14	16	19	18	19	20	19	19	16
15	14	16	16	17	16	11	9	11	13	14	19	23	28	30	31	31	31	31	29	24	19	19	18	16
16	18	15	14	14	15	13	12	9	4	2	3	4	3	5	7	8	11	12	15	21	18	18	19	18
17	16	20	20	22	18	8	5	6	7	7	8	13	21	20	22	25	26	25	27	29	29	30	27	26
18	24	22	22	22	22	20	20	19	20	17	17	19	21	23	24	25	26	25	25	20	22	20	19	21
19	24	23	21	19	20	19	19	20	20	23	24	25	22	23	27	26	23	23	18	14	19	18	16	13
20	10	13	11	10	10	7	4	4	0	1	2	3	5	8	10	12	13	16	14	13	14	16	17	18
21	18	20	19	22	22	21	19	21	19	22	23	22	22	24	22	24	24	21	21	23	27	-M-	-M-	-M-
22	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
23	6	4	3	2	3	4	2	1	2	1	2	3	4	5	6	4	5	6	4	7	4	8	9	9
24	9	10	10	7	8	12	10	10	8	6	7	9	11	13	12	9	13	16	17	16	16	14	11	11
25	10	11	7	14	11	7	6	8	8	10	12	10	9	8	9	10	11	10	9	8	18	25	24	22
26	19	18	19	20	20	15	16	6	3	4	7	10	9	7	5	4	9	10	12	15	16	18	17	12
27	14	9	13	14	13	15	16	19	18	20	23	23	24	25	27	29	30	25	23	19	18	17	20	21
28	22	22	26	28	27	25	22	18	21	26	27	31	29	32	33	30	23	24	25	24	26	25	23	21
29	20	22	24	25	22	23	22	23	26	33	31	31	29	31	31	29	28	27	20	18	18	15	14	13
30	12	14	15	16	16	11	12	10	8	7	4	4	9	13	15	17	20	22	20	21	24	23	25	27
31	24	17	22	28	25	17	15	18	19	23	24	20	23	26	27	29	27	29	30	19	18	23	16	18
HOURLY MEAN	14	14	14	14	13	12	12	12	11	11	12	14	14	15	16	16	16	16	15	15	15	16	16	15

MAXIMUM = 33 MINIMUM = 0 MEAN = 14 709 VALID OBSERVATIONS (95.3%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	16	16	15	20	17	16	15	12	21	17	19	23	17	20	31	21
MIN	2	3	10	6	5	2	5	0	2	0	3	9	5	1	9	2
MEAN	8	9	13	15	10	10	10	5	14	10	11	16	12	11	20	12

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	30	26	27	18	27	-M-	9	17	25	20	30	33	33	27	30
MIN	5	17	13	0	18	-M-	1	6	6	3	9	18	13	4	15
MEAN	19	21	21	10	22	-M-	4	11	12	12	20	25	24	15	22

MEAN MAXIMUM = 22 MEAN MINIMUM = 6.

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	19	21	21	22	20	22	19	17	17	14	16	18	14	13	11	11	11	13	16	18	15	17	16	17
2	15	14	14	14	13	21	23	23	15	19	23	19	17	20	26	29	33	33	28	28	26	25	28	30
3	29	28	25	24	22	24	26	28	28	34	31	32	31	36	37	37	32	38	36	29	36	24	33	19
4	20	25	25	23	24	23	24	23	24	23	24	23	21	22	20	19	18	17	19	15	13	11	4	11
5	17	21	19	19	17	19	14	19	16	15	18	17	19	18	20	19	15	15	12	8	7	5	3	6
6	10	11	13	12	13	15	15	18	21	25	29	29	31	33	34	35	36	34	29	23	20	24	24	24
7	25	23	23	21	15	18	16	16	18	19	19	17	14	16	17	17	17	14	13	7	3	9	22	25
8	22	19	15	15	11	14	18	21	24	20	19	20	18	21	20	19	18	16	13	10	7	7	6	5
9	7	11	9	10	12	13	12	11	10	11	15	16	14	15	16	18	18	16	16	17	21	22	22	22
10	17	12	10	12	12	13	15	17	18	24	23	25	23	23	22	24	27	28	9	9	7	16	11	13
11	5	10	6	8	18	13	12	10	5	4	6	9	8	8	8	5	4	6	11	5	3	7	10	19
12	10	7	9	13	13	10	12	12	8	10	11	11	6	7	7	6	7	7	8	9	11	10	8	10
13	8	9	9	8	7	6	4	9	4	6	5	5	6	11	16	16	23	32	31	30	27	29	30	27
14	22	19	19	21	21	23	21	19	18	19	18	16	15	14	12	12	12	11	12	10	10	11	10	11
15	11	9	8	8	9	9	10	13	11	14	12	12	12	12	13	15	17	16	15	14	13	15	18	19
16	19	18	15	11	9	10	10	10	15	17	19	21	21	25	25	23	21	22	18	14	10	9	11	15
17	15	18	17	11	11	12	12	7	3	5	5	6	13	15	14	11	12	9	9	12	13	13	13	14
18	12	9	12	16	12	10	8	14	13	7	11	14	16	17	16	17	16	17	12	15	16	17	17	11
19	11	13	9	11	8	9	9	10	9	7	7	7	7	11	12	10	13	16	17	16	18	20	22	19
20	19	17	17	16	15	14	13	13	9	12	13	15	14	13	11	12	11	11	11	12	12	11	10	14
21	15	13	14	12	12	13	11	14	16	16	16	16	15	15	16	15	17	17	15	11	14	16	14	13
22	12	17	18	16	17	14	17	18	18	17	22	25	22	21	24	22	22	22	21	20	16	15	16	21
23	21	24	21	24	25	18	13	15	14	15	16	20	23	28	26	23	23	23	20	14	14	15	12	-M-
24	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	6	6	3	1	1	4	5	8	11	14	13	15	15
25	18	14	19	14	13	17	17	16	16	14	12	19	27	28	30	29	29	27	25	22	23	23	24	26
26	23	20	21	16	19	15	17	17	13	11	10	12	10	12	12	13	16	20	18	15	19	18	23	18
27	15	16	16	17	17	16	17	19	17	19	23	23	24	26	28	28	25	25	24	23	24	24	23	19
28	20	20	14	11	15	17	22	26	24	25	19	23	14	18	15	13	9	12	12	9	8	4	7	9
29	15	13	13	13	11	13	15	12	13	11	11	14	18	21	21	22	23	25	20	17	17	15	16	15
30	13	12	10	12	11	13	11	9	11	11	9	9	9	6	8	13	16	15	12	11	12	16	18	12
HOURLY MEAN	16	16	15	15	15	15	15	16	15	15	16	17	16	18	18	18	18	19	17	15	15	15	16	17

MAXIMUM = 38 MINIMUM = 1 MEAN = 16 708 VALID OBSERVATIONS (98.3%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	22	33	38	25	21	36	25	24	22	28	19	13	32	23	19
MIN	11	13	19	4	3	10	3	5	7	7	3	6	4	10	8
MEAN	17	22	30	19	15	23	17	16	15	17	8	9	15	16	13

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	25	18	17	22	19	17	25	28	15	30	23	28	26	25	18
MIN	9	3	7	7	9	11	12	12	1	12	10	15	4	11	6
MEAN	16	11	14	12	13	14	19	19	8	21	16	21	15	16	12

MEAN MAXIMUM = 24 MEAN MINIMUM = 8.

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	9	14	12	11	10	13	13	12	15	14	18	18	17	16	14	13	10	8	6	6	8	8	9	12
2	12	13	12	15	15	15	17	16	18	21	22	22	24	25	26	27	28	29	28	25	25	26	27	29
3	28	26	23	22	21	21	21	22	25	28	27	28	27	28	27	27	27	28	27	27	29	30	29	33
4	17	14	15	13	14	11	11	12	10	12	10	8	10	12	14	16	13	16	16	16	12	12	11	13
5	16	16	18	19	19	18	16	15	15	18	18	20	18	17	18	18	18	18	18	18	20	18	17	16
6	11	9	11	11	6	6	5	9	5	8	14	13	12	12	13	13	13	15	14	14	17	16	15	18
7	18	19	16	12	11	13	12	12	12	12	14	13	13	14	16	16	14	10	12	14	9	10	18	19
8	13	14	12	10	11	12	10	11	10	6	6	2	3	0	2	3	3	4	7	9	12	11	10	10
9	12	8	10	10	11	11	11	14	12	12	14	16	20	25	28	27	26	24	23	23	23	24	25	24
10	26	25	26	26	27	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	15	12	12	15	15	13
11	12	10	9	7	6	7	6	4	3	5	5	3	5	4	7	10	12	11	12	12	14	16	17	18
12	17	18	15	19	15	16	18	22	21	24	21	13	11	13	11	10	9	8	10	10	10	11	8	4
13	16	15	13	17	13	15	14	15	17	16	13	13	14	15	15	15	13	13	12	13	16	18	20	20
14	18	17	15	16	15	17	14	12	12	13	13	14	13	13	11	8	8	8	6	4	6	5	3	6
15	10	11	10	10	10	8	8	6	7	6	7	9	11	13	13	15	15	15	15	14	16	17	16	13
16	15	14	12	12	16	16	16	15	14	20	24	20	23	24	21	18	21	21	23	22	20	16	15	19
17	23	17	16	17	15	18	16	16	18	20	20	20	20	21	21	20	21	22	22	21	20	21	19	17
18	19	18	19	19	20	21	21	21	21	22	23	22	23	20	25	28	26	25	20	20	20	17	12	19
19	17	18	16	16	16	15	16	14	13	13	13	14	12	11	11	9	10	9	7	6	11	11	11	11
20	8	11	8	7	7	7	6	4	0	1	1	2	4	7	7	8	9	9	10	11	12	14	16	14
21	14	13	12	11	11	10	10	8	16	18	21	23	25	25	25	25	25	25	24	22	22	18	20	16
22	10	13	19	18	16	16	17	16	19	22	19	20	23	23	24	26	25	23	23	21	20	31	23	13
23	19	19	15	19	21	19	19	24	16	20	19	16	14	12	13	14	19	17	13	15	20	21	19	18
24	19	17	13	10	11	13	12	14	13	14	14	14	15	15	14	14	16	15	11	5	1	11	13	13
25	15	9	6	4	5	10	10	8	6	0	6	5	2	4	3	4	4	5	11	10	11	9	10	9
26	10	7	8	7	7	8	11	11	9	11	8	7	5	4	6	5	5	7	9	10	11	11	5	8
27	7	9	9	9	9	11	-M-	-M-	-M-	-M-	-M-	-M-	1	3	3	4	6	6	5	5	9	12	14	11
28	9	7	6	3	4	4	4	7	7	5	8	8	9	8	4	1	1	1	2	1	4	8	11	11
29	13	12	7	9	10	11	12	9	7	9	8	10	10	11	11	10	10	9	10	8	11	16	18	20
30	18	17	17	14	13	12	13	11	11	12	10	11	11	9	9	9	8	6	6	7	10	12	10	13
31	13	10	8	10	5	3	2	5	4	5	7	11	13	15	15	14	13	13	13	12	13	12	13	12
HOURLY MEAN	15	14	13	13	12	13	12	13	12	13	14	14	14	14	14	14	14	14	14	13	14	15	15	15

MAXIMUM = 31 MINIMUM = 0 MEAN = 14 725 VALID OBSERVATIONS (97.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	18	29	30	17	20	18	19	14	28	27	18	24	20	18	17	24
MIN	6	12	21	8	15	5	9	0	8	12	3	4	12	3	6	12
MEAN	12	21	26	13	18	12	14	8	18	19	9	14	15	11	11	18

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

MEAN MAXIMUM = 20 MEAN MINIMUM = 7.

318 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	13	8	8	8	9	9	8	9	12	15	15	12	12	11	11	13	13	13	13	13	12	16	19
2	17	16	18	16	12	12	11	7	6	2	7	7	7	10	14	17	17	14	12	15	12	7	4	3
3	4	2	4	3	9	10	9	15	14	16	16	12	9	5	4	6	5	4	6	8	10	10	8	7
4	5	3	4	8	12	11	10	10	6	5	6	5	8	8	5	8	12	5	4	5	7	5	4	8
5	9	10	10	8	7	6	5	3	3	3	4	7	7	8	8	8	9	13	5	5	6	11	13	9
6	12	14	11	15	17	15	13	9	9	11	9	6	5	3	5	3	3	3	2	4	11	14	13	10
7	11	14	14	13	13	14	14	18	17	20	23	26	28	29	29	30	33	33	27	30	16	21	26	19
8	14	14	9	6	10	14	9	12	14	19	22	19	15	12	13	13	17	14	17	16	15	13	9	10
9	13	13	14	15	13	11	10	14	20	17	16	14	11	6	8	12	12	14	15	15	19	21	21	18
10	7	13	13	6	7	14	10	4	2	2	5	5	3	6	6	7	12	11	12	11	11	8	4	2
11	3	9	12	8	3	3	12	29	11	9	11	13	12	9	9	8	10	8	7	10	12	14	14	13
12	9	6	7	5	7	7	9	8	5	11	12	13	15	18	22	24	23	22	20	19	19	18	20	21
13	20	20	19	18	20	19	20	21	29	30	33	33	34	34	35	37	32	30	28	26	24	23	23	25
14	27	28	27	25	24	22	22	28	27	31	31	32	32	32	31	30	32	32	29	28	20	12	8	10
15	9	11	13	15	21	21	20	16	12	6	10	6	7	12	16	15	13	14	11	5	12	16	17	18
16	18	19	20	18	20	19	19	14	15	16	16	13	13	11	8	8	7	8	6	5	7	10	15	17
17	21	21	19	19	18	21	22	21	21	24	27	28	31	32	31	28	27	25	25	24	21	19	21	18
18	12	12	10	11	10	3	1	1	14	17	16	15	13	12	11	9	9	10	12	12	11	13	13	15
19	16	15	12	12	11	10	10	10	11	14	14	15	15	16	17	15	13	13	10	9	11	12	10	10
20	8	12	12	9	8	7	4	4	2	9	12	7	7	11	12	10	11	10	11	11	11	12	12	10
21	10	10	10	10	26	18	20	16	9	3	8	10	6	5	5	8	9	18	13	8	6	7	13	16
22	19	14	15	6	2	5	5	4	2	2	1	6	4	4	4	2	4	3	10	9	9	9	10	11
23	12	14	10	7	10	12	10	10	14	15	16	18	19	23	26	29	28	27	27	25	22	20	23	24
24	27	26	24	18	4	5	12	12	15	17	12	8	8	11	16	13	13	18	19	15	14	10	9	10
25	9	9	8	4	2	2	10	2	-M-	4	6	4	2	2	4	6	5	5	7	8	8	8	7	4
26	8	13	13	12	13	11	9	7	7	9	6	9	12	13	13	15	13	11	16	12	17	12	12	21
27	16	15	9	10	12	12	13	15	14	18	20	23	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
28	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
29	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	10	12	11	8	16	20	17	16	15	13	13	9	7	6	6	11
30	10	8	8	9	9	11	12	9	10	13	14	11	9	9	7	8	7	6	8	9	10	11	11	12
HOURLY MEAN	13	13	13	11	12	12	12	12	12	13	14	13	13	13	14	14	14	14	14	13	13	13	13	13

MAXIMUM = 37 MINIMUM = 1 MEAN = 13 675 VALID OBSERVATIONS (93.7%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	19	18	16	12	13	17	33	22	21	14	29	24	37	32	21
MIN	8	2	2	3	3	2	11	6	6	2	3	5	18	8	5
MEAN	12	11	8	7	7	9	22	14	14	8	10	14	26	26	13

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	20	32	17	17	12	26	19	29	27	10	21	23	-M-	20	14
MIN	5	18	1	9	2	3	1	7	4	2	6	9	-M-	6	6
MEAN	13	23	11	13	9	11	7	18	14	6	12	15	-M-	12	10

MEAN MAXIMUM = 21 MEAN MINIMUM = 6.

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	296	305	307	304	317	328	336	341	343	340	338	346	351	339	334	329	322	314	326	326	321	308	289	297
2	297	291	296	264	271	260	252	248	219	209	204	203	196	194	185	189	198	180	179	186	207	235	263	318
3	340	342	360	7	4	4	6	4	8	10	12	15	11	11	9	6	15	17	26	36	56	76	95	106
4	85	106	118	94	115	119	111	102	106	111	121	129	130	125	118	128	126	118	120	122	128	129	132	136
5	139	140	143	146	146	150	159	160	160	162	173	177	182	186	184	188	191	184	186	185	190	194	200	215
6	234	234	230	258	287	302	313	330	314	305	316	327	334	332	331	334	338	337	328	330	342	297	299	351
7	1	5	24	25	19	23	44	73	106	108	125	140	143	139	142	136	124	109	69	81	125	195	230	263
8	290	309	314	318	335	346	5	1	2	4	357	351	353	338	339	357	356	359	0	35	122	144	147	-M-
9	-M-	-M-	284	287	291	316	339	344	352	344	351	349	350	350	348	345	346	348	354	355	9	9	8	11
10	9	14	18	29	73	87	136	149	138	146	187	198	195	183	182	185	182	201	191	170	152	128	89	61
11	37	25	25	24	20	8	2	6	6	0	2	0	351	338	313	301	282	286	292	250	246	239	234	222
12	236	244	244	244	241	242	242	244	244	246	239	238	235	230	232	223	218	209	223	237	242	254	273	274
13	295	301	321	335	328	326	322	326	327	318	328	359	357	344	341	346	338	348	341	344	343	331	331	324
14	315	313	305	299	307	317	334	338	338	335	343	347	342	335	341	330	321	312	316	312	313	310	319	345
15	341	342	315	318	339	349	-M-	-M-	-M-	-M-	-M-	352	350	347	354	355	353	351	5	9	360	358	356	1
16	356	349	341	345	350	350	347	338	331	335	341	347	350	341	329	334	338	344	336	347	346	345	344	353
17	349	321	303	291	284	264	258	261	262	277	277	275	275	277	276	273	273	265	255	257	257	259	265	271
18	268	268	272	269	262	258	261	246	230	212	210	214	215	223	226	223	220	213	212	203	203	215	225	229
19	229	226	226	226	225	228	231	229	232	229	248	247	241	236	252	251	247	238	240	233	227	240	219	241
20	254	288	314	345	14	20	4	8	6	5	2	356	352	353	349	352	353	351	351	351	349	351	352	356
21	355	350	346	345	345	347	346	340	334	335	337	338	354	353	339	287	284	311	311	293	280	275	268	265
22	265	265	278	275	273	276	300	296	310	327	322	342	321	352	2	354	342	314	339	358	18	33	350	315
23	295	271	225	227	235	238	252	239	207	217	220	192	210	221	215	246	249	244	228	248	247	263	289	294
24	299	311	318	332	355	358	285	281	305	280	141	164	172	181	180	185	167	168	166	165	162	169	177	184
25	188	186	179	178	177	184	196	223	248	308	331	332	322	323	321	329	312	302	271	250	293	309	307	304
26	318	313	309	304	304	307	284	301	303	303	309	304	314	305	305	308	303	283	254	261	335	9	18	23
27	17	232	251	230	252	252	274	285	294	319	338	350	327	324	320	318	329	342	23	27	36	35	44	77
28	131	158	-M-	-M-	-M-	108	137	163	171	133	72	138	138	119	56	102	71	59	46	44	44	42	48	53
29	57	58	58	61	66	72	68	76	80	86	82	82	78	76	67	61	66	71	48	51	45	44	57	63
30	62	61	55	69	73	64	84	92	97	106	117	135	142	142	141	151	144	142	143	137	147	150	144	143
31	146	148	146	148	146	144	-M-	162	157	161	165	158	163	160	142	135	140	140	141	143	176	206	258	323

732 VALID OBSERVATIONS (98.4%)

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	326	333	330	330	334	337	330	332	327	316	321	336	325	325	330	334	335	339	338	331	333	331	336	337
2	335	323	312	308	307	304	311	300	298	299	303	314	317	323	318	315	307	297	290	285	288	302	298	302
3	292	287	292	286	313	314	331	328	314	285	285	265	264	260	267	277	287	267	268	272	318	338	331	302
4	299	305	305	319	336	326	329	342	342	354	353	344	309	318	329	340	276	241	218	217	203	208	205	206
5	198	191	195	194	190	189	194	200	208	221	233	243	255	262	266	272	317	320	306	321	338	335	344	336
6	334	328	322	296	283	293	289	273	248	232	212	187	186	179	181	167	165	167	167	172	190	215	232	276
7	318	304	304	293	292	295	301	304	310	317	324	321	331	329	333	331	329	331	330	330	328	332	336	323
8	323	329	329	322	316	323	319	316	298	304	317	310	257	238	236	225	200	196	232	213	185	183	191	199
9	259	311	330	350	355	358	357	1	359	10	16	30	28	33	41	45	48	45	39	40	47	68	66	49
10	32	32	23	19	15	17	12	10	6	5	359	355	354	356	354	352	352	346	346	345	345	345	342	336
11	334	324	325	322	311	310	305	292	293	279	240	206	194	201	211	220	219	208	184	171	172	176	180	185
12	184	178	179	188	191	189	198	210	211	214	222	232	228	229	227	223	224	235	209	195	180	193	199	201
13	198	201	207	202	190	187	188	196	198	201	204	210	197	192	195	198	196	189	184	177	168	170	183	192
14	186	188	180	179	183	182	178	176	180	185	182	185	188	182	179	181	181	178	172	169	171	177	187	194
15	191	193	195	198	198	199	197	195	201	197	200	204	196	196	195	202	200	202	197	199	209	211	219	209
16	208	216	224	234	261	256	260	279	286	234	215	217	220	203	201	221	204	180	182	184	192	-M-	-M-	-M-
17	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	207	195	189	196	192	185	177	178	182	186	196
18	198	210	235	241	260	296	294	322	326	326	315	303	297	285	295	286	301	279	296	272	262	257	253	252
19	250	238	230	232	240	259	274	300	321	324	321	323	324	328	338	332	333	329	337	339	337	331	0	84
20	126	158	-M-	-M-	-M-	-M-	-M-	-M-	-M-	162	153	141	148	141	145	148	146	139	132	117	121	122	133	140
21	144	144	137	134	341	5	10	358	349	353	355	360	356	5	15	12	10	9	10	355	351	352	352	350
22	348	350	348	349	346	340	338	336	333	329	329	331	338	347	345	341	341	334	330	323	322	323	322	319
23	329	339	333	332	328	324	317	316	318	319	318	323	322	323	326	331	337	340	339	341	330	325	325	337
24	327	303	305	313	258	262	235	237	229	227	200	204	208	197	198	181	174	172	156	147	148	151	155	163
25	164	169	167	163	163	148	96	96	116	114	138	135	151	124	133	129	93	71	50	51	64	70	69	75
26	83	96	111	114	104	110	115	113	116	111	113	118	116	116	119	118	113	116	117	124	117	119	131	132
27	134	138	140	146	157	173	188	205	232	268	269	270	281	295	299	314	312	314	313	332	337	344	347	339
28	322	316	319	327	331	325	316	315	309	307	313	320	320	327	332	339	342	350	349	360	9	353	345	347

649 VALID OBSERVATIONS (96.6%)

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	333	343	351	349	328	298	303	304	315	296	282	300	277	253	272	273	264	261	264	247	246	282	1	10
2	10	13	16	26	14	15	8	8	11	13	16	9	3	5	3	5	16	154	27	66	104	119	140	137
3	143	145	159	160	167	163	155	166	259	161	148	157	159	151	160	149	132	133	135	136	138	136	136	135
4	133	136	111	101	97	81	95	95	62	48	46	41	36	92	26	28	26	33	39	8	1	13	25	35
5	33	30	17	15	12	10	-M-	-M-	-M-	-M-	-M-	-M-	-M-	306	311	329	319	305	278	277	271	287	278	267
6	267	293	323	315	342	2	30	52	57	57	59	64	61	70	73	76	79	80	77	71	81	85	100	99
7	97	95	96	100	96	103	87	90	82	91	76	58	53	56	59	55	45	50	68	85	86	95	106	96
8	85	73	57	8	0	0	280	272	270	272	257	280	318	296	340	243	233	230	220	219	213	217	211	204
9	210	219	229	232	257	254	234	226	230	241	262	290	301	325	346	356	9	23	24	14	316	349	354	359
10	12	28	46	103	0	328	308	292	313	286	256	273	268	292	280	286	302	308	311	332	351	357	350	357
11	14	16	13	13	8	7	4	357	343	340	295	314	302	322	321	319	316	304	289	276	261	251	242	240
12	249	255	265	272	274	280	279	284	277	282	291	290	291	291	290	287	293	295	325	6	8	19	20	12
13	10	17	21	28	3	2	2	18	12	14	6	7	4	358	-M-	10	358	2	0	5	18	32	42	55
14	69	103	112	146	314	198	203	193	195	194	194	203	209	218	220	219	211	201	194	193	198	219	226	233
15	233	240	254	265	276	272	289	321	330	342	350	346	338	339	342	345	349	345	351	344	341	342	347	340
16	341	359	5	5	10	10	11	347	348	350	349	332	285	299	265	246	228	243	227	218	207	195	203	226
17	235	239	241	238	232	252	299	19	94	122	118	96	81	83	76	66	62	61	48	41	40	40	46	46
18	41	41	26	18	16	13	8	1	1	7	356	353	345	346	351	346	354	352	348	345	342	346	343	326
19	327	334	336	339	340	341	335	331	334	345	357	2	347	343	347	350	348	349	339	325	350	354	351	354
20	3	15	16	14	22	38	42	40	40	102	160	150	154	145	140	143	145	143	146	149	139	131	124	121
21	115	111	112	112	108	109	108	108	115	109	102	98	88	83	78	68	75	70	68	59	62	-M-	-M-	-M-
22	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
23	331	348	1	357	337	337	345	3	16	181	208	204	215	193	203	249	232	214	208	185	177	159	170	180
24	176	181	179	186	174	171	188	170	176	135	138	174	185	188	176	172	141	138	138	134	135	136	137	136
25	139	135	84	74	107	126	169	228	257	260	259	257	262	278	273	288	279	281	289	258	227	234	238	241
26	240	237	241	247	249	243	247	282	243	212	208	220	230	219	212	156	169	185	164	157	154	145	155	160
27	142	115	111	112	105	102	110	117	124	133	142	151	152	162	167	170	176	184	182	181	177	176	186	191
28	190	180	183	184	185	188	190	187	186	192	188	189	185	188	187	182	167	171	184	173	173	169	177	189
29	189	178	177	178	175	181	171	169	191	222	218	215	215	221	226	254	276	285	276	277	284	285	284	286
30	286	286	297	291	312	301	306	306	310	308	285	247	205	204	205	206	191	192	184	170	169	164	158	162
31	162	163	184	204	220	248	279	282	295	287	290	276	261	262	266	269	264	273	284	268	261	302	276	267

709 VALID OBSERVATIONS (95.3%)

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	269	275	280	280	279	289	300	301	300	308	312	313	295	286	274	273	265	239	229	220	213	205	191	184
2	184	195	185	182	193	205	205	219	246	254	259	253	253	247	237	237	229	221	217	211	216	204	202	203
3	200	193	192	190	192	208	205	204	201	213	207	212	210	215	211	209	193	207	199	214	225	285	332	332
4	332	328	325	334	331	327	324	324	318	317	323	326	322	327	329	332	337	325	325	347	14	20	334	283
5	302	326	324	315	305	306	313	316	332	338	326	334	316	323	316	312	354	4	346	356	3	45	115	147
6	160	167	172	178	176	194	185	191	184	190	188	187	191	196	198	197	205	210	212	206	196	191	196	194
7	196	196	197	192	182	183	183	179	190	205	214	225	222	204	206	215	224	229	228	243	198	171	195	202
8	192	191	199	193	311	8	2	7	12	31	31	23	9	7	11	24	19	21	21	34	36	5	33	104
9	162	172	-M-	191	189	197	201	193	187	176	184	177	168	172	175	173	177	170	157	153	147	146	143	147
10	157	162	170	172	170	182	190	206	217	227	240	241	223	224	235	234	220	226	32	121	241	269	66	135
11	107	102	155	225	254	180	359	50	185	160	103	145	138	122	120	91	144	125	233	54	265	196	190	196
12	142	123	163	33	25	28	31	38	55	42	36	38	57	95	118	102	95	111	108	106	99	89	69	87
13	85	56	55	93	123	136	316	214	255	269	267	282	314	358	2	358	357	19	344	3	13	11	8	16
14	360	357	356	360	6	10	13	17	24	27	22	19	21	25	31	34	40	48	52	73	96	111	120	108
15	116	124	132	130	133	136	136	139	145	147	150	167	178	174	174	176	179	178	179	182	181	170	174	183
16	182	194	197	199	192	172	169	161	174	183	211	219	217	215	230	246	247	242	244	236	214	190	186	208
17	219	215	214	208	214	218	236	268	264	269	296	350	3	19	31	50	38	48	58	40	40	53	44	48
18	81	132	82	97	111	115	82	100	110	102	95	97	108	119	124	135	152	200	168	155	163	163	149	146
19	163	153	136	124	122	110	98	102	108	88	81	78	56	54	56	65	65	63	63	59	48	53	58	63
20	59	58	68	77	71	67	69	72	73	77	69	80	87	101	119	120	123	128	125	125	132	140	142	137
21	137	149	150	151	150	149	164	159	164	180	182	186	185	183	181	183	193	188	187	179	175	176	175	179
22	186	181	177	168	191	191	187	204	215	254	338	333	343	338	332	327	325	322	320	315	305	302	298	303
23	301	304	301	298	300	304	301	307	326	329	329	326	326	334	335	341	343	335	344	340	342	346	338	-M-
24	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	5	350	4	326	300	178	157	175	177	182	185	195	185
25	183	182	190	182	165	149	164	178	189	198	207	235	237	239	243	239	233	234	226	218	211	211	216	228
26	230	237	243	246	245	238	231	240	242	242	242	235	222	225	221	216	218	223	220	203	203	202	205	208
27	205	200	200	204	209	203	199	200	203	200	207	202	199	197	203	198	223	217	210	205	204	208	208	210
28	214	222	268	317	350	355	353	352	354	351	339	347	354	351	350	349	347	342	338	344	17	86	160	163
29	196	214	218	221	233	229	255	296	276	301	332	350	342	325	322	312	321	327	333	337	341	348	353	353
30	3	3	353	345	333	343	332	335	359	356	344	344	338	313	277	269	265	274	278	280	269	267	296	343

707 VALID OBSERVATIONS (98.2%)

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	359	12	12	2	339	326	329	341	359	4	3	1	4	4	360	357	10	19	33	44	75	104	139	155
2	163	171	174	167	171	175	179	184	185	193	190	189	195	189	191	191	195	192	187	181	182	182	186	192
3	197	199	202	198	193	191	193	192	199	202	205	209	205	200	205	206	193	187	189	195	192	201	208	216
4	199	187	193	188	191	196	203	224	260	291	296	307	314	323	341	343	355	354	352	351	359	356	356	358
5	2	1	359	359	358	358	1	7	15	22	32	24	24	25	29	31	29	32	35	36	38	49	57	53
6	47	39	50	63	63	66	69	83	96	99	102	101	99	96	98	108	98	110	114	103	103	99	101	104
7	110	111	114	116	116	116	119	127	140	149	154	161	158	146	135	131	138	137	139	129	145	93	107	118
8	124	129	129	135	139	142	148	169	180	193	187	195	224	222	143	114	135	144	138	135	129	131	143	120
9	123	119	79	62	50	50	39	50	50	46	44	33	34	35	18	22	28	30	31	29	20	16	21	15
10	15	18	18	18	19	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	9	7	359	2	10	24
11	31	35	48	47	50	51	69	70	95	102	72	111	92	113	143	160	166	170	161	153	144	142	142	131
12	143	142	150	156	148	136	125	133	136	143	149	156	146	142	149	157	159	149	139	134	112	121	133	122
13	36	8	16	3	17	18	19	7	5	9	7	10	9	20	5	355	341	333	336	339	357	360	3	359
14	353	354	355	359	352	353	351	4	360	1	6	4	12	0	358	359	346	9	2	340	319	301	294	240
15	244	254	261	260	254	259	258	241	242	238	206	181	172	169	171	171	170	168	167	165	166	171	177	161
16	154	148	162	153	137	140	141	138	141	146	151	151	152	155	156	143	136	133	127	132	134	132	134	125
17	119	125	124	120	122	115	119	125	131	128	120	118	116	109	103	97	105	95	92	100	97	86	81	69
18	65	72	75	76	75	72	72	83	76	69	77	65	46	103	45	56	47	40	38	37	44	56	41	28
19	27	26	34	24	31	31	23	12	12	25	43	31	45	35	37	59	54	44	45	356	329	334	330	321
20	320	340	346	5	7	356	331	340	275	28	151	146	195	183	189	166	183	165	167	187	179	177	185	193
21	182	182	176	172	179	171	171	172	182	185	187	192	183	180	181	189	169	170	177	168	175	176	168	170
22	173	148	147	153	158	161	162	168	179	186	193	193	190	181	179	185	184	186	185	180	175	186	185	168
23	183	180	175	171	169	176	176	183	180	188	201	204	209	240	281	283	296	306	309	316	325	336	331	329
24	328	322	312	304	301	310	283	309	311	318	309	296	291	300	288	285	282	293	292	309	296	241	254	278
25	290	307	1	64	64	41	34	22	92	345	7	347	324	145	167	141	154	148	187	202	206	203	202	198
26	207	219	295	298	293	349	9	30	55	54	49	27	0	357	352	350	325	341	2	15	24	32	50	60
27	63	65	57	54	72	72	-M-	-M-	-M-	-M-	-M-	-M-	125	206	233	213	226	233	233	219	203	205	236	232
28	234	238	231	204	191	185	187	194	184	199	207	222	222	213	220	112	181	282	331	21	252	240	242	261
29	264	311	296	343	360	359	357	357	7	6	354	345	351	353	344	356	353	349	3	13	9	7	5	6
30	6	8	14	24	23	28	20	33	56	59	72	78	77	84	66	62	70	88	115	125	155	196	195	210
31	224	229	226	246	264	222	199	195	205	192	178	169	165	180	180	177	167	170	175	169	177	171	174	170

725 VALID OBSERVATIONS (97.4%)

318 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	178	183	198	193	221	214	220	214	195	193	197	214	206	224	219	215	214	209	201	187	185	179	181	189
2	182	190	194	202	214	204	192	164	161	204	198	179	192	186	192	207	214	324	1	18	41	70	74	81
3	80	27	351	321	331	329	346	1	2	1	1	6	13	25	31	55	47	64	58	71	99	133	147	158
4	151	153	112	118	135	131	127	119	140	134	129	115	110	119	120	130	175	213	180	154	196	265	224	193
5	217	227	234	248	260	260	269	284	238	286	236	226	222	207	196	210	225	258	210	243	242	208	232	242
6	335	25	45	18	26	31	43	42	62	79	80	83	66	29	58	20	44	34	80	105	143	194	196	199
7	197	197	193	195	205	214	186	193	189	197	213	223	226	228	229	229	231	232	226	210	110	218	239	248
8	266	259	243	250	242	213	263	226	200	209	224	239	257	269	271	279	315	342	12	19	23	31	85	123
9	120	138	125	123	129	140	89	114	145	146	143	145	166	166	216	96	81	45	42	43	22	22	26	32
10	46	356	4	16	11	10	13	312	302	270	293	253	209	177	172	168	212	230	210	215	215	210	204	195
11	138	151	148	123	136	125	323	173	110	137	138	137	140	150	167	181	189	171	161	160	159	165	161	155
12	166	140	126	103	142	126	141	152	173	190	195	179	180	186	194	201	203	200	200	192	188	191	188	186
13	191	193	196	204	213	213	214	214	219	219	217	211	213	212	213	210	211	218	211	204	203	201	202	194
14	195	201	205	207	214	217	212	209	205	208	208	208	209	210	209	207	204	206	199	199	332	349	347	341
15	343	354	6	355	4	342	51	28	356	62	330	358	346	330	326	336	336	335	322	305	317	321	332	319
16	310	311	319	319	314	309	318	335	341	336	336	327	323	334	340	327	308	308	291	265	244	225	210	199
17	199	203	203	196	200	197	201	200	198	204	203	198	201	201	207	202	201	206	199	199	197	191	191	194
18	201	203	204	211	205	255	227	288	27	34	36	38	37	41	49	47	33	30	19	21	35	37	31	32
19	23	29	39	52	63	80	111	126	140	144	148	142	153	144	148	167	180	179	158	147	144	149	154	152
20	157	159	149	159	201	230	263	311	347	19	34	63	67	61	62	80	94	95	97	98	98	96	98	97
21	104	127	140	123	144	128	188	300	45	254	247	254	250	247	250	259	270	359	356	344	352	351	335	338
22	343	352	7	352	215	229	248	244	274	205	226	246	249	282	287	83	27	23	37	43	58	82	102	119
23	140	145	163	169	177	173	165	177	174	178	177	180	184	192	198	203	207	211	211	210	205	203	212	217
24	219	224	224	215	227	217	199	208	201	228	252	255	264	331	12	17	22	31	40	47	59	65	70	84
25	73	68	134	119	162	155	19	281	-M-	113	80	120	159	345	347	349	357	344	10	35	58	59	75	79
26	73	121	145	153	153	171	176	187	187	188	183	202	197	177	169	184	184	180	156	164	158	166	200	173
27	169	191	223	216	191	207	169	175	168	173	178	181	185	196	198	190	186	182	177	178	177	179	190	191
28	199	205	204	207	214	208	209	213	213	217	219	212	211	210	212	208	206	196	192	192	189	186	187	193
29	198	209	229	262	217	195	199	199	213	225	236	272	349	7	13	21	39	40	59	77	67	67	59	28
30	58	54	37	36	30	30	39	59	77	83	87	86	75	85	80	84	76	76	61	53	54	70	83	85

719 VALID OBSERVATIONS (99.9%)

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	9	11	11	12	15	15	19	20	18	18	18	18	15	15	16	15	13	11	9	8	8	8	6	4
2	3	3	3	4	3	4	3	4	4	4	4	10	13	16	16	17	17	8	5	3	3	3	4	7
3	13	14	21	20	17	17	17	18	16	19	18	15	13	13	12	11	9	8	6	5	4	5	5	6
4	5	6	5	5	6	6	7	8	9	10	10	9	8	8	10	10	11	9	8	8	8	10	11	11
5	11	11	11	11	8	8	7	9	10	10	11	13	12	13	13	14	14	10	8	5	5	5	5	5
6	8	7	6	7	5	4	3	10	9	12	16	18	19	21	22	22	18	14	14	13	12	9	7	5
7	9	9	10	10	9	8	9	6	-M-	-M-	-M-	-M-	10	12	11	7	6	4	4	4	3	2	2	1
8	2	6	6	4	6	6	5	7	7	7	7	6	5	5	5	4	5	4	3	1	1	2	3	1
9	0	0	0	1	2	2	4	5	7	7	12	16	15	14	13	12	12	11	9	6	7	9	7	8
10	6	6	5	3	2	2	1	2	3	6	8	9	8	7	7	10	9	7	4	3	3	4	4	6
11	6	10	12	12	10	9	10	10	7	9	8	7	6	5	5	6	6	5	2	2	2	3	3	4
12	3	8	7	6	10	10	10	7	5	5	8	8	8	9	11	13	12	8	8	7	11	14	9	4
13	2	2	4	5	2	3	2	3	2	2	3	5	5	4	6	8	7	9	8	8	4	5	3	2
14	2	3	2	8	11	12	10	13	13	20	19	18	14	13	15	13	12	9	6	5	2	3	6	5
15	5	7	7	7	6	10	12	14	12	8	9	10	13	12	14	15	14	15	11	10	9	8	9	10
16	9	10	7	6	10	7	7	6	5	10	10	10	11	11	10	9	10	8	5	6	5	5	3	3
17	2	2	3	4	2	2	1	2	4	3	7	9	16	15	14	13	12	9	8	10	10	11	11	12
18	12	8	2	2	3	2	4	3	2	4	8	12	12	15	17	19	18	13	15	9	9	11	15	13
19	7	9	9	10	9	9	9	9	5	6	9	11	11	11	11	8	7	5	4	2	3	4	4	3
20	1	1	0	1	3	3	5	7	9	12	14	13	11	13	14	14	13	10	9	9	12	12	9	10
21	9	8	6	6	8	7	5	5	3	5	6	7	8	6	5	4	6	4	3	2	2	2	2	1
22	2	2	2	2	2	2	2	3	2	3	4	3	4	5	5	5	4	1	3	2	1	2	2	3
23	1	0	1	2	2	2	2	3	2	2	3	4	5	6	6	9	9	6	2	2	3	2	2	2
24	2	1	1	1	2	2	1	1	1	2	2	2	4	7	9	7	8	6	4	3	3	4	10	8
25	7	6	6	3	4	3	4	2	2	8	10	14	17	18	17	14	14	12	6	8	10	17	15	15
26	15	12	14	14	11	10	11	11	11	11	13	14	13	12	12	12	11	7	5	3	5	4	2	1
27	2	4	4	3	0	-M-	2	4	4	8	8	10	10	11	12	11	10	9	9	7	5	4	3	3
28	3	2	3	3	3	3	3	3	4	5	5	6	7	5	4	5	5	6	6	7	8	10	9	10
29	10	12	12	12	11	11	9	9	9	12	13	13	12	13	13	13	12	10	10	10	10	10	9	7
30	8	5	5	5	5	5	4	4	5	4	6	12	13	13	13	13	13	12	9	9	9	7	11	12
31	13	10	9	10	14	15	17	19	17	17	17	12	10	7	7	8	9	7	7	7	4	3	3	7
HOURLY MEAN	6	6	6	6	6	7	7	7	7	8	9	10	11	11	11	11	10	8	7	6	6	6	6	6

MAXIMUM = 22 MINIMUM = 0 MEAN = 8 739 VALID OBSERVATIONS (99.3%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	20	17	21	11	14	22	12	7	16	10	12	14	9	20	15	11
MIN	4	3	4	5	5	3	1	1	0	1	2	3	2	2	5	3
MEAN	13	7	13	8	9	12	7	5	7	5	7	8	4	10	10	8

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

MEAN MAXIMUM = 14 MEAN MINIMUM = 2

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	10	15	14	18	17	15	15	17	16	15	19	21	19	21	22	22	21	20	19	16	17	17	19	20
2	17	14	13	14	13	14	13	11	10	9	11	14	16	18	17	15	13	11	7	7	9	7	7	7
3	7	12	10	5	4	6	4	4	5	4	4	6	5	5	6	6	8	7	9	10	10	12	7	4
4	8	12	13	13	14	11	6	9	10	10	11	7	7	8	7	4	6	5	5	6	6	7	7	7
5	7	5	5	6	7	7	8	9	8	13	18	19	18	18	14	12	13	13	11	11	11	9	10	8
6	6	6	3	4	3	3	5	3	5	5	6	5	9	12	15	15	16	13	11	9	9	11	14	12
7	10	10	11	10	13	13	12	11	12	15	15	18	21	22	22	21	21	19	14	13	12	13	14	13
8	16	17	18	10	9	9	7	5	6	10	9	4	9	11	11	11	9	10	8	5	4	6	5	4
9	5	4	8	11	13	12	12	14	10	12	13	9	9	9	9	9	9	11	10	10	10	10	10	9
10	11	12	15	20	23	24	24	26	22	26	25	29	29	29	30	26	26	28	26	22	24	20	20	18
11	16	14	10	9	11	10	8	5	8	9	7	7	9	10	11	12	12	11	7	6	7	9	11	10
12	10	11	12	13	15	14	12	13	12	16	17	17	15	14	12	12	12	9	5	5	5	7	8	7
13	8	6	7	5	5	7	10	7	10	13	14	15	14	13	15	17	16	12	9	7	7	7	8	7
14	6	8	8	7	7	6	6	7	9	9	12	14	14	14	16	14	14	12	12	14	13	14	14	16
15	15	16	15	13	14	14	10	-M-	-M-	-M-	15	19	19	18	19	21	18	15	8	7	7	6	4	4
16	4	4	7	4	3	3	3	2	3	3	4	7	6	6	7	10	11	10	9	9	8	8	8	8
17	9	7	8	10	10	10	9	8	7	10	13	17	18	19	19	17	21	15	12	11	10	9	10	10
18	7	8	8	8	4	2	4	3	3	5	5	6	7	8	9	6	6	6	5	8	8	3	5	10
19	9	6	9	11	11	14	16	12	13	13	14	19	20	22	20	19	16	10	6	2	1	2	1	2
20	2	2	3	2	1	2	3	1	2	6	8	12	16	19	21	21	18	16	10	10	10	8	5	7
21	6	6	5	3	5	8	8	8	9	11	15	15	14	15	16	19	21	23	19	17	22	21	20	19
22	18	20	19	21	20	17	15	17	19	18	19	23	24	23	25	25	23	22	20	14	14	15	14	12
23	15	19	18	19	16	15	15	13	16	16	17	19	18	19	21	21	22	16	10	8	7	4	6	3
24	4	2	2	2	3	3	3	2	3	4	7	12	15	12	12	12	12	12	9	9	11	11	10	7
25	8	6	4	4	3	5	4	3	2	4	8	7	5	4	6	5	5	6	12	11	10	9	11	11
26	10	9	6	6	5	7	8	9	13	13	12	13	11	11	13	13	11	11	11	11	10	13	18	15
27	12	10	13	13	9	9	10	8	11	19	18	15	16	17	16	16	15	14	12	8	10	11	14	9
28	8	8	10	12	12	12	13	12	12	13	14	14	12	13	13	13	12	11	11	10	7	6	6	4
HOURLY MEAN	9	10	10	10	10	10	9	9	10	11	12	14	14	15	15	15	15	13	11	10	10	10	10	9

MAXIMUM = 30 MINIMUM = 1 MEAN = 11 669 VALID OBSERVATIONS (99.6%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	22	18	12	14	19	16	22	18	14	30	16	17	17	16
MIN	10	7	4	4	5	3	10	4	4	11	5	5	5	6
MEAN	18	12	7	8	11	8	15	9	10	23	10	11	10	11

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	21	11	21	10	22	21	23	25	22	15	12	18	19	14
MIN	4	2	7	2	1	1	3	12	3	2	2	5	8	4
MEAN	13	6	12	6	11	9	14	19	15	7	6	11	13	11

MEAN MAXIMUM = 18 MEAN MINIMUM = 5

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2	3	2	1	2	3	2	2	2	2	5	6	4	8	9	9	10	11	8	8	8	8	9	7
2	5	7	13	12	9	10	10	11	11	11	10	10	9	8	6	6	5	4	3	2	1	2	1	2
3	3	4	3	2	5	6	8	6	9	9	9	10	10	9	10	9	9	7	6	8	8	8	9	8
4	6	6	9	8	8	8	7	5	5	11	10	8	9	10	12	13	12	10	4	2	4	8	12	12
5	10	10	11	11	9	6	5	4	-M-	6	9	8	9	10	7	7	7	6	7	7	4	3	3	1
6	1	1	1	2	3	3	4	6	6	10	10	10	9	9	9	10	9	9	8	-M-	-M-	-M-	-M-	-M-
7	-M-	4	6	4	4	5	5	4	4	4	5	7	8	8	7	6	8	8	5	2	2	2	1	0
8	1	3	3	1	0	1	1	0	0	1	3	4	3	3	3	3	5	5	4	4	3	3	4	2
9	2	2	4	4	8	8	8	9	10	11	14	16	16	16	15	14	14	14	8	2	1	3	3	5
10	4	6	3	0	1	1	1	1	1	4	6	9	9	10	12	12	13	12	10	6	5	6	6	6
11	11	10	8	5	5	4	3	2	1	2	4	7	8	8	9	8	8	7	5	3	0	1	4	7
12	9	9	10	8	9	9	9	8	9	12	15	20	20	18	17	14	12	10	7	3	2	2	2	2
13	4	1	0	3	3	2	1	3	2	5	5	10	-M-	13	12	12	12	11	9	6	5	3	3	2
14	0	1	1	1	0	1	1	1	1	4	8	10	11	12	12	12	14	14	11	7	5	8	6	4
15	5	9	9	9	10	6	7	2	7	10	14	17	22	24	23	24	24	24	22	15	11	10	8	6
16	5	6	6	6	5	4	5	2	1	2	3	4	4	5	6	8	9	11	10	8	7	6	8	8
17	7	10	11	15	13	4	3	2	3	5	6	8	12	14	16	16	17	17	15	19	19	18	17	15
18	14	13	14	14	13	13	12	12	14	12	13	14	16	17	18	18	19	18	17	10	10	10	9	9
19	11	11	10	8	10	9	9	11	13	17	18	18	17	19	22	20	17	16	12	6	10	9	7	4
20	1	2	0	1	1	2	1	1	1	1	3	3	4	6	8	9	9	11	10	7	6	6	7	9
21	10	11	10	13	11	13	10	11	11	13	13	13	12	13	11	13	13	12	12	14	14	12	11	10
22	9	8	7	8	7	8	9	9	9	8	9	10	10	7	8	9	8	7	5	2	2	2	0	0
23	0	0	0	0	0	0	0	0	0	1	1	3	3	4	5	4	3	6	2	2	1	2	1	2
24	4	4	1	2	3	4	3	4	4	4	6	7	9	10	9	8	10	10	9	6	5	4	2	2
25	1	2	5	5	4	2	2	2	5	11	13	12	8	8	8	10	9	8	6	3	7	10	11	11
26	9	8	11	12	13	9	-M-	2	2	3	5	8	8	6	3	5	7	8	8	8	6	8	6	2
27	2	2	1	2	3	4	4	9	12	14	17	20	22	22	23	24	23	19	15	11	11	10	11	12
28	12	14	16	16	15	14	13	10	-M-	22	20	23	22	22	23	22	20	17	15	16	17	17	15	11
29	11	12	14	15	13	15	14	15	17	26	23	22	23	25	24	27	27	22	17	15	14	11	9	9
30	5	6	7	8	7	3	3	2	6	7	6	5	8	11	12	14	15	14	12	11	15	14	11	15
31	16	7	11	14	14	11	13	16	15	20	20	20	25	28	26	30	29	28	25	16	11	15	9	11
HOURLY MEAN	6	6	7	7	7	6	6	6	6	9	10	11	12	12	12	13	13	12	10	8	7	7	7	6

MAXIMUM = 30 MINIMUM = 0 MEAN = 9 734 VALID OBSERVATIONS (98.7%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	11	13	10	13	11	10	8	5	16	13	11	20	13	14	24	11
MIN	1	1	2	2	1	1	0	0	1	0	0	2	0	0	2	1
MEAN	5	7	7	8	7	6	5	3	9	6	5	10	5	6	13	6

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	19	19	22	11	14	10	6	10	13	13	24	23	27	15	30
MIN	2	9	4	0	10	0	0	1	1	2	1	10	9	2	7
MEAN	12	14	13	5	12	7	2	6	7	7	12	17	17	9	18

MEAN MAXIMUM = 15 MEAN MINIMUM = 2.

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	13	14	14	14	13	13	9	10	12	12	13	15	13	13	12	12	12	11	11	8	6	4	4	5
2	5	5	6	7	6	7	11	13	12	16	23	19	18	19	22	25	27	26	21	17	15	13	15	18
3	18	16	13	13	12	15	16	18	21	27	24	26	26	29	31	31	22	22	24	19	24	17	22	12
4	14	17	17	16	17	16	15	16	17	17	18	16	16	17	15	13	14	12	13	10	7	4	2	6
5	8	10	9	10	9	10	8	10	11	13	14	13	15	14	15	15	10	11	7	4	2	1	1	1
6	2	1	1	0	2	4	6	7	11	17	20	20	24	26	26	27	28	27	22	13	10	12	12	12
7	14	12	13	11	9	10	8	9	12	14	16	15	13	14	15	16	16	12	11	3	1	3	6	14
8	11	11	9	8	8	8	12	13	17	16	16	18	19	18	18	15	15	12	9	6	4	4	2	3
9	3	2	2	2	1	2	3	2	6	11	14	16	14	15	14	17	17	16	15	11	11	11	9	10
10	8	6	7	7	6	7	9	11	16	22	24	23	19	21	21	21	23	21	9	6	7	12	8	6
11	5	4	3	3	13	10	9	5	3	4	5	9	8	8	7	6	4	6	6	6	5	3	7	13
12	10	6	5	9	8	7	8	9	6	8	9	8	6	6	7	6	7	7	6	5	4	5	6	5
13	3	4	5	2	2	3	2	3	3	6	7	6	5	10	13	13	15	22	24	22	20	20	23	20
14	14	11	11	13	15	17	15	15	17	19	17	15	14	12	12	10	10	9	9	6	4	5	3	3
15	2	2	2	3	3	2	4	7	9	13	12	12	12	11	13	14	15	13	12	9	7	6	9	11
16	8	8	8	5	6	7	7	6	10	13	16	19	20	21	22	21	22	19	16	10	5	4	4	7
17	8	10	9	5	5	4	6	5	5	6	6	6	10	13	12	10	10	8	7	7	6	6	7	7
18	3	3	5	6	6	5	6	9	9	7	10	12	12	13	12	13	12	14	9	10	11	14	13	7
19	8	8	5	5	4	4	4	4	5	5	6	5	5	7	8	9	9	11	12	11	12	14	14	12
20	11	10	11	11	11	10	10	9	8	9	11	12	10	9	9	10	11	10	9	8	7	7	6	9
21	8	7	8	8	8	9	7	11	14	13	12	12	11	11	13	13	13	13	11	9	10	10	10	9
22	7	10	10	11	12	10	11	12	12	15	15	19	18	17	19	17	18	17	16	13	11	8	9	12
23	12	15	12	14	15	11	6	11	12	13	14	17	18	22	21	19	18	19	14	8	7	7	6	7
24	4	4	4	3	2	3	6	6	6	7	5	6	5	5	4	4	5	6	7	7	5	5	6	6
25	7	7	9	8	8	10	11	13	13	11	12	17	22	26	27	26	24	21	19	14	11	11	13	17
26	13	14	13	11	12	9	11	13	13	12	10	12	11	12	12	13	16	18	16	10	-M-	-M-	-M-	-M-
27	-M-	8	7	7	7	7	9	11	12	14	19	19	12	20	15	21	18	19	15	13	12	12	11	10
28	11	12	8	5	8	10	14	18	16	16	12	17	10	13	11	10	7	8	8	4	2	2	3	3
29	5	6	4	3	2	4	8	6	12	11	8	11	14	16	16	18	17	18	12	8	7	5	4	5
30	4	3	3	3	4	4	4	7	7	8	6	8	7	6	9	14	16	15	12	9	8	10	11	4
HOURLY MEAN	8	8	8	7	8	8	8	10	11	12	13	14	13	15	15	15	15	15	13	9	8	8	9	9

MAXIMUM = 31 MINIMUM = 0 MEAN = 11 715 VALID OBSERVATIONS (99.3%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	15	27	31	18	15	28	16	19	17	24	13	10	24	19	15
MIN	4	5	12	2	1	0	1	2	1	6	3	4	2	3	2
MEAN	11	15	21	13	9	14	11	11	9	13	6	7	11	12	8

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	22	13	14	14	12	14	19	22	7	27	18	21	18	18	16
MIN	4	4	3	4	6	7	7	6	2	7	9	7	2	2	3
MEAN	12	7	9	8	9	10	13	13	5	15	13	13	9	9	8

MEAN MAXIMUM = 18 MEAN MINIMUM = 4.

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3	4	4	4	4	4	5	7	10	10	13	13	13	11	10	9	8	7	5	4	3	2	2	2
2	2	2	3	5	7	11	10	11	14	19	18	18	20	19	20	22	22	19	17	15	14	14	14	18
3	18	17	14	14	13	14	13	13	18	22	23	21	23	21	23	21	19	19	17	18	19	20	20	17
4	11	10	10	9	9	7	6	8	10	12	9	7	9	9	10	11	9	10	10	10	7	5	4	6
5	8	8	10	10	10	9	8	10	11	14	14	15	15	14	15	15	14	13	11	11	11	9	7	8
6	6	6	6	5	3	3	4	5	4	7	9	11	11	11	10	9	12	11	9	7	8	6	5	6
7	7	8	7	5	6	5	7	9	10	11	12	12	13	12	12	12	11	7	8	7	4	4	7	9
8	7	6	4	6	7	8	8	9	8	7	5	4	4	3	4	5	4	5	7	6	7	5	4	3
9	3	2	4	5	5	6	6	6	5	7	7	12	15	16	21	20	19	15	17	15	14	16	15	16
10	17	18	16	18	18	15	17	17	18	17	16	15	16	16	15	16	14	13	11	8	4	4	4	5
11	5	5	3	3	2	3	2	2	3	4	5	6	6	6	7	10	11	11	11	8	7	6	7	7
12	8	8	8	10	6	7	9	12	13	16	15	10	9	11	10	12	9	7	9	6	3	4	2	3
13	9	9	8	11	8	11	10	9	10	11	-M-	9	11	13	12	10	9	8	8	7	8	10	11	11
14	11	10	10	7	7	6	5	6	8	9	9	11	11	11	10	8	6	6	4	2	2	2	2	0
15	0	2	2	1	2	1	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	14	16	13	10	9	11	9	7
16	7	6	5	5	6	7	8	12	12	14	19	19	21	23	20	14	15	14	16	15	14	10	8	11
17	15	11	11	10	10	11	11	11	13	15	15	14	15	16	15	14	13	12	13	13	12	13	11	9
18	12	11	11	12	13	14	13	14	14	13	13	13	13	12	16	16	16	16	12	13	12	9	5	10
19	9	10	8	10	9	8	8	10	11	9	9	9	9	9	8	8	7	7	4	3	3	2	2	2
20	3	2	2	2	1	1	1	2	3	3	4	4	6	6	8	9	9	10	10	5	4	3	4	2
21	3	4	4	4	3	2	4	6	14	15	17	18	20	20	19	21	23	22	19	18	14	13	14	11
22	5	6	9	10	8	11	12	12	16	16	14	17	17	19	19	20	21	18	16	15	15	21	13	8
23	11	11	7	10	13	12	11	16	11	14	16	15	13	12	13	14	16	13	9	8	12	13	12	10
24	11	10	9	5	5	7	9	11	11	13	14	13	15	14	15	15	14	12	9	4	3	6	7	7
25	7	4	3	3	4	5	4	5	4	3	7	5	4	5	4	4	5	4	9	7	6	5	4	5
26	4	2	4	3	3	1	3	7	6	6	6	7	6	5	6	6	5	6	7	5	4	4	4	4
27	3	4	5	4	4	5	4	4	6	6	5	5	4	4	5	5	6	7	5	4	4	3	6	4
28	3	2	2	2	1	1	2	3	3	3	7	7	8	8	4	4	2	3	2	2	3	3	4	7
29	9	5	3	3	2	3	4	5	5	6	7	8	9	9	9	8	8	7	7	4	4	5	9	10
30	9	8	8	7	7	5	6	6	7	8	8	8	7	7	8	8	8	6	6	5	4	5	5	5
31	6	4	2	2	2	2	2	4	4	6	9	10	12	14	13	14	12	11	11	10	7	5	5	3
HOURLY MEAN	8	7	7	7	6	7	7	8	9	10	11	11	12	12	12	12	12	11	10	9	8	8	7	7

MAXIMUM = 23 MINIMUM = 0 MEAN = 9 733 VALID OBSERVATIONS (98.5%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	13	22	23	12	15	12	13	9	21	18	11	16	13	11	16	23
MIN	2	2	13	4	7	3	4	3	2	4	2	2	7	0	0	5
MEAN	7	14	18	9	11	7	9	6	11	14	6	9	10	7	7	13

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

MEAN MAXIMUM = 14 MEAN MINIMUM = 4.

35 FT WIND SPEED (MPH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5	6	3	3	4	3	3	6	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
2	-M-	-M-	10	9	7	9	5	4	5	3	7	7	8	9	12	14	15	10	9	12	8	4	3	2
3	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
4	-M-	-M-	-M-	-M-	0	1	2	2	2	4	4	4	7	5	4	5	9	4	3	4	4	2	3	3
5	3	3	3	3	3	2	3	2	4	4	5	7	6	8	5	6	7	10	2	2	2	2	3	2
6	5	3	3	6	7	7	5	5	6	8	6	5	4	3	4	4	4	3	2	3	5	6	6	3
7	4	4	5	5	5	5	8	10	11	12	19	23	23	24	25	26	26	25	20	22	7	13	17	12
8	9	7	5	3	5	6	4	8	11	15	19	15	14	12	13	12	13	10	11	10	6	4	4	2
9	4	6	5	6	5	5	5	9	16	13	12	11	10	5	6	8	8	8	9	9	11	13	12	9
10	3	5	5	3	3	6	3	3	4	4	6	6	5	6	7	9	11	10	10	9	6	3	2	1
11	3	2	6	3	4	3	6	19	8	6	8	11	9	8	9	8	9	7	6	8	9	10	11	10
12	8	5	5	4	5	4	6	7	7	11	11	10	14	15	17	18	19	17	14	14	13	12	13	13
13	11	11	10	11	12	13	13	18	22	26	28	28	29	29	30	28	26	25	20	19	16	15	15	17
14	17	19	20	19	19	16	16	20	20	23	25	24	26	25	26	23	25	24	20	20	14	7	6	5
15	5	7	8	8	13	15	12	9	7	3	8	5	6	8	11	11	10	10	8	3	5	7	7	7
16	7	7	9	9	9	10	12	9	11	12	13	11	11	10	7	8	7	7	6	5	2	2	4	5
17	8	11	8	8	9	10	13	14	14	19	21	23	25	26	24	22	22	20	19	17	13	12	13	11
18	7	6	4	2	3	3	1	2	9	12	12	10	9	10	8	6	7	7	7	6	4	4	4	5
19	6	5	5	4	4	5	4	5	8	12	13	12	13	14	15	14	12	11	8	7	6	3	1	2
20	2	3	4	4	4	3	3	4	3	5	6	5	4	4	5	4	4	4	5	4	11	8	10	9
21	3	2	6	9	6	6	6	7	9	11	9	3	2	1	3	4	6	4	4	3	1	3	1	2
22	2	2	2	6	4	4	4	1	3	2	5	3	3	2	2	0	2	4	7	3	4	3	3	2
23	2	3	3	3	3	3	4	7	12	11	12	13	16	17	21	22	22	21	20	19	14	12	10	16
24	17	17	15	12	3	2	7	7	10	14	10	8	8	7	10	8	9	12	13	9	6	5	3	2
25	2	2	5	2	1	2	3	1	1	2	3	3	2	2	2	4	4	4	3	4	2	3	3	0
26	1	2	1	1	1	1	0	3	5	7	6	6	8	9	10	10	8	8	10	5	9	4	5	11
27	9	8	3	5	7	7	7	9	10	12	15	18	16	17	17	15	17	17	14	12	11	12	12	11
28	9	12	10	10	10	9	11	12	17	20	23	20	21	23	23	21	21	21	20	16	13	10	13	16
29	14	13	11	4	6	6	5	6	8	10	10	8	10	12	11	11	9	7	7	4	0	2	2	3
30	1	3	4	3	4	4	6	4	7	8	10	7	6	6	6	6	4	4	4	4	3	4	4	3
HOURLY MEAN	6	6	6	6	6	6	6	7	9	10	12	11	11	11	12	12	12	11	10	9	7	7	7	7

MAXIMUM = 30 MINIMUM = 0 MEAN = 9 674 VALID OBSERVATIONS (93.6%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	6	15	-M-	9	10	8	26	19	16	11	19	19	30	26	15
MIN	3	2	-M-	0	2	2	4	2	4	1	2	4	10	5	3
MEAN	4	8	-M-	4	4	5	15	9	9	5	8	11	20	19	8

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

MEAN MAXIMUM = 15 MEAN MINIMUM = 3.

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																						
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	291	302	307	307	323	332	341	346	346	346	345	351	359	344	336	336	330	320	329	313	312	307	278	259
2	126	175	125	185	143	168	137	163	182	156	161	207	197	201	198	195	204	185	182	153	156	57	151	296
3	345	341	3	12	11	9	12	12	15	21	20	15	15	14	12	12	15	26	34	49	54	64	84	98
4	78	91	98	81	98	119	110	107	114	119	132	139	135	134	119	134	139	126	121	132	144	146	150	156
5	153	148	151	152	150	152	150	163	163	165	177	190	186	191	188	195	199	192	192	179	179	197	196	202
6	223	216	176	245	270	30	94	331	314	305	320	332	339	337	341	344	346	343	337	333	347	286	290	351
7	1	8	29	32	34	35	-M-	-M-	-M-	-M-	-M-	-M-	-M-	149	146	133	122	95	24	44	121	162	107	37
8	31	322	318	359	329	340	15	7	9	14	5	13	8	343	351	20	24	16	14	42	200	137	170	157
9	101	150	75	355	195	310	1	343	355	347	355	351	349	349	352	350	349	349	357	354	5	13	11	21
10	15	18	13	9	40	68	120	155	143	139	186	208	201	189	192	196	197	208	187	174	162	141	87	75
11	39	27	24	25	18	9	4	9	13	5	11	10	15	3	329	309	292	299	335	196	182	199	202	193
12	183	233	228	229	239	244	240	230	222	233	244	235	234	230	236	231	221	202	215	236	249	265	299	186
13	105	300	347	326	215	345	103	26	130	164	10	23	6	10	352	356	342	350	346	345	350	329	287	310
14	150	235	183	302	306	307	330	341	341	338	345	347	351	343	343	338	326	314	322	317	323	312	304	334
15	339	343	317	304	325	347	339	351	352	350	349	353	353	355	356	357	355	354	5	8	3	356	358	356
16	353	348	337	341	351	348	347	334	328	334	343	345	352	353	333	338	341	346	312	335	321	343	314	359
17	284	255	331	328	289	220	127	148	192	182	271	280	278	277	280	278	278	271	249	253	259	262	268	271
18	262	258	210	180	172	181	163	169	175	170	201	218	221	224	231	230	224	217	218	209	201	212	224	224
19	211	215	220	225	211	228	225	228	209	203	245	242	244	245	252	253	247	237	229	182	184	157	185	177
20	340	27	105	70	19	16	8	9	2	6	5	357	353	355	351	351	355	352	354	354	357	1	1	360
21	359	356	351	351	346	343	344	316	295	330	346	345	7	13	343	302	284	323	324	260	190	198	217	178
22	181	185	170	158	161	146	300	186	138	347	346	109	28	16	36	10	14	41	9	341	83	147	220	14
23	152	115	151	151	129	151	83	177	185	169	134	167	180	227	218	238	252	245	191	163	162	117	129	189
24	195	149	152	66	251	240	219	238	34	167	134	152	152	170	189	183	172	169	182	197	164	181	170	178
25	173	168	169	152	66	165	191	44	225	296	342	339	327	330	328	337	320	311	269	237	285	320	314	307
26	319	318	315	309	312	311	282	304	302	302	313	305	317	307	312	316	303	283	257	257	346	25	358	194
27	192	251	212	195	-M-	-M-	62	102	142	257	347	0	329	327	328	325	338	349	18	19	29	19	34	290
28	121	102	109	8	11	137	154	164	190	44	10	136	156	215	61	65	68	56	47	26	29	39	44	48
29	58	57	57	56	63	70	61	69	76	77	72	89	92	71	63	60	68	71	47	50	42	41	49	45
30	52	36	10	32	47	46	20	26	6	44	108	137	141	145	141	156	159	156	150	145	151	145	144	143
31	150	150	148	149	152	149	160	167	163	166	169	160	169	164	159	148	141	141	137	142	158	211	257	323

735 VALID OBSERVATIONS (98.8%)

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	327	329	329	329	334	336	329	330	326	319	320	334	329	325	330	335	336	342	342	334	337	336	338	339
2	336	323	310	312	309	307	311	296	289	292	298	311	319	327	321	320	310	300	276	271	272	289	280	289
3	278	269	283	315	326	205	251	232	203	176	193	239	258	249	259	269	288	263	263	267	301	330	286	204
4	292	298	296	315	327	310	307	329	338	355	359	356	320	320	319	341	270	229	211	212	201	210	206	198
5	199	174	179	194	180	181	189	192	196	216	233	241	254	260	262	271	312	319	305	324	339	336	344	335
6	329	326	21	0	224	175	200	161	184	182	184	176	187	180	178	171	172	168	167	167	184	208	225	260
7	312	293	298	276	280	287	293	291	305	316	324	319	333	330	332	332	331	333	335	334	330	332	338	325
8	321	331	333	322	319	324	309	311	281	304	326	335	258	238	239	226	205	197	234	200	167	179	163	171
9	274	335	349	349	354	1	360	5	3	8	21	28	31	30	33	43	35	40	34	33	38	60	61	40
10	24	27	19	16	16	16	10	9	5	7	0	357	354	358	356	350	349	345	346	345	347	346	343	339
11	337	324	326	324	313	314	294	256	278	273	225	198	196	203	214	216	220	207	181	176	177	182	177	161
12	177	177	175	184	190	187	188	204	208	209	220	226	229	223	224	218	224	228	193	181	198	190	197	199
13	193	194	197	179	178	168	176	198	200	197	199	204	197	192	192	193	192	186	172	168	157	147	183	187
14	180	178	177	167	165	152	158	154	168	184	180	188	192	183	181	181	179	178	170	167	176	176	183	196
15	189	193	198	196	194	195	-M-	-M-	-M-	-M-	191	193	193	191	193	194	194	195	199	198	211	202	180	194
16	199	186	194	186	210	175	157	164	158	157	178	201	212	196	196	209	202	170	172	180	193	176	173	190
17	193	185	195	206	208	210	194	166	185	192	202	210	206	203	192	186	191	187	174	163	164	170	174	187
18	171	193	229	233	198	206	281	333	6	323	311	303	297	284	292	280	302	276	277	258	259	192	229	255
19	251	213	219	226	232	250	266	297	318	322	320	319	320	325	333	328	324	326	324	239	134	95	128	152
20	149	148	168	127	122	84	163	136	136	142	129	139	151	140	144	150	145	138	130	109	115	132	154	138
21	137	132	98	13	345	4	1	357	342	348	351	355	350	358	10	360	5	5	3	348	347	348	346	345
22	339	339	340	340	338	330	331	330	328	324	330	331	334	338	340	334	335	331	325	322	314	317	317	313
23	326	333	328	326	322	320	316	311	314	317	319	321	320	319	318	329	334	336	334	323	298	338	297	146
24	253	0	112	170	180	154	197	163	170	170	182	197	203	192	187	176	172	161	146	137	134	134	133	137
25	136	146	151	157	146	158	30	1	109	118	132	133	149	135	118	100	96	53	34	35	46	54	53	61
26	65	68	87	94	78	102	110	111	112	106	109	114	113	115	116	118	111	115	110	115	112	108	120	128
27	128	144	138	137	132	148	172	187	210	256	269	265	275	290	296	309	308	314	309	327	332	338	340	327
28	298	294	302	315	319	313	307	307	304	303	308	317	320	324	329	338	342	349	347	355	11	349	338	325

668 VALID OBSERVATIONS (99.4%)

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	117	352	12	21	186	262	253	87	78	62	343	300	274	240	264	265	258	257	258	232	235	282	351	3
2	351	7	9	19	7	11	10	3	4	11	16	15	6	9	11	355	348	14	12	360	29	241	122	163
3	158	144	164	154	163	142	137	153	174	162	155	162	161	150	158	151	132	128	128	133	134	132	137	137
4	129	121	111	103	100	87	103	94	39	39	35	28	24	20	12	11	15	19	7	332	344	1	13	25
5	19	20	5	7	5	358	336	320	325	351	359	353	308	293	303	315	313	293	272	268	189	167	166	109
6	355	55	300	135	350	40	4	11	29	45	49	49	52	47	54	53	54	62	60	45	49	-M-	-M-	-M-
7	-M-	81	85	86	78	81	58	63	67	89	65	56	46	52	63	43	35	40	56	48	10	10	14	30
8	17	359	86	150	65	200	295	165	130	157	197	242	47	238	27	253	213	211	213	207	194	205	194	194
9	186	190	197	204	245	234	215	209	217	230	256	285	297	323	346	351	3	12	14	347	280	342	348	355
10	13	9	100	175	10	10	135	100	75	242	250	266	287	289	276	282	297	302	308	325	339	350	334	347
11	9	12	6	359	0	359	355	345	45	18	307	306	308	331	318	313	310	294	277	250	170	196	231	239
12	245	247	262	262	261	256	242	253	249	273	285	282	287	285	285	281	287	294	322	0	3	359	192	325
13	8	117	70	3	121	5	135	19	21	9	28	4	-M-	356	358	10	353	1	352	353	9	12	18	57
14	130	140	3	235	120	120	139	151	175	164	192	197	210	224	218	217	206	201	194	187	189	213	215	221
15	227	224	242	255	264	247	284	356	332	335	347	346	332	340	339	340	347	344	348	341	332	329	326	332
16	334	339	358	11	3	354	3	140	10	355	20	355	280	280	250	229	220	234	219	211	200	183	185	208
17	234	238	241	232	228	290	350	10	100	110	110	87	78	81	77	52	47	48	39	27	28	29	33	35
18	31	27	17	12	4	4	359	351	350	360	353	352	347	342	351	350	351	349	347	343	334	332	324	313
19	311	318	326	330	330	328	319	320	328	345	353	359	349	343	347	346	352	347	343	309	334	349	336	345
20	7	8	140	57	111	69	173	138	155	150	151	154	159	150	142	145	145	145	149	152	133	125	118	120
21	118	116	115	119	115	113	116	119	126	119	113	106	92	86	83	60	70	62	59	-M-	-M-	-M-	-M-	-M-
22	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
23	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	134	148	185	161	176	206	226	182	202	204	185	108	145	156	131
24	134	140	107	84	107	177	189	152	157	129	136	172	179	184	175	164	142	142	141	141	143	145	129	147
25	127	34	20	59	98	110	181	214	236	265	255	256	269	264	256	288	266	271	280	238	212	220	230	233
26	237	230	237	242	247	232	-M-	333	199	185	194	225	222	211	-M-	111	169	181	161	149	137	140	164	148
27	252	78	51	70	77	102	109	115	126	136	144	149	151	163	167	168	176	181	181	179	175	179	182	181
28	188	170	175	179	182	184	184	177	-M-	190	185	188	189	183	181	178	162	166	180	167	170	165	172	181
29	189	176	170	171	173	174	166	164	181	211	211	207	208	213	217	244	269	279	267	270	277	276	273	277
30	278	275	278	279	302	252	283	224	301	309	277	251	211	201	198	194	187	187	183	168	164	160	144	152
31	157	129	172	200	211	232	272	275	287	281	280	267	257	251	251	259	256	266	279	264	247	295	259	254

698 VALID OBSERVATIONS (93.8%)

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	258	266	270	268	264	275	285	289	291	298	308	311	291	280	264	274	262	235	217	212	205	192	176	166
2	169	186	151	141	140	178	195	211	240	248	248	244	246	243	227	226	221	212	211	204	207	198	193	195
3	196	187	185	185	183	199	195	195	198	209	203	209	208	211	206	206	188	203	194	206	210	274	325	327
4	330	327	321	329	329	329	325	324	318	316	321	323	320	326	324	332	336	320	318	346	13	14	269	273
5	284	300	299	298	297	297	305	306	329	329	324	332	315	318	311	309	354	2	340	352	350	120	153	139
6	164	118	131	109	148	171	165	177	181	187	189	184	192	194	193	192	201	208	206	193	187	182	183	182
7	191	193	195	187	165	176	174	170	184	194	204	222	219	214	210	222	221	226	225	207	-M-	-M-	185	194
8	184	186	194	175	321	359	352	3	6	17	15	-M-	-M-	5	10	16	11	18	21	26	355	10	8	182
9	172	151	148	127	118	125	158	123	169	175	179	179	177	177	180	174	174	170	163	154	146	153	152	150
10	139	124	141	140	148	161	181	191	201	210	224	226	223	221	229	228	221	238	248	251	120	260	152	92
11	3	72	9	257	242	180	348	44	76	143	101	135	137	122	114	74	268	154	273	118	27	197	186	196
12	130	1	1	5	8	9	17	16	26	23	23	26	47	110	112	110	104	109	101	92	42	35	37	53
13	39	23	17	27	50	26	169	176	192	267	271	290	325	10	7	358	356	8	335	1	12	6	6	9
14	357	352	355	357	6	10	17	16	23	25	23	19	21	19	18	29	36	48	51	65	91	98	53	44
15	73	41	40	81	87	148	119	143	150	152	157	185	186	179	181	179	183	188	182	184	182	168	167	183
16	184	186	195	187	176	155	146	141	173	183	212	226	216	212	230	245	247	242	246	230	192	176	178	200
17	214	210	208	169	177	183	209	231	244	262	291	8	10	18	27	52	33	54	50	33	23	21	18	20
18	61	124	43	94	119	103	41	79	100	100	87	100	118	126	130	138	159	205	164	157	170	167	155	165
19	156	150	142	128	99	80	71	77	83	66	66	72	45	45	47	58	61	56	55	45	41	46	47	50
20	49	47	54	64	63	64	60	67	67	72	66	70	83	99	116	116	121	129	120	126	139	148	148	145
21	142	151	144	138	139	147	160	153	168	178	184	179	183	185	183	182	193	191	188	180	184	182	177	177
22	172	177	174	165	188	184	188	197	215	259	335	333	344	336	331	327	333	329	324	316	308	299	290	296
23	293	300	292	291	299	306	306	304	331	335	331	337	323	335	338	342	342	343	345	337	336	341	347	2
24	10	357	340	21	31	280	15	25	30	21	27	27	25	52	60	226	175	145	175	173	178	180	173	156
25	190	185	186	167	141	133	159	173	183	194	194	221	230	237	233	232	225	228	225	216	211	210	218	224
26	224	233	233	229	229	218	224	234	237	232	242	229	219	221	218	220	223	232	228	205	-M-	-M-	-M-	-M-
27	-M-	196	184	187	193	180	186	191	192	187	186	195	195	190	191	194	214	207	201	196	197	201	196	199
28	202	213	251	303	357	3	360	359	1	1	339	347	355	342	348	337	337	339	340	334	27	302	164	168
29	191	202	176	182	143	180	229	308	267	290	317	349	336	325	316	310	315	325	338	341	350	354	355	341
30	360	335	357	345	3	333	324	331	17	359	340	340	2	320	269	266	263	269	275	271	257	261	284	348

711 VALID OBSERVATIONS (98.8%)

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	329	11	3	350	333	348	340	338	354	355	0	356	357	9	5	359	357	9	26	30	12	110	42	85
2	135	111	168	170	178	186	179	185	184	186	183	194	194	188	193	190	188	186	179	176	177	179	193	195
3	196	201	194	193	188	182	182	190	197	197	201	198	196	195	193	181	185	185	186	188	193	201	207	190
4	178	191	183	181	178	192	208	240	287	287	307	311	317	337	339	347	352	354	350	353	349	347	360	2
5	1	356	358	0	356	357	2	7	15	20	21	21	22	27	23	25	26	31	29	26	32	30	22	9
6	14	33	38	17	1	40	54	67	89	91	73	83	74	88	74	79	109	113	98	89	88	88	80	99
7	106	120	121	107	107	118	121	137	145	152	153	152	143	135	138	139	128	135	131	140	62	112	132	129
8	128	122	134	142	149	153	165	182	192	181	172	204	156	137	83	107	128	125	125	122	115	111	71	79
9	43	31	42	31	37	22	36	29	35	32	25	30	25	15	22	24	27	23	19	16	13	10	12	15
10	15	16	15	14	12	11	14	13	14	9	4	8	4	15	7	8	8	15	360	353	357	358	17	14
11	3	14	120	94	149	152	137	96	80	55	43	89	95	146	159	164	162	163	154	142	140	141	124	142
12	138	147	148	132	122	117	127	132	140	142	154	138	138	144	154	151	132	139	132	98	117	95	31	360
13	12	20	3	15	14	13	7	7	8	7	359	5	8	13	8	358	352	339	331	355	358	358	356	1
14	359	355	355	2	1	359	360	14	17	11	4	15	18	14	7	11	2	24	16	45	111	128	148	135
15	157	189	189	159	160	149	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	175	174	171	163	168	175	168	141
16	139	140	148	138	139	135	139	138	143	147	157	156	157	158	160	151	140	138	133	135	142	136	135	124
17	124	134	129	127	127	122	130	131	138	134	129	127	127	121	120	116	118	112	108	111	82	80	65	62
18	65	65	73	65	75	69	77	85	75	76	72	58	51	37	37	46	35	32	33	33	38	49	32	17
19	17	18	20	18	22	24	14	14	19	26	40	34	43	32	29	59	54	56	41	349	350	11	331	124
20	161	20	154	140	129	164	146	149	156	176	111	168	188	181	202	185	184	173	174	195	185	193	201	171
21	168	170	161	149	160	143	163	148	178	180	184	193	182	181	185	189	170	173	177	170	175	173	167	169
22	168	130	139	145	145	156	158	162	177	185	193	196	187	186	178	181	181	191	182	176	171	184	183	151
23	183	178	172	174	177	168	176	180	181	194	199	207	216	239	285	287	298	307	323	333	337	340	335	334
24	333	324	313	311	278	296	291	311	318	319	304	304	295	300	297	284	285	296	290	256	45	218	236	291
25	280	29	25	35	12	16	25	26	47	44	30	7	69	107	103	125	145	142	175	192	191	195	204	186
26	178	178	6	136	186	8	33	28	42	54	40	38	31	2	355	6	338	356	3	23	15	21	27	45
27	40	39	39	42	47	45	55	77	93	136	146	142	60	242	240	204	212	231	222	210	188	198	225	217
28	186	144	103	65	87	91	177	153	161	151	199	218	220	210	211	90	103	316	17	57	203	187	196	278
29	274	359	203	350	16	12	351	7	20	5	356	357	359	360	354	4	0	351	8	345	358	11	8	3
30	5	12	15	16	13	16	16	35	47	49	66	68	81	61	67	62	71	100	119	126	187	204	207	206
31	-M-	-M-	-M-	-M-	-M-	-M-	-M-	178	190	179	166	166	168	182	180	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-

718 VALID OBSERVATIONS (96.5%)

35 FT WIND DIRECTION (DEG)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
2	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	2	12	27	51	46	31	22
3	31	131	12	121	114	147	83	19	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
4	-M-	-M-	-M-	-M-	8	27	56	71	85	98	102	79	95	98	79	73	171	195	159	142	185	349	174	190
5	197	177	181	148	148	151	139	139	193	284	210	199	226	200	198	197	223	266	162	125	150	169	186	122
6	17	18	10	21	27	26	19	21	58	80	77	72	62	96	71	30	44	48	57	86	162	202	191	166
7	160	160	165	171	181	174	161	185	170	183	199	207	212	220	217	222	222	221	218	202	148	196	230	237
8	267	242	191	44	210	189	43	176	185	196	213	226	245	265	272	282	331	355	20	29	28	27	48	97
9	100	128	106	103	116	108	59	103	132	126	120	120	146	146	61	84	76	47	42	40	26	24	29	32
10	17	2	14	60	31	10	25	221	298	254	291	257	166	152	123	133	200	208	192	204	206	162	158	46
11	42	155	126	62	261	334	349	155	66	116	121	119	123	128	148	167	162	151	140	142	140	145	148	141
12	150	117	108	92	121	82	122	136	148	173	185	162	162	166	175	185	185	179	180	170	166	170	168	169
13	171	174	176	185	195	193	194	192	202	204	203	203	197	197	199	194	197	199	196	186	184	183	180	177
14	177	183	184	191	195	199	194	193	189	194	197	192	194	207	192	192	189	187	185	185	337	4	333	358
15	356	355	11	3	12	354	56	24	2	45	341	21	8	345	332	350	351	354	335	291	311	321	323	309
16	304	305	320	318	318	316	331	346	354	353	345	333	334	344	345	331	322	318	294	268	178	172	190	181
17	196	194	197	181	186	176	188	180	185	187	190	185	189	188	192	188	189	190	186	184	178	177	176	177
18	197	186	172	169	169	45	43	27	36	36	40	43	39	40	49	49	44	39	30	26	27	28	27	21
19	19	24	20	24	20	65	103	118	119	125	129	125	139	128	133	148	161	166	136	133	132	158	114	120
20	111	134	134	135	189	214	31	325	61	39	30	66	71	55	52	81	80	85	92	84	77	72	71	90
21	78	157	148	84	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	11	4	16	14	1	354	5
22	350	347	17	185	247	198	221	174	343	-M-	-M-	-M-	-M-	-M-	-M-	78	46	42	39	46	48	55	61	17
23	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
24	-M-	-M-	-M-	-M-	234	127	-M-	-M-	-M-	-M-	236	233	245	315	1	12	13	21	26	32	43	47	40	49
25	49	37	108	328	299	18	354	167	20	76	74	108	20	46	333	342	3	339	20	24	24	3	62	36
26	7	51	164	232	166	190	138	133	168	168	156	187	184	170	161	178	186	160	147	157	144	149	195	151
27	153	172	240	188	159	191	137	165	160	164	171	166	179	183	189	185	186	184	178	176	170	164	176	179
28	184	195	193	192	198	197	199	210	212	209	210	202	203	205	201	195	194	181	186	180	176	171	173	184
29	193	197	219	253	195	170	179	193	206	217	221	249	345	3	8	15	31	46	55	78	56	13	355	10
30	15	347	358	2	2	11	10	31	64	72	72	73	68	76	82	66	71	60	39	32	16	2	11	30

608 VALID OBSERVATIONS (84.4%)

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-0.1	0.2	0.7	0.6	1.2	1.6	1.9	2.3	2.4	2.4	2.6	2.5	2.6	3.4	4.1	4.0	3.8	2.6	1.5	0.6	-0.1	-0.7	-2.7	-2.6
2	-2.7	-4.1	-3.1	-4.8	-5.2	-6.1	-6.0	-6.2	-6.4	-4.5	-2.3	1.6	3.4	5.1	5.9	5.9	6.0	4.2	2.9	1.6	0.9	0.6	-0.3	1.6
3	2.5	1.7	-0.6	-3.6	-5.1	-6.1	-6.8	-7.8	-8.6	-8.7	-8.6	-8.3	-7.7	-7.0	-6.5	-6.2	-6.4	-7.2	-7.9	-8.6	-9.2	-9.6	-10.4	-10.3
4	-10.1	-10.0	-10.1	-10.0	-9.9	-9.9	-9.8	-10.0	-10.0	-9.7	-9.5	-8.8	-7.9	-6.7	-5.4	-5.1	-5.1	-5.4	-6.3	-7.1	-7.8	-8.1	-8.3	-8.8
5	-9.2	-9.4	-9.3	-9.2	-9.3	-9.0	-9.3	-9.1	-9.0	-8.2	-6.0	-3.3	-1.8	-0.4	1.3	1.6	1.4	0.4	-0.9	-1.7	-2.0	-2.2	-1.8	-1.4
6	-1.6	-1.6	-1.5	-1.7	-0.6	-0.6	-0.5	1.2	1.5	1.8	3.4	3.8	3.6	2.8	2.2	1.6	1.1	0.4	-0.8	-1.4	-1.5	-2.3	-2.2	-1.9
7	-2.4	-3.0	-4.8	-6.4	-7.0	-7.5	-8.9	-9.7	-10.2	-9.7	-8.5	-6.6	-4.7	-2.7	-1.1	0.2	1.3	0.5	-1.4	-2.9	-4.0	-4.4	-4.4	-3.6
8	-3.3	-3.2	-3.5	-3.6	-3.6	-2.8	-4.4	-5.0	-5.9	-6.0	-5.4	-4.6	-4.1	-2.9	-2.1	-1.9	-1.7	-2.5	-3.1	-3.7	-4.6	-4.3	-4.7	-4.7
9	-4.7	-4.7	-4.8	-5.1	-5.4	-4.8	-4.5	-4.0	-3.6	-3.4	-2.9	-2.9	-3.4	-3.1	-1.9	-1.9	-2.8	-4.2	-5.4	-6.6	-8.0	-9.1	-10.0	-10.7
10	-11.5	-12.2	-12.7	-13.2	-M-	-13.6	-13.7	-13.0	-12.3	-11.3	-9.2	-6.1	-8.0	-5.8	-4.8	-4.4	-4.2	-4.3	-5.6	-5.8	-5.9	-5.4	-4.7	-4.5
11	-4.6	-4.6	-6.0	-8.4	-10.6	-11.5	-12.5	-13.4	-14.3	-14.0	-12.8	-11.1	-9.7	-8.5	-6.9	-6.2	-6.0	-6.3	-7.1	-9.1	-9.9	-10.7	-10.2	-10.8
12	-11.4	-11.5	-11.8	-11.2	-11.7	-9.9	-9.7	-10.5	-8.7	-7.3	-4.9	-1.5	1.7	4.3	6.5	7.8	7.6	5.7	3.0	2.8	2.2	2.4	2.3	1.9
13	0.4	-0.1	-0.3	0.2	-3.3	-2.7	-6.4	-5.0	-5.2	-4.2	-1.0	0.8	2.5	3.5	4.5	4.3	4.2	4.0	2.8	2.1	1.4	0.5	-0.5	-1.2
14	-2.2	-3.1	-3.0	-2.5	-1.7	-1.3	-1.1	-1.1	-1.2	-0.8	-0.5	-0.1	0.3	0.7	0.9	0.9	0.8	0.4	-0.2	-0.3	-0.2	-0.3	-0.1	0.2
15	0.1	0.2	-0.5	-1.6	-2.2	-1.5	-1.4	-1.3	-1.8	-1.7	-1.1	0.0	0.6	0.8	0.9	-0.7	-1.9	-4.0	-6.0	-7.0	-7.6	-7.7	-8.2	-8.3
16	-8.7	-9.7	-10.5	-11.3	-11.6	-12.1	-12.8	-13.8	-13.8	-12.9	-11.4	-9.3	-8.2	-6.9	-5.8	-5.1	-4.8	-5.5	-6.8	-7.7	-8.5	-8.7	-10.4	-10.7
17	-12.9	-13.3	-12.3	-12.8	-14.2	-13.1	-14.4	-14.9	-15.8	-12.0	-6.9	-2.5	0.2	1.6	2.6	3.3	3.7	3.0	0.9	-0.6	-1.2	-2.1	-2.7	-2.8
18	-3.2	-4.0	-4.9	-4.8	-6.5	-6.4	-5.7	-5.8	-6.2	-5.3	-0.8	2.5	5.3	8.0	9.4	10.7	10.3	9.8	7.4	5.9	5.1	4.9	5.6	5.3
19	4.7	4.5	4.3	4.0	3.4	2.5	1.5	0.3	0.0	0.9	2.9	4.2	5.9	6.8	7.1	7.5	7.9	7.4	5.3	4.1	-M-	3.4	2.3	2.3
20	1.1	0.7	-0.0	-0.8	-1.5	-2.0	-1.9	-1.5	-1.7	-1.8	-0.5	0.3	1.4	3.1	3.9	4.4	4.1	3.5	2.4	1.7	1.0	0.4	-0.2	-1.0
21	-1.8	-2.4	-2.9	-3.5	-4.3	-4.7	-5.7	-6.5	-7.7	-6.1	-3.5	-1.3	1.0	2.6	4.3	5.4	5.9	5.8	3.9	0.6	-1.6	-3.5	-3.8	-2.6
22	-0.9	-1.1	-2.1	-4.5	-5.2	-6.2	-5.4	-7.6	-7.2	-2.9	1.0	3.7	6.3	8.8	10.1	10.9	11.3	10.7	9.4	5.9	2.1	-0.3	-1.1	-1.0
23	-3.3	-2.7	-4.2	-4.4	-5.7	-5.4	-4.3	-5.2	-3.6	-2.0	2.4	6.7	11.0	13.5	15.4	17.3	17.1	15.8	13.1	9.4	6.5	4.8	3.3	0.8
24	1.8	-1.2	-1.7	-1.5	-1.5	-2.6	-2.2	-3.2	-2.8	-0.4	4.6	8.7	13.0	15.9	17.5	18.1	18.4	16.8	15.3	13.7	11.8	11.9	12.0	10.8
25	10.8	10.0	9.4	8.0	6.9	7.4	7.1	5.3	1.6	3.8	8.5	10.6	10.7	12.1	12.1	12.6	12.8	11.4	9.3	6.3	6.7	6.6	5.2	4.6
26	4.3	3.7	3.5	2.8	1.4	1.1	-0.9	-0.6	-0.7	0.2	2.6	4.0	5.1	5.7	6.3	6.9	6.8	6.0	4.3	3.4	3.2	0.2	-1.5	-2.9
27	-5.0	-3.0	-1.6	-3.1	-2.9	-3.7	-2.5	-5.9	-5.5	-1.4	1.9	3.2	4.2	5.1	5.7	5.9	5.7	4.9	1.9	-0.0	-1.4	-2.0	-3.0	-5.1
28	-5.2	-6.2	-8.1	-6.6	-7.1	-8.9	-8.4	-9.6	-9.4	-6.5	-3.1	-1.0	0.5	2.8	4.5	5.0	5.4	4.8	2.9	0.6	-0.5	-2.1	-3.8	-4.7
29	-5.5	-6.3	-6.7	-7.0	-7.3	-7.5	-8.2	-8.0	-7.6	-7.5	-7.4	-5.9	-5.2	-4.6	-4.2	-4.0	-3.9	-4.1	-4.6	-4.8	-5.3	-6.2	-6.9	-7.3
30	-7.8	-8.4	-8.6	-8.7	-8.8	-9.1	-10.7	-10.6	-10.3	-9.4	-6.9	-3.6	-2.1	-0.9	-0.1	0.6	0.9	0.5	-0.8	-2.6	-2.8	-4.1	-5.1	-5.2
31	-5.0	-4.7	-4.3	-4.4	-4.4	-4.2	-4.3	-4.1	-4.4	-3.9	-3.8	-3.8	-4.4	-4.3	-3.9	-3.9	-3.9	-3.7	-3.8	-3.8	-4.0	-3.8	-3.7	-3.7
HOURLY MEAN	-3.1	-3.5	-3.9	-4.5	-4.8	-5.2	-5.6	-5.9	-6.1	-4.9	-2.8	-0.9	0.4	1.7	2.7	3.1	3.1	2.3	0.8	-0.5	-1.5	-2.0	-2.6	-2.9

MAXIMUM = 18.4 MINIMUM =-15.8 MEAN = -1.9 742 VALID OBSERVATIONS (99.7%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	4.1	6.0	2.5	-5.1	1.6	3.8	1.3	-1.7	-1.9	-4.2	-4.6	7.8	4.5	0.9	0.9	-4.8
MIN	-2.7	-6.4	-10.4	-10.1	-9.4	-2.3	-10.2	-6.0	-10.7	-13.7	-14.3	-11.8	-6.4	-3.1	-8.3	-13.8
MEAN	1.5	-0.5	-6.5	-8.3	-4.5	0.2	-4.7	-3.8	-4.9	-8.4	-9.4	-2.6	0.1	-0.7	-2.6	-9.5

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	3.7	10.7	7.9	4.4	5.9	11.3	17.3	18.4	12.8	6.9	5.9	5.4	-3.9	0.9	-3.7
MIN	-15.8	-6.5	0.0	-2.0	-7.7	-7.6	-5.7	-3.2	1.6	-2.9	-5.9	-9.6	-8.2	-10.7	-5.0
MEAN	-5.8	1.5	4.1	0.6	-1.4	1.4	4.0	7.2	8.3	2.7	-0.3	-2.7	-6.1	-5.2	-4.1

MEAN MAXIMUM = 3.7 MEAN MINIMUM = -7.4

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-3.4	-3.5	-3.7	-5.4	-6.7	-7.4	-8.3	-9.4	-10.1	-10.2	-9.5	-9.2	-9.0	-8.7	-8.5	-9.0	-9.7	-10.2	-11.0	-11.7	-12.0	-12.3	-12.8	-13.2
2	-14.0	-14.8	-15.3	-15.5	-15.9	-16.0	-16.6	-17.2	-17.8	-17.2	-15.2	-13.3	-11.9	-11.4	-10.8	-10.4	-10.3	-10.7	-12.1	-13.5	-15.4	-15.2	-15.4	-16.8
3	-17.1	-17.0	-16.0	-16.7	-16.9	-19.6	-19.3	-20.7	-20.6	-19.2	-16.8	-13.6	-11.8	-10.4	-8.9	-7.8	-7.1	-7.3	-8.4	-8.9	-8.7	-8.7	-11.0	-13.3
4	-13.2	-11.8	-11.7	-11.4	-10.9	-12.1	-15.4	-13.7	-13.5	-12.2	-11.3	-10.5	-10.1	-9.2	-8.4	-8.5	-9.0	-9.4	-10.8	-12.4	-14.1	-14.7	-15.5	-16.2
5	-16.3	-15.4	-13.9	-11.7	-10.6	-9.9	-9.0	-8.4	-7.5	-5.3	-3.7	-2.3	-1.3	-0.8	0.0	1.0	1.5	1.3	0.6	0.6	0.3	-0.4	-0.9	-1.4
6	-2.2	-2.3	-3.6	-4.9	-5.8	-6.6	-8.2	-10.0	-10.1	-9.6	-7.5	-4.9	-2.2	-1.1	-0.4	0.3	0.8	0.5	0.4	0.2	-0.5	-1.0	-1.0	-0.7
7	0.1	-0.5	-1.1	-2.3	-2.7	-2.8	-3.3	-4.6	-4.2	-1.8	-0.3	0.1	0.1	0.3	-0.5	-0.9	-2.6	-3.9	-5.4	-6.3	-7.6	-8.9	-9.7	-10.6
8	-11.0	-12.2	-13.2	-14.8	-15.5	-15.8	-17.1	-17.5	-17.4	-15.6	-14.3	-13.8	-13.5	-12.5	-11.5	-10.9	-10.7	-10.2	-10.1	-10.0	-9.6	-9.6	-8.9	-8.4
9	-7.9	-7.8	-7.0	-5.7	-6.4	-8.7	-10.5	-11.2	-11.6	-11.8	-11.7	-11.3	-10.4	-9.9	-9.0	-8.8	-8.7	-8.7	-8.9	-8.9	-8.8	-8.5	-8.5	-9.0
10	-8.9	-8.8	-8.9	-10.2	-12.2	-13.7	-14.4	-15.2	-15.4	-15.8	-15.8	-16.1	-16.3	-16.4	-16.2	-16.5	-16.8	-17.3	-18.4	-19.2	-19.9	-20.5	-21.2	-21.8
11	-22.7	-23.1	-23.5	-23.6	-23.6	-23.9	-24.6	-25.9	-25.0	-23.5	-21.6	-19.4	-18.2	-16.7	-14.9	-13.3	-12.2	-11.7	-12.4	-12.8	-13.3	-13.3	-13.3	-13.3
12	-13.4	-12.6	-12.4	-11.8	-11.5	-11.8	-12.1	-11.1	-10.4	-9.4	-7.6	-6.1	-4.4	-2.6	-1.5	-1.0	-0.5	-0.4	-1.3	-2.1	-2.7	-3.6	-4.3	-4.8
13	-5.5	-6.2	-6.5	-6.8	-7.1	-6.7	-6.8	-7.3	-6.8	-4.9	-2.9	-0.7	0.9	2.0	3.2	4.1	4.2	3.7	2.5	2.2	1.3	0.2	-0.2	-0.8
14	-1.1	-1.1	-1.4	-1.8	-2.5	-3.3	-3.4	-3.2	-2.0	0.0	1.9	3.4	5.1	7.1	8.8	9.4	9.2	8.2	7.1	6.2	5.0	4.2	3.7	3.8
15	3.5	3.7	3.9	3.7	3.5	3.0	2.4	2.3	3.0	4.1	5.9	7.3	7.6	8.2	9.0	9.9	10.4	9.9	8.6	8.0	7.1	6.0	5.8	5.6
16	4.2	4.0	3.5	3.3	3.0	1.5	1.2	0.9	0.3	1.0	3.8	7.3	10.4	13.1	15.0	16.2	16.4	14.9	12.3	10.1	8.8	8.5	7.4	6.0
17	5.1	5.1	5.9	6.8	6.2	6.2	5.8	4.6	6.1	7.5	9.6	13.3	15.5	16.5	17.2	18.0	18.3	17.6	15.6	14.2	12.8	11.6	-M-	-M-
18	-M-	9.9	8.7	7.7	6.0	6.4	6.2	6.7	7.1	8.8	10.4	12.0	13.8	14.8	15.7	16.0	16.0	15.3	14.0	12.8	9.5	7.4	6.9	7.4
19	7.2	5.3	6.2	6.7	6.9	7.2	6.7	6.2	6.9	9.0	10.8	13.6	15.0	15.8	16.6	16.8	16.9	16.2	14.6	12.0	7.4	4.1	3.1	2.1
20	1.6	1.1	0.4	2.2	1.7	1.2	1.5	2.0	3.0	5.6	9.4	11.8	14.6	15.8	17.2	18.1	17.8	17.3	15.3	13.3	11.6	10.7	9.6	8.8
21	9.3	8.9	8.5	9.1	7.5	6.1	5.4	5.4	5.2	5.2	5.9	7.6	9.3	10.5	11.2	10.8	9.9	9.1	8.4	7.7	6.7	5.9	5.0	4.3
22	4.4	4.7	4.8	5.0	5.0	4.6	3.9	3.5	3.0	3.3	3.4	4.5	6.3	7.0	7.8	8.3	8.5	8.3	7.9	7.1	6.3	5.7	4.8	3.9
23	3.4	2.7	1.5	0.5	-0.2	-0.5	-0.5	-0.6	0.5	2.4	4.7	6.4	8.5	10.2	12.2	13.2	13.6	13.6	12.2	10.7	8.0	7.0	6.0	3.8
24	2.3	4.4	0.7	-0.9	-1.0	-0.8	-1.9	-2.0	-1.1	3.1	8.8	12.3	15.1	16.3	17.6	18.5	18.8	18.6	17.3	14.3	12.5	11.8	10.3	9.7
25	8.7	7.9	7.9	7.6	6.6	6.5	5.9	4.6	4.5	7.1	10.5	13.3	15.2	16.3	17.3	18.4	19.0	18.4	12.3	9.8	8.4	7.6	6.9	6.3
26	5.8	5.1	5.0	4.9	4.7	5.3	5.7	5.6	4.9	4.3	4.0	4.4	5.4	6.1	6.9	7.2	7.7	8.1	7.6	7.7	8.7	9.2	9.6	9.6
27	9.0	9.0	9.4	9.4	9.7	11.0	12.8	13.1	13.7	11.7	10.0	9.6	10.4	11.2	10.4	10.7	10.4	9.8	9.3	8.5	7.8	6.9	6.4	5.5
28	4.3	3.4	2.9	2.5	2.1	2.0	1.2	1.6	2.2	2.8	3.5	4.2	4.4	4.9	6.1	7.1	6.8	6.5	6.3	4.7	2.9	2.0	1.7	0.8
HOURLY MEAN	-2.5	-2.2	-2.5	-2.6	-3.1	-3.5	-4.0	-4.3	-4.0	-2.9	-1.3	0.3	1.7	2.7	3.6	4.2	4.2	3.8	2.6	1.6	0.5	-0.3	-1.3	-1.9

MAXIMUM = 19.0 MINIMUM =-25.9 MEAN = -0.5 669 VALID OBSERVATIONS (99.6%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	-3.4	-10.3	-7.1	-8.4	1.5	0.8	0.3	-8.4	-5.7	-8.8	-11.7	-0.4	4.2	9.4
MIN	-13.2	-17.8	-20.7	-16.2	-16.3	-10.1	-10.6	-17.5	-11.8	-21.8	-25.9	-13.4	-7.3	-3.4
MEAN	-9.0	-14.3	-13.6	-11.9	-4.7	-3.4	-3.3	-12.7	-9.2	-15.7	-18.6	-6.6	-1.9	2.7

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	10.4	16.4	18.3	16.0	16.9	18.1	11.2	8.5	13.6	18.8	19.0	9.6	13.7	7.1
MIN	2.3	0.3	4.6	6.0	2.1	0.4	4.3	3.0	-0.6	-2.0	4.5	4.0	5.5	0.8
MEAN	5.9	7.2	10.9	10.4	9.7	8.8	7.6	5.5	5.8	8.5	10.3	6.4	9.8	3.6

MEAN MAXIMUM = 5.3 MEAN MINIMUM = -6.1

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-2.1	-0.5	-2.1	-4.9	-5.6	-4.4	-3.8	-5.1	-4.4	-0.3	2.6	5.0	6.1	8.1	10.2	11.2	11.8	11.8	11.1	10.0	9.1	8.8	8.7	7.5
2	6.5	5.6	2.9	0.9	-0.3	-1.5	-2.8	-3.6	-3.7	-3.2	-2.2	-0.7	0.9	2.1	3.0	3.8	4.5	4.6	3.9	2.4	0.9	0.0	-0.5	-1.4
3	-1.5	-1.8	-2.4	-2.3	-2.0	-2.2	-3.2	-2.2	-0.6	0.7	2.0	3.0	4.1	5.1	4.8	4.9	4.5	3.4	3.3	3.3	3.4	3.5	3.6	3.8
4	3.8	4.0	3.9	3.8	3.9	4.0	4.1	3.9	3.9	3.7	3.2	3.0	2.1	2.0	1.7	0.4	-0.5	-0.4	0.0	0.2	0.7	1.4	1.3	0.0
5	-0.3	-0.5	-1.0	-1.3	-1.9	-2.5	-3.2	-4.1	-3.7	-1.8	-0.7	0.4	1.1	1.0	2.0	2.9	3.4	3.2	2.3	1.5	0.4	0.4	-0.4	0.2
6	-0.9	-1.2	-1.4	-2.2	-1.6	-2.7	-1.8	-1.6	-1.3	-0.7	-0.0	0.9	1.9	3.0	3.9	4.1	4.1	3.9	3.2	1.8	0.9	0.3	-0.5	-1.2
7	-2.0	-2.7	-3.1	-3.7	-4.3	-4.7	-5.6	-5.8	-4.8	-3.1	-1.7	-1.0	-0.2	0.8	1.8	2.4	2.7	2.3	1.6	1.1	0.7	0.4	-1.0	-2.5
8	-2.7	-1.4	-3.6	-5.4	-5.5	-5.8	-6.4	-7.5	-5.5	-2.1	1.2	2.4	3.7	4.6	5.1	5.8	5.8	5.9	4.9	3.7	2.8	1.9	0.9	1.2
9	0.9	-0.1	-0.8	-0.9	-1.1	-2.0	-2.4	-2.3	-0.9	2.8	4.2	5.9	6.8	7.8	7.7	8.0	8.5	7.6	6.6	5.2	2.8	2.7	2.7	2.7
10	1.8	2.1	-2.4	-3.5	-2.7	-4.8	-5.8	-4.7	-1.7	1.2	4.2	7.6	9.2	10.4	11.3	12.5	13.3	13.2	12.6	11.7	10.3	9.3	7.4	6.3
11	5.0	2.9	1.8	0.7	0.3	-0.2	-0.7	-1.9	-0.9	1.3	3.0	4.7	6.4	8.3	9.6	10.7	11.4	11.3	10.5	8.4	5.8	4.1	3.2	3.0
12	3.3	2.4	3.6	3.4	3.2	2.4	1.3	1.8	3.5	8.1	12.2	14.3	15.6	16.4	17.2	17.4	17.4	17.4	16.4	14.7	11.4	9.1	6.0	6.3
13	6.8	1.5	3.3	5.1	-2.2	-1.4	-3.4	-0.6	1.7	4.7	7.6	9.9	11.1	11.7	11.9	-M-	11.9	11.2	9.9	8.5	7.1	6.5	3.3	0.1
14	-2.8	-2.8	-3.7	-5.5	-6.5	-6.5	-6.8	-5.6	-2.2	3.4	8.0	10.1	12.5	13.5	14.3	15.1	15.0	14.4	13.0	10.7	9.4	8.0	7.0	7.4
15	6.8	5.7	6.6	7.0	7.0	6.8	5.8	5.6	7.6	10.5	13.5	15.4	15.9	15.3	15.3	15.2	14.8	14.0	12.4	11.1	9.9	8.9	7.6	6.0
16	4.7	5.0	4.9	3.8	2.8	1.7	1.1	-2.9	0.5	2.9	4.6	7.0	9.0	10.6	12.1	13.4	14.4	14.9	14.2	12.0	10.4	8.8	8.9	9.5
17	9.7	9.4	9.2	9.2	8.8	8.2	7.8	6.4	5.9	8.0	10.4	11.9	12.7	13.8	13.6	12.1	10.9	10.0	8.9	7.2	5.7	4.1	2.6	1.4
18	0.2	-0.6	-1.1	-2.0	-2.8	-3.1	-3.2	-3.6	-3.1	-1.3	0.6	1.7	3.1	4.2	4.8	5.7	6.2	6.3	5.7	4.6	3.9	2.9	2.1	1.0
19	0.3	-0.0	-0.3	-0.6	-1.2	-1.8	-2.7	-2.8	-0.6	1.8	3.3	4.8	6.8	8.2	8.3	8.5	8.8	8.8	7.8	6.6	5.9	5.4	4.0	2.0
20	0.1	-1.4	-4.0	-4.1	-6.2	-5.8	-5.9	-6.8	-2.8	0.6	2.1	3.0	3.9	4.3	5.3	6.0	6.5	6.9	6.6	5.7	4.4	3.5	3.8	4.4
21	4.5	4.7	5.1	5.7	5.9	5.8	5.5	5.6	5.8	6.3	6.7	6.7	5.5	5.0	4.7	5.1	5.3	5.0	4.6	4.2	3.6	3.5	3.3	2.9
22	3.2	3.2	3.2	3.3	3.3	3.3	3.6	3.6	3.9	5.3	7.3	9.0	10.0	11.0	11.5	12.0	12.1	12.0	11.0	10.3	8.7	6.0	2.3	0.7
23	-0.2	-0.7	-1.1	-2.0	-2.5	-2.3	-3.8	-3.2	0.3	4.0	10.1	12.1	12.5	13.5	15.9	15.1	14.5	14.6	14.0	12.6	11.0	9.9	8.7	7.7
24	7.1	6.1	5.9	6.2	6.9	5.3	5.4	5.5	6.0	6.8	8.6	11.9	14.2	15.6	16.5	17.3	16.9	16.5	15.4	13.7	12.4	11.4	10.6	10.1
25	9.3	9.0	8.3	7.1	7.0	6.6	6.1	4.8	6.5	9.6	12.8	15.0	16.2	17.4	17.9	18.6	18.6	18.3	17.6	15.4	12.9	11.1	10.9	10.3
26	9.8	9.2	8.6	8.4	8.1	6.6	6.7	7.1	7.8	8.6	10.2	12.2	14.5	15.4	16.9	17.8	19.1	18.8	17.7	16.4	13.9	13.1	12.9	11.5
27	10.4	9.9	9.2	8.6	8.1	7.6	7.0	7.7	9.7	12.3	14.8	16.9	18.5	19.3	20.2	20.7	21.0	20.6	19.7	19.1	18.8	18.1	17.4	16.8
28	16.2	16.5	15.9	15.4	15.4	15.6	15.9	15.8	15.9	17.2	18.0	18.4	19.5	19.8	19.8	19.0	18.3	18.2	16.8	14.8	13.9	13.2	13.4	13.1
29	12.9	12.6	12.4	13.0	13.2	13.2	13.1	12.9	13.2	12.0	10.7	10.2	9.7	10.4	11.4	10.6	11.8	10.2	9.1	8.5	8.2	7.7	7.6	7.4
30	6.5	6.1	5.6	5.4	5.5	4.6	4.0	3.2	6.1	8.0	9.8	12.6	15.4	18.2	20.2	21.8	23.0	23.1	22.2	20.1	19.1	18.3	15.3	15.8
31	16.8	14.3	15.3	15.2	15.2	14.6	12.5	9.9	10.8	11.9	12.9	14.7	15.8	16.7	16.6	16.6	16.4	16.1	14.4	12.9	11.7	12.0	10.4	9.3
HOURLY MEAN	4.3	3.8	3.2	2.7	2.2	1.8	1.2	1.0	2.4	4.5	6.5	8.0	9.2	10.1	10.8	11.2	11.4	11.1	10.2	9.0	7.7	6.9	5.9	5.3

MAXIMUM = 23.1 MINIMUM = -7.5 MEAN = 6.3 743 VALID OBSERVATIONS (99.9%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	11.8	6.5	5.1	4.1	3.4	4.1	2.7	5.9	8.5	13.3	11.4	17.4	11.9	15.1	15.9	14.9
MIN	-5.6	-3.7	-3.2	-0.5	-4.1	-2.7	-5.8	-7.5	-2.4	-5.8	-1.9	1.3	-3.4	-6.8	5.6	-2.9
MEAN	3.7	0.9	1.5	2.3	-0.1	0.4	-1.4	0.2	3.0	4.9	4.5	9.4	5.5	5.0	10.2	7.3

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	13.8	6.3	8.8	6.9	6.7	12.1	15.9	17.3	18.6	19.1	21.0	19.8	13.2	23.1	16.8
MIN	1.4	-3.6	-2.8	-6.8	2.9	0.7	-3.8	5.3	4.8	6.6	7.0	13.1	7.4	3.2	9.3
MEAN	8.7	1.3	3.4	1.3	5.0	6.7	6.7	10.5	12.0	12.1	14.7	16.5	10.9	12.9	13.9

MEAN MAXIMUM = 12.0 MEAN MINIMUM = -0.1

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	9.4	9.2	9.0	8.5	7.9	7.6	7.5	7.9	9.7	12.3	15.0	16.6	17.6	18.7	19.7	20.5	20.9	20.9	20.1	17.7	16.0	14.4	12.9	12.5
2	12.1	11.6	11.6	10.6	10.1	12.4	13.6	15.1	17.5	20.0	21.6	23.0	24.8	26.9	27.8	27.7	27.4	26.3	25.1	23.7	22.0	20.8	20.2	19.5
3	19.4	19.2	18.8	18.5	17.6	17.7	18.2	19.0	19.8	20.3	21.0	21.5	21.6	22.4	23.5	23.9	22.2	16.9	20.1	18.7	14.3	14.7	10.3	8.4
4	7.8	7.2	5.0	4.7	4.5	4.4	4.3	4.1	4.1	4.7	5.7	6.0	6.4	6.4	6.8	7.0	7.4	7.6	8.3	8.0	6.4	4.8	3.3	3.2
5	2.9	3.7	3.7	3.1	2.5	2.1	2.0	2.7	5.4	7.8	8.4	9.9	10.3	11.1	10.5	10.6	11.1	11.7	11.4	10.3	8.7	6.7	5.9	4.7
6	3.1	2.5	2.5	1.8	1.6	1.9	3.0	4.0	6.6	10.1	12.5	14.8	16.7	17.9	19.1	20.1	20.7	20.4	19.6	17.8	15.9	14.8	13.8	13.0
7	12.6	12.2	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	16.2	17.5	19.0	20.9	21.8	22.8	23.3	23.6	22.8	21.1	19.7	18.3	18.2	19.0
8	18.1	17.7	17.6	17.1	16.0	13.3	11.5	10.9	11.0	11.5	11.5	11.5	11.8	13.7	14.7	15.5	15.9	16.1	15.6	14.4	13.5	12.7	9.7	8.6
9	7.7	6.9	6.9	5.7	5.2	5.0	5.1	5.5	8.7	12.0	13.9	15.2	16.9	18.0	18.7	19.3	19.8	20.0	19.6	18.2	16.4	15.2	13.8	13.0
10	13.4	13.9	14.3	14.1	14.0	15.2	16.1	17.2	18.9	21.1	23.2	24.4	25.7	24.4	30.2	28.5	28.6	27.7	22.8	18.7	17.5	16.0	16.2	16.3
11	15.7	15.2	14.6	14.7	15.3	15.5	15.7	14.2	14.1	14.9	15.7	17.0	18.6	18.9	19.5	20.6	22.5	22.6	22.4	20.7	20.9	20.4	20.2	1?
12	14.3	14.1	14.9	14.0	12.8	12.3	12.1	12.0	12.5	13.6	13.6	13.9	15.2	17.6	18.2	19.1	20.4	20.9	20.8	20.1	19.4	19.2	19.0	18.3
13	17.8	16.7	16.3	15.3	15.1	14.8	14.4	13.9	15.4	16.2	18.4	19.9	20.8	20.8	19.3	19.4	18.6	12.9	10.7	9.8	9.3	9.3	9.2	7.9
14	6.7	5.6	5.3	4.8	4.7	3.8	2.9	3.0	3.8	5.2	6.2	7.4	8.8	9.9	10.5	11.1	11.7	11.9	11.4	10.6	9.4	8.6	7.6	6.9
15	5.5	5.1	4.8	4.4	3.9	3.5	2.9	2.8	4.4	6.8	8.7	10.2	11.3	12.6	14.1	14.7	15.4	14.9	14.5	13.0	11.5	11.6	11.2	11.4
16	10.9	10.3	10.2	9.7	9.8	9.8	9.1	8.7	9.5	10.8	13.1	15.2	16.9	18.7	19.8	19.6	18.9	19.2	18.7	18.0	16.4	16.5	16.0	-M-
17	-M-	-M-	15.5	14.7	14.5	13.8	13.1	13.7	14.9	17.0	19.6	22.0	22.9	23.7	24.7	25.1	24.9	24.6	24.0	22.0	20.6	19.3	18.7	17.5
18	16.8	15.7	14.6	14.1	13.1	12.7	12.6	12.1	11.9	13.0	14.3	15.5	16.6	18.0	19.0	19.6	20.0	18.2	15.7	15.7	15.6	15.7	15.4	14.8
19	14.6	14.1	13.5	13.8	13.4	13.4	13.6	13.4	13.5	13.8	13.5	13.8	14.5	14.9	15.4	15.7	15.7	15.3	15.1	14.1	13.0	12.0	11.2	10.8
20	10.1	10.3	10.2	10.0	9.7	9.5	9.4	9.5	9.4	-M-	9.3	8.6	8.8	9.4	10.4	11.0	11.5	11.5	11.0	10.4	9.8	9.1	8.7	8.0
21	7.4	7.1	6.9	6.8	7.0	7.3	7.2	7.4	7.3	8.5	8.9	9.7	10.2	11.2	12.1	13.4	14.1	14.0	14.0	13.9	13.7	13.4	13.5	13.8
22	14.1	14.5	14.7	14.5	14.6	14.7	15.0	15.4	15.8	16.9	15.0	15.9	16.1	16.4	16.0	15.8	16.1	15.7	15.1	13.6	12.7	12.0	11.1	10.6
23	9.9	10.0	9.4	9.2	9.0	8.5	7.6	8.5	10.4	12.2	13.9	15.6	17.1	18.2	18.9	19.3	19.6	19.7	19.1	18.0	16.2	15.8	14.4	13.5
24	12.9	11.8	10.7	9.3	8.1	6.1	8.1	8.1	9.4	10.6	12.5	14.3	16.2	17.5	18.8	19.9	20.0	20.3	20.1	18.7	17.0	15.7	15.1	14.1
25	13.6	13.7	12.9	13.0	12.5	12.2	12.5	13.9	14.9	16.9	20.6	25.6	28.7	30.1	30.1	29.9	29.9	28.9	27.7	25.8	24.2	22.9	22.1	21.4
26	20.7	19.8	19.1	18.3	17.1	16.6	16.5	17.5	19.1	21.1	23.0	24.8	26.1	27.4	28.8	29.5	30.3	30.6	29.6	27.4	25.7	24.0	24.1	-M-
27	20.7	19.8	18.3	17.7	17.5	16.5	16.4	18.1	20.2	22.0	24.4	25.9	27.1	28.2	29.1	29.4	29.9	29.9	28.8	27.2	26.0	24.7	23.4	22.8
28	22.1	21.2	20.9	20.1	18.1	15.8	14.8	14.0	14.0	15.5	16.4	16.8	17.5	16.4	17.1	18.2	19.8	20.3	19.9	18.7	17.0	14.7	14.2	13.9
29	13.5	13.3	12.3	11.8	11.6	11.2	13.0	14.7	16.6	18.6	21.0	23.1	25.2	25.3	26.3	26.5	26.7	25.7	24.2	22.8	21.4	20.0	18.7	17.7
30	17.2	15.3	13.2	12.7	12.8	11.7	11.2	13.0	14.8	16.6	17.6	18.6	19.5	19.4	20.0	20.3	19.8	19.7	19.6	18.5	17.0	16.0	15.5	15.2
HOURLY MEAN	12.8	12.3	12.0	11.5	11.0	10.7	10.7	11.0	12.2	13.9	15.2	16.5	17.6	18.5	19.4	19.8	20.1	19.6	18.9	17.6	16.3	15.3	14.5	13.4

MAXIMUM = 30.6 MINIMUM = 1.6 MEAN = 15.1 707 VALID OBSERVATIONS (98.2%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	20.9	27.8	23.9	8.3	11.7	20.7	23.6	18.1	20.0	30.2	22.6	20.9	20.8	11.9	15.4
MIN	7.5	10.1	8.4	3.2	2.0	1.6	12.2	8.6	5.0	13.4	14.1	12.0	7.9	2.9	2.8
MEAN	13.9	19.7	18.7	5.8	7.0	11.4	19.3	13.7	12.8	19.9	17.8	16.2	15.1	7.4	9.1

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	19.8	25.1	20.0	15.7	11.5	14.1	16.9	19.7	20.3	30.1	30.6	29.9	22.1	26.7	20.3
MIN	8.7	13.1	11.9	10.8	8.0	6.8	10.6	7.6	6.1	12.2	16.5	16.4	13.9	11.2	11.2
MEAN	14.2	19.4	15.4	13.6	9.8	10.4	14.7	13.9	14.0	21.0	23.4	23.5	17.4	19.2	16.5

MEAN MAXIMUM = 20.6 MEAN MINIMUM = 9.2

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	14.8	15.1	14.9	14.2	12.7	11.0	10.4	11.0	11.9	13.5	14.6	15.5	16.6	17.1	17.8	18.4	18.7	18.6	17.9	16.7	14.2	12.2	12.0	10.1
2	9.6	9.3	9.5	8.9	9.2	9.2	9.4	10.4	13.2	16.0	18.4	20.6	22.1	23.3	24.5	24.9	25.5	25.4	24.9	23.2	21.7	20.7	19.5	18.9
3	18.4	18.1	17.7	17.1	16.9	16.6	16.1	16.7	17.4	18.6	19.8	20.4	20.7	21.7	22.3	22.9	24.0	24.7	24.7	23.8	22.4	21.3	20.6	19.5
4	19.2	18.2	17.8	17.1	16.4	16.9	17.6	17.4	17.9	16.8	17.0	15.1	15.1	14.9	15.5	15.5	15.5	16.2	16.2	15.0	13.9	13.2	12.7	12.5
5	12.1	11.6	11.1	10.5	10.0	9.6	9.9	10.3	11.5	13.1	14.6	16.0	17.0	17.9	18.5	18.3	18.4	17.5	17.3	16.2	15.3	13.2	12.2	11.7
6	11.0	10.5	10.4	9.6	9.3	9.1	9.4	10.3	-M-	-M-	13.5	14.6	15.6	16.3	16.4	16.6	17.0	16.8	16.3	15.2	13.3	11.9	10.9	10.0
7	9.3	8.6	8.0	7.0	6.1	5.4	5.2	6.2	7.4	9.1	10.8	12.3	13.1	13.6	14.1	14.8	14.5	14.3	13.9	13.4	12.3	11.0	10.9	11.1
8	10.8	10.6	10.4	10.6	10.6	10.2	10.2	10.6	10.9	10.7	10.7	11.3	12.5	14.2	15.4	16.3	16.8	17.6	17.5	17.1	16.0	14.6	13.5	12.8
9	11.6	11.1	10.7	10.1	10.6	10.9	11.1	11.0	11.7	12.3	12.8	13.3	14.1	14.2	12.4	12.0	11.4	11.2	11.4	10.8	10.6	9.9	9.3	8.6
10	7.9	7.1	6.2	5.3	4.3	3.2	2.4	2.4	3.1	4.8	6.8	9.3	11.3	13.0	14.1	14.8	15.5	15.5	15.3	14.3	12.4	11.4	10.5	9.7
11	8.6	4.4	5.0	2.6	0.5	-1.4	-0.9	3.9	8.4	11.0	12.9	14.5	15.8	16.9	17.9	18.5	18.7	18.9	17.8	16.5	15.2	13.7	12.5	10.8
12	10.7	10.3	10.4	10.4	9.1	8.4	8.6	8.6	9.7	10.5	10.8	10.9	11.6	13.2	14.6	16.5	17.5	17.6	17.5	16.9	15.7	14.8	13.9	13.5
13	12.8	12.1	11.6	10.1	9.3	9.0	9.2	9.9	10.4	10.8	10.5	10.4	10.0	10.0	10.2	9.9	9.6	9.4	9.5	9.6	9.4	9.2	9.0	9.3
14	9.3	9.5	9.8	9.9	9.4	9.0	8.7	9.7	10.7	12.9	15.1	16.6	17.7	18.6	18.8	18.6	19.0	19.6	19.1	17.5	14.7	12.6	10.9	10.2
15	9.2	10.3	9.9	9.4	9.1	9.4	7.7	9.8	13.4	16.6	18.6	19.5	20.1	20.5	20.7	20.7	20.7	21.0	20.3	19.2	18.1	17.3	17.0	15.2
16	14.0	13.9	13.9	13.7	12.9	12.5	12.6	13.8	14.8	16.4	17.6	17.4	17.9	18.0	17.2	16.8	17.2	16.8	15.7	15.3	15.0	13.9	12.3	11.5
17	11.7	11.8	11.5	11.7	12.0	11.1	11.2	11.4	11.7	11.8	11.7	12.3	12.5	12.4	12.6	12.2	12.5	12.3	12.3	12.2	11.9	12.1	11.4	10.4
18	10.5	10.4	10.4	10.6	10.9	10.1	9.4	8.9	9.0	8.4	9.0	9.2	8.9	8.6	8.4	7.2	6.8	6.2	6.0	7.1	8.8	9.8	9.9	10.2
19	9.8	9.3	8.9	8.7	8.1	8.3	8.4	9.1	10.2	12.0	13.9	14.9	15.5	16.9	17.8	18.2	18.4	18.7	18.7	17.3	15.3	13.5	10.3	8.8
20	7.6	7.3	6.5	6.0	5.2	4.6	5.3	8.6	11.6	15.0	17.4	18.5	19.7	20.1	20.7	21.1	21.1	20.7	20.2	18.8	17.2	16.0	14.9	13.6
21	12.6	12.1	11.5	10.1	9.7	10.0	10.4	12.7	15.7	17.5	19.8	20.8	21.8	22.5	22.8	23.2	22.9	22.3	21.9	20.9	19.9	19.5	19.3	18.7
22	18.4	17.0	16.2	16.0	15.9	16.0	16.2	16.3	17.5	18.9	20.1	21.7	23.0	24.2	25.3	26.0	26.1	26.0	25.3	24.2	23.2	21.1	18.9	18.5
23	18.4	17.1	17.0	17.8	17.4	17.0	17.2	17.5	17.7	19.3	20.2	21.1	22.8	23.8	25.2	25.3	25.6	25.0	24.2	22.8	20.7	18.4	16.4	14.4
24	13.1	12.1	11.6	11.3	10.9	11.0	11.8	12.3	13.0	14.2	15.7	18.1	19.9	21.4	22.4	22.8	23.5	24.4	24.5	23.4	20.5	19.1	18.9	18.0
25	18.0	15.6	15.6	14.5	14.0	13.8	13.7	14.4	15.0	16.9	18.7	20.2	21.7	22.8	23.1	23.0	-M-	-M-	-M-	-M-	-M-	18.7	17.5	16.7
26	16.0	15.5	15.3	14.1	13.0	13.2	13.6	15.4	17.2	18.8	20.6	22.6	24.1	25.2	25.9	26.3	26.6	26.2	25.4	24.3	23.3	22.6	21.2	19.5
27	18.6	17.8	16.9	16.4	16.0	15.8	15.8	16.8	18.5	19.4	21.4	23.1	24.8	25.5	25.1	25.3	25.2	25.2	25.0	24.3	23.2	22.3	21.6	20.9
28	20.2	19.2	18.2	17.6	17.1	17.4	17.6	18.3	19.1	19.7	21.3	21.7	22.7	23.4	24.0	24.7	25.0	25.4	25.0	23.7	22.6	21.1	20.4	20.1
29	19.6	19.3	18.3	18.2	17.2	17.8	18.2	19.2	20.1	22.5	24.1	25.3	26.0	26.6	27.3	27.9	27.7	27.7	26.9	25.4	24.5	23.7	22.7	21.7
30	20.7	19.7	18.8	18.1	17.3	16.7	16.0	16.2	17.2	18.4	19.8	21.2	22.2	23.2	23.9	24.5	24.7	24.8	24.3	23.3	21.4	19.6	18.6	17.5
31	16.3	15.4	14.9	14.6	13.7	12.4	13.1	15.2	18.3	21.1	22.3	23.2	24.0	24.8	24.9	25.1	24.8	24.2	23.6	22.3	21.0	19.7	18.6	17.5
HOURLY MEAN	13.6	12.9	12.5	12.0	11.4	11.1	11.1	12.1	13.5	14.9	16.1	17.1	18.1	18.9	19.4	19.6	19.7	19.7	19.3	18.4	17.1	16.1	15.1	14.3

MAXIMUM = 27.9 MINIMUM = -1.4 MEAN = 15.6 737 VALID OBSERVATIONS (99.1%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	18.7	25.5	24.7	19.2	18.5	17.0	14.8	17.6	14.2	15.5	18.9	17.6	12.8	19.6	21.0	18.0
MIN	10.1	8.9	16.1	12.5	9.6	9.1	5.2	10.2	8.6	2.4	-1.4	8.4	9.0	8.7	7.7	11.5
MEAN	14.6	17.4	20.1	16.0	13.9	12.9	10.5	13.0	11.4	9.2	10.9	12.6	10.1	13.7	15.6	15.0

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	12.6	10.9	18.7	21.1	23.2	26.1	25.6	24.5	23.1	26.6	25.5	25.4	27.9	24.8	25.1
MIN	10.4	6.0	8.1	4.6	9.7	15.9	14.4	10.9	13.7	13.0	15.8	17.1	17.2	16.0	12.4
MEAN	11.9	8.9	13.0	14.1	17.4	20.5	20.1	17.2	17.6	20.2	21.0	21.1	22.8	20.3	19.6

MEAN MAXIMUM = 20.5 MEAN MINIMUM = 10.4

35 FT AMBIENT TEMPERATURE (DEG C)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	16.7	15.8	14.9	13.8	12.9	11.9	12.0	14.5	17.6	19.5	21.0	22.2	24.1	25.3	26.3	26.9	27.6	27.8	27.3	25.9	24.4	23.2	22.3	21.8
2	21.4	20.8	20.7	20.1	19.7	19.4	18.4	18.3	18.4	19.1	19.8	21.7	23.3	24.6	25.3	26.2	26.5	22.5	20.4	20.4	20.1	19.4	18.5	17.3
3	17.0	15.1	14.9	13.6	13.2	12.6	13.0	15.8	17.4	20.5	21.6	22.6	23.5	24.4	24.8	25.0	25.2	25.0	23.9	23.1	22.3	20.8	19.7	18.2
4	18.8	16.2	15.9	15.6	15.5	16.0	16.8	17.3	18.3	20.3	22.0	22.9	24.1	24.6	25.7	25.5	-M-	21.4	22.7	22.2	21.2	21.1	19.8	19.0
5	18.7	18.0	17.5	17.5	17.2	16.6	16.5	18.2	20.8	23.7	26.1	27.4	29.0	30.1	30.7	30.0	29.3	27.2	27.0	26.4	25.3	24.1	23.9	23.2
6	22.8	23.0	23.6	21.9	20.9	20.1	20.3	20.9	22.3	24.6	25.8	27.2	28.6	29.6	30.0	30.4	30.5	30.4	29.8	28.2	25.8	24.2	23.3	22.1
7	21.1	20.1	19.8	19.1	19.3	19.0	20.3	22.0	22.6	23.6	27.2	29.3	31.1	32.1	32.5	33.1	33.1	32.8	31.8	30.9	27.5	28.1	27.8	27.0
8	26.3	25.0	24.0	23.4	22.6	22.9	23.6	23.6	25.0	26.1	28.4	29.5	30.6	31.6	32.3	32.7	33.4	32.7	30.8	29.3	27.6	26.3	24.3	22.7
9	21.6	20.4	19.7	18.9	18.4	18.1	18.4	19.3	21.7	24.3	26.2	27.5	28.8	28.4	28.1	28.6	29.3	27.6	27.1	25.7	23.7	21.1	19.9	19.2
10	18.2	17.3	17.2	16.7	16.8	16.7	16.5	16.6	16.3	17.6	19.6	21.7	23.6	24.6	25.5	25.8	25.6	-M-	-M-	-M-	-M-	-M-	-M-	-M-
11	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	15.4	16.2	17.1	18.3	19.9	21.0	22.0	22.5	23.0	23.0	22.0	-M-	-M-	-M-	-M-	-M-
12	-M-	-M-	-M-	-M-	17.2	17.3	17.3	18.3	20.8	23.2	24.4	25.8	26.8	28.1	28.8	28.8	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
13	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
14	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	20.5	19.6	19.0	18.4
15	18.5	18.2	17.8	17.2	16.7	15.7	14.0	13.2	14.2	15.2	16.5	18.4	19.9	20.0	20.5	20.6	21.5	21.1	21.0	19.4	18.5	17.7	16.7	15.5
16	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	24.2	24.5	24.5	24.1	23.0	20.2	19.0	17.0	16.9
17	16.3	15.8	14.5	14.1	14.4	14.4	15.0	16.3	18.4	20.3	22.1	24.3	25.9	26.7	27.4	28.1	28.0	27.3	26.5	25.2	23.8	22.3	21.3	20.3
18	19.5	18.5	17.7	17.3	16.8	17.1	17.3	18.9	21.2	22.1	22.7	23.2	24.3	25.3	25.8	25.8	25.5	24.7	24.6	24.0	23.0	21.6	20.7	19.4
19	18.5	17.8	17.2	16.4	15.7	16.0	15.6	17.2	19.1	21.0	22.6	23.6	24.5	25.1	26.2	26.6	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
20	-M-	19.6	19.3	19.5	19.2	18.8	19.5	19.9	20.9	20.6	20.7	23.1	25.0	26.5	27.4	27.5	27.2	26.9	26.8	25.7	-M-	-M-	-M-	-M-
21	-M-	-M-	-M-	-M-	19.7	18.8	18.7	21.9	20.0	20.8	24.2	26.8	28.2	28.9	28.5	28.1	27.2	25.4	24.6	24.9	23.5	22.3	22.9	22.0
22	22.5	21.7	20.3	16.8	15.9	14.6	16.4	20.1	21.4	22.6	24.3	24.3	25.7	27.4	28.2	28.7	29.3	29.2	28.1	26.8	25.0	23.3	21.9	20.7
23	19.4	19.4	19.4	19.2	18.2	18.3	18.3	20.6	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
24	-M-	-M-	-M-	25.3	24.7	24.1	23.7	25.6	26.4	28.1	29.6	31.1	32.6	32.9	31.5	30.6	30.3	28.2	26.4	24.8	24.0	23.2	22.6	22.0
25	21.5	21.2	18.7	16.8	16.9	16.7	17.4	19.0	20.5	22.0	24.3	26.0	27.9	29.1	29.2	29.8	29.5	29.7	28.7	27.3	26.6	25.1	22.5	20.4
26	20.4	20.3	19.2	18.6	18.0	17.6	18.7	20.4	22.6	23.5	24.2	24.8	25.4	25.9	26.6	27.1	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
27	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	19.6	20.9	22.8	24.4	25.3	25.7	26.4	27.0	27.7	27.5	27.3	26.8	25.9	25.3	25.0	25.0
28	24.9	24.6	24.0	23.8	23.5	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
29	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	26.8	27.7	28.9	27.2	24.2	21.9	22.5	23.1	22.7	23.3	23.1	22.0	21.9	21.4	20.7
30	20.2	20.3	19.8	20.1	19.9	19.2	19.3	20.5	22.3	23.5	24.9	26.0	26.6	26.9	27.8	28.2	28.3	28.7	28.1	26.9	25.3	24.1	23.2	22.4
HOURLY MEAN	20.2	19.5	18.9	18.4	18.1	17.5	17.7	19.0	20.1	21.8	23.4	24.8	26.1	26.8	27.2	27.3	27.5	26.6	26.0	25.2	23.6	22.5	21.6	20.7

MAXIMUM = 33.4 MINIMUM = 11.9 MEAN = 22.6 548 VALID OBSERVATIONS (76.1%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	27.8	26.5	25.2	25.7	30.7	30.5	33.1	33.4	29.3	25.8	23.0	28.8	-M-	20.5	21.5
MIN	11.9	17.3	12.6	15.5	16.5	20.1	19.0	22.6	18.1	16.3	15.4	17.2	-M-	18.4	13.2
MEAN	20.6	20.9	19.7	20.1	23.5	25.3	26.3	27.3	23.4	19.8	20.0	23.1	-M-	19.4	17.8

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	24.5	28.1	25.8	26.6	27.5	28.9	29.3	20.6	32.9	29.8	27.1	27.7	24.9	28.9	28.7
MIN	16.9	14.1	16.8	15.6	18.8	18.7	14.6	18.2	22.0	16.7	17.6	19.6	23.5	20.7	19.2
MEAN	21.5	21.2	21.5	20.2	22.8	23.9	23.1	19.1	27.0	23.6	22.1	25.2	24.2	23.8	23.8

MEAN MAXIMUM = 27.3 MEAN MINIMUM = 17.5

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.5	2.7	1.0	0.2	-0.6	-0.8	-1.0	-1.1	-1.3	-1.3	-1.5	-1.7	-1.9	-2.1	-2.5	-2.3	-2.0	-1.1	-0.5	0.1	0.6	0.9	2.0	1.8
2	0.8	2.8	1.8	1.8	2.7	3.1	2.4	3.0	2.0	0.4	-0.4	-1.4	-1.7	-1.6	-1.5	-1.5	-1.0	0.2	1.3	2.5	4.1	3.4	4.1	1.2
3	-0.8	-0.9	-1.5	-1.7	-1.7	-1.7	-1.7	-1.7	-1.8	-2.1	-2.3	-2.3	-2.5	-2.3	-2.4	-2.3	-2.0	-1.5	-1.0	-0.9	-0.9	-1.2	-1.3	-1.4
4	-1.5	-1.6	-1.5	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.6	-1.7	-1.6	-1.7	-1.8	-2.0	-1.8	-1.7	-1.4	-0.8	-0.6	-0.6	-0.7	-0.9	-0.9
5	-0.9	-1.1	-1.2	-1.2	-1.1	-1.1	-1.0	-0.8	-0.8	-1.0	-1.4	-1.8	-1.7	-1.8	-1.7	-1.4	-2.2	-0.6	0.3	0.9	1.0	1.4	1.1	0.4
6	0.4	0.6	0.3	0.6	-0.5	-0.3	0.2	-0.6	-1.0	-1.0	-1.4	-1.4	-1.5	-1.5	-1.5	-1.6	-1.6	-1.3	-1.1	-0.9	-1.3	-0.7	-0.6	-0.4
7	-1.3	-1.6	-1.5	-1.5	-1.4	-1.5	-1.4	-1.6	-1.7	-1.9	-1.7	-1.9	-1.8	-1.9	-1.8	-1.6	-1.6	-0.9	-0.2	-0.4	-0.5	-0.0	0.2	-0.5
8	-0.5	-0.2	0.4	0.5	1.4	-0.8	-1.2	-1.6	-1.6	-1.7	-2.1	-2.2	-2.1	-2.0	-2.2	-1.9	-1.9	-1.3	-1.0	-0.7	-0.1	-0.7	-0.5	-0.5
9	-0.8	-0.7	-0.5	0.0	0.8	-0.0	-0.4	-1.0	-1.7	-1.8	-2.2	-2.5	-2.3	-2.4	-2.7	-2.7	-2.5	-1.9	-1.7	-1.6	-1.4	-1.5	-1.6	-1.3
10	-1.3	-1.2	-1.1	-1.0	-1.0	-1.2	-1.0	-0.9	-1.2	-1.5	-1.5	-1.8	-1.7	-1.6	-1.4	-1.3	-1.3	-0.9	0.2	0.4	0.3	-0.5	-1.1	-1.1
11	-1.1	-1.4	-1.6	-1.6	-1.6	-1.8	-1.9	-1.7	-1.7	-2.2	-2.3	-2.4	-2.6	-2.3	-2.1	-1.8	-1.7	-1.2	-0.2	2.7	3.2	4.2	3.6	1.8
12	1.2	1.8	3.0	2.3	4.0	1.8	1.7	2.3	0.1	-1.0	-1.4	-1.5	-1.6	-1.7	-1.6	-1.4	-1.1	0.4	2.5	2.2	2.7	2.4	1.5	0.5
13	1.6	1.7	3.3	1.0	5.0	2.6	7.0	4.1	4.7	2.7	-0.8	-1.3	-2.0	-1.6	-1.7	-1.8	-1.5	-1.4	-0.7	-0.2	0.1	0.5	0.8	1.1
14	1.0	1.9	0.9	0.8	-0.1	0.3	-0.8	-1.0	-1.2	-1.7	-1.8	-2.0	-2.0	-1.9	-1.9	-1.7	-1.6	-1.5	-1.4	-1.2	-0.8	-0.5	-0.5	-0.9
15	-1.1	-1.4	-1.1	-0.9	-0.3	-1.3	-1.5	-1.7	-1.7	-1.8	-2.0	-2.5	-2.7	-2.7	-2.8	-2.5	-2.4	-2.0	-1.8	-1.6	-1.6	-1.6	-1.5	-1.5
16	-1.6	-1.5	-1.3	-1.2	-1.7	-1.5	-1.5	-1.2	-1.3	-2.1	-2.5	-2.9	-2.9	-3.0	-2.8	-2.7	-2.4	-1.9	-0.8	-0.5	0.3	0.0	1.1	0.6
17	3.1	3.5	2.3	2.7	4.2	3.4	4.9	4.1	4.1	1.7	-1.4	-1.7	-1.8	-1.9	-1.9	-1.7	-1.5	-0.7	1.6	2.8	2.5	1.4	0.9	1.5
18	1.6	1.5	1.6	0.9	2.7	2.5	1.1	1.5	2.1	0.7	-1.0	-1.6	-1.7	-1.7	-1.7	-1.5	-1.2	-0.3	1.3	1.7	1.0	0.7	-0.0	-0.3
19	-0.4	-0.5	-0.7	-0.7	-0.6	-0.2	0.3	1.3	0.8	-0.3	-1.3	-1.5	-1.6	-1.6	-1.5	-1.5	-1.2	-0.5	1.4	1.7	1.0	0.1	0.5	0.0
20	1.0	1.6	2.3	3.3	1.6	2.5	1.4	-M-	-0.9	-1.6	-1.8	-2.0	-2.1	-2.2	-2.6	-2.4	-2.1	-1.6	-1.2	-1.0	-1.0	-0.9	-1.1	-1.3
21	-1.2	-1.2	-1.1	-1.0	-0.9	-1.1	-0.7	-0.2	0.9	-0.5	-1.8	-1.7	-2.3	-2.1	-1.8	-1.3	-1.2	-1.2	0.8	4.5	7.2	9.4	10.6	9.7
22	4.9	1.7	1.5	5.2	4.7	6.0	4.4	6.6	7.2	2.2	-1.3	-1.4	-1.3	-1.5	-1.8	-1.8	-1.7	-0.9	0.3	2.3	7.1	8.9	10.6	9.7
23	11.4	8.9	9.0	10.5	12.3	11.7	9.8	9.6	7.6	5.1	0.8	-0.8	-1.2	-1.5	-1.6	-1.5	-1.2	0.2	2.7	6.5	8.4	8.6	8.7	9.4
24	8.8	-M-	12.0	10.9	10.0	9.8	8.9	9.6	9.2	7.3	2.2	0.2	-1.1	-1.3	-1.7	-1.4	-1.1	0.4	1.6	2.5	3.9	2.7	0.4	0.9
25	0.4	0.5	1.0	2.4	3.0	2.2	1.5	2.0	5.2	1.2	-1.9	-2.5	-2.6	-2.7	-2.2	-2.2	-2.0	-1.2	0.6	3.2	1.6	-0.8	-0.9	-0.8
26	-1.1	-1.0	-1.2	-1.2	-0.9	-0.7	0.2	-0.4	-0.7	-1.4	-2.1	-2.2	-2.6	-2.5	-2.4	-2.4	-2.0	-1.2	0.2	2.0	0.9	3.0	3.8	4.6
27	5.5	4.2	1.9	2.5	2.4	3.6	1.9	4.2	3.4	-0.8	-2.3	-2.8	-2.7	-2.8	-2.7	-2.5	-2.3	-1.8	-1.1	-0.7	-0.4	-0.3	0.2	2.0
28	2.2	3.1	4.7	3.0	3.2	4.8	4.5	5.4	5.4	1.5	-1.5	-1.7	-1.7	-1.8	-1.9	-1.7	-1.7	-1.3	-0.3	-0.1	-0.4	-1.1	-1.1	-1.3
29	-1.3	-1.4	-1.4	-1.4	-1.4	-1.3	-1.3	-1.4	-1.3	-1.6	-1.6	-1.7	-1.8	-1.9	-M-	-M-	-M-	-M-	-1.3	-1.2	-1.2	-1.1	-0.9	-0.8
30	-0.8	-0.5	-0.8	-0.5	-0.3	-0.5	-0.1	-0.4	-0.6	-1.3	-1.9	-1.8	-1.8	-1.9	-1.8	-1.7	-1.6	-1.1	-0.3	0.8	0.2	0.4	0.6	0.2
31	-0.5	-0.6	-0.7	-0.7	-0.8	-1.0	-1.0	-1.1	-1.2	-1.3	-1.2	-1.1	-1.0	-1.0	-1.3	-1.4	-1.3	-1.4	-1.2	-1.0	-0.5	-0.5	-0.8	-1.3
HOURLY MEAN	1.0	0.7	1.0	1.1	1.3	1.2	1.0	1.1	0.9	-0.3	-1.5	-1.8	-1.9	-2.0	-2.0	-1.8	-1.6	-1.0	-0.1	0.8	1.1	1.2	1.2	1.0

MAXIMUM = 12.3 MINIMUM = -3.0 MEAN = 0.0 738 VALID OBSERVATIONS (99.2%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	2.7	4.1	-0.8	-0.6	1.4	0.6	0.2	1.4	0.8	0.4	4.2	4.0	7.0	1.9	-0.3	1.1
MIN	-2.5	-1.7	-2.5	-2.0	-1.8	-1.6	-1.9	-2.2	-2.7	-1.8	-2.6	-1.7	-2.0	-2.0	-2.8	-3.0
MEAN	-0.5	1.2	-1.7	-1.4	-0.7	-0.7	-1.2	-1.0	-1.4	-1.0	-0.7	0.8	1.0	-0.8	-1.7	-1.5

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	4.9	2.7	1.7	3.3	10.6	10.6	12.3	12.0	5.2	4.6	6.5	5.4	-0.8	0.8	-0.5
MIN	-1.9	-1.7	-1.6	-2.6	-2.3	-1.8	-1.6	-1.7	-2.7	-2.6	-2.8	-1.9	-1.9	-1.9	-1.4
MEAN	1.3	0.4	-0.3	-0.5	0.9	3.0	5.5	4.1	0.2	-0.5	0.4	0.8	-1.4	-0.7	-1.0

MEAN MAXIMUM = 3.5 MEAN MINIMUM = -2.1

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-1.3	-1.1	-1.1	-1.2	-1.2	-1.1	-1.1	-1.1	-1.3	-1.7	-1.9	-2.0	-2.2	-2.2	-2.1	-2.0	-1.6	-1.5	-1.3	-1.1	-1.1	-1.1	-1.1	-1.1
2	-1.0	-0.9	-0.6	-0.7	-0.7	-0.6	-0.6	0.2	0.8	-0.4	-1.7	-2.2	-2.6	-2.7	-2.7	-2.4	-2.0	-1.3	0.1	1.9	4.1	3.8	3.3	4.1
3	3.7	4.1	2.4	1.3	0.6	4.4	3.5	5.0	4.8	2.8	0.9	-0.9	-1.4	-1.5	-1.5	-1.5	-1.4	-0.9	0.4	1.6	1.9	0.9	2.4	3.8
4	3.0	1.5	0.8	0.8	-0.3	-0.4	2.2	-0.1	-0.9	-1.9	-2.4	-2.4	-1.9	-2.4	-2.2	-1.5	-1.3	-1.0	0.2	2.0	3.7	3.8	4.0	4.5
5	4.7	2.2	1.5	-0.1	-0.3	-0.5	-0.2	0.2	0.6	-0.5	-1.0	-1.3	-1.5	-1.5	-1.6	-1.4	-1.3	-1.3	-1.0	-1.1	-1.2	-1.2	-1.3	-1.3
6	-1.1	-1.0	-0.0	1.5	2.7	2.8	4.1	4.1	3.0	2.1	0.3	-0.3	-1.3	-1.3	-1.3	-1.3	-1.2	-0.7	-0.6	-0.5	0.1	0.4	0.3	0.9
7	0.8	0.5	1.5	2.6	2.3	1.5	0.6	0.7	0.8	-1.2	-1.8	-2.2	-2.5	-2.5	-2.3	-2.1	-1.8	-1.4	-1.2	-1.1	-1.1	-1.1	-1.1	-1.1
8	-1.2	-1.3	-1.3	-1.3	-1.3	-1.3	-1.0	-0.8	-0.7	-1.7	-2.1	-M-	-1.6	-1.6	-1.6	-1.5	-1.3	-1.2	-1.0	-0.4	-0.1	0.5	0.1	0.3
9	-0.9	-1.0	-0.9	-1.4	-1.7	-1.8	-1.6	-1.8	-1.9	-2.1	-2.0	-1.9	-2.0	-1.9	-2.0	-1.7	-1.5	-1.4	-1.4	-1.3	-1.2	-1.2	-1.2	-1.3
10	-1.4	-1.5	-1.7	-1.7	-1.8	-1.8	-1.9	-1.9	-1.9	-2.0	-2.1	-1.9	-1.9	-2.0	-2.0	-1.9	-1.8	-1.7	-1.5	-1.6	-1.6	-1.5	-1.5	-1.5
11	-1.4	-1.4	-1.2	-1.1	-1.1	-0.8	-0.1	1.3	0.9	-0.5	-1.4	-1.5	-1.6	-1.7	-1.7	-1.6	-1.5	-1.1	-0.1	0.2	0.3	-0.0	-0.4	-0.2
12	-0.1	-0.4	-0.5	-0.1	-0.4	-0.3	-0.1	0.1	-0.6	-1.1	-1.4	-1.5	-1.6	-1.7	-1.6	-1.5	-1.3	-1.0	0.2	1.2	1.1	1.2	1.0	1.0
13	0.7	0.7	1.4	1.5	1.6	0.7	0.3	1.1	0.9	-0.6	-1.3	-1.5	-1.4	-1.2	-1.3	-1.2	-0.8	-0.5	-0.1	-0.1	0.4	1.0	0.8	1.2
14	0.8	0.5	0.1	0.1	0.5	1.5	1.7	1.3	0.3	-0.8	-1.1	-1.3	-1.4	-1.5	-1.4	-1.2	-1.0	-0.4	-0.2	-0.2	-0.3	-0.4	-0.3	-0.3
15	-0.2	-0.2	-0.2	-0.0	-0.0	-0.1	0.2	0.2	-0.3	-0.9	-1.3	-1.4	-1.5	-1.5	-1.6	-1.5	-1.1	-0.3	0.4	0.3	0.7	2.1	2.4	2.0
16	2.6	1.8	2.1	1.0	1.8	1.8	1.8	4.8	3.4	1.6	-0.1	-1.3	-1.6	-1.7	-1.7	-1.5	-1.3	-0.6	0.7	2.6	2.8	1.8	1.3	2.4
17	2.8	2.5	1.9	1.2	1.7	1.9	1.4	1.7	0.3	-0.3	-0.8	-1.5	-1.7	-1.6	-1.6	-1.5	-1.2	-0.6	0.3	0.1	-0.1	0.0	0.1	0.2
18	0.2	0.5	0.7	0.6	1.8	2.0	1.8	1.1	-0.2	-1.4	-1.5	-1.9	-2.0	-1.7	-1.8	-1.5	-1.3	-0.5	0.3	2.0	5.4	7.0	5.6	5.3
19	4.9	6.4	4.6	2.0	1.3	1.0	0.6	0.3	-0.9	-1.5	-2.2	-2.4	-2.5	-2.6	-2.6	-2.4	-2.2	-1.6	-0.1	2.5	6.9	10.0	10.7	11.4
20	11.4	11.6	-M-	8.8	8.0	8.9	8.4	6.7	5.7	1.9	-0.3	-1.4	-1.6	-1.6	-1.6	-1.6	-1.2	-1.0	0.3	1.0	1.0	0.4	0.6	2.2
21	3.1	3.2	2.7	0.4	1.0	-0.1	-0.1	-0.9	-1.5	-1.7	-2.2	-2.3	-2.5	-2.2	-2.0	-1.7	-1.6	-1.5	-1.4	-1.5	-1.5	-1.5	-1.6	-1.6
22	-1.5	-1.4	-1.3	-1.3	-1.2	-1.3	-1.4	-1.3	-1.4	-1.5	-1.7	-2.0	-2.4	-2.1	-2.0	-2.1	-1.8	-1.4	-1.2	-0.9	-0.8	-0.8	-0.8	-0.7
23	-0.8	-1.1	-1.2	-1.1	-1.1	-1.0	-1.1	-1.1	-1.5	-2.0	-2.4	-2.6	-2.8	-2.9	-2.8	-2.5	-2.2	-1.9	-1.0	0.2	2.5	3.0	3.6	4.1
24	6.1	2.7	4.6	5.8	5.9	6.5	6.3	7.2	4.8	0.7	-1.3	-1.7	-1.8	-1.9	-1.8	-1.8	-1.6	-1.2	-0.1	2.7	3.7	3.4	3.7	3.0
25	3.6	4.3	3.8	3.1	3.8	3.9	2.4	2.5	0.9	-0.9	-1.4	-1.5	-1.7	-1.9	-1.6	-1.6	-1.7	-1.4	-1.2	-1.1	-1.0	-0.9	-1.0	-0.9
26	-0.9	-0.9	-0.7	-0.6	-0.7	-1.1	-1.1	-1.2	-1.3	-1.4	-1.4	-1.4	-1.3	-1.4	-1.4	-1.3	-1.2	-1.2	-1.1	-1.1	-0.9	-0.9	-0.8	-0.9
27	-0.6	-0.8	0.0	0.6	1.5	1.2	-0.2	-0.4	-0.7	-1.2	-1.7	-1.6	-1.7	-1.9	-2.0	-2.2	-2.1	-1.8	-1.3	-1.0	-1.0	-1.3	-1.3	-1.1
28	-0.4	-0.1	-0.4	-0.6	-1.0	-1.0	-1.1	-1.2	-1.5	-1.6	-1.8	-2.0	-2.0	-2.1	-2.4	-2.6	-2.1	-1.9	-1.8	-1.5	-1.1	-0.8	-0.3	0.4
HOURLY MEAN	1.3	1.1	0.6	0.7	0.8	0.9	0.8	1.0	0.4	-0.7	-1.4	-1.7	-1.9	-1.9	-1.9	-1.7	-1.5	-1.2	-0.5	0.1	0.8	0.9	1.0	1.2

MAXIMUM = 11.6 MINIMUM = -2.9 MEAN = -0.1 670 VALID OBSERVATIONS (99.7%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	-1.1	4.1	5.0	4.5	4.7	4.1	2.6	0.5	-0.9	-1.4	1.3	1.2	1.6	1.7
MIN	-2.2	-2.7	-1.5	-2.4	-1.6	-1.3	-2.5	-2.1	-2.1	-2.1	-1.7	-1.7	-1.5	-1.5
MEAN	-1.4	-0.2	1.5	0.3	-0.4	0.5	-0.5	-1.0	-1.5	-1.7	-0.7	-0.4	0.1	-0.2

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	2.4	4.8	2.8	7.0	11.4	11.6	3.2	-0.7	4.1	7.2	4.3	-0.6	1.5	0.4
MIN	-1.6	-1.7	-1.7	-2.0	-2.6	-1.6	-2.5	-2.4	-2.9	-1.9	-1.9	-1.4	-2.2	-2.6
MEAN	-0.2	1.0	0.2	0.8	1.7	2.9	-0.8	-1.4	-0.8	2.2	0.4	-1.1	-0.9	-1.3

MEAN MAXIMUM = 3.1 MEAN MINIMUM = -2.0

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	3.0	1.2	2.5	5.2	4.7	3.5	2.9	3.5	3.3	-0.7	-1.8	-1.9	-1.7	-1.7	-1.9	-1.8	-1.6	-1.3	-0.7	0.7	0.8	0.4	-0.7	-1.2
2	-0.9	-1.4	-1.8	-1.6	-1.7	-1.6	-1.7	-1.9	-2.3	-2.3	-2.4	-2.7	-2.9	-2.9	-2.7	-2.3	-2.1	-1.8	-1.3	-0.1	1.3	2.1	2.4	3.1
3	2.4	1.9	2.1	2.1	0.8	0.8	1.9	0.3	-0.7	-1.0	-1.3	-1.2	-1.3	-1.2	-1.1	-1.2	-1.2	-1.7	-1.2	-1.2	-1.1	-1.1	-0.9	-1.0
4	-1.0	-0.8	-0.6	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-1.1	-1.2	-1.2	-1.2	-1.3	-1.4	-1.4	-1.1	-0.8	-0.5	-0.3	0.1	-0.2	-1.4	-1.2
5	-1.3	-1.5	-1.7	-1.8	-1.7	-1.6	-1.3	-0.5	-1.0	-2.3	-2.7	-3.0	-M-	-2.4	-2.4	-2.4	-2.1	-1.7	-1.3	-0.6	0.3	1.4	1.8	1.7
6	1.9	1.6	2.7	3.3	2.5	3.6	1.6	-0.1	-0.9	-1.7	-1.8	-1.9	-1.9	-1.8	-2.0	-1.8	-1.7	-1.6	-1.3	-0.7	-0.7	-0.7	-0.6	-0.7
7	-0.9	-1.0	-0.7	-0.8	-0.7	-0.6	-0.7	-0.7	-1.4	-1.7	-1.8	-1.9	-2.0	-1.9	-2.0	-1.9	-1.8	-1.6	-1.1	-0.6	-0.2	0.0	1.4	2.7
8	2.5	0.6	2.4	4.3	4.1	3.9	4.8	5.6	4.4	0.8	-1.5	-1.7	-1.8	-1.9	-1.9	-1.9	-1.6	-1.4	-0.7	0.7	1.5	2.7	3.4	2.0
9	1.8	2.0	2.2	1.7	1.3	2.3	2.0	0.8	-0.8	-M-	-1.6	-2.0	-2.2	-2.7	-3.1	-2.7	-2.2	-1.9	-1.5	-0.3	2.5	2.2	1.9	1.1
10	1.2	-0.3	4.2	5.2	4.6	6.4	7.7	6.5	0.8	-0.8	-1.6	-1.8	-2.0	-2.1	-1.9	-1.9	-1.9	-1.6	-1.1	-0.5	0.2	-0.5	0.2	0.1
11	-1.3	-1.4	-1.4	-1.4	-1.2	-1.1	-0.7	0.7	-0.3	-1.5	-1.7	-2.1	-2.1	-2.8	-2.7	-2.4	-2.2	-1.7	-0.9	1.5	4.8	6.4	7.3	7.3
12	5.2	5.0	2.0	1.2	1.0	2.3	3.1	2.4	0.5	-1.3	-1.7	-1.9	-2.1	-2.3	-2.2	-2.1	-1.8	-1.6	-1.2	-0.6	1.6	3.9	4.5	3.4
13	2.4	6.0	4.3	1.3	6.6	7.4	8.6	5.3	2.0	-1.3	-2.0	-2.7	-2.9	-3.0	-3.0	-2.6	-M-	-2.4	-1.8	-0.7	0.1	-0.1	1.5	4.1
14	6.4	7.3	7.2	8.7	10.5	9.9	9.8	8.5	-M-	-0.7	-1.6	-1.7	-1.8	-1.8	-1.9	-1.8	-1.6	-1.4	-0.8	0.8	1.7	1.5	2.0	0.8
15	0.4	1.0	1.9	0.4	0.1	-0.1	0.8	-0.7	-1.3	-2.1	-2.5	-2.9	-3.0	-3.0	-2.9	-2.8	-2.5	-2.1	-1.5	-1.0	-0.7	-0.4	0.0	0.3
16	0.8	0.6	-1.1	-0.9	-0.8	-0.5	-0.9	2.7	-0.3	-1.5	-1.7	-2.2	-2.0	-2.0	-1.9	-1.7	-1.6	-1.5	-0.6	1.8	2.3	2.1	1.6	0.7
17	-0.3	-0.4	-0.3	-0.1	0.1	-0.1	0.1	2.3	1.8	-1.3	-1.6	-1.4	-1.5	-1.6	-1.5	-1.4	-1.4	-1.3	-1.2	-1.3	-1.3	-1.3	-1.2	-1.1
18	-1.2	-1.2	-1.6	-1.6	-1.7	-1.7	-1.6	-1.8	-2.3	-2.5	-2.9	-3.1	-3.1	-3.3	-3.1	-2.9	-2.6	-2.2	-1.6	-1.0	-0.7	-0.4	-0.2	0.7
19	1.0	0.8	0.3	-0.1	0.1	-0.1	-0.1	-0.5	-1.8	-2.4	-2.7	-2.8	-3.1	-3.2	-3.2	-2.9	-2.8	-2.3	-1.6	-0.4	-0.2	-0.7	-0.3	0.8
20	2.6	3.6	5.7	5.5	7.2	5.5	5.4	6.2	2.0	-1.2	-1.5	-1.6	-1.6	-1.6	-1.7	-1.6	-1.5	-1.4	-1.1	-0.5	0.3	0.8	0.1	-0.8
21	-0.9	-1.0	-0.9	-0.9	-0.9	-1.0	-1.1	-1.1	-1.1	-1.2	-1.2	-1.2	-1.3	-1.4	-1.5	-1.4	-1.2	-1.3	-1.1	-1.2	-1.1	-1.1	-1.2	-1.2
22	-1.3	-1.3	-1.3	-1.5	-1.4	-1.5	-1.4	-1.5	-1.7	-1.8	-2.2	-2.4	-2.3	-2.0	-2.1	-2.4	-2.1	-1.8	-1.3	-0.5	1.1	4.0	8.4	10.0
23	9.1	8.2	8.0	7.9	7.6	7.5	8.0	6.7	2.5	0.5	-1.2	-2.0	-1.9	-2.0	-3.7	-2.6	-1.7	-1.5	-0.8	0.5	1.2	2.3	2.1	1.6
24	1.4	1.8	1.8	0.5	0.1	0.1	-0.3	-0.3	-0.7	-1.4	-1.5	-1.7	-2.0	-2.1	-1.9	-1.7	-1.4	-1.2	-0.7	0.1	0.4	-0.0	-0.1	0.1
25	0.5	0.5	0.2	0.7	-0.6	-0.5	0.1	1.6	-0.2	-1.4	-1.8	-1.8	-1.7	-1.8	-1.7	-2.0	-1.8	-1.5	-1.0	1.2	3.1	2.6	0.4	0.1
26	0.1	-0.1	0.1	0.1	0.3	1.3	1.0	-0.4	-0.9	-1.3	-1.5	-1.5	-1.6	-1.6	-1.7	-1.6	-1.7	-1.5	-1.0	-0.5	1.9	2.1	1.3	2.4
27	2.7	1.0	1.3	1.1	0.4	0.0	-0.2	-0.7	-1.4	-1.5	-1.8	-2.0	-1.9	-2.1	-2.1	-1.9	-1.8	-1.6	-1.1	-0.6	-0.7	-0.4	-0.4	-0.4
28	-0.2	-0.4	-0.5	-0.5	-0.5	-0.7	-0.7	-0.7	-1.0	-1.6	-2.1	-2.2	-2.4	-1.9	-1.8	-1.6	-1.1	-1.0	-0.9	-0.8	-1.3	-0.9	-0.7	-0.5
29	-0.6	-0.6	-0.6	-0.5	-0.6	-0.5	-0.6	-0.7	-0.9	-1.3	-1.3	-1.1	-1.2	-1.5	-1.4	-1.4	-1.6	-1.5	-1.2	-1.1	-1.1	-1.1	-1.1	-1.0
30	-0.4	-0.2	-0.0	0.0	-0.2	0.1	0.7	1.6	-1.4	-1.8	-1.5	-1.7	-1.8	-2.0	-2.0	-1.8	-1.8	-1.5	-0.8	0.1	-0.0	0.1	2.7	1.4
31	-0.3	1.0	-0.2	0.0	-0.1	-0.4	-0.6	-1.1	-1.5	-1.8	-2.0	-2.1	-2.2	-2.2	-2.1	-2.0	-1.7	-1.5	-1.3	-0.9	-0.4	-0.9	-0.3	-0.1
HOURLY MEAN	1.1	1.1	1.2	1.2	1.3	1.4	1.5	1.3	-0.3	-1.4	-1.8	-2.0	-2.0	-2.1	-2.1	-2.0	-1.8	-1.6	-1.1	-0.3	0.5	0.8	1.1	1.1

MAXIMUM = 10.5 MINIMUM = -3.7 MEAN = -0.2 740 VALID OBSERVATIONS (99.5%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	5.2	3.1	2.4	0.1	1.8	3.6	2.7	5.6	2.5	7.7	7.3	5.2	8.6	10.5	1.9	2.7
MIN	-1.9	-2.9	-1.7	-1.4	-3.0	-2.0	-2.0	-1.9	-3.1	-2.1	-2.8	-2.3	-3.0	-1.9	-3.0	-2.2
MEAN	0.6	-1.2	-0.3	-0.9	-1.2	-0.2	-0.9	1.2	0.0	0.8	-0.0	0.7	1.2	2.6	-1.0	-0.4

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	2.3	0.7	1.0	7.2	-0.9	10.0	9.1	1.8	3.1	2.4	2.7	-0.2	-0.5	2.7	1.0
MIN	-1.6	-3.3	-3.2	-1.7	-1.5	-2.4	-3.7	-2.1	-2.0	-1.7	-2.1	-2.4	-1.6	-2.0	-2.2
MEAN	-0.7	-1.8	-1.2	1.2	-1.1	-0.4	2.3	-0.4	-0.3	-0.3	-0.7	-1.1	-1.0	-0.5	-1.0

MEAN MAXIMUM = 3.7 MEAN MINIMUM = -2.3

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-0.4	-0.5	-0.3	-0.2	0.1	0.2	0.4	-0.7	-1.3	-1.8	-2.2	-2.5	-2.4	-2.3	-2.1	-1.9	-1.7	-1.5	-1.0	1.3	2.7	3.1	3.4	2.5
2	2.1	1.4	1.1	1.9	2.0	1.8	0.4	-0.5	-1.2	-1.5	-1.7	-2.0	-2.0	-2.0	-2.1	-1.9	-1.7	-1.3	-0.8	-0.2	0.0	0.3	-0.2	-0.4
3	-0.4	-0.5	-0.5	-0.6	-0.6	-0.6	-0.5	-0.7	-1.0	-1.2	-1.4	-1.3	-1.5	-1.4	-1.7	-1.7	-1.5	0.7	-0.0	-0.2	2.4	-0.4	-1.3	-1.4
4	-1.5	-1.5	-1.6	-1.6	-1.5	-1.5	-1.5	-1.5	-1.7	-1.8	-2.1	-2.0	-1.9	-1.9	-2.0	-1.8	-2.0	-1.7	-1.4	-1.3	-1.4	-0.9	0.6	1.0
5	2.5	2.9	2.7	1.6	0.6	0.5	-0.4	-0.5	-1.8	-2.3	-2.4	-2.8	-2.7	-2.6	-2.2	-2.2	-2.1	-2.1	-1.5	-1.0	0.3	2.4	2.8	3.8
6	5.0	4.9	4.2	3.6	3.2	2.5	1.0	0.4	-0.9	-1.6	-1.9	-2.1	-2.2	-2.1	-2.1	-1.9	-1.7	-1.4	-0.7	-0.0	0.5	0.2	0.3	0.3
7	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2	0.0	-0.5	-1.4	-1.7	-1.8	-1.9	-1.9	-2.0	-2.1	-1.8	-1.7	-1.5	-0.9	0.9	2.4	2.5	1.3	-0.0
8	-0.2	-0.4	-0.7	-0.3	-0.6	-0.7	-1.6	-1.7	-1.8	-1.9	-2.1	-2.1	-2.1	-2.5	-2.5	-2.2	-2.2	-2.0	-1.5	-0.7	-0.5	0.1	3.0	4.1
9	4.3	4.5	3.0	3.4	3.7	3.4	2.0	0.9	-0.7	-0.8	-1.9	-2.0	-1.8	-2.0	-2.0	-1.9	-1.7	-1.5	-1.1	-0.2	0.8	1.4	1.8	2.1
10	2.0	1.2	0.9	1.0	1.3	1.0	0.2	-0.8	-1.3	-1.6	-1.9	-2.0	-1.9	-2.1	-1.9	-1.7	-1.6	-0.9	0.1	1.8	1.0	2.3	1.5	2.3
11	3.5	3.1	2.2	1.7	1.4	1.0	-0.3	0.2	-0.6	-1.0	-0.9	-1.4	-1.5	-1.4	-1.3	-1.3	-1.3	-0.8	-0.2	0.1	0.2	0.8	-0.1	-0.1
12	-0.2	0.6	3.8	0.0	-0.5	-0.4	-0.9	-1.0	-1.3	-1.3	-1.1	-1.3	-1.4	-1.6	-1.4	-1.6	-1.7	-1.6	-1.3	-0.6	-0.3	-0.5	-0.8	-0.6
13	-0.6	-0.6	-0.4	0.1	-0.2	0.1	-0.0	1.4	0.0	-1.3	-1.3	-1.4	-1.6	-2.1	-1.9	-1.9	-1.6	-1.3	-0.5	-1.2	-0.9	-1.3	-1.7	-1.7
14	-1.7	-1.6	-1.7	-1.6	-1.7	-1.7	-1.5	-1.9	-2.0	-2.1	-2.4	-2.5	-2.5	-2.5	-2.3	-2.0	-1.9	-1.7	-1.4	-0.8	-0.0	0.2	0.6	0.8
15	1.3	0.5	0.3	0.1	0.1	0.0	0.2	-0.3	-1.4	-1.7	-1.6	-1.7	-1.8	-1.8	-1.8	-1.9	-1.7	-1.6	-1.3	-0.9	0.1	0.9	0.6	0.7
16	0.3	0.4	-0.2	-0.4	-0.5	-0.4	-0.4	-0.7	-0.9	-1.2	-1.5	-1.7	-1.7	-1.5	-1.5	-1.7	-1.7	-1.5	-1.1	-0.1	1.8	1.5	1.6	0.6
17	-0.0	0.3	1.1	0.9	0.8	0.9	1.0	-0.4	-1.2	-1.4	-1.6	-2.3	-2.7	-2.3	-2.1	-1.8	-1.7	-1.5	-1.0	0.1	0.3	0.8	0.6	0.6
18	1.5	1.5	1.1	0.1	0.1	-0.4	-0.7	-0.7	-1.2	-1.4	-1.7	-1.7	-1.5	-1.5	-1.3	-1.1	-0.9	-1.1	-1.0	-0.9	-1.0	-0.8	-0.9	-0.8
19	-0.9	-0.9	-1.0	-0.9	-0.9	-0.8	-0.9	-0.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.2	-1.2	-1.3	-1.3	-1.2	-1.2	-1.3	-1.2	-1.2	-1.2
20	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.4	-1.6	-1.6	-1.6	-1.7	-1.5	-1.4	-1.4	-0.9	-0.6	-0.5	-0.6	-0.5
21	-0.4	-0.5	-0.6	-0.9	-1.1	-1.1	-1.0	-1.1	-1.2	-1.3	-1.3	-1.3	-1.4	-1.4	-1.4	-1.3	-1.2	-1.2	-1.1	-1.0	-1.0	-0.9	-0.9	-0.9
22	-0.8	-0.4	-0.4	-0.7	-0.8	-0.7	-0.8	-0.8	-0.8	-0.7	-1.7	-2.1	-2.6	-2.6	-2.6	-2.1	-2.0	-1.4	-1.5	-1.1	-0.8	-0.4	0.1	-0.0
23	-0.0	-0.4	-0.1	-0.0	-0.1	-0.3	-0.3	-1.0	-1.9	-2.1	-2.3	-2.6	-2.8	-2.8	-2.7	-2.7	-2.2	-1.9	-1.5	-0.6	0.9	0.7	1.2	1.5
24	1.3	1.0	1.1	1.5	1.9	2.5	-0.7	-1.4	-1.8	-2.0	-2.2	-2.4	-2.8	-2.5	-2.0	-1.8	-1.6	-1.5	-1.2	-0.3	1.2	1.4	1.7	2.1
25	2.1	0.9	0.9	0.3	0.6	0.7	0.2	-0.9	-1.3	-1.6	-1.6	-1.7	-2.0	-2.0	-2.0	-1.9	-1.6	-1.1	-0.6	-0.2	0.2	0.2	-0.0	0.0
26	-0.0	-0.2	0.1	0.3	0.9	0.7	0.5	-1.0	-1.5	-1.6	-1.5	-1.7	-1.6	-1.8	-1.8	-1.7	-1.7	-1.6	-1.1	-0.0	0.6	1.1	0.4	-0.1
27	-0.1	0.0	0.6	0.8	0.3	0.8	0.1	-1.1	-1.5	-1.8	-2.0	-2.0	-2.1	-2.2	-2.1	-2.0	-1.7	-1.6	-1.1	-0.4	-0.2	-0.1	-0.1	-0.3
28	-0.2	-0.2	-0.1	-0.1	-1.1	-1.3	-1.4	-1.6	-1.9	-2.1	-2.6	-2.9	-2.7	-2.4	-2.7	-3.0	-2.6	-2.3	-1.8	-0.9	0.6	3.0	3.9	3.9
29	3.4	1.8	2.0	2.2	1.5	2.1	0.6	-0.8	-1.4	-1.7	-2.1	-2.6	-2.8	-2.6	-2.7	-2.5	-2.2	-1.8	-1.2	-0.5	-0.0	0.3	0.7	0.8
30	-0.1	0.4	2.3	1.8	0.4	0.4	0.2	-1.5	-1.9	-2.2	-2.2	-2.3	-2.4	-1.8	-1.8	-2.1	-1.9	-1.8	-1.5	-1.0	0.3	0.5	0.1	1.3
HOURLY MEAN	0.7	0.5	0.6	0.4	0.3	0.2	-0.2	-0.7	-1.3	-1.6	-1.8	-2.0	-2.0	-2.0	-2.0	-1.9	-1.7	-1.4	-1.1	-0.4	0.3	0.5	0.6	0.7

MAXIMUM = 5.0 MINIMUM = -3.0 MEAN = -0.6 720 VALID OBSERVATIONS (100.0%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	3.4	2.1	2.4	1.0	3.8	5.0	2.5	4.1	4.5	2.3	3.5	3.8	1.4	0.8	1.3
MIN	-2.5	-2.1	-1.7	-2.1	-2.8	-2.2	-2.1	-2.5	-2.0	-2.1	-1.5	-1.7	-2.1	-2.5	-1.9
MEAN	-0.4	-0.4	-0.7	-1.4	-0.3	0.3	-0.5	-1.0	0.6	-0.0	0.1	-0.7	-0.9	-1.5	-0.5

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	1.8	1.1	1.5	-0.8	-0.5	-0.4	0.1	1.5	2.5	2.1	1.1	0.8	3.9	3.4	2.3
MIN	-1.7	-2.7	-1.7	-1.3	-1.7	-1.4	-2.6	-2.8	-2.8	-2.0	-1.8	-2.2	-3.0	-2.8	-2.4
MEAN	-0.5	-0.5	-0.7	-1.1	-1.2	-1.1	-1.2	-1.0	-0.4	-0.5	-0.6	-0.8	-0.9	-0.4	-0.7

MEAN MAXIMUM = 2.1 MEAN MINIMUM = -2.2

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.6	0.5	-0.4	-0.1	1.2	1.5	-0.0	-1.6	-2.1	-2.4	-2.6	-2.9	-3.0	-3.0	-3.1	-2.7	-2.5	-2.2	-1.7	-0.8	1.4	3.6	2.6	4.2
2	3.8	3.2	2.1	1.6	1.1	-0.1	-0.3	-1.1	-1.5	-1.9	-2.1	-2.2	-2.4	-2.4	-2.2	-2.2	-2.0	-1.8	-1.4	-0.8	-0.6	-0.7	-0.5	-0.6
3	-0.7	-0.7	-0.5	-0.7	-0.8	-0.9	-0.6	-0.9	-1.1	-1.5	-1.6	-1.7	-1.6	-1.9	-1.9	-1.7	-1.5	-1.2	-1.0	-0.8	-0.8	-0.9	-0.9	-1.0
4	-1.0	-1.0	-1.0	-0.8	-0.9	-0.8	-0.8	-0.9	-1.3	-1.7	-1.7	-1.6	-1.3	-1.3	-1.3	-1.2	-1.8	-1.8	-1.5	-1.2	-1.0	-0.4	-0.1	-0.5
5	-0.7	-0.9	-0.9	-1.0	-1.1	-1.1	-1.2	-1.6	-1.7	-2.0	-1.9	-2.1	-2.1	-2.1	-2.0	-1.7	-1.7	-1.4	-1.3	-1.1	-1.0	-0.9	-0.8	-0.9
6	-1.1	-1.1	-0.8	-0.7	-0.9	-0.5	-0.9	-1.2	-1.3	-1.5	-1.7	-1.9	-2.0	-2.1	-1.8	-1.5	-1.6	-1.6	-1.4	-0.9	-0.1	-0.0	-M-	-M-
7	-M-	-M-	-M-	-M-	-M-	-0.5	-0.9	-1.5	-1.6	-1.7	-1.7	-1.8	-1.7	-1.6	-1.4	-1.4	-1.1	-1.0	-0.9	-0.8	-0.4	0.3	0.6	0.1
8	-0.5	-0.4	-0.5	-0.8	-0.8	-0.9	-0.9	-1.2	-1.2	-1.1	-1.1	-1.2	-1.3	-1.5	-1.5	-1.5	-1.3	-1.4	-1.2	-0.8	-0.4	-0.3	0.1	0.1
9	-0.1	0.0	-0.2	-0.9	-1.0	-1.0	-1.1	-1.1	-1.2	-1.4	-1.3	-1.4	-1.4	-1.3	-1.5	-1.5	-1.4	-1.3	-1.3	-1.3	-1.2	-1.1	-1.1	-1.2
10	-1.3	-1.3	-1.3	-1.3	-1.4	-1.4	-1.5	-1.7	-1.9	-2.2	-2.4	-2.7	-2.8	-2.8	-2.5	-2.3	-2.2	-1.9	-1.6	-1.0	0.2	0.6	0.8	0.7
11	0.8	3.6	2.8	4.4	6.4	8.0	7.2	2.1	-1.2	-1.6	-1.9	-2.4	-2.1	-2.2	-2.0	-1.7	-1.8	-1.7	-1.1	-0.7	-0.1	0.5	1.0	1.7
12	1.1	0.9	0.2	-0.0	0.3	-1.0	-1.6	-1.4	-1.0	-1.3	-1.1	-1.2	-1.4	-1.6	-1.4	-1.7	-1.5	-1.2	-1.2	-0.7	-0.0	-0.0	-0.2	-0.2
13	-0.6	-1.2	-1.2	-1.3	-1.2	-1.4	-1.4	-1.4	-1.6	-1.6	-1.4	-1.6	-1.6	-1.7	-1.7	-1.6	-1.6	-1.3	-1.2	-1.3	-1.2	-1.2	-1.1	-1.2
14	-1.2	-1.3	-1.1	-1.1	-0.8	-0.4	-0.6	-1.4	-1.8	-2.2	-2.2	-2.3	-2.4	-2.6	-2.4	-1.9	-1.7	-1.9	-1.4	0.7	4.2	6.5	8.2	7.9
15	7.2	5.3	2.4	2.6	2.8	2.0	3.5	1.0	-0.9	-1.5	-1.5	-1.7	-1.8	-1.9	-1.9	-1.7	-1.6	-1.6	-1.1	-0.5	-0.2	-0.0	-0.3	0.4
16	1.5	0.9	0.5	0.7	0.5	0.5	0.0	-1.1	-1.2	-1.3	-1.6	-1.2	-1.2	-1.3	-1.2	-1.0	-0.8	-1.0	-1.0	-0.9	-0.9	-0.9	-1.4	-1.5
17	-1.4	-1.4	-1.2	-1.2	-1.5	-1.6	-1.7	-1.1	-1.1	-1.1	-1.2	-1.1	-1.2	-1.3	-1.3	-1.3	-1.2	-1.1	-1.1	-1.0	-1.1	-1.0	-1.0	-0.9
18	-0.9	-1.0	-1.0	-0.9	-1.0	-1.1	-1.1	-1.1	-1.0	-0.9	-1.0	-1.0	-1.0	-0.9	-0.5	-0.4	0.2	0.8	1.3	0.3	-0.5	-0.5	-0.7	-0.8
19	-0.7	-0.8	-0.7	-0.7	-0.6	-0.9	-1.4	-1.8	-1.9	-1.9	-2.1	-2.0	-2.0	-2.3	-2.1	-1.9	-1.9	-1.7	-1.5	-0.2	2.1	3.1	6.2	7.2
20	7.2	6.8	6.9	7.1	7.3	7.4	7.0	2.4	-0.7	-1.5	-1.4	-1.6	-1.9	-1.8	-1.8	-1.7	-1.6	-1.4	-0.9	0.1	1.7	2.2	2.7	2.6
21	2.5	2.1	1.1	1.7	2.2	1.9	1.0	-0.6	-1.1	-1.5	-1.7	-1.9	-2.1	-2.1	-2.0	-1.8	-1.5	-1.1	-0.9	-0.6	-0.4	-0.5	-0.5	-0.5
22	-0.6	0.3	0.6	-0.1	-0.1	-0.4	-0.6	-0.9	-1.1	-1.3	-1.3	-1.6	-1.9	-2.1	-2.0	-1.9	-1.7	-1.5	-1.2	-0.9	-0.8	-0.7	0.9	0.1
23	-0.3	-0.5	-0.5	-0.5	-0.7	-0.6	-0.6	-0.5	-0.9	-1.1	-1.1	-1.3	-1.7	-1.7	-1.9	-1.8	-1.9	-1.8	-1.4	-0.8	-0.8	-0.7	-0.8	-0.9
24	-0.9	-0.9	-0.9	-0.7	-0.0	-0.1	-0.9	-1.4	-1.8	-2.2	-2.3	-2.5	-2.6	-2.7	-2.5	-2.2	-2.0	-1.9	-1.6	-0.6	2.3	3.3	0.6	0.0
25	1.0	3.5	1.7	2.4	1.8	0.2	-0.6	-1.3	-1.4	-1.8	-2.5	-2.8	-2.7	-2.7	-2.1	-1.6	-1.7	-1.8	-1.4	-1.0	-0.4	-0.1	0.4	0.0
26	0.2	0.2	0.4	1.6	2.9	1.8	0.2	-1.6	-1.6	-1.9	-2.1	-2.6	-M-	-M-	-M-	-M-	-M-	-2.2	-1.7	-1.0	-0.4	-0.4	-0.9	-0.4
27	-0.4	-0.3	-0.4	-0.5	-0.3	-0.5	-0.8	-1.3	-1.6	-1.6	-1.9	-2.3	-2.8	-2.6	-1.8	-1.5	-1.4	-1.4	-1.2	-0.5	0.5	0.5	0.9	0.6
28	0.6	1.3	2.5	2.6	3.2	2.7	2.0	1.3	0.2	-0.4	-1.2	-1.3	-1.5	-1.5	-1.7	-1.9	-1.7	-2.0	-1.3	0.0	0.6	2.1	2.5	1.2
29	1.6	-0.1	1.1	1.2	2.6	0.9	-0.6	-1.9	-1.9	-2.5	-2.9	-3.4	-3.4	-3.7	-3.7	-3.4	-2.9	-2.6	-1.6	0.1	1.3	0.4	-0.4	-0.9
30	-0.9	-1.0	-0.9	-1.0	-1.0	-0.9	-1.1	-1.4	-1.4	-1.7	-1.9	-2.2	-2.3	-2.5	-2.6	-2.6	-2.4	-2.2	-1.6	-0.6	0.5	0.8	0.7	0.4
31	0.5	1.0	1.0	0.9	1.1	2.7	1.9	-0.6	-1.5	-1.8	-1.9	-2.1	-2.3	-2.3	-2.3	-2.1	-1.9	-1.6	-1.3	-0.7	0.1	0.1	0.2	0.2
HOURLY MEAN	0.5	0.5	0.3	0.4	0.6	0.4	0.0	-0.9	-1.3	-1.6	-1.8	-1.9	-2.0	-2.0	-1.9	-1.8	-1.7	-1.5	-1.2	-0.7	0.1	0.4	0.6	0.5

MAXIMUM = 8.2 MINIMUM = -3.7 MEAN = -0.7 732 VALID OBSERVATIONS (98.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	4.2	3.8	-0.5	-0.1	-0.7	-0.0	0.6	0.1	0.0	0.8	8.0	1.1	-0.6	8.2	7.2	1.5
MIN	-3.1	-2.4	-1.9	-1.8	-2.1	-2.1	-1.8	-1.5	-1.5	-2.8	-2.4	-1.7	-1.7	-2.6	-1.9	-1.6
MEAN	-0.6	-0.6	-1.1	-1.1	-1.4	-1.2	-1.0	-0.9	-1.1	-1.5	0.7	-0.7	-1.3	-0.1	0.3	-0.6

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	-0.9	1.3	7.2	7.4	2.5	0.9	-0.3	3.3	3.5	2.9	0.9	3.2	2.6	0.8	2.7
MIN	-1.7	-1.1	-2.3	-1.9	-2.1	-2.1	-1.9	-2.7	-2.8	-2.6	-2.8	-2.0	-3.7	-2.6	-2.3
MEAN	-1.2	-0.6	-0.4	1.9	-0.4	-0.9	-1.0	-1.0	-0.6	-0.5	-0.9	0.4	-1.1	-1.2	-0.5

MEAN MAXIMUM = 2.3 MEAN MINIMUM = -2.2

318 FT TO 35 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0.4	0.1	0.3	0.6	0.8	1.5	1.0	-1.0	-1.5	-1.8	-2.0	-2.0	-2.3	-2.2	-2.1	-2.0	-1.9	-1.8	-1.5	-1.0	-0.2	0.1	-0.0	-0.0
2	-0.2	-0.2	-0.3	-0.6	-0.7	-0.8	-0.8	-0.5	-0.9	-0.8	-0.8	-0.3	-1.6	-2.2	-1.9	-1.9	-1.4	-1.5	-1.6	-1.5	-1.1	-0.8	0.1	1.0
3	1.2	3.6	3.8	3.2	2.9	4.4	3.2	-0.3	-1.8	-2.4	-M-	-M-	-M-	-M-	-3.0	-2.5	-2.3	-2.1	-1.2	-0.6	0.1	0.8	1.3	2.6
4	2.5	4.5	3.6	4.4	4.3	3.0	1.1	0.1	-0.7	-1.7	-1.7	-1.8	-2.1	-1.9	-2.0	-1.5	-1.0	-1.0	-0.4	-0.9	0.1	-0.0	1.5	1.8
5	1.4	1.4	1.6	0.4	1.0	2.1	2.0	-0.2	-0.7	-1.6	-1.7	-2.0	-2.3	-2.3	-2.3	-1.6	-1.0	-0.5	-0.1	1.2	2.7	2.7	2.0	1.4
6	1.2	2.2	1.3	0.6	0.2	-0.1	-0.4	-0.8	-0.9	-1.6	-1.9	-2.2	-2.8	-3.0	-3.0	-3.0	-2.7	-2.6	-1.8	-0.2	1.0	0.6	0.7	0.4
7	0.6	1.9	1.6	1.1	0.5	0.7	-0.1	-0.7	-1.1	-1.0	-1.9	-2.1	-2.3	-2.3	-2.3	-2.2	-2.0	-1.7	-1.0	-0.9	-0.2	-0.2	-0.5	-0.6
8	-0.6	0.6	0.9	0.7	1.3	0.7	-0.2	0.2	-1.4	-1.3	-1.8	-1.7	-1.7	-1.8	-1.9	-2.0	-2.7	-2.6	-1.6	-1.3	-0.3	0.6	0.7	0.8
9	-0.3	-0.5	-0.2	-0.4	-0.4	-0.5	-0.9	-1.4	-1.4	-1.6	-1.6	-1.7	-2.0	-1.4	-1.4	-2.0	-2.1	-1.3	-1.2	-1.2	-1.3	-1.4	-1.4	-1.1
10	-0.3	-0.5	-0.9	-0.3	-0.7	-0.6	0.6	-0.2	-0.3	-1.1	-1.8	-2.0	-2.4	-2.2	-2.3	-2.2	-2.0	-1.9	-1.7	-1.2	-0.3	0.4	-0.3	1.0
11	1.7	1.6	0.8	0.6	0.5	0.3	0.5	-0.9	-1.0	-1.2	-1.7	-2.0	-2.1	-2.1	-2.2	-2.1	-2.0	-1.6	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1
12	-1.1	-1.2	-1.2	-1.2	-1.2	-0.7	-1.0	-1.2	-1.6	-1.9	-1.9	-2.2	-2.3	-2.3	-2.1	-2.0	-1.9	-1.7	-1.5	-1.1	-0.7	-0.7	-0.7	-0.7
13	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.9	-1.5	-1.4	-1.9	-2.2	-2.3	-2.6	-2.6	-2.3	-2.2	-1.9	-1.6	-1.3	-1.0	-0.8	-0.9	-0.9	-0.9
14	-0.8	-0.9	-0.9	-0.9	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.3	-1.5	-1.5	-1.4	-1.7	-1.5	-1.8	-1.5	-1.1	-1.0	-1.1	-1.0	-1.0	-0.9
15	-1.1	-1.2	-1.6	-1.5	-1.4	-1.4	-1.1	-0.4	-0.8	-0.7	-1.8	-2.4	-2.5	-2.3	-2.3	-2.7	-3.1	-2.7	-2.2	-0.9	0.2	0.6	0.4	1.7
16	2.4	1.3	0.1	0.2	0.8	-0.1	-1.1	-2.1	-2.0	-2.5	-2.7	-3.0	-3.1	-3.6	-3.4	-3.1	-2.8	-2.4	-1.9	-1.0	1.9	3.4	5.1	2.6
17	1.6	0.9	1.1	1.1	0.2	0.2	-0.5	-1.3	-1.4	-1.8	-2.0	-2.1	-2.2	-2.3	-2.2	-2.1	-2.0	-1.7	-1.4	-0.9	-0.4	-0.3	-0.2	-0.3
18	-0.4	0.1	0.8	1.7	1.5	0.5	0.3	-0.9	-1.6	-2.0	-2.3	-2.2	-2.5	-2.7	-2.6	-2.2	-1.9	-1.5	-1.4	-1.0	-0.2	-0.0	0.0	0.5
19	-0.2	-0.3	0.0	0.3	0.8	-0.2	-0.4	-1.5	-1.3	-1.6	-1.8	-1.8	-1.8	-2.0	-2.0	-1.9	-1.9	-1.7	-1.2	-0.8	-0.4	0.9	1.3	1.2
20	0.9	0.9	0.6	-0.2	-0.1	-0.5	-0.7	-1.1	-1.2	-1.3	-0.8	-1.9	-1.4	-2.3	-2.3	-2.3	-2.3	-1.6	-1.4	-1.1	-1.0	-0.8	-0.9	-0.9
21	-0.9	-0.8	-0.4	-0.6	-0.3	-0.4	0.5	0.4	1.7	1.0	-1.4	-2.0	-1.9	-2.1	-1.9	-1.8	-1.7	-2.1	-2.0	-1.1	0.7	1.9	1.9	1.7
22	1.3	0.1	-0.0	2.2	3.6	5.5	4.4	-0.0	-0.9	-1.6	-1.9	-1.9	-2.2	-2.6	-2.6	-2.2	-2.8	-2.6	-2.0	-1.2	-0.0	0.5	1.2	1.9
23	1.9	1.8	1.1	0.6	1.4	1.6	0.6	-1.1	-1.5	-1.7	-2.1	-2.3	-2.5	-2.3	-2.2	-2.0	-1.8	-1.7	-1.4	-1.1	-0.7	-0.7	-0.6	-0.7
24	-0.7	-0.6	-0.5	-0.5	-0.1	0.9	1.3	-1.1	-0.9	-1.8	-1.9	-2.2	-2.4	-3.3	-3.8	-3.2	-2.7	-2.2	-1.8	-1.3	-1.0	-0.9	-0.6	-0.6
25	-0.7	-0.9	-1.3	-0.4	0.9	0.4	0.8	-0.9	0.8	-2.0	-2.0	-2.2	-2.7	-2.9	-3.0	-3.2	-3.0	-2.7	-1.6	-0.2	0.6	1.6	3.5	5.4
26	4.2	1.4	1.5	2.4	2.5	3.5	1.7	-0.8	-1.4	-1.6	-1.5	-1.7	-2.0	-2.1	-2.2	-2.3	-1.9	-1.6	-1.1	-0.7	-0.2	-0.4	0.0	-0.3
27	-0.4	-0.7	-0.8	-0.5	-1.2	-1.2	-0.6	-0.7	-0.8	-1.0	-1.7	-2.0	-1.8	-1.8	-1.6	-1.5	-1.5	-1.4	-1.2	-0.8	-0.6	-0.6	-0.4	-0.5
28	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.6	-1.1	-1.2	-1.5	-1.7	-1.8	-2.0	-2.0	-2.0	-2.0	-1.7	-1.6	-1.3	-0.9	-0.6	-0.5	-0.6	-0.6
29	-0.6	-0.6	-0.8	-0.8	0.2	0.2	-0.2	-0.8	-1.3	-1.6	-1.9	-2.0	-2.8	-2.4	-2.1	-2.1	-1.5	-1.9	-1.9	-1.6	-1.0	-0.5	-0.3	-0.3
30	0.5	-0.1	-0.4	-0.6	-0.8	-1.0	-1.0	-1.4	-1.4	-1.9	-1.8	-2.3	-2.4	-2.2	-2.5	-2.3	-2.2	-2.4	-2.0	-1.3	-0.3	0.3	0.5	0.3
HOURLY MEAN	0.4	0.4	0.3	0.3	0.5	0.5	0.2	-0.8	-1.0	-1.5	-1.8	-2.0	-2.2	-2.3	-2.3	-2.2	-2.1	-1.8	-1.4	-0.9	-0.2	0.1	0.4	0.5

MAXIMUM = 5.5 MINIMUM = -3.8 MEAN = -0.8 716 VALID OBSERVATIONS (99.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	1.5	1.0	4.4	4.5	2.7	2.2	1.9	1.3	-0.2	1.0	1.7	-0.7	-0.6	-0.8	1.7
MIN	-2.3	-2.2	-3.0	-2.1	-2.3	-3.0	-2.3	-2.7	-2.1	-2.4	-2.2	-2.3	-2.6	-1.8	-3.1
MEAN	-0.8	-0.9	0.5	0.4	0.2	-0.8	-0.7	-0.7	-1.2	-1.0	-0.8	-1.4	-1.4	-1.2	-1.3

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	5.1	1.6	1.7	1.3	0.9	1.9	5.5	1.9	1.3	5.4	4.2	-0.4	-0.4	0.2	0.5
MIN	-3.6	-2.3	-2.7	-2.0	-2.3	-2.1	-2.8	-2.5	-3.8	-3.2	-2.3	-2.0	-2.0	-2.8	-2.5
MEAN	-0.7	-0.8	-0.8	-0.8	-1.0	-0.5	-0.2	-0.7	-1.3	-0.7	-0.2	-1.0	-1.1	-1.2	-1.2

MEAN MAXIMUM = 1.7 MEAN MINIMUM = -2.5

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	2.7	4.6	2.0	0.7	-0.5	-0.7	-0.9	-1.0	-1.1	-1.1	-1.3	-1.5	-1.7	-1.9	-2.2	-2.0	-1.8	-1.2	-0.2	0.2	1.1	1.6	2.0	1.8
2	0.5	1.1	1.7	0.9	2.2	1.0	1.1	2.0	1.3	1.5	0.3	-1.2	-1.3	-1.3	-1.3	-1.2	-1.0	-0.5	0.6	1.7	4.1	3.4	3.4	1.1
3	-0.7	-0.9	-1.4	-1.3	-1.4	-1.5	-1.4	-1.4	-1.5	-1.6	-1.7	-1.8	-1.9	-1.9	-2.0	-2.0	-1.7	-1.4	-0.9	-0.7	-0.6	-1.0	-1.0	-1.1
4	-1.3	-1.3	-1.2	-1.3	-1.2	-1.2	-1.2	-1.3	-1.2	-1.3	-1.4	-1.3	-1.4	-1.4	-1.5	-1.4	-1.4	-1.2	-0.5	-0.1	0.0	-0.2	-0.6	-0.7
5	-0.8	-1.1	-1.1	-1.1	-1.0	-1.0	-0.9	-0.9	-0.9	-1.0	-1.3	-1.3	-1.4	-1.3	-1.3	-1.3	-1.2	-1.0	-0.5	-0.1	0.4	0.9	0.8	0.2
6	0.1	0.6	0.5	0.8	-0.6	-0.5	-0.2	-0.9	-1.1	-1.2	-1.5	-1.5	-1.4	-1.4	-1.4	-1.4	-1.5	-1.3	-1.0	-0.8	-1.2	-0.7	-0.4	-0.4
7	-1.6	-1.7	-1.4	-1.3	-1.3	-1.3	-1.2	-1.3	-1.2	-1.3	-1.3	-1.4	-1.5	-1.6	-1.6	-1.4	-1.3	-0.6	0.0	0.1	-0.0	0.4	0.5	-0.8
8	-0.6	0.0	1.0	1.6	2.4	-1.1	-1.4	-1.7	-2.0	-2.1	-2.6	-2.6	-2.8	-2.3	-2.5	-2.1	-2.1	-1.7	-1.5	-0.7	-0.4	-0.6	-0.3	-0.5
9	-0.7	-0.7	-0.5	-0.1	0.3	-0.1	-0.6	-1.1	-2.3	-2.2	-2.1	-2.3	-2.1	-2.2	-2.2	-2.4	-2.2	-2.0	-2.0	-2.0	-1.6	-1.2	-1.6	-1.0
10	-1.5	-1.0	-1.3	-1.0	-0.8	-1.0	-1.0	-0.9	-1.0	-1.0	-1.2	-1.4	-1.4	-1.4	-1.2	-1.2	-1.1	-1.0	-0.5	0.3	0.9	0.1	-0.7	-0.8
11	-1.0	-1.2	-1.3	-1.3	-1.4	-1.7	-1.7	-1.6	-1.9	-2.2	-2.7	-2.4	-2.6	-2.6	-2.3	-2.0	-1.9	-1.7	-0.8	0.6	1.7	3.4	3.9	1.8
12	1.5	1.4	1.7	1.3	1.4	0.7	0.7	1.2	0.0	-1.0	-1.2	-1.3	-1.3	-1.3	-1.2	-1.2	-1.1	-0.3	0.4	0.8	2.1	3.3	2.0	0.7
13	0.8	1.9	5.8	1.2	1.9	1.7	2.1	1.5	1.4	1.2	-0.9	-1.4	-2.5	-2.4	-2.2	-2.2	-1.5	-1.4	-0.6	-0.1	-0.0	0.8	0.8	1.1
14	0.6	0.6	0.0	0.4	0.3	0.7	-0.7	-0.9	-1.3	-1.6	-1.7	-1.8	-1.8	-1.9	-1.8	-1.6	-1.7	-1.7	-1.6	-1.4	-1.0	-1.0	-0.7	-1.0
15	-1.3	-1.5	-1.3	-0.9	-0.0	-1.5	-1.5	-1.7	-1.8	-2.1	-2.3	-2.4	-2.3	-2.4	-2.3	-2.0	-2.0	-2.0	-1.6	-1.4	-1.9	-1.9	-1.5	-1.7
16	-1.8	-1.6	-1.2	-1.4	-2.1	-1.8	-1.7	-1.3	-1.5	-2.3	-2.7	-2.7	-2.7	-2.5	-2.8	-2.6	-2.2	-2.0	-1.0	-0.8	-0.3	-0.3	-0.3	0.2
17	1.3	2.0	2.8	2.9	3.2	4.7	4.8	2.6	1.5	2.4	-1.2	-1.4	-1.4	-1.5	-1.5	-1.4	-1.3	-0.8	1.1	3.2	3.2	1.9	1.4	2.3
18	2.1	1.1	0.9	0.6	2.6	1.7	1.4	1.2	2.1	1.2	-0.7	-1.3	-1.3	-1.3	-1.3	-1.3	-1.2	-0.7	0.4	0.9	0.6	0.2	-0.4	-0.5
19	-0.6	-0.6	-0.8	-0.9	-0.8	-0.7	-0.4	0.1	0.5	-0.4	-1.2	-1.2	-1.3	-1.3	-1.3	-1.3	-1.2	-0.8	0.5	0.7	0.4	-0.0	-0.1	-0.3
20	0.0	0.7	1.2	2.1	1.9	2.1	1.5	-M-	-0.9	-1.3	-1.4	-1.6	-2.0	-2.0	-2.2	-2.0	-1.7	-1.6	-1.0	-0.9	-0.7	-0.6	-1.3	-1.4
21	-1.2	-1.2	-1.1	-1.1	-1.0	-1.3	-0.8	0.1	0.6	-0.2	-2.0	-2.2	-2.6	-2.2	-2.2	-1.3	-1.0	-1.3	0.2	1.4	3.0	6.3	8.9	8.1
22	6.9	2.2	1.8	3.1	3.7	3.9	2.1	2.6	4.0	1.5	-1.1	-1.3	-2.0	-1.5	-1.9	-2.2	-2.5	-1.2	-0.6	0.6	1.6	2.3	3.5	3.8
23	5.8	4.9	3.9	3.6	6.6	7.7	7.1	7.6	4.8	4.8	2.4	-0.6	-1.1	-1.4	-1.4	-1.3	-1.2	-0.5	0.8	3.9	3.9	4.1	2.8	2.9
24	6.1	7.2	6.1	7.1	8.6	8.6	6.9	6.1	8.1	7.5	4.4	0.8	-1.0	-1.3	-1.5	-1.3	-1.3	-0.4	0.8	1.2	1.9	1.3	-0.0	-0.0
25	0.0	-0.0	0.3	0.9	1.3	0.6	0.3	0.4	0.8	0.3	-2.0	-2.3	-2.4	-2.5	-2.1	-2.0	-1.9	-1.2	0.4	1.7	1.7	-0.9	-1.0	-0.9
26	-1.2	-1.1	-1.3	-1.3	-0.8	-0.6	0.5	-0.3	-0.5	-1.7	-2.3	-2.1	-2.6	-2.6	-2.4	-2.5	-2.1	-1.5	-0.3	-0.1	0.8	0.4	-0.5	-0.1
27	0.6	2.7	3.2	2.5	2.0	2.4	2.5	2.2	1.4	-1.0	-2.5	-2.8	-2.6	-2.8	-2.5	-2.5	-2.2	-1.9	-1.0	-0.5	-0.1	-0.0	0.3	0.7
28	0.5	0.2	1.3	1.7	1.4	2.9	4.2	4.8	5.1	3.1	-1.4	-1.5	-1.4	-1.7	-1.8	-1.4	-1.3	-1.2	-0.2	0.3	-0.1	-1.0	-1.0	-1.2
29	-1.3	-1.3	-1.3	-1.3	-1.2	-1.2	-1.2	-1.1	-1.0	-1.2	-1.4	-1.5	-1.5	-1.6	-M-	-M-	-M-	-M-	-1.1	-1.1	-1.0	-0.8	-0.7	-0.6
30	-0.5	-0.2	-0.7	-0.2	-0.1	-0.0	-0.1	0.0	-0.6	-0.9	-1.2	-1.4	-1.4	-1.5	-1.5	-1.4	-1.4	-1.1	-0.4	0.7	0.2	0.5	1.0	0.9
31	-0.4	-0.4	-0.6	-0.5	-0.7	-0.8	-0.9	-1.1	-1.1	-1.2	-1.2	-1.0	-1.0	-0.9	-1.2	-1.1	-1.1	-1.1	-0.8	-0.7	-0.3	-0.6	-1.0	-1.4
HOURLY MEAN	0.4	0.5	0.6	0.5	0.8	0.7	0.6	0.5	0.3	-0.2	-1.2	-1.6	-1.8	-1.8	-1.8	-1.7	-1.6	-1.2	-0.4	0.2	0.6	0.6	0.6	0.4

MAXIMUM = 8.9 MINIMUM = -2.8 MEAN = -0.3 739 VALID OBSERVATIONS (99.3%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	4.6	4.1	-0.6	0.0	0.9	0.8	0.5	2.4	0.3	0.9	3.9	3.3	5.8	0.7	-0.0	0.2
MIN	-2.2	-1.3	-2.0	-1.5	-1.4	-1.5	-1.7	-2.8	-2.4	-1.5	-2.7	-1.3	-2.5	-1.9	-2.4	-2.8
MEAN	-0.1	0.8	-1.4	-1.1	-0.8	-0.8	-1.0	-1.1	-1.5	-0.9	-1.0	0.4	0.3	-0.9	-1.7	-1.6

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	4.8	2.6	0.7	2.1	8.9	6.9	7.7	8.6	1.7	0.8	3.2	5.1	-0.6	1.0	-0.3
MIN	-1.5	-1.3	-1.3	-2.2	-2.6	-2.5	-1.4	-1.5	-2.5	-2.6	-2.8	-1.8	-1.6	-1.5	-1.4
MEAN	1.3	0.3	-0.5	-0.6	0.2	1.2	2.9	3.2	-0.4	-1.1	-0.1	0.4	-1.2	-0.5	-0.9

MEAN MAXIMUM = 2.6 MEAN MINIMUM = -1.9

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-1.4	-1.1	-1.2	-1.2	-1.2	-1.1	-1.2	-1.2	-1.3	-1.9	-2.0	-1.9	-2.0	-2.1	-2.0	-1.8	-1.5	-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.0
2	-1.0	-0.9	-0.5	-0.6	-0.6	-0.5	-0.3	0.7	1.0	-0.4	-2.1	-2.4	-2.5	-2.4	-2.4	-2.4	-2.1	-1.6	-0.2	1.2	2.6	3.5	3.3	2.8
3	3.2	4.5	3.7	1.6	-0.1	0.6	1.8	1.7	2.9	2.5	0.9	-0.6	-1.4	-1.5	-1.5	-1.4	-1.6	-1.0	0.0	1.9	3.0	1.4	1.7	2.2
4	2.4	2.1	1.4	1.5	0.0	-0.4	0.6	0.0	-0.8	-2.4	-2.7	-2.5	-2.6	-2.8	-2.8	-1.6	-1.3	-1.1	-0.7	0.3	1.6	2.2	3.2	4.3
5	3.1	1.4	1.2	-0.1	-0.2	-0.4	-0.3	-0.0	0.1	-0.6	-0.9	-1.1	-1.2	-1.3	-1.3	-1.2	-1.3	-1.4	-1.2	-1.2	-1.2	-1.3	-1.4	-1.2
6	-1.3	-1.1	-0.4	0.3	1.1	1.8	4.5	1.9	1.5	1.4	0.6	-0.2	-1.1	-1.1	-1.2	-1.2	-1.2	-0.9	-0.7	-0.7	-0.5	-0.2	-0.1	1.2
7	1.2	0.9	2.6	3.1	2.9	2.1	1.1	1.2	1.6	-1.3	-1.7	-2.1	-2.2	-2.2	-2.0	-1.9	-1.7	-1.4	-1.2	-1.1	-1.1	-1.2	-1.1	-1.2
8	-1.3	-1.4	-1.3	-1.4	-1.4	-1.4	-1.2	-1.2	-1.1	-2.0	-2.6	-M-	-1.3	-1.3	-1.2	-1.2	-1.2	-1.1	-1.0	-0.6	-0.3	0.2	0.0	-0.1
9	-1.1	-1.1	-0.8	-1.6	-1.9	-2.1	-1.8	-1.8	-2.2	-2.0	-1.8	-1.6	-1.8	-1.7	-1.6	-1.5	-1.3	-1.3	-1.3	-1.2	-1.1	-1.1	-1.1	-1.1
10	-1.2	-1.2	-1.3	-1.3	-1.4	-1.4	-1.5	-1.5	-1.7	-1.7	-1.9	-1.9	-1.9	-2.0	-2.0	-1.9	-1.8	-1.5	-1.5	-1.5	-1.5	-1.4	-1.4	-1.4
11	-1.5	-1.5	-1.3	-1.1	-1.2	-0.8	-0.0	1.4	1.6	0.2	-1.1	-1.2	-1.4	-1.4	-1.4	-1.4	-1.3	-1.1	-0.8	-0.3	-0.0	-0.4	-0.6	-0.2
12	-0.2	-0.6	-0.6	-0.4	-0.7	-0.6	-0.4	-0.5	-0.7	-1.0	-1.1	-1.1	-1.2	-1.3	-1.3	-1.3	-1.2	-1.0	-0.6	0.5	0.8	0.7	0.1	0.4
13	0.0	0.5	1.0	1.3	1.5	0.8	0.1	0.5	0.3	-0.5	-1.0	-1.2	-1.2	-1.1	-1.2	-1.1	-1.0	-0.9	-0.7	-0.6	0.3	0.5	-0.1	0.8
14	0.3	0.1	-0.3	-0.2	0.1	1.4	1.5	0.7	-0.0	-0.8	-1.0	-1.1	-1.3	-1.3	-1.2	-1.1	-1.1	-0.7	-0.6	-0.5	-0.6	-0.7	-0.5	-0.5
15	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.4	-0.3	-0.5	-0.9	-1.1	-1.2	-1.3	-1.3	-1.3	-1.3	-1.1	-0.7	-0.3	-0.3	0.1	2.0	2.2	1.4
16	1.9	1.6	1.9	1.0	2.7	0.4	1.5	4.9	2.7	1.6	0.6	-1.0	-1.4	-1.4	-1.3	-1.3	-1.2	-0.9	-0.2	0.7	1.8	0.8	1.0	1.1
17	1.9	1.2	1.3	0.7	1.0	0.7	0.4	0.7	-0.1	-0.4	-0.6	-1.2	-1.5	-1.4	-1.2	-1.2	-1.1	-0.8	-0.3	-0.4	-0.5	-0.4	-0.3	-0.4
18	-0.3	0.0	-0.0	0.4	1.4	2.9	2.5	1.1	0.2	-1.6	-2.0	-2.0	-2.1	-1.6	-1.9	-1.5	-1.7	-0.8	-0.1	0.6	3.3	6.0	4.3	4.5
19	4.2	5.4	3.9	1.4	1.0	1.2	0.6	0.5	-0.8	-1.5	-2.2	-2.2	-2.3	-2.3	-2.3	-2.2	-2.0	-1.5	-0.1	1.1	2.7	2.6	3.4	6.1
20	8.3	7.6	8.9	9.7	9.3	11.9	10.7	4.9	7.5	3.3	-0.0	-1.2	-1.5	-1.5	-1.5	-1.5	-1.2	-1.0	0.4	1.1	1.2	0.7	1.1	3.2
21	4.2	3.8	3.9	0.0	0.9	0.7	0.9	-0.9	-1.3	-1.6	-1.9	-1.8	-2.0	-1.7	-1.5	-1.3	-1.3	-1.2	-1.2	-1.2	-1.4	-1.3	-1.4	-1.5
22	-1.4	-1.4	-1.2	-1.1	-1.1	-1.2	-1.2	-1.2	-1.2	-1.4	-1.6	-1.8	-2.0	-1.7	-1.6	-1.8	-1.6	-1.3	-1.1	-0.9	-0.8	-0.7	-0.8	-0.7
23	-0.8	-1.1	-1.2	-1.1	-1.0	-1.0	-1.2	-1.2	-1.5	-2.1	-2.3	-2.4	-2.6	-2.5	-2.5	-2.2	-1.8	-1.8	-1.0	0.7	2.3	4.1	5.1	1.9
24	2.7	4.0	1.2	2.1	3.8	7.9	5.5	5.3	3.4	1.4	-1.0	-1.3	-1.5	-1.5	-1.5	-1.4	-1.4	-1.1	-0.2	2.6	4.0	3.7	4.5	3.5
25	3.8	3.4	3.4	4.0	5.5	3.7	3.1	3.7	2.1	-0.5	-1.2	-1.3	-1.5	-1.5	-1.4	-1.4	-1.2	-1.2	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9
26	-0.8	-0.7	-0.6	-0.4	-0.6	-0.8	-0.9	-1.0	-1.1	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1	-1.0	-1.0	-0.9	-0.8	-0.8	-0.7	-0.7
27	-0.4	-0.5	0.6	1.3	2.7	0.6	-0.4	-0.6	-0.7	-1.1	-1.4	-1.4	-1.4	-1.7	-1.8	-2.1	-2.0	-1.8	-1.4	-0.8	-1.0	-1.2	-1.1	-0.9
28	-0.2	0.2	-0.2	-0.5	-0.9	-0.9	-1.1	-1.3	-1.7	-1.8	-1.9	-2.1	-2.0	-2.1	-2.3	-2.2	-2.0	-1.8	-1.7	-1.5	-1.2	-1.1	0.0	0.2
HOURLY MEAN	0.9	0.8	0.9	0.6	0.8	0.8	0.8	0.6	0.3	-0.7	-1.3	-1.5	-1.7	-1.7	-1.6	-1.6	-1.4	-1.2	-0.7	-0.2	0.4	0.5	0.6	0.8

MAXIMUM = 11.9 MINIMUM = -2.8 MEAN = -0.2 671 VALID OBSERVATIONS (99.9%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	-1.0	3.5	4.5	4.3	3.1	4.5	3.1	0.2	-0.8	-1.2	1.6	0.8	1.5	1.5
MIN	-2.1	-2.5	-1.6	-2.8	-1.4	-1.3	-2.2	-2.6	-2.2	-2.0	-1.5	-1.3	-1.	-1.3
MEAN	-1.4	-0.3	1.0	-0.1	-0.5	0.1	-0.3	-1.1	-1.5	-1.6	-0.7	-0.6	-0.1	-0.4

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	2.2	4.9	1.9	6.0	6.1	11.9	4.2	-0.7	5.1	7.9	5.5	-0.4	2.7	0.2
MIN	-1.3	-1.4	-1.5	-2.1	-2.3	-1.5	-2.0	-2.0	-2.6	-1.5	-1.5	-1.2	-2.1	-2.3
MEAN	-0.4	0.7	-0.2	0.5	0.6	3.4	-0.4	-1.3	-0.7	1.9	0.7	-0.9	-0.8	-1.2

MEAN MAXIMUM = 3.0 MEAN MINIMUM = -1.8

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.2	1.6	1.7	1.1	1.8	2.6	3.2	3.1	2.9	-0.9	-1.9	-1.9	-1.8	-1.5	-1.6	-1.5	-1.3	-1.3	-0.8	0.3	0.5	0.4	-0.7	-1.4
2	-1.4	-1.7	-1.5	-1.4	-1.7	-1.5	-1.7	-1.9	-2.0	-2.1	-2.0	-2.4	-2.7	-2.7	-2.3	-2.3	-2.2	-1.8	-1.3	-0.8	0.5	1.9	1.8	2.8
3	2.5	2.6	2.7	2.0	0.2	1.0	3.2	1.0	-0.9	-1.0	-1.2	-1.2	-1.4	-1.2	-1.3	-1.3	-1.1	-1.8	-1.1	-1.0	-0.9	-0.8	-0.8	-0.8
4	-0.6	-0.6	-0.4	-0.7	-0.8	-0.8	-0.9	-0.9	-1.0	-1.3	-1.4	-1.3	-1.3	-1.4	-1.5	-1.3	-1.0	-0.8	-0.5	-0.0	-0.5	-1.2	-1.3	-0.4
5	-1.1	-1.4	-1.7	-1.7	-1.8	-2.0	-1.6	-0.8	-1.2	-2.7	-3.0	-3.2	-3.1	-2.7	-2.7	-2.7	-2.4	-1.8	-1.2	-0.5	0.6	1.6	1.3	1.6
6	1.0	0.4	1.8	2.4	0.9	2.7	1.8	0.2	-0.8	-1.7	-1.7	-1.8	-1.7	-1.5	-1.6	-1.5	-1.6	-1.5	-1.3	-0.7	-0.7	-0.7	-0.4	-0.6
7	-0.8	-0.9	-0.5	-0.6	-0.5	-0.3	-0.5	-0.6	-1.2	-1.2	-1.3	-1.6	-1.8	-1.7	-1.7	-1.7	-1.8	-1.7	-1.1	-0.7	-0.3	0.1	0.4	-0.1
8	-0.3	-0.0	1.6	1.8	0.8	1.8	3.2	3.5	3.5	1.5	-1.6	-1.7	-1.8	-2.0	-1.9	-1.9	-1.4	-1.4	-1.1	-0.1	1.0	1.7	2.1	1.9
9	2.3	1.7	1.4	1.1	0.4	1.0	0.9	0.1	-0.9	-M-	-1.4	-1.6	-1.9	-2.6	-2.4	-2.2	-1.9	-1.5	-1.4	-0.8	0.2	1.2	1.2	0.9
10	-0.2	-0.6	0.1	-0.0	0.3	1.5	3.4	5.3	0.6	-0.8	-1.4	-1.6	-1.8	-1.9	-1.6	-1.6	-1.9	-1.7	-1.3	-0.4	0.3	-0.7	0.5	0.1
11	-1.1	-1.1	-1.5	-2.0	-1.8	-1.6	-0.9	-0.0	-1.0	-2.0	-1.9	-2.2	-2.3	-3.0	-2.7	-2.5	-2.5	-2.0	-1.2	0.1	2.0	3.5	7.2	7.7
12	6.2	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-1.5	-1.6	-1.8	-1.9	-1.8	-1.8	-1.6	-1.6	-1.5	-1.1	-0.4	-0.2	-0.3	-0.1
13	-0.4	0.6	-0.1	1.0	2.1	3.7	4.2	3.1	1.7	-1.9	-2.2	-2.1	-2.0	-2.3	-2.2	-1.9	-M-	-2.0	-1.7	-0.7	0.0	-0.3	-0.4	0.1
14	0.8	0.8	1.5	5.7	4.2	5.7	5.1	7.7	-M-	-0.4	-1.4	-1.5	-1.6	-1.5	-1.5	-1.5	-1.5	-1.3	-1.1	-0.0	0.7	1.3	1.9	0.5
15	0.2	0.4	0.8	0.4	0.2	-0.3	-0.2	-1.0	-1.4	-2.0	-2.2	-2.3	-2.6	-2.5	-2.5	-2.3	-2.2	-1.8	-1.3	-0.9	-0.6	-0.2	0.2	1.0
16	1.7	0.5	-1.2	-0.8	-0.8	-1.0	-1.3	-0.2	-0.8	-1.6	-1.6	-2.0	-1.9	-1.9	-1.6	-1.6	-1.4	-1.3	-0.9	1.0	1.3	0.6	0.4	0.2
17	-0.8	-0.7	-0.5	-0.5	-0.5	-0.4	-0.5	1.2	2.0	-1.0	-1.3	-1.3	-1.4	-1.5	-1.5	-1.4	-1.4	-1.3	-1.1	-1.2	-1.1	-1.1	-1.1	-0.9
18	-1.0	-1.0	-1.2	-1.2	-1.3	-1.5	-1.5	-1.7	-2.2	-2.1	-2.5	-2.5	-2.3	-2.6	-2.4	-2.3	-2.2	-1.9	-1.5	-0.9	-0.5	-0.1	0.3	1.5
19	2.1	1.6	0.9	0.5	0.8	0.5	0.4	-0.2	-1.9	-2.1	-2.4	-2.1	-2.5	-2.7	-2.6	-2.3	-2.3	-2.0	-1.5	-0.3	0.1	-0.5	0.0	1.8
20	1.8	1.8	2.2	1.2	1.3	3.3	0.8	1.8	1.3	-1.3	-1.5	-1.4	-1.3	-1.4	-1.4	-1.4	-1.4	-1.3	-1.1	-0.5	0.6	1.1	0.4	-0.5
21	-0.8	-0.8	-0.8	-0.8	-0.8	-0.9	-0.9	-1.0	-1.0	-1.1	-1.1	-1.1	-1.4	-1.4	-1.6	-1.5	-1.3	-1.3	-1.1	-1.1	-1.0	-1.1	-1.1	-1.1
22	-1.2	-1.3	-1.2	-1.3	-1.3	-1.6	-1.2	-1.3	-1.6	-1.8	-2.0	-1.9	-1.7	-1.7	-1.8	-1.9	-1.8	-1.6	-1.2	-0.7	-0.1	-0.4	1.7	3.7
23	3.1	3.3	4.1	3.3	2.9	3.0	4.5	4.3	2.3	2.2	-2.0	-1.4	-1.8	-1.9	-3.6	-3.0	-1.5	-1.3	-1.1	-0.6	-0.2	2.0	1.1	1.2
24	1.2	1.9	1.3	0.1	0.2	0.2	-0.5	-0.3	-0.6	-1.1	-1.3	-1.4	-1.6	-1.6	-1.6	-1.5	-1.4	-1.2	-0.8	0.4	0.7	0.2	0.1	0.5
25	0.7	0.5	0.6	1.0	-0.4	-0.3	-0.1	0.2	-0.0	-1.2	-1.3	-1.5	-1.5	-1.5	-1.4	-1.8	-1.6	-1.4	-1.1	-0.2	1.8	1.6	0.2	-0.1
26	-0.1	-0.4	-0.3	-0.1	0.2	0.5	0.9	-0.4	-1.0	-1.2	-1.3	-1.3	-1.4	-1.4	-1.5	-1.3	-1.4	-1.3	-1.1	-0.6	0.9	1.4	1.5	3.6
27	3.4	1.3	1.9	1.9	0.8	0.3	-0.0	-0.6	-1.3	-1.4	-1.6	-1.7	-1.7	-1.7	-1.8	-1.6	-1.5	-1.4	-1.1	-0.8	-0.9	-0.7	-0.6	-0.6
28	-0.5	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-0.8	-1.0	-1.2	-1.5	-1.5	-1.7	-1.3	-1.3	-1.2	-1.0	-0.9	-1.0	-0.4	-1.3	-1.5	-1.0	-0.6
29	-0.8	-0.8	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7	-0.9	-1.2	-1.1	-1.0	-1.2	-1.2	-1.2	-1.2	-1.3	-1.1	-1.0	-0.9	-1.0	-1.0	-1.0	-0.9
30	-0.4	-0.0	0.1	0.2	0.1	-0.3	0.1	-0.3	-1.8	-2.1	-1.6	-1.6	-1.5	-1.5	-1.5	-1.4	-1.3	-1.2	-0.9	-0.3	-0.2	0.1	3.1	1.6
31	-0.4	1.3	-0.3	-0.2	-0.2	-0.6	-0.8	-1.1	-1.3	-1.4	-1.5	-1.4	-1.6	-1.6	-1.4	-1.4	-1.3	-1.2	-1.2	-0.8	-0.4	-0.8	-0.3	-0.0
HOURLY MEAN	0.5	0.3	0.3	0.4	0.1	0.4	0.6	0.6	-0.4	-1.2	-1.7	-1.7	-1.8	-1.8	-1.9	-1.8	-1.6	-1.5	-1.2	-0.5	0.0	0.2	0.5	0.7

MAXIMUM = 7.7 MINIMUM = -3.6 MEAN = -0.5 732 VALID OBSERVATIONS (98.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	3.2	2.8	3.2	-0.0	1.6	2.7	0.4	3.5	2.3	5.3	7.7	6.2	4.2	7.7	1.0	1.7
MIN	-1.9	-2.7	-1.8	-1.5	-3.2	-1.8	-1.8	-2.0	-2.6	-1.9	-3.0	-1.9	-2.3	-1.6	-2.6	-2.0
MEAN	0.2	-1.3	-0.1	-0.9	-1.4	-0.4	-0.9	0.4	-0.3	-0.2	-0.5	-0.7	-0.2	1.0	-1.0	-0.7

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	2.0	1.5	2.1	3.3	-0.8	3.7	4.5	1.9	1.8	3.6	3.4	-0.4	-0.6	3.1	1.3
MIN	-1.5	-2.6	-2.7	-1.5	-1.6	-2.0	-3.6	-1.6	-1.8	-1.5	-1.8	-1.7	-1.3	-2.1	-1.6
MEAN	-0.8	-1.4	-0.7	0.1	-1.1	-1.1	0.8	-0.3	-0.4	-0.3	-0.5	-1.0	-0.9	-0.5	-0.8

MEAN MAXIMUM = 2.7 MEAN MINIMUM = -2.0

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-0.3	-0.5	-0.2	-0.0	0.2	0.4	0.5	-0.7	-1.4	-1.9	-2.2	-2.5	-2.0	-1.7	-1.5	-1.5	-1.4	-1.2	-0.9	0.8	1.2	2.4	2.8	1.9
2	1.4	0.9	1.1	0.8	0.7	0.9	-0.1	-0.6	-1.1	-1.3	-1.4	-1.5	-1.5	-1.5	-1.5	-1.3	-1.2	-1.1	-0.8	-0.3	-0.0	-0.1	-0.4	-0.6
3	-0.6	-0.6	-0.7	-0.8	-0.8	-0.8	-0.5	-0.7	-0.9	-1.0	-1.1	-1.2	-1.3	-1.2	-1.4	-1.4	-1.2	1.8	-0.7	-0.4	2.2	-0.7	-1.2	-1.3
4	-1.4	-1.4	-1.6	-1.4	-1.4	-1.4	-1.4	-1.5	-1.6	-1.8	-2.0	-1.8	-1.8	-1.8	-1.8	-1.7	-1.8	-1.7	-1.4	-1.4	-1.5	-1.1	-0.5	1.3
5	3.9	5.2	4.5	3.1	1.6	1.3	-0.1	-0.3	-1.9	-2.3	-2.3	-2.4	-2.5	-2.4	-2.1	-2.2	-1.8	-1.9	-1.5	-1.4	-0.7	0.4	0.6	0.8
6	3.9	5.1	4.2	2.8	2.5	2.0	0.9	0.4	-0.8	-1.2	-1.4	-1.5	-1.5	-1.4	-1.4	-1.4	-1.3	-1.1	-0.7	-0.4	-0.1	-0.2	-0.2	-0.0
7	-0.4	-0.4	-0.4	-0.3	-0.5	-0.5	-0.4	-0.5	-1.1	-1.3	-1.4	-1.3	-1.4	-1.5	-1.5	-1.4	-1.4	-1.3	-0.9	-0.1	0.3	1.3	0.6	-0.3
8	-0.4	-0.6	-0.7	-0.5	-0.3	-0.5	-1.3	-1.4	-1.4	-1.3	-1.4	-1.4	-1.5	-1.6	-1.5	-1.5	-1.5	-1.5	-1.2	-0.5	-0.6	-0.6	0.8	1.8
9	1.8	2.5	2.0	2.4	2.0	2.4	1.5	1.3	0.0	-1.2	-1.4	-1.5	-1.4	-1.5	-1.5	-1.4	-1.4	-1.3	-1.0	-0.1	1.1	2.0	2.3	3.3
10	3.2	1.3	0.8	0.5	0.6	0.5	-0.3	-0.7	-1.1	-1.3	-1.4	-1.4	-1.4	-1.5	-1.4	-1.3	-1.2	-0.8	-0.7	0.7	0.8	-0.5	-0.3	1.4
11	1.9	2.5	1.1	0.9	1.0	0.6	0.1	1.5	-0.1	-0.8	-0.5	-1.3	-1.2	-1.1	-1.0	-1.0	-1.1	-0.7	-0.4	0.3	-0.2	-0.4	-0.5	-0.4
12	0.7	0.5	4.1	-0.1	-0.2	-0.3	-1.1	-1.2	-3.1	-1.5	-1.1	-1.3	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0	-0.5	-0.1	-0.4	-0.7	-0.5
13	-0.5	-0.3	0.1	0.2	0.0	0.3	0.3	2.9	-0.4	-1.7	-1.1	-1.4	-1.8	-1.4	-1.5	-1.7	-1.2	-0.9	-1.0	-1.4	-1.1	-1.3	-1.4	-1.3
14	-1.6	-1.7	-1.8	-1.8	-1.7	-1.6	-1.1	-1.4	-1.5	-1.5	-1.7	-1.7	-1.8	-1.7	-1.7	-1.6	-1.5	-1.4	-1.3	-0.7	0.1	0.6	0.8	0.9
15	1.4	0.7	0.5	0.1	0.4	0.4	0.6	0.4	-1.1	-1.3	-1.4	-1.3	-1.4	-1.4	-1.4	-1.3	-1.2	-1.1	-1.0	-0.2	-0.0	0.4	0.4	0.1
16	0.0	0.1	-0.4	-0.5	-0.6	-0.2	0.1	-0.0	-0.8	-1.1	-1.2	-1.3	-1.3	-1.2	-1.2	-1.4	-1.3	-1.2	-1.0	-0.3	0.6	0.7	0.9	0.3
17	-0.1	0.1	0.4	0.3	0.4	0.4	0.2	-0.5	-1.1	-1.2	-1.5	-2.5	-2.0	-1.5	-1.5	-1.4	-1.4	-1.3	-0.8	0.7	0.9	1.7	1.7	1.5
18	1.7	0.8	1.3	0.5	0.4	-0.2	-0.7	-0.4	-0.9	-1.0	-1.2	-1.2	-1.2	-1.2	-1.1	-1.0	-0.8	-0.9	-0.9	-0.9	-1.0	-0.8	-0.7	-0.6
19	-0.7	-0.6	-0.5	-0.5	-0.6	-0.4	-0.6	-0.6	-0.7	-0.6	-0.7	-0.6	-0.9	-0.8	-1.0	-0.8	-1.2	-1.2	-1.1	-0.9	-1.0	-1.0	-1.0	-1.0
20	-1.0	-1.0	-1.0	-1.0	-0.9	-0.9	-0.9	-1.0	-1.1	-1.1	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1	-1.1	-0.5	-0.2	-0.2	-0.5	-0.0
21	0.1	-0.2	-0.3	-0.7	-0.8	-1.0	-0.9	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.2	-1.1	-1.1	-1.0	-1.0	-0.9	-0.9	-0.8	-0.8	-0.8
22	-0.8	-0.3	-0.4	-0.6	-0.8	-0.7	-0.8	-0.7	-0.6	0.0	-1.7	-1.7	-2.2	-2.2	-2.2	-1.8	-1.8	-1.6	-1.3	-0.9	-0.6	-0.2	0.4	0.5
23	0.4	0.0	0.4	0.4	0.3	0.2	-0.1	-0.8	-1.8	-2.0	-2.2	-2.2	-2.5	-2.4	-2.3	-2.3	-1.9	-1.7	-1.3	-0.2	1.1	1.0	1.9	2.4
24	2.5	1.5	1.9	1.3	0.6	0.5	-0.6	-1.2	-1.5	-1.7	-2.3	-2.2	-2.5	-2.3	-1.9	-2.0	-1.5	-1.2	-1.2	-0.7	0.3	0.2	1.3	1.9
25	0.9	0.2	0.1	0.1	0.8	1.6	0.6	-0.8	-1.0	-1.2	-1.3	-1.4	-1.6	-1.6	-1.6	-1.5	-1.3	-1.1	-0.7	-0.2	0.1	-0.0	-0.0	-0.2
26	-0.3	-0.4	-0.4	-0.2	-0.0	-0.0	-0.2	-0.9	-1.1	-1.2	-1.3	-1.3	-1.4	-1.4	-1.5	-1.4	-1.4	-1.3	-1.0	-0.5	0.2	0.5	0.1	-0.1
27	-0.1	-0.1	0.2	0.3	0.2	0.4	-0.2	-0.9	-1.1	-1.3	-1.5	-1.5	-1.6	-1.6	-1.5	-1.5	-1.3	-1.3	-1.0	-0.6	-0.4	-0.2	-0.2	-0.3
28	-0.1	-0.2	-0.1	0.0	-1.0	-1.2	-1.2	-1.4	-1.7	-1.8	-2.2	-2.3	-2.0	-1.9	-2.2	-2.3	-2.0	-1.9	-1.5	-0.6	0.2	0.9	1.6	3.5
29	3.2	2.0	2.5	2.4	1.7	1.2	0.3	-0.6	-1.0	-1.4	-1.9	-1.9	-2.1	-2.2	-2.3	-2.1	-1.8	-1.6	-1.0	-0.3	0.4	0.6	1.0	1.1
30	0.0	-0.2	1.3	2.4	1.2	1.1	0.7	-1.5	-1.6	-1.8	-1.9	-2.0	-2.1	-1.7	-1.3	-1.4	-1.4	-1.4	-1.2	-0.8	0.5	1.1	0.8	2.4
HOURLY MEAN	0.6	0.5	0.6	0.3	0.2	0.1	-0.2	-0.5	-1.1	-1.3	-1.5	-1.6	-1.6	-1.6	-1.5	-1.5	-1.4	-1.2	-1.0	-0.5	0.1	0.2	0.3	0.6

MAXIMUM = 5.2 MINIMUM = -3.1 MEAN = -0.5 720 VALID OBSERVATIONS (100.0%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	2.8	1.4	2.2	1.3	5.2	5.1	1.3	1.8	3.3	3.2	2.5	4.1	2.9	0.9	1.4
MIN	-2.5	-1.5	-1.4	-2.0	-2.5	-1.5	-1.5	-1.6	-1.5	-1.5	-1.3	-3.1	-1.8	-1.8	-1.4
MEAN	-0.4	-0.4	-0.7	-1.4	-0.2	0.3	-0.7	-0.9	0.5	-0.2	-0.0	-0.6	-0.7	-1.2	-0.4

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	0.9	1.7	1.7	-0.4	-0.0	0.1	0.5	2.4	2.5	1.6	0.5	0.4	3.5	3.2	2.4
MIN	-1.4	-2.5	-1.2	-1.2	-1.2	-1.2	-2.2	-2.5	-2.5	-1.6	-1.5	-1.6	-2.3	-2.3	-2.1
MEAN	-0.5	-0.3	-0.5	-0.8	-0.9	-0.9	-1.0	-0.7	-0.4	-0.5	-0.7	-0.7	-0.9	-0.2	-0.4

MEAN MAXIMUM = 2.0 MEAN MINIMUM = -1.8

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	1.3	0.6	-0.3	-0.2	1.8	2.7	0.5	-1.6	-2.0	-1.9	-2.0	-2.0	-2.0	-1.8	-2.0	-1.9	-1.8	-1.6	-1.3	-0.6	0.4	2.2	1.6	2.1
2	2.9	2.4	2.2	1.5	0.6	-0.3	-0.3	-0.9	-1.2	-1.4	-1.4	-1.5	-1.6	-1.6	-1.6	-1.7	-1.5	-1.4	-1.2	-0.9	-0.7	-0.8	-0.7	-0.8
3	-0.8	-0.8	-0.7	-0.8	-0.9	-0.8	-0.6	-0.9	-1.0	-1.2	-1.3	-1.4	-1.3	-1.4	-1.5	-1.4	-1.2	-1.1	-0.9	-0.9	-0.8	-0.9	-0.9	-0.9
4	-0.9	-0.9	-0.9	-0.9	-1.1	-1.0	-0.9	-0.8	-1.3	-1.6	-1.7	-1.5	-1.0	-0.9	-0.8	-0.8	-1.9	-1.5	-1.3	-1.1	-1.1	-0.3	-0.0	-0.5
5	-0.7	-0.9	-0.8	-1.0	-1.2	-1.1	-1.3	-1.4	-1.5	-1.5	-1.5	-1.6	-1.5	-1.6	-1.4	-1.3	-1.2	-1.1	-1.0	-0.9	-0.7	-0.6	-0.5	-0.5
6	-0.9	-1.0	-0.6	-0.4	-0.6	-0.3	-0.8	-1.0	-1.1	-1.2	-1.2	-1.3	-1.4	-1.4	-1.3	-1.2	-1.2	-1.2	-1.1	-0.5	0.4	0.4	-M-	-M-
7	-M-	-M-	-M-	-M-	-M-	-0.2	-0.6	-1.2	-1.3	-1.3	-1.4	-1.4	-1.3	-1.3	-1.2	-1.2	-1.0	-0.9	-0.9	-0.7	-0.6	0.4	1.1	0.5
8	-0.3	0.0	-0.3	-0.7	-0.8	-0.8	-0.9	-1.0	-1.0	-1.0	-1.0	-1.1	-1.1	-1.2	-1.2	-1.3	-1.1	-1.2	-1.0	-0.8	-0.3	-0.2	-0.1	0.2
9	0.3	0.7	0.1	-0.6	-0.8	-0.8	-1.0	-0.9	-1.0	-1.2	-1.1	-1.2	-1.2	-1.2	-1.2	-1.3	-1.1	-1.1	-1.1	-1.0	-0.9	-1.0	-0.9	-1.0
10	-1.1	-1.1	-1.1	-1.1	-1.1	-1.1	-1.2	-1.4	-1.5	-1.7	-1.8	-1.9	-1.8	-1.7	-1.6	-1.5	-1.4	-1.3	-1.2	-0.7	0.5	1.1	1.3	1.2
11	1.2	0.8	0.9	1.0	1.6	2.7	3.1	1.7	-1.1	-1.1	-1.5	-2.1	-1.5	-1.5	-1.6	-1.4	-1.4	-1.3	-1.1	-0.8	-0.0	0.7	1.4	2.7
12	1.6	1.5	0.7	0.3	0.6	-1.7	-2.2	-1.3	-1.0	-1.2	-1.1	-1.1	-1.3	-1.4	-1.2	-1.4	-1.3	-1.1	-1.1	-0.7	0.0	-0.0	-0.2	-0.1
13	-0.2	-1.0	-0.9	-1.1	-1.0	-1.2	-1.1	-1.3	-1.4	-1.4	-1.3	-1.5	-1.3	-1.4	-1.6	-1.6	-1.7	-1.4	-1.2	-1.4	-1.2	-1.1	-1.1	-1.1
14	-1.1	-1.1	-0.8	-0.7	-0.7	-0.3	-0.7	-1.5	-1.8	-1.8	-1.6	-1.6	-1.7	-1.8	-1.7	-1.4	-1.6	-1.4	-1.3	-0.3	1.1	3.0	4.2	4.7
15	3.7	2.6	2.8	2.9	2.4	1.9	1.3	1.5	-0.7	-1.3	-1.3	-1.4	-1.4	-1.5	-1.6	-1.5	-1.4	-1.3	-1.1	-0.7	-0.3	-0.3	-0.4	0.6
16	2.2	1.5	0.8	0.8	1.0	1.3	0.5	-1.0	-1.1	-1.2	-1.5	-1.1	-1.2	-1.2	-1.1	-0.9	-0.7	-1.0	-0.9	-0.9	-0.8	-1.8	-1.5	-1.5
17	-1.1	-1.3	-1.3	-1.1	-1.1	-2.0	-2.2	-1.0	-1.0	-1.1	-1.0	-0.9	-1.1	-1.2	-1.1	-1.4	-1.1	-0.9	-0.9	-0.9	-1.0	-0.9	-0.7	-0.2
18	-0.3	-0.5	-0.7	0.1	0.7	-0.6	-0.8	-0.9	-0.6	-0.4	-0.3	-0.4	-0.8	-0.7	0.0	0.1	0.9	1.9	1.0	-0.2	-0.2	0.0	-0.3	-0.4
19	-0.3	-0.3	-0.4	-0.3	-0.0	-0.6	-1.2	-1.6	-1.5	-1.5	-1.8	-1.7	-1.7	-1.7	-1.7	-1.6	-1.4	-1.5	-1.2	-0.4	1.8	3.1	3.7	3.2
20	2.4	3.1	3.8	4.5	4.3	4.7	5.9	3.1	-0.7	-1.6	-1.9	-2.1	-2.0	-1.8	-1.6	-1.5	-1.3	-1.3	-1.0	-0.5	0.8	1.9	2.2	2.4
21	2.4	1.4	0.6	0.5	1.5	1.3	0.8	-0.3	-1.0	-1.3	-1.4	-1.5	-1.6	-1.7	-1.7	-1.5	-1.3	-1.1	-1.0	-0.7	-0.6	-0.7	-0.6	-0.7
22	-0.8	0.6	0.9	0.1	-0.1	-0.3	-0.6	-0.9	-1.0	-1.1	-1.1	-1.3	-1.6	-1.6	-1.6	-1.5	-1.5	-1.4	-1.1	-0.9	-0.8	-0.5	2.2	0.7
23	-0.5	-0.7	-0.6	-0.6	-0.7	-0.5	-0.5	-0.5	-0.8	-0.9	-0.9	-1.2	-1.5	-1.4	-1.5	-1.5	-1.7	-1.6	-1.2	-0.7	-0.6	-0.6	-0.7	-0.9
24	-0.8	-0.7	-0.8	-0.4	0.0	-0.1	-0.8	-1.3	-1.8	-2.0	-1.9	-2.3	-2.1	-2.2	-2.1	-1.8	-1.6	-1.6	-1.3	-0.9	0.1	0.9	-0.1	0.2
25	1.4	3.0	0.8	1.3	1.8	0.5	-0.1	-1.2	-1.4	-2.0	-2.4	-2.7	-2.8	-2.0	-1.9	-1.5	-1.5	-1.5	-1.3	-1.1	-0.6	-0.4	-0.0	-0.4
26	-0.1	0.1	0.4	1.1	1.6	0.9	-0.6	-1.5	-1.6	-1.7	-1.7	-2.2	-M-	-M-	-M-	-M-	-M-	-2.0	-1.3	-0.7	-0.3	-0.3	-0.9	-0.3
27	-0.4	-0.2	-0.2	-0.3	-0.1	-0.3	-0.6	-1.1	-1.4	-1.5	-1.8	-2.6	-2.6	-2.8	-1.9	-1.7	-1.5	-1.4	-1.2	-0.9	0.5	0.2	0.8	0.2
28	0.5	0.7	1.4	2.3	3.1	2.2	3.2	1.2	0.4	-0.4	-1.3	-1.3	-1.5	-1.5	-1.9	-1.8	-2.0	-2.2	-1.6	-1.5	-0.5	0.8	2.7	1.5
29	2.6	0.1	0.5	1.4	1.1	0.4	-0.8	-2.1	-2.0	-2.4	-2.6	-3.2	-2.8	-3.0	-2.9	-2.7	-2.4	-2.2	-1.2	-0.3	0.5	0.7	-0.3	-0.7
30	-0.9	-0.9	-0.7	-0.7	-0.7	-0.5	-0.9	-1.2	-1.3	-1.6	-1.6	-1.9	-2.1	-2.3	-2.3	-2.2	-2.0	-1.9	-1.4	-0.8	-0.1	0.3	0.4	0.1
31	0.1	0.6	0.4	0.8	1.1	2.0	1.5	-0.4	-1.6	-1.8	-1.9	-2.1	-2.2	-2.0	-2.0	-1.9	-1.8	-1.6	-1.4	-0.9	-0.3	-0.3	-0.1	0.3
HOURLY MEAN	0.4	0.3	0.2	0.3	0.4	0.2	-0.1	-0.7	-1.2	-1.4	-1.5	-1.6	-1.6	-1.6	-1.6	-1.5	-1.4	-1.3	-1.1	-0.8	-0.2	0.2	0.4	0.4

MAXIMUM = 5.9 MINIMUM = -3.2 MEAN = -0.6 732 VALID OBSERVATIONS (98.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	2.7	2.9	-0.6	-0.0	-0.5	0.4	1.1	0.2	0.7	1.3	3.1	1.6	-0.2	4.7	3.7	2.2
MIN	-2.0	-1.7	-1.5	-1.9	-1.6	-1.4	-1.4	-1.3	-1.3	-1.9	-2.1	-2.2	-1.7	-1.8	-1.6	-1.8
MEAN	-0.4	-0.5	-1.0	-1.0	-1.1	-0.9	-0.8	-0.8	-0.8	-1.0	0.1	-0.6	-1.2	-0.5	0.1	-0.5

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	-0.2	1.9	3.7	5.9	2.4	2.2	-0.5	0.9	3.0	1.6	0.8	3.2	2.6	0.4	2.0
MIN	-2.2	-0.9	-1.8	-2.1	-1.7	-1.6	-1.7	-2.3	-2.8	-2.2	-2.8	-2.2	-3.2	-2.3	-2.2
MEAN	-1.1	-0.1	-0.4	0.9	-0.4	-0.6	-0.9	-1.1	-0.7	-0.6	-0.9	0.1	-1.0	-1.1	-0.6

MEAN MAXIMUM = 1.7 MEAN MINIMUM = -1.9

318 FT TO 155 FT DIFFERENTIAL TEMPERATURE (C/100M)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0.3	-0.1	0.3	0.3	0.6	1.4	1.0	-0.9	-1.5	-1.8	-1.8	-1.9	-2.1	-2.3	-2.2	-2.0	-1.8	-1.8	-1.5	-1.1	-0.6	-0.3	-0.3	-0.1
2	-0.4	-0.4	-0.4	-0.5	-0.6	-0.9	-0.9	-0.3	-0.7	-0.6	-0.2	0.8	-1.6	-2.2	-1.7	-1.7	-1.3	-1.5	-1.5	-1.3	-1.0	-0.7	-0.1	0.1
3	0.5	1.4	2.2	3.5	2.9	3.9	1.7	-1.1	-1.9	-2.0	-M-	-M-	-M-	-M-	-2.9	-2.3	-2.2	-2.0	-1.1	-0.7	0.1	0.6	1.1	0.6
4	1.9	3.4	3.9	3.3	5.0	3.2	1.1	0.3	-0.7	-1.7	-1.7	-1.7	-1.8	-1.8	-1.8	-1.3	-1.1	-1.1	0.1	-1.6	-0.5	-0.0	0.7	1.2
5	1.3	1.0	0.8	0.2	0.9	1.6	0.8	-0.9	-1.2	-1.8	-2.0	-2.3	-2.3	-2.4	-2.4	-1.5	-1.0	-0.4	-0.6	-0.5	1.4	1.6	1.5	0.8
6	1.3	3.1	1.4	1.2	0.7	0.4	-0.0	-0.5	-1.0	-1.4	-1.7	-2.4	-3.0	-3.3	-3.2	-3.5	-3.0	-2.6	-1.9	-1.0	-0.3	-0.0	0.6	0.4
7	0.4	1.6	1.1	0.6	0.4	0.7	-0.1	-0.7	-1.0	-1.0	-1.7	-1.9	-2.0	-1.9	-1.9	-1.9	-1.7	-1.5	-0.9	-0.9	-0.2	-0.5	-0.6	-0.7
8	-0.6	0.4	0.7	0.2	0.3	0.4	-0.2	0.2	-1.3	-1.3	-1.6	-1.5	-1.6	-1.6	-1.7	-1.8	-2.6	-2.3	-1.1	-1.0	0.2	0.9	0.2	0.5
9	-0.2	-0.3	0.1	0.0	0.0	-0.4	-0.8	-1.3	-1.3	-1.5	-1.6	-1.9	-2.1	-1.5	-1.4	-1.8	-1.9	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-0.6
10	-0.1	-0.3	-0.8	-0.7	-0.8	-0.0	1.4	-0.1	0.2	-1.5	-2.1	-2.4	-3.0	-2.3	-2.4	-2.3	-1.9	-1.8	-1.5	-1.3	-0.6	-0.3	-0.4	0.5
11	1.4	1.4	1.5	1.0	0.6	0.2	0.8	-1.2	-1.2	-1.2	-1.7	-2.1	-2.2	-2.3	-2.3	-2.2	-2.0	-1.5	-1.1	-1.1	-1.1	-1.0	-1.1	-1.0
12	-1.1	-1.0	-1.0	-1.0	-1.0	-0.4	-0.7	-1.0	-1.7	-1.7	-1.8	-2.1	-2.0	-1.9	-1.7	-1.6	-1.6	-1.5	-1.4	-1.1	-0.8	-0.8	-0.8	-0.9
13	-0.8	-0.8	-0.8	-0.8	-0.6	-0.7	-1.0	-1.3	-1.4	-1.7	-1.8	-2.0	-2.1	-2.1	-2.0	-1.8	-1.6	-1.4	-1.2	-1.0	-0.9	-1.0	-0.9	-0.9
14	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9	-1.0	-1.1	-1.1	-1.2	-1.3	-1.3	-1.4	-1.4	-1.6	-1.4	-1.6	-1.4	-1.1	-1.0	-1.0	-1.6	-1.2	-0.3
15	-0.1	-1.3	-1.8	-1.7	-1.7	-1.4	-0.7	-0.3	-1.8	-1.6	-2.1	-3.0	-2.8	-2.4	-2.5	-2.6	-2.9	-2.6	-2.4	-1.6	0.1	0.8	0.7	3.0
16	3.6	1.8	0.5	0.7	1.6	0.2	-1.5	-2.1	-2.4	-2.7	-2.9	-3.6	-3.5	-3.9	-4.0	-3.7	-3.4	-2.9	-2.3	-1.3	1.2	3.2	3.7	2.3
17	0.9	0.6	0.8	0.5	-0.2	0.1	-0.8	-1.2	-1.4	-1.6	-1.6	-1.8	-1.9	-1.9	-1.9	-1.8	-1.7	-1.6	-1.4	-1.1	-0.7	-0.6	-0.5	-0.7
18	-0.6	-0.4	0.1	0.5	0.3	0.4	0.1	-1.3	-1.6	-1.8	-2.0	-2.0	-2.4	-2.5	-2.5	-2.3	-1.9	-1.3	-1.2	-0.7	0.1	0.2	0.3	1.1
19	0.5	0.3	0.7	1.1	0.7	-0.1	-0.5	-1.2	-1.5	-1.6	-1.8	-2.0	-1.8	-2.0	-2.0	-1.8	-1.9	-1.7	-1.2	-0.9	-1.0	1.1	1.1	1.0
20	0.7	1.3	0.8	-0.0	-0.2	-0.7	-0.6	-1.2	-1.4	-1.3	-0.6	-2.3	-1.6	-2.6	-2.6	-2.3	-2.1	-1.4	-1.3	-1.0	-0.9	-0.8	-0.9	-0.8
21	-0.8	-0.7	-0.4	-0.4	0.1	-0.2	0.2	0.2	3.4	1.6	-1.4	-2.2	-2.3	-2.7	-2.3	-1.8	-1.6	-1.8	-2.0	-1.4	-0.4	0.9	1.5	2.4
22	1.8	-0.2	0.0	0.8	1.8	3.7	2.9	0.2	-1.5	-2.1	-2.6	-2.3	-2.7	-3.5	-3.2	-3.4	-3.7	-3.5	-2.0	-1.2	-0.3	0.2	1.0	2.2
23	2.3	2.3	1.8	1.4	1.9	2.3	1.0	-1.1	-1.5	-1.6	-1.8	-2.0	-2.1	-1.9	-1.9	-1.7	-1.6	-1.7	-1.4	-1.1	-0.9	-0.8	-0.7	-0.7
24	-0.7	-0.7	-0.6	-0.6	-0.5	-0.2	0.8	-1.1	-1.1	-1.8	-1.8	-2.5	-3.0	-3.7	-2.8	-2.6	-2.4	-2.0	-1.7	-1.2	-0.9	-0.8	-0.4	-0.5
25	-0.5	-0.8	-1.7	-0.9	0.3	-0.6	0.7	-1.0	0.2	-3.4	-2.2	-3.1	-4.3	-5.4	-4.3	-4.5	-3.9	-3.8	-2.4	-1.1	-0.2	1.0	2.0	2.9
26	1.4	1.0	2.2	3.4	3.5	4.3	1.5	-0.7	-1.7	-1.8	-1.8	-2.0	-2.1	-2.1	-2.2	-2.1	-1.8	-1.6	-1.1	-0.8	-0.2	-0.5	-0.6	-0.1
27	-0.6	-0.8	-0.8	-0.6	-1.6	-1.3	-0.7	-0.9	-0.7	-0.7	-1.7	-1.8	-1.6	-1.6	-1.5	-1.5	-1.4	-1.4	-1.3	-1.0	-0.8	-0.8	-0.7	-0.7
28	-0.7	-0.7	-0.7	-0.6	-0.5	-0.6	-0.9	-1.2	-1.4	-1.5	-1.6	-1.9	-2.0	-2.0	-2.0	-1.9	-1.7	-1.5	-1.3	-1.1	-0.9	-0.8	-0.8	-0.8
29	-0.8	-0.7	-0.8	-0.8	-0.3	-0.3	-0.6	-1.0	-1.4	-1.7	-1.9	-2.4	-2.8	-2.0	-1.8	-1.5	-1.3	-2.0	-2.1	-1.6	-0.9	-0.4	-0.3	0.1
30	1.4	0.2	-0.3	-0.5	-0.8	-0.7	-0.6	-1.5	-1.8	-2.0	-2.0	-2.6	-2.6	-2.3	-2.6	-2.2	-2.1	-2.5	-2.1	-1.4	0.0	1.0	1.0	0.6
HOURLY MEAN	0.4	0.3	0.3	0.3	0.4	0.4	0.1	-0.8	-1.1	-1.5	-1.7	-2.1	-2.3	-2.4	-2.3	-2.2	-2.0	-1.8	-1.4	-1.1	-0.4	-0.0	0.1	0.4

MAXIMUM = 5.0 MINIMUM = -5.4 MEAN = -0.9 716 VALID OBSERVATIONS (99.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	1.4	0.8	3.9	5.0	1.6	3.1	1.6	0.9	0.1	1.4	1.5	-0.4	-0.6	-0.3	3.0
MIN	-2.3	-2.2	-2.9	-1.8	-2.4	-3.5	-2.0	-2.6	-2.1	-3.0	-2.3	-2.1	-2.1	-1.6	-3.0
MEAN	-0.8	-0.8	0.1	0.3	-0.3	-0.8	-0.7	-0.7	-1.0	-1.0	-0.8	-1.3	-1.3	-1.1	-1.4

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	3.7	0.9	1.1	1.1	1.3	3.4	3.7	2.3	0.8	2.9	4.3	-0.6	-0.5	0.1	1.4
MIN	-4.0	-1.9	-2.5	-2.0	-2.6	-2.7	-3.7	-2.1	-3.7	-5.4	-2.2	-1.8	-2.0	-2.8	-2.6
MEAN	-0.9	-0.9	-0.9	-0.7	-1.0	-0.5	-0.7	-0.5	-1.4	-1.5	-0.2	-1.1	-1.2	-1.2	-1.1

MEAN MAXIMUM = 1.6 MEAN MINIMUM = -2.6

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JANUARY 1981

JAN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-
10	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
11	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
12	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
13	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
14	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
15	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	4	11	4	2	0	1	0	0	0	0	0	0
HOURLY MEAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MAXIMUM = 11 MINIMUM = 0 TOTAL = 22.00 611 VALID OBSERVATIONS (82.1%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	0	0
MIN	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	0	0
SUM	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	0	0

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22

MEAN MAXIMUM = 0 MEAN MINIMUM = 0.

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
FEBRUARY 1981

FEB-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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
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
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-
5	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
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
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
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	-M-	-M-
14	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
HOURLY MEAN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MAXIMUM = 0 MINIMUM = 0 TOTAL = 0.00 614 VALID OBSERVATIONS (91.4%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0

DAY	15	16	17	18	19	20	21	22	23	24	25	26	27	28
MAX	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MEAN MAXIMUM = -M- MEAN MINIMUM = -M-

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MARCH 1981

MAR-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	-M-	-M-
2	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
3	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0	0	0	0	0	2	2	1	0	1	0	1
4	1	0	0	1	1	0	0	1	0	0	7	21	8	9	0	1	6	5	2	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
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
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
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
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
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
14	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-
18	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
27	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	5	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY MEAN	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

MAXIMUM = 21 MINIMUM = 0 TOTAL = 94.00 696 VALID OBSERVATIONS (93.5%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	0	-M-	2	21	0	0	0	0	0	0	0	0	0	5	0	0
MIN	0	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	-M-	7	63	0	0	0	0	0	0	0	0	0	5	0	0

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	0	0	0	0	2	0	0	1	0	0	1	5	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	0	3	0	0	1	0	0	1	14	0	0	0

MEAN MAXIMUM = 1 MEAN MINIMUM = 0

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
APRIL 1981

APR-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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
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
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	1	0	14	0	0	0
4	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
5	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-
11	-M-	-M-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	16
12	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	18	6	4	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0
19	0	2	1	1	0	0	0	4	2	4	7	2	1	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	12	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
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
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY MEAN	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1

MAXIMUM = 46 MINIMUM = 0 TOTAL = 168.00 676 VALID OBSERVATIONS (93.9%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	0	0	19	-M-	0	0	0	0	0	0	16	46	18	0	0
MIN	0	0	0	-M-	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	34	-M-	0	0	0	0	0	0	17	46	29	0	0

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	0	0	4	7	0	0	12	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	5	24	0	0	13	0	0	0	0	0	0	0	0

MEAN MAXIMUM = 4 MEAN MINIMUM = 0.

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
MAY 1981

MAY-1981

DAY	HOUR 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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
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
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	1	0	1	0	0	0	1	11	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
9	0	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
12	0	0	0	0	3	4	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	11	9	14	6	7	10	5
14	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	9	17
18	5	3	0	0	0	0	0	0	0	3	5	1	16	13	15	10	17	3	2	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
22	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	1	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
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
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
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
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY MEAN	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	1

MAXIMUM = 17 MINIMUM = 0 TOTAL = 237.00 728 VALID OBSERVATIONS (97.8%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
MAX	0	0	0	11	0	0	0	0	0	0	0	5	14	4	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	14	0	0	0	0	0	0	0	14	68	5	0	0

DAY	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MAX	17	17	0	0	0	5	5	0	0	0	0	0	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	32	93	0	0	0	6	5	0	0	0	0	0	0	0	0

MEAN MAXIMUM = 3 MEAN MINIMUM = 0.

PRECIPITATION (.01 INCH)
COOPER NUCLEAR STATION METEOROLOGICAL DATA
JUNE 1981

JUN-1981	HOUR																							
DAY	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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
2	0	0	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
9	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-
10	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	-M-	0	0	0	0	0
11	0	0	0	0	0	1	9	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	14	0
15	0	0	4	22	0	21	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
20	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	23	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
27	0	1	0	4	13	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HOURLY MEAN	0	0	1	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MAXIMUM = 23 MINIMUM = 0 TOTAL = 175.00 669 VALID OBSERVATIONS (92.9%)

DAILY STATISTICS

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
MAX	0	3	0	1	1	0	0	0	-M-	0	9	0	0	14	22
MIN	0	0	0	0	0	0	0	0	-M-	0	0	0	0	0	0
SUM	0	4	0	1	1	0	0	0	-M-	0	16	0	0	18	59

DAY	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
MAX	0	0	0	3	1	2	0	0	0	23	3	22	0	0	0
MIN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	0	0	0	3	2	3	0	0	0	25	3	40	0	0	0

MEAN MAXIMUM = 4 MEAN MINIMUM = 0

APPENDIX B

JOINT FREQUENCY TABLES

JOINT FREQUENCY TABLES

The wind speed, wind direction, and 318-35 ft differential temperature data presented in Section A are categorized as shown on Page B-3. The joint frequency of occurrence of each wind speed and wind direction category for each wind level is computed, and the number of joint occurrences and the percent frequency of occurrence is shown. Joint frequency of occurrence of wind speed vs. wind direction is shown across all atmospheric stability categories and for each atmospheric stability category individually. The percent frequency of occurrence is normalized to 100% on each table, i.e, the total in the right hand corner of the table is 100%. Row totals and column totals are shown in the right column and bottom row, respectively, of each table. The number of calm hours and the percent of calm hours are shown in the first wind speed category of each table. The number of valid data pairs collected are shown in the lower right hand corner of each table.

The following abbreviations are used on the tables:

WDC = Wind Direction Category
WSC = Wind Speed Category
DTC = Differential Temperature Category

The numerals 1 and 2 refer to the 35-ft and 318-ft wind levels, respectively.

CLASSIFICATION OF METEOROLOGICAL CATEGORIES USED IN JOINT FREQUENCY ANALYSES

a. Wind Speed

Beaufort Wind Scale	Wind Speed (mph)
Calm	$V \leq *$
1	$* < V \leq 4$
2	$4 < V \leq 8$
3	$8 < V \leq 13$
4	$13 < V \leq 19$
5	$19 < V \leq 25$
6	$25 < V \leq 32$
7	$32 < V \leq 39$
8	$39 < V \leq 45$
9	$45 < V$

* Threshold speed of anemometer or wind vane, whichever is higher.

b. Wind Direction

Wind Sector	Wind Direction (Degrees)
N	$349° < \theta \leq 11°$
NNE	$11° < \theta \leq 34°$
NE	$34° < \theta \leq 56°$
ENE	$56° < \theta \leq 79°$
E	$79° < \theta \leq 101°$
ESE	$101° < \theta \leq 124°$
SE	$124° < \theta \leq 146°$
SSE	$146° < \theta \leq 169°$
S	$169° < \theta \leq 191°$
SSW	$191° < \theta \leq 214°$
SW	$214° < \theta \leq 236°$
WSW	$236° < \theta \leq 259°$
W	$259° < \theta \leq 281°$
WNW	$281° < \theta \leq 304°$
NW	$304° < \theta \leq 326°$
NNW	$326° < \theta \leq 349°$

c. Pasquill Stability

Stability Category	Stability Classification	ΔT (C/100m)
A	Extremely unstable	$\Delta T \leq -1.9$
B	Moderately unstable	$-1.9 < \Delta T \leq -1.7$
C	Slightly unstable	$-1.7 < \Delta T \leq -1.5$
D	Neutral	$-1.5 < \Delta T \leq -0.5$
E	Slightly stable	$-0.5 < \Delta T \leq 1.5$
F	Moderately stable	$1.5 < \Delta T \leq 4.0$
G	Extremely stable	$4.0 < \Delta T$

ARRANGEMENT OF JOINT FREQUENCY TABLES

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318-ft Wind Speed Vs. Wind Direction	
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Extremely unstable, January - March 1981	B-7
Moderately unstable, January - March 1981	B-8
Slightly unstable, January - March 1981	B-9
Neutral, January - March 1981	B-10
Slightly stable, January - March 1981	B-11
Moderately stable, January - March 1981	B-12
Extremely stable, January - March 1981	B-13
All occurrences, April - June 1981	B-14
Extremely unstable, April - June 1981	B-15
Moderately unstable, April - June 1981	B-16
Slightly unstable, April - June 1981	B-17
Neutral, April - June 1981	B-18
Slightly stable, April - June 1981	B-19
Moderately stable, April - June 1981	B-20
Extremely stable, April - June 1981	B-21
All occurrences, January - June 1981	B-22
Extremely unstable, January - June 1981	B-23
Moderately unstable, January - June 1981	B-24
Slightly unstable, January - June 1981	B-25
Neutral, January - June 1981	B-26
Slightly stable, January - June 1981	B-27
Moderately stable, January - June 1981	B-28
Extremely stable, January - June 1981	B-29
35-ft Wind Speed Vs. Wind Direction	
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Moderately unstable, January - March 1981	B-32
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Neutral, January - March 1981	B-34
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Moderately stable, January - March 1981	B-36
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Moderately unstable, April - June 1981	B-40
Slightly unstable, April - June 1981	B-41
Neutral, April - June 1981	B-42
Slightly stable, April - June 1981	B-43
Moderately stable, April - June 1981	B-44
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ARRANGEMENT OF JOINT FREQUENCY TABLES (CONT.)

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Slightly stable, January - June 1981	B-51
Moderately stable, January - June 1981	B-52
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ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - MARCH 1981
WIND DIRECTION BY WIND SPEED

TABLE OF WDC2 BY WSC2

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	4	6	26	46	83	25	19	7	216
	0.20	0.29	1.27	2.25	4.06	1.22	0.93	0.34	10.56
NNE	0	4	12	32	24	13	4	0	89
	0.00	0.20	0.59	1.56	1.17	0.64	0.20	0.00	4.35
NE	1	2	8	18	16	4	6	0	55
	0.05	0.10	0.39	0.88	0.78	0.20	0.29	0.00	2.69
ENE	0	5	9	20	18	7	2	0	61
	0.00	0.24	0.44	0.98	0.88	0.34	0.10	0.00	2.98
E	0	6	11	14	12	5	0	0	48
	0.00	0.29	0.54	0.68	0.59	0.24	0.00	0.00	2.35
ESE	0	11	14	11	29	13	0	0	78
	0.00	0.54	0.68	0.54	1.42	0.64	0.00	0.00	3.81
SE	0	8	16	37	34	14	3	0	112
	0.00	0.39	0.78	1.81	1.66	0.68	0.15	0.00	5.47
SSE	0	7	9	27	31	13	4	0	91
	0.00	0.34	0.44	1.32	1.52	0.64	0.20	0.00	4.45
S	0	2	15	49	52	41	13	1	173
	0.00	0.10	0.73	2.39	2.54	2.00	0.64	0.05	8.46
SSW	0	4	20	37	45	31	4	0	141
	0.00	0.20	0.98	1.81	2.20	1.52	0.20	0.00	6.89
SW	1	3	24	42	34	15	6	1	126
	0.05	0.15	1.17	2.05	1.66	0.73	0.29	0.05	6.16
WSW	0	8	28	32	26	11	1	0	106
	0.00	0.39	1.37	1.56	1.27	0.54	0.05	0.00	5.18
W	3	12	27	44	26	8	6	0	126
	0.15	0.59	1.32	2.15	1.27	0.39	0.29	0.00	6.16
WNW	2	13	31	42	39	21	2	0	150
	0.10	0.64	1.52	2.05	1.91	1.03	0.10	0.00	7.33
NW	3	9	27	36	57	62	3	0	197
	0.15	0.44	1.32	1.76	2.79	3.03	0.15	0.00	9.63
NNW	0	12	29	50	59	76	48	3	277
	0.00	0.59	1.42	2.44	2.88	3.71	2.35	0.15	13.54
TOTAL	14	112	306	537	585	359	121	12	2046
	0.68	5.47	14.96	26.25	28.59	17.55	5.91	0.59	100.00

ECOLOGICAL ANALYSIS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - MARCH 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY UNSTAB

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	0	1	13	11	24	14	6	5	74
	.	0.38	4.96	4.20	9.16	5.34	2.29	1.91	28.24
NNE	0	1	1	7	2	1	0	0	12
	.	0.38	0.38	2.67	0.76	0.38	0.00	0.00	4.58
NE	0	0	0	3	0	0	0	0	3
	.	0.00	0.00	1.15	0.00	0.00	0.00	0.00	1.15
ENE	0	0	0	3	1	0	0	0	4
	.	0.00	0.00	1.15	0.38	0.00	0.00	0.00	1.53
E	0	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	.	0.00
ESE	0	0	3	0	0	0	0	0	3
	.	0.00	1.15	0.00	0.00	0.00	0.00	0.00	1.15
SE	0	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	.	0.00
SSE	0	0	0	0	0	2	2	0	4
	.	0.00	0.00	0.00	0.00	0.76	0.76	0.00	1.53
S	0	0	0	2	0	0	4	0	6
	.	0.00	0.00	0.76	0.00	0.00	1.53	0.00	2.29
SSW	0	1	2	0	3	0	0	0	6
	.	0.38	0.76	0.00	1.15	0.00	0.00	0.00	2.29
SW	0	1	0	0	0	0	0	0	1
	.	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.38
WSW	0	1	0	0	0	0	0	0	1
	.	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.38
W	0	0	0	2	1	2	3	0	8
	.	0.00	0.00	0.76	0.38	0.76	1.15	0.00	3.05
WNW	0	2	4	4	6	5	0	0	21
	.	0.76	1.53	1.53	2.29	1.91	0.00	0.00	8.02
NW	0	0	6	10	13	20	1	0	50
	.	0.00	2.29	3.82	4.96	7.63	0.38	0.00	19.08
NNW	0	1	7	9	17	12	22	1	69
	.	0.38	2.67	3.44	6.49	4.58	8.40	0.38	26.34
TOTAL	.	8	36	51	87	56	38	6	262
	.	3.05	13.74	19.47	25.57	21.37	14.50	2.29	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - MARCH 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=MODERATELY UNSTA

WDC2 WSC2

FREQUENCY | PERCENT	CALM	1-3	4-8	8-12	13-19	19-25	25-32	32-39	TOTAL
N	0 | 0.00	0 | 0.00	4 | 2.90	4 | 2.90	12 | 8.70	3 | 2.17	2 | 1.45	2 | 1.45	27 | 19.57
NNE	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	3 | 2.17	1 | 0.72	4 | 2.90	0 | 0.00	8 | 5.80
NE	0 | 0.00	0 | 0.00	1 | 0.72	1 | 0.72	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	2 | 1.45
ENE	0 | 0.00	1 | 0.72	2 | 1.45	4 | 2.90	1 | 0.72	0 | 0.00	0 | 0.00	0 | 0.00	8 | 5.80
E	0 | 0.00	0 | 0.00	0 | 0.00	1 | 0.72	1 | 0.72	0 | 0.00	0 | 0.00	0 | 0.00	2 | 1.45
ESE	0 | 0.00	2 | 1.45	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	2 | 1.45
SE	0 | 0.00	1 | 0.72	2 | 1.45	3 | 2.17	4 | 2.90	1 | 0.72	0 | 0.00	0 | 0.00	11 | 7.97
SSE	0 | 0.00	2 | 1.45	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	2 | 1.45
S	0 | 0.00	0 | 0.00	1 | 0.72	4 | 2.90	3 | 2.17	1 | 0.72	2 | 1.45	1 | 0.72	12 | 8.70
SSW	0 | 0.00	0 | 0.00	1 | 0.72	6 | 4.35	3 | 2.17	0 | 0.00	0 | 0.00	0 | 0.00	10 | 7.25
SW	0 | 0.00	0 | 0.00	1 | 0.72	3 | 2.17	2 | 1.45	0 | 0.00	0 | 0.00	0 | 0.00	6 | 4.35
WSW	0 | 0.00	1 | 0.72	2 | 1.45	2 | 1.45	0 | 0.00	0 | 0.00	0 | 0.00	0 | 0.00	5 | 3.62
W	0 | 0.00	0 | 0.00	3 | 2.17	6 | 4.35	1 | 0.72	0 | 0.00	0 | 0.00	0 | 0.00	10 | 7.25
WNW	0 | 0.00	2 | 1.45	2 | 1.45	2 | 1.45	2 | 1.45	1 | 0.72	0 | 0.00	0 | 0.00	9 | 6.52
NW	1 | 0.72	0 | 0.00	1 | 0.72	1 | 0.72	2 | 1.45	1 | 0.72	0 | 0.00	0 | 0.00	6 | 4.35
NNW	0 | 0.00	2 | 1.45	3 | 2.17	4 | 2.90	2 | 1.45	4 | 2.90	3 | 2.17	0 | 0.00	18 | 13.04
TOTAL	1 | 0.72	11 | 7.97	23 | 16.67	41 | 29.71	36 | 26.09	12 | 8.70	11 | 7.97	3 | 2.17	138 | 100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
31R FOOT *IND SPEED VS. *IND DIRECTION ANALYSIS
JANUARY - MARCH 1981
*IND DIRECTION BY *IND SPEED BY STABILITY

TABLE OF *DC2 BY *SC2
CONTROLLING FOR DTC=SLIGHTLY UNSTABL

*DC2 *SC2

FREQUENCY| PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	0	2	0	7	12	3	8	0	32
	.	1.06	0.00	3.72	6.38	1.60	4.26	0.00	17.02
NNE	0	0	0	4	5	5	0	0	14
	.	0.00	0.00	2.13	2.66	2.66	0.00	0.00	7.45
NE	0	0	0	2	0	0	0	0	2
	.	0.00	0.00	1.06	0.00	0.00	0.00	0.00	1.06
ENE	0	2	0	1	0	1	0	0	4
	.	1.06	0.00	0.53	0.00	0.53	0.00	0.00	2.13
E	0	1	2	1	2	1	0	0	7
	.	0.53	1.06	0.53	1.06	0.53	0.00	0.00	3.72
ESE	0	2	4	4	0	0	0	0	10
	.	1.06	2.13	2.13	0.00	0.00	0.00	0.00	5.32
SE	0	1	5	6	0	2	0	0	14
	.	0.53	2.66	3.19	0.00	1.06	0.00	0.00	7.45
SSE	0	3	1	1	1	1	0	0	7
	.	1.60	0.53	0.53	0.53	0.53	0.00	0.00	3.72
S	0	0	1	2	2	2	1	0	8
	.	0.00	0.53	1.06	1.06	1.06	0.53	0.00	4.26
SSW	0	0	1	5	2	5	1	0	14
	.	0.00	0.53	2.66	1.06	2.66	0.53	0.00	7.45
SW	0	0	6	12	5	0	0	0	23
	.	0.00	3.19	6.38	2.66	0.00	0.00	0.00	12.23
*SW	0	0	3	2	0	0	0	0	5
	.	0.00	1.60	1.06	0.00	0.00	0.00	0.00	2.66
W	0	3	2	3	4	0	3	0	15
	.	1.60	1.06	1.60	2.13	0.00	1.60	0.00	7.98
*NW	0	0	2	2	3	0	0	0	7
	.	0.00	1.06	1.06	1.60	0.00	0.00	0.00	3.72
NW	0	0	1	1	4	1	0	0	7
	.	0.00	0.53	0.53	2.13	0.53	0.00	0.00	3.72
NNW	0	1	2	1	2	6	5	2	19
	.	0.53	1.06	0.53	1.06	3.19	2.66	1.06	10.11
TOTAL	.	15	30	54	42	27	18	2	188
	.	7.98	15.96	28.72	22.34	14.36	9.57	1.06	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT *IND SPEED VS. *IND DIRECTION ANALYSIS
JANUARY - MARCH 1981
*IND DIRECTION BY *IND SPEED BY STABILITY

TABLE OF *DC2 BY *SC2
CONTROLLING FOR DTC=NEUTRAL

*DC2 *SC2

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	0	1	2	12	23	4	3	0	45
	.	0.15	0.30	1.81	3.47	0.60	0.45	0.00	6.79
NNE	0	2	5	6	9	6	0	0	28
	.	0.30	0.75	0.90	1.36	0.90	0.00	0.00	4.22
NE	0	1	3	6	14	4	6	0	34
	.	0.15	0.45	0.90	2.11	0.60	0.90	0.00	5.13
ENE	0	1	2	10	15	6	2	0	36
	.	0.15	0.30	1.51	2.26	0.90	0.30	0.00	5.43
E	0	3	2	9	9	4	0	0	27
	.	0.45	0.30	1.36	1.36	0.60	0.00	0.00	4.07
ESE	0	3	3	4	25	10	0	0	45
	.	0.45	0.45	0.60	3.77	1.51	0.00	0.00	6.79
SE	0	2	6	20	15	6	2	0	51
	.	0.30	0.90	3.02	2.26	0.90	0.30	0.00	7.69
SSE	0	1	3	14	11	3	0	0	32
	.	0.15	0.45	2.11	1.66	0.45	0.00	0.00	4.83
S	0	1	2	8	17	20	5	0	53
	.	0.15	0.30	1.21	2.56	3.02	0.75	0.00	7.99
SSW	0	2	8	7	9	11	2	0	39
	.	0.30	1.21	1.06	1.36	1.66	0.30	0.00	5.88
SW	0	0	3	5	7	4	5	1	25
	.	0.00	0.45	0.75	1.06	0.60	0.75	0.15	3.77
WSW	0	3	7	6	1	1	1	0	19
	.	0.45	1.06	0.90	0.15	0.15	0.15	0.00	2.87
W	0	3	4	8	2	3	0	0	20
	.	0.45	0.60	1.21	0.30	0.45	0.00	0.00	3.02
WNW	0	2	6	8	8	4	2	0	30
	.	0.30	0.90	1.21	1.21	0.60	0.30	0.00	4.52
NW	0	3	6	12	20	30	1	0	72
	.	0.45	0.90	1.81	3.02	4.52	0.15	0.00	10.86
NNW	0	3	3	18	22	43	18	0	107
	.	0.45	0.45	2.71	3.32	6.49	2.71	0.00	16.14
TOTAL	.	31	65	153	207	159	47	1	663
	.	4.68	9.80	23.08	31.22	23.98	7.09	0.15	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - MARCH 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC2 WSC2

FREQUENCY| PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	32-39	TOTAL
N	0	0	2	5	9	1	0	0	17
	.	0.00	0.46	1.16	2.09	0.23	0.00	.	3.94
NNE	0	0	1	3	3	0	0	0	7
	.	0.00	0.23	0.70	0.70	0.00	0.00	.	1.62
NE	0	0	1	5	2	0	0	0	8
	.	0.00	0.23	1.16	0.46	0.00	0.00	.	1.86
ENE	0	1	2	2	1	0	0	0	6
	.	0.23	0.46	0.46	0.23	0.00	0.00	.	1.39
E	0	0	5	1	0	0	0	0	6
	.	0.00	1.16	0.23	0.00	0.00	0.00	.	1.39
ESE	0	1	2	3	4	3	0	0	13
	.	0.23	0.46	0.70	0.93	0.70	0.00	.	3.02
SE	0	0	2	6	9	3	1	0	21
	.	0.00	0.46	1.39	2.09	0.70	0.23	.	4.87
SSE	0	0	3	4	9	4	1	0	21
	.	0.00	0.70	0.93	2.09	0.93	0.23	.	4.87
S	0	1	10	24	27	17	1	0	80
	.	0.23	2.32	5.57	6.26	3.94	0.23	.	18.56
SSW	0	0	5	10	21	12	1	0	49
	.	0.00	1.16	2.32	4.87	2.78	0.23	.	11.37
SW	0	1	3	11	14	5	1	0	35
	.	0.23	0.70	2.55	3.25	1.16	0.23	.	8.12
WSW	0	1	7	4	10	9	0	0	31
	.	0.23	1.62	0.93	2.32	2.09	0.00	.	7.19
W	0	2	3	9	10	2	0	0	26
	.	0.46	0.70	2.09	2.32	0.46	0.00	.	6.03
WNW	0	4	7	7	10	6	0	0	34
	.	0.93	1.62	1.62	2.32	1.39	0.00	.	7.89
NW	0	1	5	5	15	7	1	0	34
	.	0.23	1.16	1.16	3.48	1.62	0.23	.	7.89
NNW	0	1	5	12	14	11	0	0	43
	.	0.23	1.16	2.78	3.25	2.55	0.00	.	9.98
TOTAL	.	13	63	111	158	80	6	.	431
	.	3.02	14.62	25.75	36.66	18.56	1.39	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT *IND SPEED VS. *IND DIRECTION ANALYSIS
JANUARY - MARCH 1981
*IND DIRECTION BY *IND SPEED BY STABILITY

TABLE OF *DC2 BY *SC2
CONTROLLING FOR DTC=MODERATELY STABL

*DC2 *SC2

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	1	0	3	5	1	0	0	0	10
	0.44	0.00	1.32	2.19	0.44	0.00	0.00	.	4.39
NNE	0	0	3	5	1	0	0	0	9
	0.00	0.00	1.32	2.19	0.44	0.00	0.00	.	3.95
NE	1	0	0	0	0	0	0	0	1
	0.44	0.00	0.00	0.00	0.00	0.00	0.00	.	0.44
ENE	0	0	2	0	0	0	0	0	2
	0.00	0.00	0.88	0.00	0.00	0.00	0.00	.	0.88
E	0	1	2	2	0	0	0	0	5
	0.00	0.44	0.88	0.88	0.00	0.00	0.00	.	2.19
ESE	0	0	1	0	0	0	0	0	1
	0.00	0.00	0.44	0.00	0.00	0.00	0.00	.	0.44
SE	0	2	0	2	6	2	0	0	12
	0.00	0.88	0.00	0.88	2.63	0.88	0.00	.	5.26
SSE	0	1	0	7	10	3	1	0	22
	0.00	0.44	0.00	3.07	4.39	1.32	0.44	.	9.65
S	0	0	0	9	3	1	0	0	13
	0.00	0.00	0.00	3.95	1.32	0.44	0.00	.	5.70
SSW	0	0	0	8	5	3	0	0	16
	0.00	0.00	0.00	3.51	2.19	1.32	0.00	.	7.02
SW	0	0	8	9	6	5	0	0	28
	0.00	0.00	3.51	3.95	2.63	2.19	0.00	.	12.28
WSW	0	2	6	9	6	1	0	0	24
	0.00	0.88	2.63	3.95	2.63	0.44	0.00	.	10.53
W	0	1	7	9	6	1	0	0	24
	0.00	0.44	3.07	3.95	2.63	0.44	0.00	.	10.53
WNW	0	3	6	13	7	5	0	0	34
	0.00	1.32	2.63	5.70	3.07	2.19	0.00	.	14.91
NW	0	4	3	3	3	3	0	0	16
	0.00	1.75	1.32	1.32	1.32	1.32	0.00	.	7.02
NNW	0	2	3	4	2	0	0	0	11
	0.00	0.88	1.32	1.75	0.88	0.00	0.00	.	4.82
TOTAL	2	16	44	85	56	24	1	.	228
	0.88	7.02	19.30	37.28	24.56	10.53	0.44	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
318 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - MARCH 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY STABLE

WDC2 WSC2

FREQUENCY | PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	3	2	2	2	2	0	0	0	11
	2.21	1.47	1.47	1.47	1.47	0.00	.	.	8.09
NNE	0	1	2	7	1	0	0	0	11
	0.00	0.74	1.47	5.15	0.74	0.00	.	.	8.09
NE	0	1	3	1	0	0	0	0	5
	0.00	0.74	2.21	0.74	0.00	0.00	.	.	3.68
ENE	0	0	1	0	0	0	0	0	1
	0.00	0.00	0.74	0.00	0.00	0.00	.	.	0.74
E	0	1	0	0	0	0	0	0	1
	0.00	0.74	0.00	0.00	0.00	0.00	.	.	0.74
ESE	0	3	1	0	0	0	0	0	4
	0.00	2.21	0.74	0.00	0.00	0.00	.	.	2.94
SE	0	2	1	0	0	0	0	0	3
	0.00	1.47	0.74	0.00	0.00	0.00	.	.	2.21
SSE	0	0	2	1	0	0	0	0	3
	0.00	0.00	1.47	0.74	0.00	0.00	.	.	2.21
S	0	0	1	0	0	0	0	0	1
	0.00	0.00	0.74	0.00	0.00	0.00	.	.	0.74
SSW	0	1	3	1	2	0	0	0	7
	0.00	0.74	2.21	0.74	1.47	0.00	.	.	5.15
SW	1	1	3	2	0	1	0	0	8
	0.74	0.74	2.21	1.47	0.00	0.74	.	.	5.88
WSW	0	0	3	9	9	0	0	0	21
	0.00	0.00	2.21	6.62	6.62	0.00	.	.	15.44
W	3	3	8	7	2	0	0	0	23
	2.21	2.21	5.88	5.15	1.47	0.00	.	.	16.91
WNW	2	0	4	6	3	0	0	0	15
	1.47	0.00	2.94	4.41	2.21	0.00	.	.	11.03
NW	2	1	5	4	0	0	0	0	12
	1.47	0.74	3.68	2.94	0.00	0.00	.	.	8.82
NNW	0	2	6	2	0	0	0	0	10
	0.00	1.47	4.41	1.47	0.00	0.00	.	.	7.35
TOTAL	11	18	45	42	19	1	.	.	136
	8.09	13.24	33.09	30.88	13.97	0.74	.	.	100.00

ECOLOGICAL ANALYSIS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
314 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED

TABLE OF WDC2 BY WSC2

WDC2 WSC2

FREQUENCY
PERCENT | CALM | 1-3 | 4-7 | 8-12 | 13-18 | 19-25 | 25-31 | 32-39 | TOTAL

	0	1	20	44	71	16	5	0	157
	0.00	0.05	1.03	2.27	3.66	0.83	0.26	0.00	8.10
NNE	2	6	8	35	57	20	12	0	138
	0.00	0.31	0.41	1.81	2.94	1.03	0.62	0.00	7.12
NE	0	2	12	66	20	9	2	0	111
	0.00	0.10	0.62	3.40	1.03	0.46	0.10	0.00	5.72
ENE	0	0	27	45	17	9	1	0	99
	0.00	0.00	1.39	2.32	0.88	0.46	0.05	0.00	5.11
E	0	5	15	41	10	7	0	0	78
	0.00	0.26	0.77	2.11	0.52	0.36	0.00	0.00	4.02
ESE	0	7	24	33	16	9	0	0	91
	0.00	0.36	1.24	1.70	0.83	0.46	0.00	0.00	4.69
SE	0	9	14	56	42	13	0	0	134
	0.00	0.46	0.72	2.89	2.17	0.67	0.00	0.00	6.91
SSE	0	6	12	62	40	11	1	0	138
	0.00	0.31	0.62	3.20	2.37	0.57	0.05	0.00	7.12
S	0	4	15	52	94	37	17	0	223
	0.00	0.21	0.77	2.68	5.05	1.91	0.88	0.00	11.50
SSW	0	6	16	41	54	70	60	20	267
	0.00	0.31	0.83	2.11	2.78	3.61	3.09	1.03	13.77
SW	1	6	15	33	21	21	21	7	125
	0.05	0.31	0.77	1.70	1.08	1.08	1.08	0.36	6.45
WSW	0	3	14	15	17	8	8	0	65
	0.00	0.15	0.72	0.77	0.88	0.41	0.41	0.00	3.35
W	1	5	11	16	11	6	0	0	51
	0.05	0.31	0.57	0.83	0.57	0.31	0.00	0.00	2.63
WNW	0	4	9	11	16	9	0	0	53
	0.00	0.41	0.46	0.57	0.83	0.46	0.00	0.00	2.73
NW	0	2	11	14	30	31	1	0	89
	0.00	0.10	0.57	0.72	1.55	1.60	0.05	0.00	4.59
NNW	1	3	11	39	35	25	3	1	120
	0.05	0.25	0.57	2.01	1.81	1.29	0.15	0.05	6.19
TOTAL	3	75	234	603	563	301	131	28	1939
	0.14	3.92	12.07	31.10	29.04	15.52	6.76	1.44	100.00

ECOLOGICAL ANALYSIS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
10M FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY UNSTAB

WDC2 WSC2

FREQUENCY / PERCENT / COL%	1-3	4-7	8-12	13-18	19-24	25-31	32-38	TOTAL
N	0	1	7	16	20	2	1	0	47
	.	0.29	2.05	4.68	5.85	0.58	0.29	0.00	13.74
NNE	0	4	2	5	17	5	0	0	35
	.	1.17	0.58	1.46	5.56	1.46	0.00	0.00	10.23
NE	0	2	0	12	4	0	0	0	18
	.	0.58	0.00	3.51	1.17	0.00	0.00	0.00	5.26
ENE	0	0	4	11	0	0	0	0	15
	.	0.00	1.17	3.22	0.00	0.00	0.00	0.00	4.39
E	0	1	6	10	2	0	0	0	19
	.	0.29	1.75	2.92	0.58	0.00	0.00	0.00	5.56
ESE	0	3	3	0	0	0	0	0	6
	.	0.88	0.88	0.00	0.00	0.00	0.00	0.00	1.75
SE	0	1	2	1	2	0	0	0	6
	.	0.29	0.58	0.29	0.58	0.00	0.00	0.00	1.75
SSE	0	2	1	4	2	0	0	0	9
	.	0.58	0.29	1.17	0.58	0.00	0.00	0.00	2.63
S	0	0	3	6	9	6	6	0	30
	.	0.00	0.88	1.75	2.63	1.75	1.75	0.00	8.77
SSW	0	2	2	4	2	9	13	8	40
	.	0.58	0.58	1.17	0.58	2.63	3.80	2.34	11.70
SW	0	0	2	1	0	1	5	2	11
	.	0.00	0.58	0.29	0.00	0.29	1.46	0.58	3.22
WSW	0	0	1	1	2	1	6	0	11
	.	0.00	0.29	0.29	0.58	0.29	1.75	0.00	3.22
W	0	0	2	3	3	0	0	0	8
	.	0.00	0.58	0.88	0.88	0.00	0.00	0.00	2.34
WNW	0	1	1	1	8	0	0	0	11
	.	0.29	0.29	0.29	2.34	0.00	0.00	0.00	3.22
NW	0	2	2	2	9	12	0	0	27
	.	0.58	0.58	0.58	2.63	3.51	0.00	0.00	7.89
NNW	0	2	5	14	15	11	2	0	49
	.	0.58	1.46	4.09	4.39	3.22	0.58	0.00	14.33
TOTAL	.	21	43	91	97	47	33	10	342
	.	6.14	12.57	26.61	28.36	13.74	9.65	2.92	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=MODERATELY UNSTA

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	26-32	33-39	TOTAL
N	0	0	1	4	3	1	0	0	9
	0.00	0.00	0.78	3.13	2.34	0.78	0.00	0.00	7.03
NNE	0	0	0	1	3	3	0	0	7
	0.00	0.00	0.00	0.78	2.34	2.34	0.00	0.00	5.47
NE	0	0	0	4	1	0	0	0	5
	0.00	0.00	0.00	3.13	0.78	0.00	0.00	0.00	3.91
ENE	0	0	2	1	0	0	0	0	3
	0.00	0.00	1.56	0.78	0.00	0.00	0.00	0.00	2.34
E	0	1	1	1	2	0	0	0	5
	0.00	0.78	0.78	0.78	1.56	0.00	0.00	0.00	3.91
ESE	0	1	2	0	2	0	0	0	5
	0.00	0.78	1.56	0.00	1.56	0.00	0.00	0.00	3.91
SE	0	0	2	1	1	0	0	0	4
	0.00	0.00	1.56	0.78	0.78	0.00	0.00	0.00	3.13
SSE	0	0	1	3	3	0	0	0	7
	0.00	0.00	0.78	2.34	2.34	0.00	0.00	0.00	5.47
S	0	0	2	5	4	4	1	0	16
	0.00	0.00	1.56	3.91	3.13	3.13	0.78	0.00	12.50
SSW	0	0	1	1	2	3	6	3	16
	0.00	0.00	0.78	0.78	1.56	2.34	4.69	2.34	12.50
SW	0	2	0	3	5	6	2	1	19
	0.00	1.56	0.00	2.34	3.91	4.69	1.56	0.78	14.84
WSW	0	0	0	1	1	3	1	0	6
	0.00	0.00	0.00	0.78	0.78	2.34	0.78	0.00	4.69
W	0	0	0	4	1	1	0	0	6
	0.00	0.00	0.00	3.13	0.78	0.78	0.00	0.00	4.69
WNW	0	1	1	3	1	1	0	0	7
	0.00	0.78	0.78	2.34	0.78	0.78	0.00	0.00	5.47
NW	0	0	1	1	4	1	0	0	7
	0.00	0.00	0.78	0.78	3.13	0.78	0.00	0.00	5.47
NNW	1	0	0	2	2	1	0	0	6
	0.78	0.00	0.00	1.56	1.56	0.78	0.00	0.00	4.69
TOTAL	1	5	14	35	35	24	10	4	128
	0.78	3.91	10.94	27.34	27.34	18.75	7.81	3.13	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
314 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=SLIGHTLY UNSTABL

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-13	13-18	19-25	25-32	32-39	TOTAL
N	0	0	1	3	12	5	2	0	24
	.	0.00	0.62	1.86	7.45	3.73	1.24	0.00	14.91
NNE	0	1	1	2	5	1	3	0	14
	.	0.62	0.62	1.24	3.73	0.62	1.86	0.00	8.70
NE	0	0	0	3	1	0	0	0	4
	.	0.00	0.00	1.86	0.62	0.00	0.00	0.00	2.48
ENE	0	0	0	2	0	0	0	0	2
	.	0.00	0.00	1.24	0.00	0.00	0.00	0.00	1.24
E	0	0	1	5	1	0	0	0	7
	.	0.00	0.62	3.11	0.62	0.00	0.00	0.00	4.35
ESE	0	1	4	3	5	0	0	0	13
	.	0.62	2.48	1.86	3.11	0.00	0.00	0.00	8.07
SE	0	3	0	3	6	0	0	0	12
	.	1.86	0.00	1.86	3.73	0.00	0.00	0.00	7.45
SSE	0	1	2	5	3	1	0	0	12
	.	0.00	1.24	3.73	1.86	0.62	0.00	0.00	7.45
S	0	2	3	4	5	1	2	0	17
	.	1.24	1.86	2.48	3.11	0.62	1.24	0.00	10.56
SSW	0	0	1	3	2	2	6	2	16
	.	0.00	0.62	1.86	1.24	1.24	3.73	1.24	9.94
SW	0	1	0	4	2	4	4	1	16
	.	0.62	0.00	2.48	1.24	2.48	2.48	0.62	9.94
WSW	0	0	0	3	2	0	0	0	5
	.	0.00	0.00	1.86	1.24	0.00	0.00	0.00	3.11
W	0	0	0	1	0	0	0	0	1
	.	0.00	0.00	0.62	0.00	0.00	0.00	0.00	0.62
WNW	0	1	1	1	0	0	0	0	3
	.	0.62	0.62	0.62	0.00	0.00	0.00	0.00	1.86
NW	0	0	1	1	0	3	1	0	6
	.	0.00	0.62	0.62	0.00	1.86	0.62	0.00	3.73
NNW	0	0	1	3	1	4	0	0	9
	.	0.00	0.62	1.86	0.62	2.48	0.00	0.00	5.59
TOTAL	.	9	16	47	46	22	18	3	161
	.	5.59	9.94	29.19	28.57	13.66	11.18	1.86	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
316 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=NEUTRAL

WDC2 WSC2

FREQUENCY | PERCENT | CALM	1-3	4-8	9-13	13-19	19-25	25-32	32-39	TOTAL
N	0 0.00	0 0.00	1 0.15	8 1.18	25 3.70	7 1.04	2 0.30	0 0.00	43 6.36
NNE	0 0.00	0 0.00	2 0.30	16 2.37	16 2.37	11 1.63	9 1.33	0 0.00	54 7.99
NE	0 0.00	0 0.00	3 0.44	29 4.29	12 1.78	5 0.74	0 0.00	0 0.00	49 7.25
ENE	0 0.00	0 0.00	11 1.63	18 2.66	17 2.51	9 1.33	0 0.00	0 0.00	55 8.14
E	0 0.00	1 0.15	5 0.74	14 2.07	3 0.44	7 1.04	0 0.00	0 0.00	31 4.59
ESE	0 0.00	0 0.00	7 1.04	10 1.48	5 0.74	8 1.18	0 0.00	0 0.00	30 4.44
SE	0 0.00	2 0.30	9 1.33	28 4.14	19 2.81	11 1.63	0 0.00	0 0.00	69 10.21
SSE	0 0.00	2 0.30	4 0.59	24 3.55	20 2.96	7 1.04	1 0.15	0 0.00	58 8.58
S	0 0.00	0 0.00	4 0.59	11 1.63	42 6.21	19 2.81	8 1.18	0 0.00	84 12.43
SSW	0 0.00	1 0.15	5 0.74	6 0.89	16 2.37	27 3.99	31 4.59	5 0.74	91 13.46
SW	1 0.15	1 0.15	5 0.74	7 1.04	4 0.59	3 0.44	7 1.04	2 0.30	30 4.44
WSW	0 0.00	1 0.15	0 0.00	1 0.15	6 0.89	2 0.30	1 0.15	0 0.00	11 1.63
W	1 0.15	5 0.74	4 0.59	3 0.44	1 0.15	1 0.15	0 0.00	0 0.00	15 2.22
WNW	0 0.00	1 0.15	1 0.15	3 0.44	2 0.30	0 0.00	0 0.00	0 0.00	7 1.04
NW	0 0.00	0 0.00	3 0.44	3 0.44	9 1.33	6 0.89	0 0.00	0 0.00	21 3.11
NNW	0 0.00	2 0.30	1 0.15	5 0.74	9 1.33	9 1.33	1 0.15	1 0.15	28 4.14
TOTAL	2 0.30	16 2.37	66 9.76	186 27.51	206 30.47	132 19.53	60 8.88	8 1.18	676 100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
10M ABOVE WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	32-39	TOTAL
N	0	1	4	10	11	0	0	0	25
	0.00	0.85	2.14	2.35	0.00	0.00	0.00	5.34
NNE	0	1	2	11	12	0	0	0	25
	0.21	0.43	2.35	2.56	0.00	0.00	0.00	5.56
NE	0	0	5	16	2	4	2	0	29
	0.00	1.07	3.42	0.43	0.85	0.43	0.00	6.20
ENE	0	0	4	11	0	0	1	0	16
	0.00	0.85	2.35	0.00	0.00	0.21	0.00	3.42
E	0	1	0	11	2	0	0	0	14
	0.21	0.00	2.35	0.43	0.00	0.00	0.00	2.99
ESE	0	1	5	17	5	1	0	0	30
	0.21	1.07	3.63	1.28	0.21	0.00	0.00	6.41
SE	0	2	1	18	13	1	0	0	35
	0.43	0.21	3.85	2.78	0.21	0.00	0.00	7.48
SSE	0	2	0	18	16	2	0	0	36
	0.43	0.00	3.42	3.42	0.43	0.00	0.00	7.69
S	0	1	1	11	28	7	0	0	48
	0.21	0.21	2.35	5.98	1.50	0.00	0.00	10.26
SSW	0	2	6	22	20	27	4	2	83
	0.43	1.28	4.70	4.27	5.77	0.85	0.43	17.74
SW	0	1	4	17	8	7	3	0	36
	0.21	0.85	2.78	1.71	1.50	0.64	0.00	7.69
WSW	0	2	7	4	6	2	0	0	21
	0.43	1.50	0.85	1.28	0.43	0.00	0.00	4.49
W	0	1	3	3	4	4	0	0	15
	0.21	0.64	0.64	0.85	0.85	0.00	0.00	3.21
WNW	0	2	2	3	4	8	0	0	19
	0.43	0.43	0.64	0.85	1.71	0.00	0.00	4.06
NW	0	0	2	5	5	6	0	0	18
	0.00	0.43	1.07	1.07	1.28	0.00	0.00	3.85
NNW	0	1	1	8	7	0	0	0	17
	0.21	0.21	1.71	1.50	0.00	0.00	0.00	3.63
TOTAL	17	47	179	144	64	10	2		468
	3.63	10.04	38.25	30.77	14.74	2.14	0.43		100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=MODERATELY STABL

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	0	0	3	3	0	0	0	0	6
	.	0.00	2.25	2.25	0.00	0.00	.	0.00	4.51
NNE	0	0	1	0	1	0	0	0	2
	.	0.00	0.75	0.00	0.75	0.00	.	0.00	1.50
NE	0	0	1	2	0	0	0	0	3
	.	0.00	0.75	1.50	0.00	0.00	.	0.00	2.26
ENE	0	0	4	2	0	0	0	0	6
	.	0.00	3.01	1.50	0.00	0.00	.	0.00	4.51
E	0	1	0	0	0	0	0	0	1
	.	0.75	0.00	0.00	0.00	0.00	.	0.00	0.75
ESE	0	1	2	3	0	0	0	0	6
	.	0.75	1.50	2.25	0.00	0.00	.	0.00	4.51
SE	0	1	0	4	1	1	0	0	7
	.	0.75	0.00	3.01	0.75	0.75	.	0.00	5.26
SSE	0	0	3	6	2	1	0	0	12
	.	0.00	2.26	4.51	1.50	0.75	.	0.00	9.02
S	0	1	2	13	10	0	0	0	26
	.	0.75	1.50	9.77	7.52	0.00	.	0.00	19.55
SSW	0	1	1	5	11	2	0	0	20
	.	0.75	0.75	3.76	8.27	1.50	.	0.00	15.04
SW	0	1	3	5	2	0	0	1	12
	.	0.75	2.26	3.76	1.50	0.00	.	0.75	9.02
WSW	0	0	4	4	0	0	0	0	8
	.	0.00	3.01	3.01	0.00	0.00	.	0.00	6.02
W	0	0	2	2	2	0	0	0	6
	.	0.00	1.50	1.50	1.50	0.00	.	0.00	4.51
WNW	0	1	2	0	1	0	0	0	4
	.	0.75	1.50	0.00	0.75	0.00	.	0.00	3.01
NW	0	0	0	1	3	3	0	0	7
	.	0.00	0.00	0.75	2.26	2.26	.	0.00	5.26
NNW	0	0	2	4	1	0	0	0	7
	.	0.00	1.50	3.01	0.75	0.00	.	0.00	5.26
TOTAL	.	7	30	54	34	7	.	1	133
	.	5.26	22.56	40.60	25.56	5.26	.	0.75	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33m FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY STABLE

WDC2 WSC2

FREQUENCY / PERCENT / COL PCT	1-3	4-7	8-12	13-18	19-25	26-32	33-39	TOTAL
N	0	0	3	0	0	0	0	3
	.	0.00	9.68	0.00	0.00	.	.	9.68
NNE	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
NE	0	0	3	0	0	0	0	3
	.	0.00	9.68	0.00	0.00	.	.	9.68
ENE	0	0	2	0	0	0	0	2
	.	0.00	6.45	0.00	0.00	.	.	6.45
E	0	0	1	0	0	0	0	1
	.	0.00	3.23	0.00	0.00	.	.	3.23
ESE	0	0	1	0	0	0	0	1
	.	0.00	3.23	0.00	0.00	.	.	3.23
SE	0	0	0	1	0	0	0	1
	.	0.00	0.00	3.23	0.00	.	.	3.23
SSE	0	0	1	3	0	0	0	4
	.	0.00	3.23	9.68	0.00	.	.	12.90
S	0	0	0	2	0	0	0	2
	.	0.00	0.00	6.45	0.00	.	.	6.45
SSW	0	0	0	0	1	0	0	1
	.	0.00	0.00	0.00	3.23	.	.	3.23
SW	0	0	1	0	0	0	0	1
	.	0.00	3.23	0.00	0.00	.	.	3.23
WSW	0	0	2	1	0	0	0	3
	.	0.00	6.45	3.23	0.00	.	.	9.68
W	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
WNW	0	1	1	0	0	0	0	2
	.	3.23	3.23	0.00	0.00	.	.	6.45
NW	0	0	2	1	0	0	0	3
	.	0.00	6.45	3.23	0.00	.	.	9.68
NNW	0	0	1	3	0	0	0	4
	.	0.00	3.23	9.68	0.00	.	.	12.90
TOTAL	1	14	11	1	0	0	0	31
	3.23	58.06	35.48	3.23	0	0	0	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33M POINT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED

TABLE OF WDC2 BY WSC2

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-31	32-38	TOTAL
N	4	7	46	90	154	41	24	7	373
	0.10	0.18	1.15	2.26	3.86	1.03	0.60	0.18	9.36
NNE	0	10	20	67	81	33	16	0	227
	0.00	0.25	0.50	1.68	2.03	0.83	0.40	0.00	5.70
NE	1	4	20	84	35	13	4	0	166
	0.03	0.10	0.50	2.11	0.90	0.33	0.20	0.00	4.17
ENE	0	5	16	65	35	10	3	0	180
	0.00	0.13	0.90	1.63	0.88	0.40	0.08	0.00	4.02
E	0	11	26	55	22	12	0	0	126
	0.00	0.28	0.65	1.38	0.55	0.30	0.00	0.00	3.16
ESE	0	16	36	44	47	22	0	0	169
	0.00	0.45	0.95	1.10	1.18	0.55	0.00	0.00	4.24
SE	0	17	30	93	79	27	3	0	246
	0.00	0.43	0.75	2.33	1.91	0.68	0.08	0.00	6.17
SSE	0	13	21	89	77	24	5	0	229
	0.00	0.33	0.53	2.23	1.93	0.60	0.13	0.00	5.75
S	1	5	30	101	150	78	30	1	396
	0.03	0.15	0.75	2.53	3.76	1.96	0.75	0.03	9.94
SSW	0	10	36	78	99	101	64	20	408
	0.00	0.25	0.90	1.96	2.48	2.53	1.61	0.50	10.24
SW	2	9	34	75	55	36	27	8	251
	0.05	0.23	0.88	1.88	1.38	0.90	0.68	0.20	6.30
WSW	0	11	42	47	43	19	9	0	171
	0.00	0.28	1.05	1.18	1.08	0.48	0.23	0.00	4.29
W	4	14	38	60	37	19	5	0	177
	0.10	0.35	0.95	1.51	0.93	0.35	0.15	0.00	4.44
WNW	2	21	40	53	55	30	2	0	203
	0.05	0.53	1.00	1.33	1.38	0.75	0.05	0.00	5.09
NW	3	11	36	50	87	93	4	0	285
	0.08	0.28	0.90	1.25	2.18	2.33	0.10	0.00	7.18
NNW	1	17	40	89	94	101	51	4	397
	0.03	0.43	1.00	2.23	2.36	2.53	1.28	0.10	9.96
TOTAL	17	188	560	1140	1148	660	252	40	3985
	0.43	4.72	13.55	28.61	28.81	16.56	6.32	1.00	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
316 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY UNSTAB

WDC2 WSC2

FREQUENCY / PERCENT / COLM	1-3	4-7	8-12	13-18	19-25	26-32	33-39	TOTAL
N	2	20	27	44	16	7	5	121
	0.33	3.31	4.47	7.28	2.65	1.16	0.83	20.03
NNE	3	3	12	21	5	0	0	47
	0.49	0.50	1.99	3.48	0.83	0.00	0.00	7.78
NE	2	0	15	4	0	0	0	21
	0.33	0.00	2.48	0.66	0.00	0.00	0.00	3.48
ENE	0	4	14	1	0	0	0	19
	0.00	0.66	2.32	0.17	0.00	0.00	0.00	3.15
E	1	6	10	2	0	0	0	19
	0.17	0.99	1.66	0.33	0.00	0.00	0.00	3.15
ESE	3	6	0	0	0	0	0	9
	0.50	0.99	0.00	0.00	0.00	0.00	0.00	1.49
SE	1	2	1	2	0	0	0	6
	0.17	0.33	0.17	0.33	0.00	0.00	0.00	0.99
SSE	2	1	4	2	2	2	0	13
	0.33	0.17	0.66	0.33	0.33	0.33	0.00	2.15
S	0	3	4	9	6	10	0	33
	0.00	0.50	1.32	1.49	0.99	1.66	0.00	5.46
SSW	3	4	4	5	9	13	8	46
	0.50	0.66	0.66	0.83	1.49	2.15	1.32	7.62
SW	1	2	1	0	1	5	2	12
	0.17	0.33	0.17	0.00	0.17	0.83	0.33	1.99
WSW	1	1	1	2	1	5	0	12
	0.17	0.17	0.17	0.33	0.17	0.99	0.00	1.99
W	0	2	5	4	2	3	0	16
	0.00	0.33	0.83	0.66	0.33	0.50	0.00	2.65
WNW	3	5	5	14	5	0	0	32
	0.50	0.83	0.83	2.32	0.83	0.00	0.00	5.30
NW	2	8	12	22	32	1	0	77
	0.33	1.32	1.99	3.64	5.30	0.17	0.00	12.75
NNW	3	12	23	32	23	24	1	118
	0.50	1.99	3.81	5.30	3.81	3.97	0.17	19.54
TOTAL	24	79	142	164	103	71	16	604
	3.97	13.08	23.51	27.15	17.05	11.75	2.65	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
316 FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=MODERATELY UNSTA

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	26-32	33-39	TOTAL
N	0	0	5	8	15	4	2	2	36
	0.00	0.00	1.88	3.01	5.64	1.50	0.75	0.75	13.53
NNE	0	0	0	1	6	4	4	0	15
	0.00	0.00	0.00	0.38	2.26	1.50	1.50	0.00	5.64
NE	0	0	1	5	1	0	0	0	7
	0.00	0.00	0.38	1.88	0.38	0.00	0.00	0.00	2.63
ENE	0	1	4	5	1	0	0	0	11
	0.00	0.38	1.50	1.88	0.38	0.00	0.00	0.00	4.14
E	0	1	1	2	3	0	0	0	7
	0.00	0.38	0.38	0.75	1.13	0.00	0.00	0.00	2.63
ESE	0	3	2	0	2	0	0	0	7
	0.00	1.13	0.75	0.00	0.75	0.00	0.00	0.00	2.63
SE	0	1	4	4	5	1	0	0	15
	0.00	0.38	1.50	1.50	1.88	0.38	0.00	0.00	5.64
SSE	0	2	1	3	3	0	0	0	9
	0.00	0.75	0.38	1.13	1.13	0.00	0.00	0.00	3.38
S	0	0	3	9	7	5	3	1	28
	0.00	0.00	1.13	3.38	2.63	1.88	1.13	0.38	10.53
SSW	0	0	2	7	5	3	6	3	26
	0.00	0.00	0.75	2.63	1.88	1.13	2.26	1.13	9.77
SW	0	2	1	6	7	6	2	1	25
	0.00	0.75	0.38	2.26	2.63	2.26	0.75	0.38	9.40
WSW	0	1	2	4	1	3	1	0	11
	0.00	0.38	0.75	1.13	0.38	1.13	0.38	0.00	4.14
W	0	0	3	10	2	1	0	0	16
	0.00	0.00	1.13	3.76	0.75	0.38	0.00	0.00	6.02
WNW	0	3	3	5	3	2	0	0	16
	0.00	1.13	1.13	1.88	1.13	0.75	0.00	0.00	6.02
NW	1	0	2	2	6	2	0	0	13
	0.38	0.00	0.75	0.75	2.26	0.75	0.00	0.00	4.89
NNW	1	2	3	6	4	5	3	0	24
	0.38	0.75	1.13	2.26	1.50	1.88	1.13	0.00	9.02
TOTAL	2	16	37	74	71	36	21	7	266
	0.75	6.02	13.91	27.82	26.69	13.53	7.89	2.63	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33m FOOT *IND SPEED VS. *IND DIRECTION ANALYSIS
JANUARY - JUNE 1981
*IND DIRECTION BY *IND SPEED BY STABILITY

TABLE OF *DC2 BY *SC2
CONTROLLING FOR DTC=SLIGHTLY UNSTABL

*DC2 *SC2

FREQUENCY / PERCENT / COL %	1-3	4-7	8-12	13-18	19-25	26-32	33-39	TOTAL
N	2	1	10	24	9	10	0	56
	0.57	0.29	2.87	6.88	2.58	2.87	0.00	16.05
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NNE	1	1	5	11	6	3	0	28
	0.29	0.29	1.72	3.15	1.72	0.86	0.00	8.02
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NE	0	0	5	1	0	0	0	6
	0.00	0.00	1.43	0.29	0.00	0.00	0.00	1.72
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ENE	2	0	3	0	1	0	0	6
	0.57	1.00	0.86	0.00	0.29	0.00	0.00	1.72
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
E	1	3	5	3	1	0	0	14
	0.29	0.86	1.72	0.86	0.29	0.00	0.00	4.01
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ESE	8	8	7	5	0	0	0	28
	0.86	2.29	2.01	1.43	0.00	0.00	0.00	8.59
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SE	4	5	9	6	2	0	0	26
	1.15	1.43	2.58	1.72	0.57	0.00	0.00	7.45
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SSE	3	3	7	4	2	0	0	19
	0.86	0.86	2.01	1.15	0.57	0.00	0.00	5.44
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
S	2	4	5	7	3	3	0	25
	0.57	1.15	1.72	2.01	0.86	0.86	0.00	7.16
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SSW	0	2	4	4	7	7	2	30
	0.00	0.57	2.29	1.15	2.01	2.01	0.57	8.60
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SW	1	5	15	7	4	4	1	39
	0.29	1.72	4.58	2.01	1.15	1.15	0.29	11.17
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
WSW	0	3	5	2	0	0	0	10
	0.00	0.86	1.43	0.57	0.00	0.00	0.00	2.87
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
W	3	2	4	4	0	3	0	16
	0.86	0.57	1.15	1.15	0.00	0.86	0.00	4.58
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
WNW	1	3	3	3	0	0	0	10
	0.29	0.86	0.86	0.86	0.00	0.00	0.00	2.87
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NW	0	2	2	4	4	1	0	13
	0.00	0.57	0.57	1.15	1.15	0.29	0.00	3.72
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
NNW	1	3	4	3	10	5	2	28
	0.29	0.86	1.15	0.86	2.87	1.43	0.57	8.02
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL	24	46	101	88	49	36	5	349
	6.88	13.18	28.94	25.21	14.04	10.32	1.43	100.00

ECOLOGICAL ANALYSTS, INC.
CONNER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
31M FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=NEUTRAL

WDC2 WSC2

FREQUENCY
PERCENT | CALM | 1-3 | 4-8 | 8-13 | 13-17 | 18-25 | 25-32 | 32-39 | TOTAL

N	0	1	3	20	48	11	5	0	88
	0.00	0.07	0.22	1.49	3.58	0.82	0.37	0.00	6.57
NNE	0	2	7	22	25	17	9	0	82
	0.00	0.15	0.52	1.64	1.87	1.27	0.67	0.00	6.12
NE	0	1	6	35	20	9	6	0	83
	0.00	0.07	0.45	2.61	1.94	0.67	0.45	0.00	6.20
ENE	0	1	13	24	32	15	2	0	91
	0.00	0.07	0.97	2.09	2.39	1.12	0.15	0.00	6.80
E	0	4	8	23	12	11	0	0	58
	0.00	0.30	0.60	1.72	0.90	0.82	0.00	0.00	4.33
ESE	0	3	10	14	30	18	0	0	75
	0.00	0.22	0.75	1.05	2.24	1.34	0.00	0.00	5.60
SE	0	4	15	48	34	17	2	0	120
	0.00	0.30	1.12	3.58	2.54	1.27	0.15	0.00	8.96
SSE	0	3	7	38	31	10	1	0	90
	0.00	0.22	0.52	2.84	2.32	0.75	0.07	0.00	6.72
S	0	1	6	19	59	39	13	0	137
	0.00	0.07	0.45	1.42	4.41	2.91	0.97	0.00	10.23
SSW	0	3	13	13	25	38	33	5	130
	0.00	0.22	0.97	0.97	1.87	2.84	2.46	0.37	9.71
SW	1	1	8	12	11	7	12	3	55
	0.07	0.07	0.60	0.90	0.82	0.52	0.90	0.22	4.11
WSW	0	4	7	7	7	3	2	0	30
	0.00	0.30	0.52	0.52	0.52	0.22	0.15	0.00	2.24
W	1	3	8	11	3	4	0	0	35
	0.07	0.60	0.60	0.82	0.22	0.30	0.00	0.00	2.61
WNW	0	3	7	11	10	4	2	0	37
	0.00	0.22	0.52	0.82	0.75	0.30	0.15	0.00	2.76
NW	0	3	9	15	29	36	1	0	93
	0.00	0.22	0.67	1.12	2.17	2.69	0.07	0.00	6.95
NNW	3	5	9	23	31	52	13	1	135
	0.00	0.37	0.90	1.72	2.32	3.88	1.42	0.07	10.08
TOTAL	5	47	131	339	413	291	107	9	1339
	0.15	3.51	9.73	25.32	30.84	21.73	7.99	0.67	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33M FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	32-39	TOTAL
N	0	0	5	15	20	1	0	0	42
	.	0.00	0.67	1.67	2.22	0.11	0.00	0.00	4.67
NNE	0	1	3	14	15	0	0	0	33
	.	0.11	0.33	1.56	1.67	0.00	0.00	0.00	3.67
NE	0	0	5	21	9	4	2	0	37
	.	0.00	0.67	2.34	1.00	0.44	0.22	0.00	4.12
ENE	0	1	5	13	1	0	1	0	22
	.	0.11	0.67	1.45	0.11	0.00	0.11	0.00	2.45
E	0	1	5	12	2	0	0	0	20
	.	0.11	0.56	1.33	0.22	0.00	0.00	0.00	2.22
ESE	0	2	7	20	10	4	0	0	43
	.	0.22	0.78	2.22	1.11	0.44	0.00	0.00	4.78
SE	0	2	3	24	22	4	1	0	56
	.	0.22	0.33	2.67	2.45	0.44	0.11	0.00	6.23
SSE	0	2	3	20	25	6	1	0	57
	.	0.22	0.33	2.22	2.78	0.67	0.11	0.00	6.34
S	0	2	11	35	55	24	1	0	128
	.	0.22	1.22	3.89	6.12	2.67	0.11	0.00	14.24
SSW	0	2	11	32	41	39	5	2	132
	.	0.22	1.22	3.56	4.56	4.34	0.56	0.22	14.68
SW	0	2	7	24	22	12	4	0	71
	.	0.22	0.78	2.67	2.45	1.33	0.44	0.00	7.90
WSW	0	3	14	8	16	11	0	0	52
	.	0.33	1.56	0.89	1.78	1.22	0.00	0.00	5.78
W	0	3	5	12	14	6	0	0	41
	.	0.33	0.67	1.33	1.56	0.67	0.00	0.00	4.56
WNW	0	5	9	10	14	14	0	0	53
	.	0.67	1.00	1.11	1.56	1.56	0.00	0.00	5.90
NW	0	1	7	10	20	13	1	0	52
	.	0.11	0.78	1.11	2.22	1.45	0.11	0.00	5.78
NNW	0	2	5	20	21	11	0	0	60
	.	0.22	0.67	2.22	2.34	1.22	0.00	0.00	6.67
TOTAL	.	30	110	290	302	144	16	2	444
	.	3.34	12.24	32.24	33.59	16.57	1.78	0.22	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
HOURLY WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=MODERATELY STABL

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-3	4-8	8-12	13-18	19-25	25-32	32-39	TOTAL
N	1	0	6	8	1	0	0	0	16
	0.28	0.00	1.66	2.22	0.28	0.00	0.00	0.00	4.43
NNE	0	0	4	5	2	0	0	0	11
	0.00	0.00	1.11	1.39	0.55	0.00	0.00	0.00	3.05
NE	1	0	1	2	0	0	0	0	4
	0.28	0.00	0.28	0.55	0.00	0.00	0.00	0.00	1.11
ENE	0	0	6	2	0	0	0	0	8
	0.00	0.00	1.66	0.55	0.00	0.00	0.00	0.00	2.22
E	0	2	2	2	0	0	0	0	6
	0.00	0.55	0.55	0.55	0.00	0.00	0.00	0.00	1.66
ESE	0	1	3	3	0	0	0	0	7
	0.00	0.28	0.83	0.83	0.00	0.00	0.00	0.00	1.94
SE	0	3	0	6	7	3	0	0	19
	0.00	0.83	0.00	1.66	1.94	0.83	0.00	0.00	5.26
SSE	0	1	3	13	12	4	1	0	34
	0.00	0.28	0.83	3.60	3.32	1.11	0.28	0.00	9.42
S	0	1	2	22	13	1	0	0	39
	0.00	0.28	0.55	6.09	3.60	0.28	0.00	0.00	10.80
SSW	0	1	1	13	16	5	0	0	36
	0.00	0.28	0.28	3.60	4.43	1.39	0.00	0.00	9.97
SW	0	1	11	14	8	5	0	1	40
	0.00	0.28	3.05	3.88	2.22	1.39	0.00	0.28	11.08
WSW	0	2	10	17	2	1	0	0	32
	0.00	0.55	2.77	3.60	1.66	0.28	0.00	0.00	8.86
W	0	1	9	11	8	1	0	0	30
	0.00	0.28	2.49	3.05	2.22	0.28	0.00	0.00	8.31
WNW	0	4	8	13	8	5	0	0	38
	0.00	1.11	2.22	3.60	2.22	1.39	0.00	0.00	10.53
NW	0	4	3	4	6	6	0	0	23
	0.00	1.11	0.83	1.11	1.66	1.66	0.00	0.00	6.37
NNW	0	2	5	2	3	0	0	0	12
	0.00	0.55	1.39	2.22	0.83	0.00	0.00	0.00	4.99
TOTAL	2	23	74	139	90	31	1	1	361
	0.56	6.37	20.50	38.50	24.93	8.59	0.28	0.28	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33m FOOT WIND SPEED VS. WIND DIRECTION ANALYSIS
JANUARY - JUNE 1981
WIND DIRECTION BY WIND SPEED BY STABILITY

TABLE OF WDC2 BY WSC2
CONTROLLING FOR DTC=EXTREMELY STABLE

WDC2 WSC2

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	32-39	TOTAL
N	3	2	5	2	2	0	0	0	14
	1.80	1.20	2.99	1.20	1.20	0.00	.	.	8.38
NNE	0	1	2	7	1	0	0	0	11
	0.00	0.60	1.20	4.19	0.60	0.00	.	.	6.59
NE	0	1	5	1	0	0	0	0	8
	0.00	0.60	2.99	0.60	0.00	0.00	.	.	4.79
ENE	0	0	3	0	0	0	0	0	3
	0.00	1.00	1.80	0.00	0.00	0.00	.	.	1.80
E	0	1	1	0	0	0	0	0	2
	0.00	0.60	0.60	0.00	0.00	0.00	.	.	1.20
ESE	0	3	2	0	0	0	0	0	5
	0.00	1.80	1.20	0.00	0.00	0.00	.	.	2.99
SE	0	2	1	1	0	0	0	0	4
	0.00	1.20	0.60	0.60	0.00	0.00	.	.	2.40
SSE	0	0	3	4	0	0	0	0	7
	0.00	0.00	1.80	2.40	0.00	0.00	.	.	4.19
S	1	0	1	2	0	0	0	0	3
	0.00	0.00	0.60	1.20	0.00	0.00	.	.	1.80
SSW	0	1	3	1	3	0	0	0	8
	0.00	0.60	1.80	0.60	1.80	0.00	.	.	4.79
SW	1	1	4	2	0	1	0	0	9
	0.60	0.60	2.40	1.20	0.00	0.60	.	.	5.39
WSW	3	0	5	10	9	0	0	0	24
	1.80	0.00	2.99	5.99	5.39	0.00	.	.	14.37
W	3	3	4	7	2	0	0	0	23
	1.80	1.80	2.79	4.19	1.20	0.00	.	.	13.77
WNW	2	1	5	6	3	0	0	0	17
	1.20	0.60	2.99	3.59	1.80	0.00	.	.	10.18
NW	2	1	7	5	0	0	0	0	15
	1.20	0.60	4.19	2.99	0.00	0.00	.	.	8.98
NNW	3	2	7	5	0	0	0	0	14
	0.00	1.20	4.19	2.99	0.00	0.00	.	.	8.38
TOTAL	11	19	63	53	20	1	.	.	167
	6.59	11.38	37.72	31.74	11.98	0.60	.	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT #INDSPEED VERSUS #IND DIRECTION
JANUARY - MARCH 1981
#IND DIRECTION BY #IND SPEED

TABLE OF #DC1 BY #SC1

#DC1 #SC1

FREQUENCY| PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	TOTAL
N	0	39	56	69	40	5	9	218
	0.00	1.91	2.74	3.37	1.96	0.24	0.44	10.65
NNE	1	29	27	39	14	5	0	116
	0.05	1.42	1.32	1.91	0.68	0.29	0.00	5.67
NE	0	13	23	32	5	0	0	73
	0.00	0.64	1.12	1.56	0.24	0.00	0.00	3.57
ENE	3	17	12	21	4	0	0	57
	0.15	0.83	0.59	1.03	0.20	0.00	0.00	2.79
E	0	14	18	6	1	0	0	39
	0.00	0.68	0.88	0.29	0.05	0.00	0.00	1.91
ESE	3	25	15	31	6	0	0	80
	0.15	1.22	0.73	1.52	0.29	0.00	0.00	3.91
SE	3	32	37	44	7	1	0	124
	0.15	1.56	1.81	2.15	0.34	0.05	0.00	6.06
SSE	1	64	34	43	15	8	0	165
	0.05	3.13	1.66	2.10	0.73	0.39	0.00	8.06
S	2	53	50	54	38	10	0	207
	0.10	2.59	2.44	2.64	1.86	0.49	0.00	10.12
SSW	0	34	56	39	34	6	1	170
	0.00	1.66	2.74	1.91	1.66	0.29	0.05	8.31
SW	0	12	25	49	15	2	0	103
	0.00	0.59	1.22	2.39	0.73	0.10	0.00	5.03
WSW	0	19	23	39	6	0	5	92
	0.00	0.93	1.12	1.91	0.29	0.00	0.24	4.50
W	0	3	31	38	17	5	3	97
	0.00	0.15	1.52	1.86	0.83	0.24	0.15	4.74
WNW	0	12	29	38	10	2	0	91
	0.00	0.59	1.42	1.86	0.49	0.10	0.00	4.45
NW	0	7	36	61	54	8	0	166
	0.00	0.34	1.76	2.98	2.64	0.39	0.00	8.11
NNW	0	19	46	60	71	49	3	248
	0.00	0.93	2.25	2.93	3.47	2.39	0.15	12.12
TOTAL	13	392	518	663	337	102	21	2046
	0.64	19.16	25.32	32.40	16.47	4.99	1.03	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT #INDSPEED VERSUS #IND DIRECTION
JANUARY - MARCH 1981
STABILITY BY #IND DIRECTION BY #IND SPEED

TABLE OF #DC1 BY #SC1
CONTROLLING FOR UTC=EXTREMELY UNSTAB

#DC1 #SC1

FREQUENCY / PERCENT	CALM	1-3	4-8	8-13	13-19	19-25	25-32	TOTAL
N	0	0	12	26	31	0	6	75
	.	0.00	4.58	9.92	11.83	0.00	2.29	28.63
NNE	0	0	5	12	3	0	0	20
	.	0.00	1.91	4.58	1.15	0.00	0.00	7.63
NE	0	0	1	3	0	0	0	4
	.	0.00	0.38	1.15	0.00	0.00	0.00	1.53
ENE	0	0	1	1	0	0	0	2
	.	0.00	0.38	0.38	0.00	0.00	0.00	0.76
E	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
ESE	0	0	1	1	0	0	0	2
	.	0.00	0.38	0.38	0.00	0.00	0.00	0.76
SE	0	0	1	0	0	0	0	1
	.	0.00	0.38	0.00	0.00	0.00	0.00	0.38
SSE	0	1	0	0	0	4	0	5
	.	0.38	0.00	0.00	0.00	1.53	0.00	1.91
S	0	2	0	2	0	4	0	8
	.	0.76	0.00	0.76	0.00	1.53	0.00	3.05
SSW	0	0	1	3	0	0	0	4
	.	0.00	0.38	1.15	0.00	0.00	0.00	1.53
SW	0	0	1	0	0	0	0	1
	.	0.00	0.38	0.00	0.00	0.00	0.00	0.38
#SW	0	1	0	0	0	0	3	4
	.	0.38	0.00	0.00	0.00	0.00	1.15	1.53
#	0	0	2	1	3	2	1	9
	.	0.00	0.76	0.38	1.15	0.76	0.38	3.44
#NW	0	0	3	5	7	2	0	17
	.	0.00	1.15	1.91	2.67	0.76	0.00	6.49
NW	0	0	7	11	20	6	0	44
	.	0.00	2.67	4.20	7.63	2.29	0.00	16.79
NNW	0	0	3	18	20	24	1	66
	.	0.00	1.15	6.87	7.63	9.16	0.38	25.19
TOTAL	.	4	38	83	84	42	11	262
	.	1.53	14.50	31.68	32.06	16.03	4.20	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT *INDSPEED VERSUS *IND DIRECTION
JANUARY - MARCH 1981
STABILITY BY *IND DIRECTION BY *IND SPEED

TABLE OF *DC1 BY *SC1
CONTROLLING FOR DTC=MODERATELY UNSTA

*DC1 *SC1

FREQUENCY| PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	0	0	3	11	4	2	3	23
	0.00	2.17	7.97	2.90	1.45	2.17	16.67
NNE	0	3	3	0	4	3	0	13
	2.17	2.17	0.00	2.90	2.17	0.00	9.42
NE	0	1	4	5	0	0	0	10
	0.72	2.90	3.62	0.00	0.00	0.00	7.25
ENE	0	1	2	0	0	0	0	3
	0.72	1.45	0.00	0.00	0.00	0.00	2.17
E	0	0	0	2	0	0	0	2
	0.00	0.00	1.45	0.00	0.00	0.00	1.45
ESE	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	0.00
SE	0	0	1	7	2	0	0	10
	0.00	0.72	5.07	1.45	0.00	0.00	7.25
SSE	0	0	2	1	0	1	0	4
	0.00	1.45	0.72	0.00	0.72	0.00	2.90
S	0	1	1	5	3	2	0	12
	0.72	0.72	3.62	2.17	1.45	0.00	8.70
SSW	0	0	2	4	2	0	0	8
	0.00	1.45	2.90	1.45	0.00	0.00	5.80
SW	0	0	2	6	0	0	0	8
	0.00	1.45	4.35	0.00	0.00	0.00	5.80
WSW	0	1	2	3	1	0	0	7
	0.72	1.45	2.17	0.72	0.00	0.00	5.07
W	0	0	0	6	2	1	0	9
	0.00	0.00	4.35	1.45	0.72	0.00	6.52
WNW	0	0	2	3	0	0	0	5
	0.00	1.45	2.17	0.00	0.00	0.00	3.62
NW	0	0	3	0	3	0	0	6
	0.00	2.17	0.00	2.17	0.00	0.00	4.35
NNW	0	0	6	4	5	3	0	18
	0.00	4.35	2.90	3.62	2.17	0.00	13.04
TOTAL		7	33	57	26	12	3	138
		5.07	23.91	41.30	18.84	8.70	2.17	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT WINDSPEED VERSUS WIND DIRECTION
JANUARY - MARCH 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=SLIGHTLY UNSTABL

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	1	8	16	4	2	0	31
	.	0.53	4.26	8.51	2.13	1.06	0.00	16.49
NNE	0	1	1	6	3	1	0	12
	.	0.53	0.53	3.19	1.60	0.53	0.00	6.38
NE	0	0	1	2	0	0	0	3
	.	0.00	0.53	1.06	0.00	0.00	0.00	1.60
ENE	0	0	2	2	2	0	0	6
	.	0.00	1.06	1.06	1.06	0.00	0.00	3.19
E	0	0	6	0	1	0	0	7
	.	0.00	3.19	0.00	0.53	0.00	0.00	3.72
ESE	0	0	5	3	0	0	0	8
	.	0.00	2.66	1.60	0.00	0.00	0.00	4.26
SE	0	0	3	5	1	1	0	10
	.	0.00	1.60	2.66	0.53	0.53	0.00	5.32
SSE	0	3	2	2	1	1	0	9
	.	1.60	1.06	1.06	0.53	0.53	0.00	4.79
S	0	0	2	2	3	3	0	10
	.	0.00	1.06	1.06	1.60	1.60	0.00	5.32
SSW	0	0	5	5	5	1	0	16
	.	0.00	2.66	2.66	2.66	0.53	0.00	8.51
SW	0	0	3	10	5	0	0	18
	.	0.00	1.60	5.32	2.66	0.00	0.00	9.57
WSW	0	1	1	6	1	0	1	10
	.	0.53	0.53	3.19	0.53	0.00	0.53	5.32
W	0	0	4	1	5	0	2	12
	.	0.00	2.13	0.53	2.66	0.00	1.06	6.38
WNW	0	0	2	5	2	0	0	9
	.	0.00	1.06	2.66	1.06	0.00	0.00	4.79
NW	0	0	0	3	1	0	0	4
	.	0.00	0.00	1.60	0.53	0.00	0.00	2.13
NNW	0	0	2	3	7	9	2	23
	.	0.00	1.06	1.60	3.72	4.79	1.06	12.23
TOTAL		6	47	71	41	18	5	188
		3.19	25.00	37.77	21.81	9.57	2.66	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT #INDSPEED VERSUS #IND DIRECTION
JANUARY - MARCH 1981
STABILITY BY #IND DIRECTION BY #IND SPEED

TABLE OF #DC1 BY #SC1
CONTROLLING FOR DTC=NEUTRAL

#DC1 #SC1

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	TOTAL
N	0	6	24	15	1	1	0	47
	0.00	0.90	3.62	2.26	0.15	0.15	0.00	7.09
NNE	0	5	9	21	4	2	0	41
	0.00	0.75	1.36	3.17	0.60	0.30	0.00	6.18
NE	0	4	12	22	5	0	0	43
	0.00	0.60	1.81	3.32	0.75	0.00	0.00	6.49
ENE	0	4	5	18	2	0	0	29
	0.00	0.60	0.75	2.71	0.30	0.00	0.00	4.37
E	0	4	11	4	0	0	0	19
	0.00	0.60	1.66	0.60	0.00	0.00	0.00	2.87
ESE	0	4	7	25	6	0	0	42
	0.00	0.60	1.06	3.77	0.90	0.00	0.00	6.33
SE	0	2	13	17	4	0	0	36
	0.00	0.30	1.96	2.56	0.60	0.00	0.00	5.43
SSE	0	4	8	31	9	2	0	54
	0.00	0.60	1.21	4.68	1.36	0.30	0.00	8.14
S	0	1	6	17	23	1	0	48
	0.00	0.15	0.90	2.56	3.47	0.15	0.00	7.24
SSW	0	5	8	13	17	5	1	49
	0.00	0.75	1.21	1.96	2.56	0.75	0.15	7.39
SW	0	0	3	11	3	2	0	19
	0.00	0.00	0.45	1.66	0.45	0.30	0.00	2.87
#SW	0	2	7	7	3	0	1	20
	0.00	0.30	1.06	1.06	0.45	0.00	0.15	3.02
W	0	0	10	10	5	2	0	27
	0.00	0.00	1.51	1.51	0.75	0.30	0.00	4.07
#NW	0	1	9	4	1	0	0	15
	0.00	0.15	1.36	0.60	0.15	0.00	0.00	2.26
NW	0	2	13	28	30	2	0	75
	0.00	0.30	1.96	4.22	4.52	0.30	0.00	11.31
NNW	0	1	21	26	38	13	0	99
	0.00	0.15	3.17	3.92	5.73	1.96	0.00	14.93
TOTAL		45	166	269	151	30	2	663
		6.79	25.04	40.57	22.78	4.52	0.30	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT WINDSPEED VERSUS WIND DIRECTION
JANUARY - MARCH 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	0	17	8	1	0	0	0	26
	0.00	3.94	1.86	0.23	0.00	.	.	6.03
NNE	0	9	8	0	0	0	0	17
	0.00	2.09	1.86	0.00	0.00	.	.	3.94
NE	0	4	5	0	0	0	0	9
	0.00	0.93	1.16	0.00	0.00	.	.	2.09
ENE	1	4	1	0	0	0	0	6
	0.23	0.93	0.23	0.00	0.00	.	.	1.39
E	0	2	0	0	0	0	0	2
	0.00	0.46	0.00	0.00	0.00	.	.	0.46
ESE	0	6	2	2	0	0	0	10
	0.00	1.39	0.46	0.46	0.00	.	.	2.32
SE	0	6	10	8	0	0	0	24
	0.00	1.39	2.32	1.86	0.00	.	.	5.57
SSE	0	10	19	9	5	0	0	43
	0.00	2.32	4.41	2.09	1.16	.	.	9.98
S	0	16	31	27	9	0	0	83
	0.00	3.71	7.19	6.26	2.09	.	.	19.26
SSW	0	3	22	11	10	0	0	46
	0.00	0.70	5.10	2.55	2.32	.	.	10.67
SW	0	1	7	16	7	0	0	31
	0.00	0.23	1.62	3.71	1.62	.	.	7.19
WSW	0	3	8	10	1	0	0	22
	0.00	0.70	1.86	2.32	0.23	.	.	5.10
W	0	0	9	9	1	0	0	19
	0.00	0.00	2.09	2.09	0.23	.	.	4.41
WNW	0	4	8	13	0	0	0	25
	0.00	0.93	1.86	3.02	0.00	.	.	5.80
NW	0	4	12	19	0	0	0	35
	0.00	0.93	2.78	4.41	0.00	.	.	8.12
NNW	0	9	14	9	1	0	0	33
	0.00	2.09	3.25	2.09	0.23	.	.	7.66
TOTAL	1	98	164	134	34	.	.	431
	0.23	22.74	38.05	31.09	7.89	.	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT #INDSPEED VERSUS #IND DIRECTION
JANUARY - MARCH 1981
STABILITY BY #IND DIRECTION BY #IND SPEED

TABLE OF #DC1 BY #SC1
CONTROLLING FOR DTC=MODERATELY STABL

#DC1 #SC1

FREQUENCY / PERCENT	CALM	1-4	4-8	8-13	13-19	19-25	25-32	TOTAL
N	0	11	1	0	0	0	0	12
	0.00	4.82	0.44	0.00	0.00	.	.	5.26
NNE	1	7	1	0	0	0	0	9
	0.44	3.07	0.44	0.00	0.00	.	.	3.95
NE	0	3	0	0	0	0	0	3
	0.00	1.32	0.00	0.00	0.00	.	.	1.32
ENE	0	4	1	0	0	0	0	5
	0.00	1.75	0.44	0.00	0.00	.	.	2.19
E	0	3	1	0	0	0	0	4
	0.00	1.32	0.44	0.00	0.00	.	.	1.75
ESE	1	7	0	0	0	0	0	8
	0.44	3.07	0.00	0.00	0.00	.	.	3.51
SE	0	11	8	7	0	0	0	26
	0.00	4.82	3.51	3.07	0.00	.	.	11.40
SSE	0	19	3	0	0	0	0	22
	0.00	8.33	1.32	0.00	0.00	.	.	9.65
S	0	19	10	1	0	0	0	30
	0.00	8.33	4.39	0.44	0.00	.	.	13.16
SSW	0	16	12	3	0	0	0	31
	0.00	7.02	5.26	1.32	0.00	.	.	13.60
SW	0	5	6	5	0	0	0	16
	0.00	2.19	2.63	2.19	0.00	.	.	7.02
WSW	0	6	4	8	0	0	0	18
	0.00	2.63	1.75	3.51	0.00	.	.	7.89
W	0	2	6	8	1	0	0	17
	0.00	0.88	2.63	3.51	0.44	.	.	7.46
WNW	0	4	4	8	0	0	0	16
	0.00	1.75	1.75	3.51	0.00	.	.	7.02
NW	0	1	1	0	0	0	0	2
	0.00	0.44	0.44	0.00	0.00	.	.	0.88
NNW	0	9	0	0	0	0	0	9
	0.00	3.95	0.00	0.00	0.00	.	.	3.95
TOTAL	2	127	58	40	1	.	.	228
	0.88	55.70	25.44	17.54	0.44	.	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT *WINDSPEED VERSUS *WIND DIRECTION
JANUARY - MARCH 1981
STABILITY BY *WIND DIRECTION BY *WIND SPEED

TABLE OF *DC1 BY *SC1
CONTROLLING FOR DTC=EXTREMELY STABLE

*DC1 *SC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	4	0	0	0	0	0	4
	0.00	2.94	0.00	0.00	.	.	.	2.94
NNE	0	4	0	0	0	0	0	4
	0.00	2.94	0.00	0.00	.	.	.	2.94
NE	0	1	0	0	0	0	0	1
	0.00	0.74	0.00	0.00	.	.	.	0.74
ENE	2	4	0	0	0	0	0	6
	1.47	2.94	0.00	0.00	.	.	.	4.41
E	0	5	0	0	0	0	0	5
	0.00	3.68	0.00	0.00	.	.	.	3.68
ESE	2	8	0	0	0	0	0	10
	1.47	5.88	0.00	0.00	.	.	.	7.35
SE	3	13	1	0	0	0	0	17
	2.21	9.56	0.74	0.00	.	.	.	12.50
SSE	1	27	0	0	0	0	0	28
	0.74	19.85	0.00	0.00	.	.	.	20.59
S	2	14	0	0	0	0	0	16
	1.47	10.29	0.00	0.00	.	.	.	11.76
SSW	0	10	6	0	0	0	0	16
	0.00	7.35	4.41	0.00	.	.	.	11.76
SW	0	6	3	1	0	0	0	10
	0.00	4.41	2.21	0.74	.	.	.	7.35
*SW	0	5	1	5	0	0	0	11
	0.00	3.68	0.74	3.68	.	.	.	8.09
W	0	1	0	3	0	0	0	4
	0.00	0.74	0.00	2.21	.	.	.	2.94
*NW	0	3	1	0	0	0	0	4
	0.00	2.21	0.74	0.00	.	.	.	2.94
NW	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
NNW	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
TOTAL	10	105	12	9	.	.	.	136
	7.35	77.21	8.82	6.62	.	.	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
WIND DIRECTION BY WIND SPEED

TABLE OF #DC1 BY #SC1

#DC1 #SC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	1	33	52	73	17	5	0	181
	0.05	1.70	2.68	3.76	0.88	0.26	0.00	9.33
NNE	0	45	71	58	36	4	0	214
	0.00	2.32	3.66	2.99	1.86	0.21	0.00	11.04
NE	1	39	50	29	5	0	0	125
	0.05	2.01	2.58	1.50	0.31	0.00	0.00	6.45
ENE	2	22	34	29	5	0	0	93
	0.10	1.13	1.75	1.50	0.31	0.00	0.00	4.80
E	0	23	28	13	1	0	0	65
	0.00	1.19	1.44	0.67	0.05	0.00	0.00	3.35
ESE	1	20	39	17	4	0	0	81
	0.05	1.03	2.01	0.88	0.21	0.00	0.00	4.18
SE	2	25	53	55	19	0	0	154
	0.10	1.29	2.73	2.84	0.98	0.00	0.00	7.94
SSE	1	45	44	56	14	5	0	165
	0.05	2.32	2.27	2.89	0.72	1.29	0.00	8.51
S	0	34	54	98	68	36	3	293
	0.00	2.01	2.78	5.05	3.51	1.86	0.15	15.37
SSW	0	15	36	33	46	35	24	189
	0.00	0.77	1.86	1.70	2.37	1.81	1.24	9.75
SW	0	5	14	18	21	18	6	82
	0.00	0.26	0.72	0.93	1.08	0.93	0.31	4.23
WSW	0	3	13	9	7	5	1	38
	0.00	0.15	0.67	0.46	0.36	0.26	0.05	1.96
W	0	2	10	17	8	0	0	37
	0.00	0.10	0.52	0.88	0.41	0.00	0.00	1.91
WNW	0	4	10	24	11	0	0	49
	0.00	0.21	0.52	1.24	0.57	0.00	0.00	2.53
NW	0	3	18	20	26	1	0	68
	0.00	0.15	0.93	1.03	1.34	0.05	0.00	3.50
NNW	0	15	23	35	25	4	0	102
	0.00	0.77	1.19	1.81	1.29	0.21	0.00	5.26
TOTAL	8	338	547	584	315	113	34	1939
	0.41	17.43	28.21	30.12	16.25	5.83	1.75	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT *WINDSPEED VERSUS *WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY *WIND SPEED

TABLE OF *DC1 BY *SC1
CONTROLLING FOR DTC=EXTREMELY UNSTAB

*DC1 *SC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	3	11	31	5	0	0	50
	0.00	0.88	3.22	9.09	1.46	0.00	0.00	14.62
NNE	0	1	6	17	13	0	0	37
	0.00	0.29	1.75	4.97	3.80	0.00	0.00	10.82
NE	0	5	12	9	0	0	0	26
	0.00	1.46	3.51	2.63	0.00	0.00	0.00	7.60
ENE	1	5	13	5	0	0	0	25
	0.29	1.75	3.80	1.46	0.00	0.00	0.00	7.31
E	0	3	8	2	0	0	0	13
	0.00	0.88	2.34	0.58	0.00	0.00	0.00	3.80
ESE	0	1	3	2	0	0	0	6
	0.00	0.29	0.88	0.58	0.00	0.00	0.00	1.75
SE	0	0	2	2	2	0	0	6
	0.00	0.00	0.58	0.58	0.58	0.00	0.00	1.75
SSE	0	0	3	8	4	0	0	15
	0.00	0.00	0.88	2.34	1.17	0.00	0.00	4.39
S	0	0	1	5	11	15	2	34
	0.00	0.00	0.29	1.46	3.22	4.39	0.58	9.94
SSW	0	0	3	3	4	6	9	27
	0.00	0.00	0.88	0.88	1.17	2.34	2.63	7.89
SW	0	0	2	0	1	7	3	13
	0.00	0.00	0.58	0.00	0.29	2.05	0.88	3.80
WSW	0	0	4	0	3	0	1	8
	0.00	0.00	1.17	0.00	0.88	0.00	0.29	2.34
W	0	0	0	3	2	0	0	5
	0.00	1.00	0.00	0.88	0.58	0.00	0.00	1.46
WNW	0	0	1	4	5	0	0	11
	0.00	0.00	0.29	1.17	1.75	0.00	0.00	3.22
NW	0	1	3	3	17	0	0	24
	0.00	0.29	0.88	0.88	4.97	0.00	0.00	7.02
NNW	0	1	8	15	15	3	0	42
	0.00	0.29	2.34	4.39	4.39	0.88	0.00	12.28
TOTAL	1	21	80	109	93	33	15	342
	0.29	6.14	23.39	31.87	26.27	9.65	4.39	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR SEMIMONTHLY DATA

WDC1 WSC1

FREQUENCY / PERCENT / COL %	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0 / 0 / 0.00	1 / 0.78 / 2.34	3 / 2.34 / 7.03	2 / 1.56 / 4.88	0 / 0.00 / 0.00	0 / 0.00 / 0.00	6 / 4.69
NNE	0 / 0 / 0.00	4 / 3.13 / 9.30	4 / 3.13 / 9.30	3 / 2.34 / 7.32	0 / 0.00 / 0.00	0 / 0.00 / 0.00	11 / 8.59
NE	0 / 0 / 0.00	1 / 0.78 / 2.33	4 / 3.13 / 9.30	1 / 0.78 / 2.44	0 / 0.00 / 0.00	0 / 0.00 / 0.00	6 / 4.69
ENE	0 / 0 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 6.98	3 / 2.34 / 7.32	0 / 0.00 / 0.00	0 / 0.00 / 0.00	7 / 5.47
E	0 / 0 / 0.00	2 / 1.56 / 4.65	1 / 0.78 / 2.33	1 / 0.78 / 2.44	0 / 0.00 / 0.00	0 / 0.00 / 0.00	4 / 3.13
ESE	0 / 0 / 0.00	0 / 0.00 / 0.00	3 / 2.34 / 6.98	0 / 0.00 / 0.00	0 / 0.00 / 0.00	0 / 0.00 / 0.00	3 / 2.34
SE	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 7.32	1 / 0.78 / 3.13	0 / 0.00 / 0.00	5 / 3.91
SSE	0 / 0 / 0.00	0 / 0.00 / 0.00	0 / 0.00 / 0.00	5 / 3.91 / 12.20	0 / 0.00 / 0.00	0 / 0.00 / 0.00	5 / 3.91
S	0 / 0 / 0.00	0 / 0.00 / 0.00	3 / 2.34 / 6.98	4 / 3.13 / 9.76	9 / 7.03 / 28.13	1 / 0.78 / 3.13	22 / 17.19
SSW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	1 / 0.78 / 2.44	2 / 1.56 / 6.25	5 / 3.91 / 15.63	11 / 8.59
SW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 7.32	7 / 5.47 / 21.88	2 / 1.56 / 6.25	13 / 10.16
WSW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	1 / 0.78 / 2.44	1 / 0.78 / 3.13	0 / 0.00 / 0.00	3 / 2.34
W	0 / 0 / 0.00	0 / 0.00 / 0.00	0 / 0.00 / 0.00	4 / 3.13 / 9.76	1 / 0.78 / 3.13	0 / 0.00 / 0.00	5 / 3.91
WNW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 7.32	2 / 1.56 / 6.25	0 / 0.00 / 0.00	6 / 4.69
NW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 7.32	3 / 2.34 / 9.38	0 / 0.00 / 0.00	7 / 5.47
NNW	0 / 0 / 0.00	0 / 0.00 / 0.00	1 / 0.78 / 2.33	3 / 2.34 / 7.32	1 / 0.78 / 3.13	0 / 0.00 / 0.00	5 / 3.91
TOTAL	0 / 0.00	4 / 3.13	26 / 20.31	42 / 32.81	32 / 25.00	10 / 7.81	4 / 3.13	128 / 100.00

ECOLOGICAL ANALYSTS, INC.
CALVERT NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
BY ROOT MEAN SQUARE WIND SPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR UTC=SLIGHTLY UNSTABL

WDC1 WSC1

FREQUENCY PERCENT | COLUMN	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	0	0	3	13	7	2	0	25
	.	0.00	1.88	8.07	4.35	1.24	0.00	15.53
NNE	0	1	2	6	4	2	0	15
	.	0.62	1.24	3.73	2.48	1.24	0.00	9.32
NE	0	0	3	2	0	0	0	5
	.	0.00	1.88	1.24	0.00	0.00	0.00	3.11
ENE	0	1	0	0	0	0	0	1
	.	0.62	0.00	0.00	0.00	0.00	0.00	0.62
E	0	1	2	4	0	0	0	7
	.	0.62	1.24	2.48	0.00	0.00	0.00	4.35
ESE	0	1	6	9	0	0	0	16
	.	0.62	3.73	5.59	0.00	0.00	0.00	9.94
SE	0	0	2	7	2	0	0	11
	.	0.00	1.24	4.35	1.24	0.00	0.00	6.83
SSE	0	1	4	6	2	0	0	13
	.	0.62	2.48	3.73	1.24	0.00	0.00	8.07
S	0	1	1	3	7	5	0	17
	.	0.62	0.62	1.86	4.35	3.11	0.00	10.56
SSW	0	1	2	3	5	6	1	18
	.	0.62	1.24	1.86	3.11	3.73	0.62	11.18
SW	0	0	0	6	4	3	1	14
	.	0.00	0.00	3.73	2.48	1.86	0.62	8.70
WSW	0	0	0	2	0	0	0	2
	.	0.00	0.00	1.24	0.00	0.00	0.00	1.24
W	0	0	0	1	0	0	0	1
	.	0.00	0.00	0.62	0.00	0.00	0.00	0.62
WNW	0	0	2	1	0	0	0	3
	.	0.00	1.24	0.62	0.00	0.00	0.00	1.86
NW	0	0	2	0	4	0	0	6
	.	0.00	1.24	0.00	2.48	0.00	0.00	3.73
NNW	0	0	3	0	4	0	0	7
	.	0.00	1.86	0.00	2.48	0.00	0.00	4.35
TOTAL	.	7	32	63	39	18	2	161
	.	4.35	19.88	39.13	24.22	11.18	1.24	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
OF FOUR WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=NEUTRAL

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	3	18	24	3	3	0	51
	0.00	0.44	2.66	3.55	0.44	0.44	0.00	7.54
NNW	0	9	33	28	15	2	0	87
	0.00	1.33	4.88	4.14	2.22	0.30	0.00	12.87
NE	0	9	23	15	3	0	0	50
	0.00	1.33	3.40	2.22	0.44	0.00	0.00	7.40
ENE	1	4	15	21	5	0	0	47
	0.15	0.59	2.22	3.11	0.89	0.00	0.00	6.95
E	0	5	10	6	1	0	0	23
	0.00	0.89	1.48	0.89	0.15	0.00	0.00	3.40
ESE	0	0	15	6	4	0	0	25
	0.00	0.00	2.22	0.89	0.59	0.00	0.00	3.70
SE	0	3	22	33	14	0	0	72
	0.00	0.44	3.25	4.88	2.07	0.00	0.00	10.65
SSE	0	4	14	23	8	5	0	54
	0.00	0.59	2.07	3.40	1.18	0.74	0.00	7.99
S	0	2	6	58	37	10	0	113
	0.00	0.30	0.89	8.58	5.47	1.48	0.00	16.72
SSW	0	2	9	7	24	15	9	66
	0.00	0.30	1.33	1.04	3.55	2.22	1.33	9.76
SW	0	1	5	3	4	3	0	16
	0.00	0.15	0.74	0.44	0.59	0.44	0.00	2.37
WSW	0	2	3	2	3	2	0	12
	0.00	0.30	0.44	0.30	0.44	0.30	0.00	1.78
W	0	0	5	4	2	0	0	11
	0.00	0.00	0.74	0.59	0.30	0.00	0.00	1.63
WNW	0	1	1	4	0	0	0	6
	0.00	0.15	0.15	0.59	0.00	0.00	0.00	0.89
NW	0	1	3	9	2	1	0	16
	0.00	0.15	0.44	1.33	0.30	0.15	0.00	2.37
NNW	0	2	3	16	5	1	0	27
	0.00	0.30	0.44	2.37	0.74	0.15	0.00	3.99
TOTAL	1	49	185	259	171	62	9	676
	0.15	7.25	27.37	38.31	19.38	9.21	1.33	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1991
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC1 WSC1

FREQUENCY PERCENT | COLUMN	1-3	4-7	8-12	13-18	19-25	26-32	TOTAL
N	0	17	17	2	0	0	36
	.	3.63	3.63	0.43	0.00	.	7.69
NNE	0	25	25	3	1	0	54
	.	5.34	5.34	0.64	0.21	.	11.54
NE	0	20	8	2	3	0	33
	.	4.27	1.71	0.43	0.64	.	7.05
ENE	0	8	2	0	0	0	10
	.	1.71	0.43	0.00	0.00	.	2.14
E	0	6	6	0	0	0	12
	.	1.28	1.28	0.00	0.00	.	2.56
ESE	0	9	12	0	0	0	21
	.	1.92	2.56	0.00	0.00	.	4.49
SE	0	8	23	9	0	0	40
	.	1.71	4.91	1.92	0.00	.	8.55
SSE	0	15	17	12	0	0	44
	.	3.21	3.63	2.56	0.00	.	9.40
S	0	13	32	28	4	0	77
	.	2.78	6.84	5.98	0.85	.	16.45
SSW	0	9	16	18	11	3	57
	.	1.92	3.42	3.85	2.35	.	12.18
SW	0	2	5	6	5	0	18
	.	0.43	1.07	1.28	1.07	.	3.85
WSW	0	0	3	4	0	0	7
	.	0.00	0.64	0.85	0.00	.	1.50
W	0	2	5	3	3	0	13
	.	0.43	1.07	0.64	0.64	.	2.78
WNW	0	2	3	9	3	0	17
	.	0.43	0.64	1.92	0.64	.	3.63
NW	0	1	5	5	0	0	12
	.	0.21	1.28	1.07	0.00	.	2.56
NNW	0	9	7	1	0	0	17
	.	1.92	1.50	0.21	0.00	.	3.63
TOTAL	.	146	187	102	30	3	468
	.	31.20	39.96	21.79	6.41	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=MODERATELY STABL

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	0	4	2	0	0	0	0	11
	0.00	3.77	1.50	0.00	.	0.00	.	8.27
NNE	0	8	1	0	0	0	0	9
	0.00	6.02	0.75	0.00	.	0.00	.	6.77
NE	0	4	0	0	0	0	0	4
	0.00	3.01	0.00	0.00	.	0.00	.	3.01
ENE	0	2	1	0	0	0	0	3
	0.00	1.50	0.75	0.00	.	0.00	.	2.26
E	0	3	1	0	0	0	0	4
	0.00	2.26	0.75	0.00	.	0.00	.	3.01
ESE	1	7	0	0	0	0	0	8
	0.75	5.26	0.00	0.00	.	0.00	.	6.02
SE	1	7	3	1	0	0	0	12
	0.75	5.26	2.26	0.75	.	0.00	.	9.02
SSE	0	17	6	2	0	0	0	25
	0.00	12.78	4.51	1.50	.	0.00	.	18.80
S	0	20	11	0	0	0	0	31
	0.00	14.04	8.27	0.00	.	0.00	.	23.31
SSW	0	2	5	1	0	1	0	9
	0.00	1.50	3.76	0.75	.	0.75	.	6.77
SW	0	1	1	0	0	0	0	2
	0.00	0.75	0.75	0.00	.	0.00	.	1.50
WSW	0	1	2	0	0	0	0	3
	0.00	0.75	1.50	0.00	.	0.00	.	2.26
W	0	0	0	2	0	0	0	2
	0.00	0.00	0.00	1.50	.	0.00	.	1.50
WNW	0	1	2	3	0	0	0	6
	0.00	0.75	1.50	2.26	.	0.00	.	4.51
NW	0	0	1	0	0	0	0	1
	0.00	0.00	0.75	0.00	.	0.00	.	0.75
NNW	0	2	1	0	0	0	0	3
	0.00	1.50	0.75	0.00	.	0.00	.	2.26
TOTAL	2	84	37	9	.	1	.	133
	1.50	63.16	27.82	6.77	.	0.75	.	100.00

ECOLOGICAL ANALYSIS, P.C.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
APRIL - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=EXTREMELY STABLE

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	1	1	0	0	0	0	0	2
	3.23	3.23	.	.	.	.	.	6.45
NNE	0	1	0	0	0	0	0	1
	0.00	3.23	.	.	.	.	.	3.23
NE	1	0	0	0	0	0	0	1
	3.23	0.00	.	.	.	.	.	3.23
ENE	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
E	0	2	0	0	0	0	0	2
	0.00	6.45	.	.	.	.	.	6.45
ESE	0	2	0	0	0	0	0	2
	0.00	6.45	.	.	.	.	.	6.45
SE	1	7	0	0	0	0	0	8
	3.23	22.58	.	.	.	.	.	25.81
SSE	1	8	0	0	0	0	0	9
	3.23	25.81	.	.	.	.	.	29.03
S	0	3	0	0	0	0	0	3
	0.00	9.68	.	.	.	.	.	9.68
SSW	0	1	0	0	0	0	0	1
	0.00	3.23	.	.	.	.	.	3.23
SW	0	1	0	0	0	0	0	1
	0.00	3.23	.	.	.	.	.	3.23
WSW	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
W	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
WNW	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
NW	0	0	0	0	0	0	0	0
	.	.	.	.	.	.	.	0.00
NNW	0	1	0	0	0	0	0	1
	0.00	3.23	.	.	.	.	.	3.23
TOTAL	4	27	.	.	.	.	.	31
	12.90	87.10	.	.	.	.	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
OF 60UT *WINDSPEED VERSUS *WND DIRECTION
JANUARY - JUNE 1981
*WND DIRECTION BY *WND SPEED

TABLE OF *DC1 BY *SC1

*DC1 *SC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	26-32	TOTAL
N	1	72	108	142	57	10	9	399
	0.03	1.81	2.71	3.56	1.43	0.25	0.23	10.01
NNE	1	74	98	97	50	10	0	330
	0.03	1.86	2.46	2.43	1.25	0.25	0.00	8.28
NE	1	62	73	41	11	0	0	188
	0.03	1.56	1.83	1.03	0.28	0.00	0.00	4.72
ENE	5	37	46	50	10	0	0	150
	0.13	0.93	1.15	1.25	0.25	0.00	0.00	3.76
E	0	37	46	19	2	0	0	104
	0.00	0.93	1.15	0.48	0.05	0.00	0.00	2.61
ESE	4	45	54	48	10	0	0	161
	0.10	1.13	1.36	1.20	0.25	0.00	0.00	4.04
SE	5	57	90	99	25	1	0	278
	0.13	1.43	2.26	2.48	0.65	0.03	0.00	6.98
SSE	2	109	78	94	29	13	0	330
	0.05	2.74	1.96	2.48	0.73	0.33	0.00	8.28
S	2	92	104	152	106	40	3	505
	0.05	2.31	2.61	3.81	2.66	1.15	0.08	12.67
SSW	0	44	92	72	80	41	25	359
	0.00	1.23	2.31	1.81	2.01	1.03	0.63	9.01
SW	0	17	39	67	36	20	6	185
	0.00	0.43	0.98	1.68	0.90	0.50	0.15	4.64
WSW	0	22	36	48	13	5	6	130
	0.00	0.55	0.90	1.20	0.33	0.13	0.15	3.26
W	0	5	41	55	25	5	3	134
	0.00	0.13	1.03	1.38	0.63	0.13	0.08	3.36
WNW	0	10	39	62	21	2	0	140
	0.00	0.40	0.98	1.56	0.53	0.05	0.00	3.51
NW	0	10	52	81	80	9	0	232
	0.00	0.25	1.30	2.03	2.01	0.23	0.00	5.82
NNW	0	34	59	95	96	53	3	350
	0.00	0.85	1.73	2.38	2.41	1.33	0.08	8.78
TOTAL	21	730	1065	1247	852	215	55	3985
	0.53	18.32	26.73	31.29	16.36	5.40	1.38	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
OF FOUR #WINDSPEED VERSUS #WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY #WIND DIRECTION BY #WIND SPEED

TABLE OF #DC1 BY #SC1
CONTROLLING FOR DTC=EXTREMELY UNSTAB

#DC1 #SC1

FREQUENCY
PERCENT | CALM | 1-3 | 4-7 | 8-12 | 13-18 | 19-25 | 25-32 | TOTAL

N	0	3	23	57	36	0	6	125
	0.00	0.50	3.81	9.44	5.96	0.00	0.99	20.70
NNE	0	1	11	29	15	0	0	57
	0.00	0.17	1.82	4.80	2.65	1.00	0.00	9.44
NE	0	5	13	12	0	0	0	30
	0.00	0.83	2.15	1.99	0.00	0.00	0.00	4.97
ENE	1	6	14	6	0	0	0	27
	0.17	0.99	2.32	0.99	0.00	0.00	0.00	4.47
E	0	3	8	2	0	0	0	13
	0.00	0.50	1.32	0.33	0.00	0.00	0.00	2.15
ESE	0	1	4	3	0	0	0	8
	0.00	0.17	0.66	0.50	0.00	0.00	0.00	1.32
SE	0	0	3	2	2	0	0	7
	0.00	0.00	0.50	0.33	0.33	0.00	0.00	1.16
SSE	0	1	3	8	8	0	0	20
	0.00	0.17	0.50	1.32	0.66	0.00	0.00	3.31
S	0	2	1	7	11	19	2	42
	0.00	0.33	0.17	1.16	1.82	3.15	0.33	6.95
SSW	0	0	4	5	4	8	9	31
	0.00	0.00	0.66	0.99	0.66	1.32	1.49	5.13
SW	0	0	3	0	1	7	3	14
	0.00	0.00	0.50	0.00	0.17	1.16	0.50	2.32
WSW	0	1	4	0	3	0	4	12
	0.00	0.17	0.66	0.00	0.50	0.00	0.66	1.99
W	0	0	2	4	5	2	1	14
	0.00	0.00	0.33	0.66	0.83	0.33	0.17	2.32
WNW	0	0	4	9	13	2	0	28
	0.00	0.00	0.66	1.49	2.15	0.33	0.00	4.64
NW	0	1	10	14	37	6	0	68
	0.00	0.17	1.66	2.32	6.13	0.99	0.00	11.26
NNW	0	1	11	33	35	27	1	108
	0.00	0.17	1.82	5.46	5.79	4.47	0.17	17.88
TOTAL	1	25	118	192	167	75	26	604
	0.17	4.14	19.54	31.79	27.65	12.42	4.30	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
(% FOOT WINDSPEED) VERSUS WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY WIND DIRECTION (BY WIND SPEED)

TABLE OF #DC1 BY #SC1
CONTROLLING FOR DTC=MODERATELY UNSTA

#DC1 #SC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	0	4	14	6	2	3	29
	.	0.00	1.50	5.26	2.26	0.75	1.13	10.90
NNE	0	3	7	4	7	3	0	24
	.	1.13	2.63	1.50	2.63	1.13	0.00	9.02
NE	0	2	8	5	0	0	0	16
	.	0.75	3.01	2.26	0.00	0.00	0.00	6.02
ENE	0	2	5	3	0	0	0	10
	.	0.75	1.88	1.13	0.00	0.00	0.00	3.76
E	0	2	1	3	0	0	0	6
	.	0.75	0.38	1.13	0.00	0.00	0.00	2.26
ESE	0	0	3	0	0	0	0	3
	.	0.00	1.13	0.00	0.00	0.00	0.00	1.13
SE	0	0	2	10	3	0	0	15
	.	0.00	0.75	3.76	1.13	0.00	0.00	5.64
SSE	0	0	2	5	0	1	0	9
	.	0.00	0.75	2.26	0.00	0.38	0.00	3.38
S	0	1	4	9	12	8	1	35
	.	0.38	1.50	3.38	4.51	3.01	0.38	13.16
SSW	0	0	3	9	4	2	5	19
	.	0.00	1.13	1.88	1.50	0.75	1.88	7.14
SW	0	0	3	9	7	3	2	24
	.	0.00	1.13	3.38	2.63	1.00	0.75	9.77
WSW	0	1	3	4	2	3	0	13
	.	0.38	1.13	1.50	0.75	1.13	0.00	4.89
W	0	0	0	10	3	1	0	14
	.	0.00	0.00	3.76	1.13	0.38	0.00	5.26
WNW	0	0	3	6	2	0	0	11
	.	0.00	1.13	2.26	0.75	0.00	0.00	4.14
NW	0	0	4	3	6	0	0	13
	.	0.00	1.50	1.13	2.26	0.00	0.00	4.89
NNW	0	0	7	7	6	3	0	23
	.	0.00	2.63	2.63	2.26	1.13	0.00	8.65
TOTAL	.	11	59	94	58	28	11	266
	.	4.14	22.18	37.22	21.80	10.53	4.14	100.00

ECOLOGICAL ANALYSIS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT *TRANSPEED VERSUS *WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY *WIND DIRECTION BY *WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=SLIGHTLY UNSTABL

WDC1 WSC1

FREQUENCY | PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	1	11	29	11	4	0	56
	.	0.29	3.15	8.31	3.15	1.15	0.00	16.05
NNE	0	2	3	12	7	3	0	27
	.	0.57	0.86	3.44	2.01	0.86	0.00	7.74
NE	0	0	4	4	0	0	0	8
	.	0.00	1.15	1.15	0.00	0.00	0.00	2.29
ENE	0	1	2	2	2	0	0	7
	.	0.29	0.57	0.57	0.57	0.00	0.00	2.01
E	0	1	8	4	1	0	0	14
	.	0.29	2.29	1.15	0.29	0.00	0.00	4.01
ESE	0	1	11	12	0	0	0	24
	.	0.29	3.15	3.44	0.00	0.00	0.00	6.88
SE	0	0	5	12	3	1	0	21
	.	0.00	1.43	3.44	0.86	0.29	0.00	6.02
SSE	0	4	6	8	3	1	0	22
	.	1.15	1.72	2.29	0.86	0.29	0.00	6.30
S	0	1	3	5	10	8	0	27
	.	0.29	0.86	1.43	2.87	2.29	0.00	7.74
SSW	0	1	7	8	10	7	1	34
	.	0.29	2.01	2.29	2.87	2.01	0.29	9.74
SW	0	0	3	16	9	3	1	32
	.	0.00	0.86	4.58	2.58	0.86	0.29	9.17
WSW	0	1	1	8	1	0	1	12
	.	0.29	0.29	2.29	0.29	0.00	0.29	3.44
W	0	0	4	2	5	0	2	13
	.	0.00	1.15	0.57	1.43	0.00	0.57	3.72
WNW	0	0	4	6	2	0	0	12
	.	0.00	1.15	1.72	0.57	0.00	0.00	3.44
NW	0	0	2	3	5	0	0	10
	.	0.00	0.57	0.86	1.43	0.00	0.00	2.87
NNW	0	0	5	3	11	9	2	30
	.	0.00	1.43	0.86	3.15	2.58	0.57	8.60
TOTAL	.	13	79	134	80	36	7	349
	.	3.72	22.64	38.40	22.92	10.32	2.01	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
35 FOOT WINDSPEED VERSUS WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR UTC=NEUTRAL

WDC1 WSC1

FREQUENCY|
PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	26-32	TOTAL
N	0	9	42	39	4	4	0	98
| 0.00 | 0.67 | 3.14 | 2.91 | 0.30 | 0.30 | 0.00 | 7.32
---|---|---|---|---|---|---|---|---
NNE | 0 | 14 | 42 | 49 | 19 | 4 | 0 | 128
| 0.00 | 1.05 | 3.14 | 3.66 | 1.42 | 0.30 | 0.00 | 9.56
---|---|---|---|---|---|---|---|---
NE | 0 | 13 | 35 | 37 | 8 | 0 | 0 | 93
| 0.00 | 0.97 | 2.61 | 2.76 | 0.60 | 0.00 | 0.00 | 6.95
---|---|---|---|---|---|---|---|---
ENE | 1 | 8 | 20 | 39 | 8 | 0 | 0 | 76
| 0.07 | 0.60 | 1.49 | 2.91 | 0.60 | 0.00 | 0.00 | 5.68
---|---|---|---|---|---|---|---|---
E | 0 | 10 | 21 | 10 | 1 | 0 | 0 | 42
| 0.00 | 0.75 | 1.57 | 0.75 | 0.07 | 0.00 | 0.00 | 3.14
---|---|---|---|---|---|---|---|---
ESE | 0 | 4 | 22 | 31 | 10 | 0 | 0 | 67
| 0.00 | 0.30 | 1.64 | 2.32 | 0.75 | 0.00 | 0.00 | 5.00
---|---|---|---|---|---|---|---|---
SE | 0 | 5 | 35 | 50 | 18 | 0 | 0 | 108
| 0.00 | 0.37 | 2.61 | 3.73 | 1.34 | 0.00 | 0.00 | 8.07
---|---|---|---|---|---|---|---|---
SSE | 0 | 8 | 22 | 54 | 17 | 7 | 0 | 108
| 0.00 | 0.60 | 1.64 | 4.03 | 1.27 | 0.52 | 0.00 | 8.07
---|---|---|---|---|---|---|---|---
S | 0 | 3 | 12 | 75 | 60 | 11 | 0 | 161
| 0.00 | 0.22 | 0.90 | 5.60 | 4.48 | 0.82 | 0.00 | 12.02
---|---|---|---|---|---|---|---|---
SSW | 0 | 7 | 17 | 20 | 41 | 20 | 10 | 115
| 0.00 | 0.52 | 1.27 | 1.49 | 3.06 | 1.49 | 0.75 | 8.59
---|---|---|---|---|---|---|---|---
SW | 0 | 1 | 8 | 14 | 7 | 5 | 0 | 35
| 0.00 | 0.07 | 0.60 | 1.05 | 0.52 | 0.37 | 0.00 | 2.61
---|---|---|---|---|---|---|---|---
WSW | 0 | 4 | 10 | 9 | 6 | 2 | 1 | 32
| 0.00 | 0.30 | 0.75 | 0.67 | 0.45 | 0.15 | 0.07 | 2.39
---|---|---|---|---|---|---|---|---
W | 0 | 0 | 15 | 14 | 7 | 2 | 0 | 38
| 0.00 | 0.00 | 1.12 | 1.05 | 0.52 | 0.15 | 0.00 | 2.84
---|---|---|---|---|---|---|---|---
WNW | 0 | 2 | 10 | 4 | 1 | 0 | 0 | 21
| 0.00 | 0.15 | 0.75 | 0.60 | 0.07 | 0.00 | 0.00 | 1.57
---|---|---|---|---|---|---|---|---
NW | 0 | 3 | 18 | 37 | 32 | 3 | 0 | 91
| 0.00 | 0.22 | 1.19 | 2.76 | 2.39 | 0.22 | 0.00 | 6.80
---|---|---|---|---|---|---|---|---
NNW | 0 | 3 | 24 | 42 | 43 | 14 | 0 | 126
| 0.00 | 0.22 | 1.79 | 3.14 | 3.21 | 1.05 | 0.00 | 9.41
---|---|---|---|---|---|---|---|---
TOTAL | 1 | 99 | 391 | 529 | 383 | 72 | 11 | 1339
| 0.07 | 7.02 | 29.21 | 39.43 | 21.08 | 5.38 | 0.82 | 100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=SLIGHTLY STABLE

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-24	25-32	TOTAL
N	0	34	25	3	0	0	0	62
	0.00	3.78	2.78	0.33	0.00	0.00	.	6.90
NNE	0	34	33	3	1	0	0	71
	0.00	3.78	3.67	0.33	0.11	0.00	.	7.90
NE	0	24	13	2	3	0	0	42
	0.00	2.67	1.45	0.22	0.33	0.00	.	4.67
ENE	1	12	3	0	0	0	0	16
	0.11	1.33	0.33	0.00	0.00	0.00	.	1.78
E	0	6	8	0	0	0	0	14
	0.00	0.84	0.87	0.00	0.00	0.00	.	1.56
ESE	0	15	14	2	0	0	0	31
	0.00	1.67	1.56	0.22	0.00	0.00	.	3.45
SE	0	14	33	17	0	0	0	64
	0.00	1.56	3.67	1.89	0.00	0.00	.	7.12
SSE	0	25	38	21	5	0	0	87
	0.00	2.78	4.00	2.34	0.56	0.00	.	9.68
S	0	29	63	55	13	0	0	160
	0.00	3.23	7.01	6.12	1.45	0.00	.	17.80
SSW	0	12	38	29	21	3	0	103
	0.00	1.33	4.23	3.23	2.34	0.33	.	11.46
SW	0	3	12	22	12	0	0	49
	0.00	0.33	1.33	2.45	1.33	0.00	.	5.45
WSW	0	3	11	14	1	0	0	29
	0.00	0.33	1.22	1.56	0.11	0.00	.	3.23
W	0	2	14	12	4	0	0	32
	0.00	0.22	1.56	1.33	0.44	0.00	.	3.56
WNW	0	5	11	22	3	0	0	41
	0.00	0.67	1.22	2.45	0.33	0.00	.	4.67
NW	0	5	18	24	0	0	0	47
	0.00	0.56	2.00	2.67	0.00	0.00	.	5.23
NNW	0	18	21	10	1	0	0	50
	0.00	2.00	2.34	1.11	0.11	0.00	.	5.56
TOTAL	1	244	351	236	64	3	.	899
	0.11	27.14	39.04	26.25	7.12	0.33	.	100.00

ECOLOGICAL ANALYSTS, INC.
COMANCHE NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
33 FOOT WINDSPEED VERSUS WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF WDC1 BY WSC1
CONTROLLING FOR DTC=MODERATELY STABL

WDC1 WSC1

FREQUENCY / PERCENT	CALM	1-3	4-7	8-12	13-18	19-25	25-32	TOTAL
N	0	20	3	0	0	0	0	23
	0.00	5.54	0.83	0.00	0.00	0.00	.	6.37
NNE	1	15	2	0	0	0	0	18
	0.28	4.16	0.55	0.00	0.00	0.00	.	4.99
NE	0	7	0	0	0	0	0	7
	0.00	1.94	0.00	0.00	0.00	0.00	.	1.94
ENE	0	5	3	0	0	0	0	8
	0.00	1.66	0.55	0.00	0.00	0.00	.	2.22
E	0	5	3	0	0	0	0	8
	0.00	1.66	0.55	0.00	0.00	0.00	.	2.22
ESE	2	14	0	0	0	0	0	16
	0.55	3.88	0.00	0.00	0.00	0.00	.	4.43
SE	1	18	11	8	0	0	0	38
	0.28	4.99	3.05	2.22	0.00	0.00	.	10.53
SSE	0	36	9	2	0	0	0	47
	0.00	9.97	2.49	0.55	0.00	0.00	.	13.02
S	0	34	21	1	0	0	0	61
	0.00	10.80	5.82	0.28	0.00	0.00	.	16.90
SSW	0	14	17	4	0	1	0	40
	0.00	4.94	4.71	1.11	0.00	0.28	.	11.08
SW	0	5	7	5	0	0	0	18
	0.00	1.66	1.94	1.39	0.00	0.00	.	4.99
WSW	0	7	6	8	0	0	0	21
	0.00	1.94	1.66	2.22	0.00	0.00	.	5.82
W	0	2	6	10	1	0	0	19
	0.00	0.55	1.66	2.77	0.28	0.00	.	5.26
WNW	0	5	6	11	0	0	0	22
	0.00	1.39	1.66	3.05	0.00	0.00	.	6.09
NW	0	1	2	0	0	0	0	3
	0.00	0.28	0.55	0.00	0.00	0.00	.	0.83
NNW	0	11	1	0	0	0	0	12
	0.00	3.05	0.28	0.00	0.00	0.00	.	3.32
TOTAL	4	211	95	49	1	1	.	361
	1.11	58.45	26.32	13.57	0.28	0.28	.	100.00

ECOLOGICAL ANALYSTS, INC.
COOPER NUCLEAR STATION DATA ANALYSIS
JOINT FREQUENCY OF OCCURRENCE
OF 60M WINDSPEED VERSUS WIND DIRECTION
JANUARY - JUNE 1981
STABILITY BY WIND DIRECTION BY WIND SPEED

TABLE OF #DC1 BY #SC1
CONTROLLING FOR DTC=EXTREMELY STABLE

#DC1 #SC1

FREQUENCY|
PERCENT |CALM |1-3 |4-7 |8-12 |13-18 |19-24 |25-32 | TOTAL
---|---|---|---|---|---|---|---|---|---|
N | 1 | 5 | 0 | 0 | 0 | 0 | 0 | 6
| 0.60 | 2.99 | 0.00 | 0.00 | . | . | . | 3.59
---|---|---|---|---|---|---|---|---|---|
NNE | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 4
| 0.60 | 1.80 | 0.00 | 0.00 | . | . | . | 2.39
---|---|---|---|---|---|---|---|---|---|
NE | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2
| 0.60 | 0.60 | 0.00 | 0.00 | . | . | . | 1.20
---|---|---|---|---|---|---|---|---|---|
ENE | 2 | 4 | 0 | 0 | 0 | 0 | 0 | 6
| 1.20 | 2.40 | 0.00 | 0.00 | . | . | . | 3.59
---|---|---|---|---|---|---|---|---|---|
E | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 7
| 0.00 | 4.19 | 0.00 | 0.00 | . | . | . | 4.19
---|---|---|---|---|---|---|---|---|---|
ESE | 2 | 10 | 0 | 0 | 0 | 0 | 0 | 12
| 1.20 | 5.99 | 0.00 | 0.00 | . | . | . | 7.19
---|---|---|---|---|---|---|---|---|---|
SE | 4 | 20 | 1 | 0 | 0 | 0 | 0 | 25
| 2.40 | 11.98 | 0.60 | 0.00 | . | . | . | 14.97
---|---|---|---|---|---|---|---|---|---|
SSE | 2 | 35 | 0 | 0 | 0 | 0 | 0 | 37
| 1.20 | 20.96 | 0.00 | 0.00 | . | . | . | 22.16
---|---|---|---|---|---|---|---|---|---|
S | 2 | 17 | 0 | 0 | 0 | 0 | 0 | 19
| 1.20 | 10.18 | 0.00 | 0.00 | . | . | . | 11.38
---|---|---|---|---|---|---|---|---|---|
SSW | 0 | 11 | 6 | 0 | 0 | 0 | 0 | 17
| 0.00 | 6.59 | 3.59 | 0.00 | . | . | . | 10.18
---|---|---|---|---|---|---|---|---|---|
SW | 0 | 7 | 3 | 1 | 0 | 0 | 0 | 11
| 0.00 | 4.19 | 1.80 | 0.60 | . | . | . | 6.59
---|---|---|---|---|---|---|---|---|---|
WSW | 0 | 5 | 1 | 5 | 0 | 0 | 0 | 11
| 0.00 | 2.99 | 0.60 | 2.99 | . | . | . | 6.59
---|---|---|---|---|---|---|---|---|---|
W | 0 | 1 | 0 | 3 | 0 | 0 | 0 | 4
| 0.00 | 0.60 | 0.00 | 1.80 | . | . | . | 2.40
---|---|---|---|---|---|---|---|---|---|
WNW | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 4
| 0.00 | 1.80 | 0.60 | 0.00 | . | . | . | 2.40
---|---|---|---|---|---|---|---|---|---|
NW | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0
| . | . | . | . | . | . | . | 0.00
---|---|---|---|---|---|---|---|---|---|
NNW | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1
| 0.00 | 0.60 | 0.00 | 0.00 | . | . | . | 0.60
---|---|---|---|---|---|---|---|---|---|
TOTAL | 14 | 132 | 12 | 9 | . | . | . | 167
| 8.38 | 79.04 | 7.19 | 5.39 | . | . | . | 100.00

APPENDIX C

RADIOLOGICAL DOSE CALCULATION FROM AIRBORNE SOURCES

RADIOLOGICAL DOSE CALCULATIONS FROM AIRBORNE SOURCES

Five types of tables are presented in this section: estimated concentration to emission ratios, estimated gamma radiation dose, individual radiation doses for selected sites, radiation doses for the ALARA population, and radiation doses for the NEPA population.

The tables of estimated concentration to emission ratios were generated using the computer model XOQDOQ discussed in Appendix D. Tables are presented for the vent stack and elevated release options separately, and the following time periods: January - March, April - June, and January - June 1981.

The tables of estimated gamma radiation dose were generated using the GASPAR computer model. The tables are for a combined vent stack and elevated release. The time periods are the same as the concentration to emission ratio tables.

The individual radiation doses at selected points were generated using the GASPAR computer model discussed in Appendix D. Two sites were selected for each quarterly period based on the predicted gamma radiation dose table; two locations outside the plant boundary for each quarter are given, one in the north quadrant and one in the south quadrant. Radiation dose is given for total body, gastrointestinal tract, bone, liver, kidney, thyroid, lung, and skin by 7 pathways and 4 age groups.

Tables of radiation dose to the ALARA (As Low As Reasonably Achievable) population within 50 miles of the plant, and the NEPA (National Environmental Policy Act) population of the continental United States were generated using the GASPAR computer model. Tables are presented for each quarter covered by this report and are combined vent stack and elevated releases. Radiation doses to the 8 body components given above are given for 7 pathways, for individual isotopes by pathway and a total for each isotope.

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COOPER NUCLEAR STATION - VENT RELEASE POINT - FIRST QUARTER 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	DISTANCE IN MILES 0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.202E-05	9.434E-06	5.640E-06	2.957E-06	1.211E-06	6.593E-07	4.187E-07	2.925E-07	2.179E-07	1.700E-07	1.373E-07
SSW	1.434E-05	6.416E-06	4.088E-06	2.230E-06	9.495E-07	5.279E-07	3.397E-07	2.396E-07	1.797E-07	1.410E-07	1.144E-07
SW	9.848E-06	4.007E-06	2.296E-06	1.177E-06	4.684E-07	2.509E-07	1.575E-07	1.090E-07	8.054E-08	6.240E-08	5.009E-08
WSW	8.133E-06	4.043E-06	2.847E-06	1.702E-06	8.159E-07	4.864E-07	3.279E-07	2.392E-07	1.842E-07	1.476E-07	1.218E-07
W	6.688E-06	2.882E-06	1.856E-06	1.023E-06	4.408E-07	2.468E-07	1.596E-07	1.130E-07	8.509E-08	6.695E-08	5.445E-08
WNW	1.133E-05	5.349E-06	3.869E-06	2.333E-06	1.119E-06	6.657E-07	4.480E-07	3.263E-07	2.510E-07	2.009E-07	1.657E-07
NW	2.017E-05	8.546E-06	5.802E-06	3.406E-06	1.605E-06	9.498E-07	6.381E-07	4.646E-07	3.574E-07	2.862E-07	2.361E-07
NNW	2.675E-05	1.210E-05	8.347E-06	4.804E-06	2.174E-06	1.253E-06	8.267E-07	5.940E-07	4.524E-07	3.594E-07	2.947E-07
N	3.135E-05	1.389E-05	8.954E-06	4.986E-06	2.204E-06	1.259E-06	8.267E-07	5.922E-07	4.500E-07	3.568E-07	2.921E-07
NNE	2.739E-05	1.123E-05	6.962E-06	3.757E-06	1.589E-06	8.833E-07	5.695E-07	4.025E-07	3.028E-07	2.381E-07	1.936E-07
NE	1.510E-05	5.641E-06	3.398E-06	1.819E-06	7.661E-07	4.256E-07	2.745E-07	1.941E-07	1.461E-07	1.150E-07	9.353E-08
ENE	1.488E-05	5.870E-06	3.555E-06	1.899E-06	7.961E-07	4.407E-07	2.834E-07	2.000E-07	1.502E-07	1.180E-07	9.587E-08
E	1.294E-05	4.554E-06	2.514E-06	1.275E-06	5.070E-07	2.729E-07	1.723E-07	1.200E-07	8.918E-08	6.947E-08	5.603E-08
ESE	1.289E-05	5.076E-06	2.999E-06	1.575E-06	6.493E-07	3.561E-07	2.276E-07	1.599E-07	1.197E-07	9.374E-08	7.596E-08
SE	1.638E-05	5.929E-06	3.168E-06	1.566E-06	6.041E-07	3.184E-07	1.978E-07	1.359E-07	9.984E-08	7.700E-08	6.156E-08
SSE	2.176E-05	8.530E-06	4.812E-06	2.442E-06	9.654E-07	5.155E-07	3.231E-07	2.235E-07	1.651E-07	1.279E-07	1.027E-07

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

BEARING	DISTANCE IN MILES 5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.139E-07	5.907E-08	3.853E-08	2.235E-08	1.528E-08	1.140E-08	8.991E-09	7.361E-09	6.194E-09	5.321E-09	4.648E-09
SSW	9.527E-08	5.011E-08	3.297E-08	1.930E-08	1.326E-08	9.925E-09	7.843E-09	6.433E-09	5.421E-09	4.663E-09	4.077E-09
SW	4.135E-08	2.107E-08	1.357E-08	7.722E-09	5.199E-09	3.834E-09	2.994E-09	2.431E-09	2.031E-09	1.735E-09	1.507E-09
WSW	1.029E-07	5.689E-08	3.860E-08	2.350E-08	1.655E-08	1.262E-08	1.011E-08	8.393E-09	7.144E-09	6.199E-09	5.462E-09
W	4.544E-08	2.407E-08	1.592E-08	9.403E-09	6.506E-09	4.899E-09	3.891E-09	3.205E-09	2.711E-09	2.340E-09	2.053E-09
WNW	1.399E-07	7.709E-08	5.222E-08	3.173E-08	2.232E-08	1.700E-08	1.362E-08	1.130E-08	9.615E-09	8.341E-09	7.346E-09
NW	1.995E-07	1.103E-07	7.493E-08	4.570E-08	3.223E-08	2.461E-08	1.975E-08	1.640E-08	1.397E-08	1.213E-08	1.070E-08
NNW	2.476E-07	1.343E-07	9.025E-08	5.431E-08	3.800E-08	2.884E-08	2.304E-08	1.908E-08	1.620E-08	1.404E-08	1.235E-08
N	2.452E-07	1.325E-07	8.872E-08	5.315E-08	3.705E-08	2.804E-08	2.235E-08	1.847E-08	1.566E-08	1.354E-08	1.189E-08
NNE	1.615E-07	8.557E-08	5.663E-08	3.343E-08	2.310E-08	1.738E-08	1.379E-08	1.135E-08	9.589E-09	8.270E-09	7.247E-09
NE	7.811E-08	4.153E-08	2.756E-08	1.635E-08	1.135E-08	8.566E-09	6.815E-09	5.621E-09	4.760E-09	4.113E-09	3.610E-09
ENE	7.996E-08	4.232E-08	2.800E-08	1.653E-08	1.143E-08	8.604E-09	6.829E-09	5.623E-09	4.754E-09	4.102E-09	3.596E-09
E	4.645E-08	2.405E-08	1.568E-08	9.088E-09	6.211E-09	4.634E-09	3.652E-09	2.989E-09	2.515E-09	2.161E-09	1.887E-09
ESE	6.321E-08	3.316E-08	2.181E-08	1.277E-08	8.781E-09	6.580E-09	5.204E-09	4.272E-09	3.603E-09	3.101E-09	2.713E-09
SE	5.062E-08	2.539E-08	1.618E-08	9.065E-09	6.038E-09	4.415E-09	3.423E-09	2.763E-09	2.297E-09	1.952E-09	1.689E-09
SSE	8.476E-08	4.313E-08	2.777E-08	1.579E-08	1.064E-08	7.849E-09	6.130E-09	4.978E-09	4.160E-09	3.553E-09	3.086E-09

COOPER NUCLEAR STATION - ELEVATED RELEASE POINT - FIRST QUARTER 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	DISTANCE IN MILES 0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.463E-05	4.792E-06	3.045E-06	1.824E-06	9.023E-07	5.496E-07	3.761E-07	2.772E-07	2.153E-07	1.736E-07	1.441E-07
SSW	1.034E-05	3.379E-06	1.839E-06	9.394E-07	3.785E-07	2.056E-07	1.307E-07	9.147E-08	6.831E-08	5.342E-08	4.324E-08
SW	6.271E-06	2.295E-06	1.470E-06	8.256E-07	3.641E-07	2.064E-07	1.345E-07	9.571E-08	7.230E-08	5.703E-08	4.648E-08
WSW	6.570E-06	2.281E-06	1.197E-06	5.868E-07	2.231E-07	1.165E-07	7.190E-08	4.914E-08	3.598E-08	2.766E-08	2.205E-08
W	6.225E-06	2.377E-06	1.343E-06	6.866E-07	2.737E-07	1.469E-07	9.244E-08	6.411E-08	4.748E-08	3.686E-08	2.963E-08
WNW	8.861E-06	3.193E-06	1.806E-06	9.347E-07	3.790E-07	2.057E-07	1.304E-07	9.097E-08	6.771E-08	5.279E-08	4.261E-08
NW	1.191E-05	4.26[illegible]E-06	2.378E-06	1.212E-06	4.829E-07	2.593E-07	1.633E-07	1.134E-07	8.407E-08	6.533E-08	5.258E-08
NNW	1.108E-05	[illegible]-06	2.099E-06	1.047E-06	4.076E-07	2.165E-07	1.355E-07	9.362E-08	6.919E-08	5.363E-08	4.308E-08
N	1.641E-05	[illegible]-06	3.126E-06	1.541E-06	5.938E-07	3.136E-07	1.954E-07	1.346E-07	9.922E-08	7.673E-08	6.150E-08
NNE	1.504E-05	[illegible]-06	2.772E-06	1.390E-06	5.475E-07	2.932E-07	1.845E-07	1.281E-07	9.504E-08	7.391E-08	5.953E-08
NE	1.576E-05	[illegible]-06	3.017E-06	1.593E-06	6.789E-07	3.832E-07	2.504E-07	1.789E-07	1.357E-07	1.075E-07	8.798E-08
ENE	1.776E-05	[illegible]	3.433E-06	1.752E-06	7.026E-07	3.806E-07	2.416E-07	1.689E-07	1.260E-07	9.850E-08	7.969E-08
E	1.960E-05	[illegible]	4.162E-06	2.376E-06	1.113E-06	6.610E-07	4.461E-07	3.260E-07	2.516E-07	2.020E-07	1.671E-07
ESE	1.993E-05	7.202E-06	4.200E-06	2.284E-06	1.010E-06	5.817E-07	3.850E-07	2.775E-07	2.120E-07	1.689E-07	1.388E-07
SE	1.797E-05	6.537E-06	3.872E-06	2.128E-06	9.497E-07	5.489E-07	3.638E-07	2.625E-07	2.006E-07	1.598E-07	1.314E-07
SSE	2.193E-05	7.448E-06	4.051E-06	2.051E-06	8.167E-07	4.397E-07	2.776E-07	1.932E-07	1.436E-07	1.119E-07	9.022E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

BEARING	DISTANCE IN MILES 5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.224E-07	6.883E-08	4.723E-08	2.918E-08	2.076E-08	1.595E-08	1.286E-08	1.073E-08	9.169E-09	7.984E-09	7.056E-09
SSW	3.596E-08	1.884E-08	1.240E-08	7.280E-09	5.025E-09	3.779E-09	2.998E-09	2.468E-09	2.087E-09	1.801E-09	1.579E-09
SW	3.885E-08	2.066E-08	1.369E-08	8.082E-09	5.578E-09	4.190E-09	3.320E-09	2.729E-09	2.304E-09	1.985E-09	1.738E-09
WSW	1.812E-08	9.088E-09	5.797E-09	3.267E-09	2.196E-09	1.619E-09	1.264E-09	1.026E-09	8.576E-10	7.326E-10	6.366E-10
W	2.449E-08	1.251E-08	8.078E-09	4.622E-09	3.135E-09	2.326E-09	1.825E-09	1.488E-09	1.248E-09	1.069E-09	9.312E-10
WNW	3.534E-08	1.834E-08	1.198E-08	6.972E-09	4.793E-09	3.592E-09	2.843E-09	2.335E-09	1.971E-09	1.698E-09	1.487E-09
NW	4.351E-08	2.240E-08	1.455E-08	8.392E-09	5.727E-09	4.269E-09	3.363E-09	2.751E-09	2.314E-09	1.988E-09	1.736E-09
NNW	3.559E-08	1.821E-08	1.178E-08	6.763E-09	4.603E-09	3.423E-09	2.692E-09	2.199E-09	1.847E-09	1.584E-09	1.382E-09
N	5.069E-08	2.569E-08	1.650E-08	9.350E-09	6.281E-09	4.623E-09	3.603E-09	2.921E-09	2.437E-09	2.078E-09	1.803E-09
NNE	4.930E-08	2.543E-08	1.654E-08	9.556E-09	6.517E-09	4.854E-09	3.822E-09	3.125E-09	2.628E-09	2.256E-09	1.969E-09
NE	7.382E-08	3.990E-08	2.675E-08	1.608E-08	1.126E-08	8.557E-09	6.842E-09	5.667E-09	4.815E-09	4.173E-09	3.672E-09
ENE	6.624E-08	3.465E-08	2.276E-08	1.332E-08	9.160E-09	6.866E-09	5.432E-09	4.461E-09	3.763E-09	3.241E-09	2.837E-09
E	1.415E-07	7.888E-08	5.387E-08	3.310E-08	2.347E-08	1.799E-08	1.449E-08	1.207E-08	1.030E-08	8.962E-09	7.914E-09
ESE	1.169E-07	6.397E-08	4.320E-08	2.617E-08	1.838E-08	1.399E-08	1.120E-08	9.287E-09	7.899E-09	6.850E-09	6.032E-09
SE	1.107E-07	6.069E-08	4.103E-08	2.489E-08	1.750E-08	1.333E-08	1.068E-08	8.857E-09	7.538E-09	6.540E-09	5.761E-09
SSE	7.481E-08	3.880E-08	2.533E-08	1.472E-08	1.008E-08	7.531E-09	5.945E-09	4.874E-09	4.106E-09	3.532E-09	3.089E-09

COOPER NUCLEAR STATION - VENT RELEASE POINT - SECOND QUARTER 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

	DISTANCE IN MILES										
SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.228E-05	9.471E-06	5.612E-06	2.963E-06	1.239E-06	6.865E-07	4.417E-07	3.117E-07	2.341E-07	1.838E-07	1.492E-07
SSW	3.056E-05	1.328E-05	7.656E-06	3.916E-06	1.558E-06	8.342E-07	5.238E-07	3.626E-07	2.682E-07	2.079E-07	1.669E-07
SW	1.908E-05	8.525E-06	5.007E-06	2.627E-06	1.091E-06	6.016E-07	3.857E-07	2.714E-07	2.033E-07	1.593E-07	1.291E-07
WSW	1.230E-05	4.831E-06	2.860E-06	1.341E-06	5.372E-07	2.912E-07	1.848E-07	1.291E-07	9.613E-08	7.491E-08	6.040E-08
W	1.035E-05	4.389E-06	2.579E-06	1.342E-06	5.452E-07	2.956E-07	1.871E-07	1.304E-07	9.692E-08	7.547E-08	6.084E-08
WNW	1.311E-05	5.894E-06	3.729E-06	2.019E-06	8.533E-07	4.724E-07	3.033E-07	2.134E-07	1.599E-07	1.253E-07	1.015E-07
NW	2.391E-05	9.893E-06	6.177E-06	3.389E-06	1.471E-06	8.307E-07	5.410E-07	3.850E-07	2.910E-07	2.297E-07	1.873E-07
NNW	2.596E-05	1.182E-05	7.490E-06	4.090E-06	1.760E-06	9.887E-07	6.418E-07	4.558E-07	3.440E-07	2.713E-07	2.210E-07
N	3.716E-05	1.563E-05	9.231E-06	4.798E-06	1.946E-06	1.056E-06	6.692E-07	4.670E-07	3.476E-07	2.710E-07	2.187E-07
NNE	2.020E-05	7.885E-06	4.384E-06	2.209E-06	8.689E-07	4.635E-07	2.905E-07	2.010E-07	1.486E-07	1.152E-07	9.248E-08
NE	7.343E-06	2.714E-06	1.508E-06	7.639E-07	3.024E-07	1.619E-07	1.018E-07	7.054E-08	5.224E-08	4.056E-08	3.262E-08
ENE	4.212E-06	1.578E-06	8.702E-07	4.372E-07	1.716E-07	9.133E-08	5.713E-08	3.947E-08	2.914E-08	2.256E-08	1.810E-08
E	4.750E-06	1.767E-06	9.508E-07	4.702E-07	1.813E-07	9.564E-08	5.948E-08	4.091E-08	3.010E-08	2.324E-08	1.860E-08
ESE	5.755E-06	2.223E-06	1.236E-06	6.224E-07	2.450E-07	1.309E-07	8.216E-08	5.692E-08	4.214E-08	3.271E-08	2.630E-08
SE	6.081E-06	2.073E-06	1.079E-06	5.268E-07	2.015E-07	1.058E-07	6.556E-08	4.498E-08	3.304E-08	2.547E-08	2.036E-08
SSE	1.022E-05	4.196E-06	2.408E-06	1.236E-06	4.971E-07	2.683E-07	1.694E-07	1.179E-07	8.753E-08	6.810E-08	5.486E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

	DISTANCE IN MILES										
BEARING	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.244E-07	6.552E-08	4.317E-08	2.533E-08	1.743E-08	1.307E-08	1.034E-08	8.493E-09	7.164E-09	6.168E-09	5.397E-09
SSW	1.378E-07	7.004E-08	4.504E-08	2.556E-08	1.718E-08	1.265E-08	9.859E-09	7.994E-09	6.671E-09	5.689E-09	4.936E-09
SW	1.074E-07	5.625E-08	3.690E-08	2.150E-08	1.471E-08	1.098E-08	8.658E-09	7.087E-09	5.963E-09	5.123E-09	4.474E-09
WSW	5.003E-08	2.570E-08	1.660E-08	9.441E-09	6.346E-09	4.670E-09	3.640E-09	2.950E-09	2.462E-09	2.099E-09	1.821E-09
W	5.040E-08	2.601E-08	1.691E-08	9.756E-09	6.643E-09	4.942E-09	3.887E-09	3.176E-09	2.668E-09	2.289E-09	1.997E-09
WNW	8.446E-08	4.418E-08	2.896E-08	1.688E-08	1.157E-08	8.643E-09	6.818E-09	5.584E-09	4.700E-09	4.038E-09	3.527E-09
NW	1.566E-07	8.353E-08	5.548E-08	3.284E-08	2.272E-08	1.710E-08	1.357E-08	1.117E-08	9.440E-09	8.142E-09	7.136E-09
NNW	1.847E-07	9.836E-08	6.526E-08	3.863E-08	2.673E-08	2.012E-08	1.597E-08	1.315E-08	1.111E-08	9.587E-09	8.403E-09
N	1.813E-07	9.376E-08	6.103E-08	3.522E-08	2.394E-08	1.779E-08	1.397E-08	1.140E-08	9.560E-09	8.192E-09	7.137E-09
NNE	7.635E-08	3.887E-08	2.503E-08	1.425E-08	9.610E-09	7.094E-09	5.543E-09	4.504E-09	3.764E-09	3.215E-09	2.793E-09
NE	2.699E-08	1.388E-08	9.011E-09	5.193E-09	3.539E-09	2.634E-09	2.073E-09	1.694E-09	1.424E-09	1.222E-09	1.066E-09
ENE	1.494E-08	7.602E-09	4.895E-09	2.786E-09	1.878E-09	1.386E-09	1.083E-09	8.797E-10	7.354E-10	6.283E-10	5.459E-10
E	1.532E-08	7.733E-09	4.951E-09	2.792E-09	1.868E-09	1.370E-09	1.065E-09	8.613E-10	7.172E-10	6.104E-10	5.287E-10
ESE	2.175E-08	1.115E-08	7.220E-09	4.141E-09	2.807E-09	2.081E-09	1.632E-09	1.329E-09	1.114E-09	9.534E-10	8.298E-10
SE	1.675E-08	8.444E-09	5.405E-09	3.056E-09	2.056E-09	1.516E-09	1.184E-09	9.612E-10	8.034E-10	6.862E-10	5.963E-10
SSE	4.542E-08	2.337E-08	1.516E-08	8.720E-09	5.921E-09	4.396E-09	3.451E-09	2.815E-09	2.361E-09	2.023E-09	1.763E-09

COOPER NUCLEAR STATION - ELEVATED RELEASE POINT - SECOND QUARTER 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

	DISTANCE IN MILES										
SECTOR	0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.260E-05	3.964E-06	2.036E-06	9.963E-07	3.845E-07	2.035E-07	1.271E-07	8.779E-08	6.486E-08	5.027E-08	4.039E-08
SSW	1.032E-05	3.395E-06	1.741E-06	8.441E-07	3.208E-07	1.678E-07	1.037E-07	7.100E-08	5.205E-08	4.007E-08	3.199E-08
SW	1.227E-05	4.041E-06	2.103E-06	1.034E-06	3.987E-07	2.108E-07	1.314E-07	9.062E-08	6.683E-08	5.171E-08	4.147E-08
WSW	1.205E-05	3.993E-06	2.085E-06	1.025E-06	3.949E-07	2.084E-07	1.298E-07	8.935E-08	6.581E-08	5.087E-08	4.075E-08
W	7.816E-06	2.674E-06	1.416E-06	6.998E-07	2.707E-07	1.429E-07	8.891E-08	6.117E-08	4.502E-08	3.477E-08	2.783E-08
WNW	1.170E-05	4.061E-06	2.154E-06	1.062E-06	4.091E-07	2.159E-07	1.343E-07	9.247E-08	6.811E-08	5.264E-08	4.217E-08
NW	1.493E-05	5.397E-06	2.881E-06	1.421E-06	5.449E-07	2.860E-07	1.771E-07	1.213E-07	8.896E-08	6.848E-08	5.467E-08
NNW	1.547E-05	5.398E-06	2.871E-06	1.422E-06	5.500E-07	2.909E-07	1.813E-07	1.250E-07	9.212E-08	7.125E-08	5.711E-08
N	1.928E-05	6.634E-06	3.518E-06	1.736E-06	6.694E-07	3.535E-07	2.202E-07	1.516E-07	1.117E-07	8.640E-08	6.925E-08
NNE	1.979E-05	7.038E-06	3.760E-06	1.859E-06	7.191E-07	3.805E-07	2.373E-07	1.636E-07	1.206E-07	9.330E-08	7.480E-08
NE	1.198E-05	4.253E-06	2.283E-06	1.137E-06	4.485E-07	2.423E-07	1.538E-07	1.075E-07	8.016E-08	6.254E-08	5.049E-08
ENE	8.305E-06	3.004E-06	1.639E-06	8.236E-07	3.248E-07	1.742E-07	1.098E-07	7.631E-08	5.667E-08	4.411E-08	3.557E-08
E	6.054E-06	2.382E-06	1.311E-06	6.611E-07	2.662E-07	1.461E-07	9.374E-08	6.602E-08	4.946E-08	3.872E-08	3.133E-08
ESE	6.003E-06	2.263E-06	1.289E-06	6.639E-07	2.686E-07	1.458E-07	9.258E-08	6.470E-08	4.824E-08	3.767E-08	3.045E-08
SE	7.260E-06	2.288E-06	1.184E-06	5.836E-07	2.27[illegible]-07	1.211E-07	7.603E-08	5.272E-08	3.908E-08	3.037E-08	2.446E-08
SSE	9.412E-06	3.217E-06	1.720E-06	8.545E-07	3.332E-07	1.769E-07	1.106E-07	7.641E-08	5.647E-08	4.379E-08	3.518E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

	DISTANCE IN MILES										
BEARING	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.337E-08	1.710E-08	1.108E-08	6.391E-09	4.365E-09	3.257E-09	2.568E-09	2.103E-09	1.771E-09	1.523E-09	1.331E-09
SSW	2.628E-08	1.315E-08	8.375E-09	4.708E-09	3.159E-09	2.324E-09	1.812E-09	1.470E-09	1.227E-09	1.047E-09	9.095E-10
SW	3.420E-08	1.737E-08	1.118E-08	6.359E-09	4.287E-09	3.165E-09	2.474E-09	2.012E-09	1.683E-09	1.438E-09	1.251E-09
WSW	3.357E-08	1.698E-08	1.089E-08	6.167E-09	4.140E-09	3.047E-09	2.376E-09	1.927E-09	1.609E-09	1.373E-09	1.192E-09
W	2.293E-08	1.160E-08	7.449E-09	4.228E-09	2.852E-09	2.106E-09	1.647E-09	1.340E-09	1.121E-09	9.590E-10	8.342E-10
WNW	3.476E-08	1.762E-08	1.133E-08	6.450E-09	4.364E-09	3.231E-09	2.531E-09	2.061E-09	1.727E-09	1.478E-09	1.286E-09
NW	4.489E-08	2.240E-08	1.422E-08	7.949E-09	5.304E-09	3.884E-09	3.015E-09	2.436E-09	2.027E-09	1.725E-09	1.493E-09
NNW	4.708E-08	2.386E-08	1.533E-08	8.703E-09	5.864E-09	4.328E-09	3.382E-09	2.748E-09	2.298E-09	1.963E-09	1.706E-09
N	5.709E-08	2.897E-08	1.863E-08	1.061E-08	7.169E-09	5.303E-09	4.152E-09	3.379E-09	2.829E-09	2.420E-09	2.105E-09
NNE	6.167E-08	3.126E-08	2.008E-08	1.139E-08	7.658E-09	5.641E-09	4.400E-09	3.570E-09	2.981E-09	2.543E-09	2.208E-09
NE	4.188E-08	2.166E-08	1.405E-08	8.049E-09	5.445E-09	4.026E-09	3.149E-09	2.560E-09	2.140E-09	1.829E-09	1.589E-09
ENE	2.947E-08	1.523E-08	9.918E-09	5.736E-09	3.911E-09	2.912E-09	2.292E-09	1.873E-09	1.574E-09	1.351E-09	1.179E-09
E	2.601E-08	1.342E-08	8.656E-09	4.893E-09	3.264E-09	2.386E-09	1.847E-09	1.488E-09	1.235E-09	1.048E-09	9.047E-10
ESE	2.530E-08	1.323E-08	8.681E-09	5.078E-09	3.493E-09	2.619E-09	2.073E-09	1.702E-09	1.437E-09	1.237E-09	1.083E-09
SE	2.026E-08	1.047E-08	6.824E-09	3.959E-09	2.709E-09	2.024E-09	1.598E-09	1.310E-09	1.104E-09	9.497E-10	8.305E-10
SSE	2.913E-08	1.510E-08	9.868E-09	5.746E-09	3.945E-09	2.955E-09	2.338E-09	1.920E-09	1.621E-09	1.396E-09	1.223E-09

COOPER NUCLEAR STATION - VENT RELEASE POINT - FIRST SEMI-ANNUAL 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	DISTANCE IN MILES 0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.228E-05	9.496E-06	5.662E-06	2.986E-06	1.241E-06	6.834E-07	4.377E-07	3.078E-07	2.305E-07	1.806E-07	1.464E-07
SSW	2.234E-05	9.815E-06	5.880E-06	3.086E-06	1.263E-06	6.874E-07	4.363E-07	3.045E-07	2.266E-07	1.766E-07	1.425E-07
SW	1.442E-05	6.233E-06	3.644E-06	1.907E-06	7.871E-07	4.322E-07	2.763E-07	1.940E-07	1.450E-07	1.135E-07	9.185E-08
WSW	1.023E-05	4.478E-06	2.787E-06	1.542E-06	6.866E-07	3.950E-07	2.607E-07	1.873E-07	1.426E-07	1.132E-07	9.274E-08
W	8.547E-06	3.633E-06	2.221E-06	1.187E-06	4.960E-07	2.732E-07	1.748E-07	1.228E-07	9.188E-08	7.193E-08	5.825E-08
WNW	1.229E-05	5.648E-06	3.817E-06	2.187E-06	9.911E-07	5.719E-07	3.775E-07	2.712E-07	2.064E-07	1.639E-07	1.343E-07
NW	2.213E-05	9.270E-06	6.039E-06	3.430E-06	1.555E-06	9.002E-07	5.962E-07	4.296E-07	3.279E-07	2.609E-07	2.142E-07
NNW	2.638E-05	1.196E-05	7.926E-06	4.454E-06	1.972E-06	1.124E-06	7.366E-07	5.267E-07	3.996E-07	3.165E-07	2.588E-07
N	3.435E-05	1.481E-05	9.132E-06	4.916E-06	2.087E-06	1.164E-06	7.527E-07	5.330E-07	4.014E-07	3.160E-07	2.571E-07
NNE	2.403E-05	9.651E-06	5.738E-06	3.020E-06	1.245E-06	6.828E-07	4.361E-07	3.061E-07	2.290E-07	1.793E-07	1.452E-07
NE	1.157E-05	4.313E-06	2.539E-06	1.339E-06	5.548E-07	3.054E-07	1.957E-07	1.377E-07	1.032E-07	8.098E-08	6.570E-08
ENE	9.969E-06	3.886E-06	2.314E-06	1.223E-06	5.074E-07	2.792E-07	1.788E-07	1.258E-07	9.427E-08	7.391E-08	5.994E-08
E	9.025E-06	3.221E-06	1.769E-06	8.921E-07	3.526E-07	1.891E-07	1.190E-07	8.266E-08	6.132E-08	4.768E-08	3.840E-08
ESE	9.540E-06	3.731E-06	2.169E-06	1.126E-06	4.592E-07	2.503E-07	1.593E-07	1.115E-07	8.327E-08	6.509E-08	5.266E-08
SE	1.142E-05	4.080E-06	2.170E-06	1.070E-06	4.124E-07	2.172E-07	1.349E-07	9.267E-08	6.810E-08	5.253E-08	4.200E-08
SSE	1.632E-05	6.493E-06	3.689E-06	1.880E-06	7.487E-07	4.015E-07	2.524E-07	1.750E-07	1.296E-07	1.006E-07	8.083E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

BEARING	DISTANCE IN MILES 5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.218E-07	6.384E-08	4.193E-08	2.452E-08	1.685E-08	1.262E-08	9.978E-09	8.188E-09	6.903E-09	5.941E-09	5.196E-09
SSW	1.181E-07	6.097E-08	3.962E-08	2.281E-08	1.549E-08	1.150E-08	9.021E-09	7.355E-09	6.166E-09	5.281E-09	4.599E-09
SW	7.635E-08	3.986E-08	2.609E-08	1.517E-08	1.036E-08	7.727E-09	6.087E-09	4.980E-09	4.187E-09	3.596E-09	3.139E-09
WSW	7.787E-08	4.205E-08	2.810E-08	1.676E-08	1.164E-08	8.790E-09	6.992E-09	5.765E-09	4.881E-09	4.216E-09	3.699E-09
W	4.845E-08	2.535E-08	1.664E-08	9.723E-09	6.681E-09	5.004E-09	3.958E-09	3.249E-09	2.740E-09	2.359E-09	2.064E-09
WNW	1.127E-07	6.094E-08	4.080E-08	2.443E-08	1.703E-08	1.289E-08	1.028E-08	8.488E-09	7.196E-09	6.223E-09	5.466E-09
NW	1.801E-07	9.804E-08	6.595E-08	3.973E-08	2.779E-08	2.109E-08	1.685E-08	1.394E-08	1.184E-08	1.025E-08	9.017E-09
NNW	2.170E-07	1.168E-07	7.810E-08	4.670E-08	3.252E-08	2.461E-08	1.961E-08	1.620E-08	1.373E-08	1.188E-08	1.043E-08
N	2.147E-07	1.139E-07	7.543E-08	4.453E-08	3.074E-08	2.310E-08	1.831E-08	1.506E-08	1.272E-08	1.096E-08	9.598E-09
NNE	1.207E-07	6.319E-08	4.148E-08	2.423E-08	1.663E-08	1.245E-08	9.833E-09	8.064E-09	6.795E-09	5.845E-09	5.111E-09
NE	5.475E-08	2.889E-08	1.908E-08	1.125E-08	7.776E-09	5.852E-09	4.645E-09	3.825E-09	3.234E-09	2.790E-09	2.446E-09
ENE	4.992E-08	2.629E-08	1.733E-08	1.019E-08	7.025E-09	5.276E-09	4.181E-09	3.437E-09	2.903E-09	2.502E-09	2.191E-09
E	3.179E-08	1.638E-08	1.064E-08	6.137E-09	4.177E-09	3.106E-09	2.442E-09	1.995E-09	1.675E-09	1.437E-09	1.253E-09
ESE	4.376E-08	2.285E-08	1.497E-08	8.732E-09	5.987E-09	4.476E-09	3.534E-09	2.897E-09	2.440E-09	2.098E-09	1.834E-09
SE	3.454E-08	1.735E-08	1.107E-08	6.221E-09	4.155E-09	3.045E-09	2.365E-09	1.913E-09	1.592E-09	1.355E-09	1.174E-09
SSE	6.680E-08	3.415E-08	2.206E-08	1.261E-08	8.522E-09	6.304E-09	4.934E-09	4.015E-09	3.361E-09	2.874E-09	2.500E-09

COOPER NUCLEAR STATION - ELEVATED RELEASE POINT - FIRST SEMI-ANNUAL 1981
NO DECAY, UNDEPLETED
CORRECTED FOR OPEN TERRAIN RECIRCULATION
ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

SECTOR	DISTANCE IN MILES 0.250	0.500	0.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.374E-05	4.441E-06	2.606E-06	1.458E-06	6.706E-07	3.940E-07	2.638E-07	1.916E-07	1.472E-07	1.177E-07	9.709E-08
SSW	1.054E-05	3.462E-06	1.835E-06	9.161E-07	3.600E-07	1.925E-07	1.209E-07	8.390E-08	6.219E-08	4.833E-08	3.891E-08
SW	9.322E-06	3.210E-06	1.835E-06	9.638E-07	3.990E-07	2.192E-07	1.402E-07	9.842E-08	7.361E-08	5.761E-08	4.664E-08
WSW	9.338E-06	3.154E-06	1.652E-06	8.117E-07	3.113E-07	1.637E-07	1.016E-07	6.979E-08	5.130E-08	3.958E-08	3.166E-08
W	7.197E-06	2.589E-06	1.418E-06	7.138E-07	2.809E-07	1.498E-07	9.383E-08	6.487E-08	4.793E-08	3.714E-08	2.982E-08
WNW	1.037E-05	3.667E-06	2.009E-06	1.015E-06	4.017E-07	2.151E-07	1.352E-07	9.378E-08	6.948E-08	5.396E-08	4.341E-08
NW	1.359E-05	4.887E-06	2.661E-06	1.333E-06	5.206E-07	2.763E-07	1.726E-07	1.190E-07	8.777E-08	6.789E-08	5.443E-08
NNW	1.343E-05	4.709E-06	2.523E-06	1.254E-06	4.869E-07	2.582E-07	1.612E-07	1.113E-07	8.214E-08	6.360E-08	5.103E-08
N	1.796E-05	6.303E-06	3.354E-06	1.656E-06	6.386E-07	3.374E-07	2.102E-07	1.449E-07	1.068E-07	8.258E-08	6.620E-08
NNE	1.763E-05	6.173E-06	3.317E-06	1.653E-06	6.456E-07	3.438E-07	2.154E-07	1.491E-07	1.103E-07	8.556E-08	6.877E-08
NE	1.410E-05	4.906E-06	2.716E-06	1.408E-06	5.874E-07	3.282E-07	2.130E-07	1.515E-07	1.145E-07	9.036E-08	7.369E-08
ENE	1.335E-05	4.708E-06	2.590E-06	1.315E-06	5.245E-07	2.832E-07	1.793E-07	1.252E-07	9.325E-08	7.279E-08	5.882E-08
E	1.316E-05	4.737E-06	2.820E-06	1.571E-06	7.171E-07	4.212E-07	2.823E-07	2.053E-07	1.579E-07	1.263E-07	1.042E-07
ESE	1.344E-05	4.889E-06	2.831E-06	1.518E-06	6.573E-07	3.736E-07	2.451E-07	1.755E-07	1.334E-07	1.059E-07	8.670E-08
SE	1.301E-05	4.567E-06	2.619E-06	1.404E-06	6.081E-07	3.457E-07	2.267E-07	1.623E-07	1.234E-07	9.785E-08	8.014E-08
SSE	1.605E-05	5.468E-06	2.960E-06	1.490E-06	5.893E-07	3.158E-07	1.988E-07	1.380E-07	1.024E-07	7.965E-08	6.417E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)

BEARING	DISTANCE IN MILES 5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	8.201E-08	4.531E-08	3.077E-08	1.878E-08	1.328E-08	1.015E-08	8.156E-09	6.783E-09	5.783E-09	5.026E-09	4.434E-09
SSW	3.220E-08	1.658E-08	1.077E-08	6.227E-09	4.256E-09	3.176E-09	2.505E-09	2.052E-09	1.728E-09	1.486E-09	1.299E-09
SW	3.877E-08	2.025E-08	1.327E-08	7.723E-09	5.283E-09	3.944E-09	3.110E-09	2.546E-09	2.142E-09	1.841E-09	1.608E-09
WSW	2.606E-08	1.315E-08	8.421E-09	4.762E-09	3.200E-09	2.357E-09	1.839E-09	1.493E-09	1.247E-09	1.065E-09	9.247E-10
W	2.461E-08	1.255E-08	8.092E-09	4.623E-09	3.133E-09	2.323E-09	1.822E-09	1.485E-09	1.245E-09	1.067E-09	9.293E-10
WNW	3.591E-08	1.845E-08	1.197E-08	6.902E-09	4.713E-09	3.515E-09	2.770E-09	2.267E-09	1.908E-09	1.639E-09	1.432E-09
NW	4.487E-08	2.276E-08	1.463E-08	8.316E-09	5.618E-09	4.155E-09	3.252E-09	2.646E-09	2.215E-09	1.895E-09	1.648E-09
NNW	4.211E-08	2.144E-08	1.382E-08	7.894E-09	5.345E-09	3.960E-09	3.104E-09	2.529E-09	2.120E-09	1.815E-09	1.580E-09
N	5.458E-08	2.769E-08	1.781E-08	1.012E-08	6.822E-09	5.036E-09	3.935E-09	3.197E-09	2.673E-09	2.284E-09	1.984E-09
NNE	5.682E-08	2.907E-08	1.880E-08	1.077E-08	7.293E-09	5.404E-09	4.237E-09	3.452E-09	2.893E-09	2.476E-09	2.156E-09
NE	6.166E-08	3.296E-08	2.190E-08	1.300E-08	9.015E-09	6.798E-09	5.403E-09	4.453E-09	3.768E-09	3.253E-09	2.853E-09
ENE	4.885E-08	2.546E-08	1.668E-08	9.734E-09	6.677E-09	4.995E-09	3.947E-09	3.237E-09	2.728E-09	2.347E-09	2.053E-09
E	8.802E-08	4.857E-08	3.293E-08	2.003E-08	1.410E-08	1.075E-08	8.619E-09	7.153E-09	6.089E-09	5.284E-09	4.656E-09
ESE	7.283E-08	3.952E-08	2.655E-08	1.598E-08	1.119E-08	8.493E-09	6.787E-09	5.619E-09	4.773E-09	4.135E-09	3.638E-09
SE	6.732E-08	3.657E-08	2.458E-08	1.481E-08	1.037E-08	7.879E-09	6.300E-09	5.218E-09	4.434E-09	3.843E-09	3.382E-09
SSE	5.318E-08	2.758E-08	1.802E-08	1.048E-08	7.182E-09	5.372E-09	4.245E-09	3.482E-09	2.936E-09	2.527E-09	2.211E-09

COOPER NUCLEAR STATION - COMBINED RELEASE - FIRST QUARTER 1981
INDIVIDUAL ANNUAL GAMMA AIR DOSE (MILLIRADS)

SECTOR	DISTANCE IN MILES 0.500	1.000	2.000	3.000	4.000	5.000	10.00	20.00	30.00	40.00	50.00
S	5.36E+00	1.26E+00	1.38E-01	2.60E-02	6.64E-03	2.10E-03	1.67E-04	3.53E-05	1.36E-05	6.99E-06	4.23E-06
SSW	3.93E+00	1.04E+00	2.06E-01	8.44E-02	4.47E-02	2.73E-02	5.67E-03	9.37E-04	2.23E-04	6.51E-05	2.14E-05
SW	2.53E+00	6.18E-01	7.55E-02	1.79E-02	5.56E-03	2.04E-03	8.85E-05	1.33E-05	4.93E-06	2.44E-06	1.43E-06
WSW	2.60E+00	6.43E-01	1.18E-01	4.44E-02	2.24E-02	1.34E-02	2.63E-03	3.70E-04	7.95E-05	2.11E-05	6.54E-06
W	2.66E+00	7.27E-01	1.37E-01	5.16E-02	2.56E-02	1.48E-02	2.38E-03	2.19E-04	3.27E-05	7.03E-06	2.34E-06
WNW	3.61E+00	9.92E-01	1.87E-01	7.16E-02	3.54E-02	2.04E-02	3.09E-03	2.50E-04	3.31E-05	6.72E-06	2.46E-06
NW	4.92E+00	1.33E+00	2.55E-01	9.48E-02	4.90E-02	2.87E-02	4.95E-03	5.27E-04	8.58E-05	1.89E-05	5.79E-06
NNW	4.56E+00	1.19E+00	2.29E-01	9.10E-02	4.83E-02	2.96E-02	6.53E-03	1.17E-03	3.09E-04	9.97E-05	3.64E-05
N	6.88E+00	1.78E+00	3.38E-01	1.36E-01	7.28E-02	4.52E-02	1.07E-02	2.21E-03	6.95E-04	2.62E-04	1.07E-04
NNE	6.04E+00	1.59E+00	3.04E-01	1.24E-01	6.60E-02	4.04E-02	9.06E-03	1.59E-03	4.19E-04	1.31E-04	4.73E-05
NE	6.26E+00	1.59E+00	2.42E-01	6.71E-02	2.55E-02	1.04E-02	4.14E-04	3.33E-05	1.24E-05	6.25E-06	3.70E-06
ENE	7.10E+00	1.91E+00	3.82E-01	1.54E-01	8.27E-02	5.07E-02	1.13E-02	1.94E-03	5.06E-04	1.59E-04	5.54E-05
E	7.80E+00	2.06E+00	2.74E-01	6.42E-02	1.91E-02	6.51E-03	1.74E-04	2.88E-05	1.26E-05	6.97E-06	4.40E-06
ESE	8.18E+00	2.11E+00	3.00E-01	7.68E-02	2.46E-02	9.23E-03	2.69E-04	2.82E-05	1.12E-05	5.90E-06	3.66E-06
SE	7.35E+00	1.89E+00	2.59E-01	6.36E-02	2.00E-02	7.22E-03	2.00E-04	2.67E-05	1.12E-05	5.98E-06	3.69E-06
SSE	8.60E+00	2.22E+00	4.31E-01	1.74E-01	8.85E-02	5.35E-02	1.05E-02	1.39E-03	2.83E-04	6.96E-05	2.02E-05

COOPER NUCLEAR STATION - COMBINED RELEASE - SECOND QUARTER 1981
INDIVIDUAL ANNUAL GAMMA AIR DOSE (MILLIRADS)

SECTOR	DISTANCE IN MILES 0.500	1.000	2.000	3.000	4.000	5.000	10.00	20.00	30.00	40.00	50.00
S	4.23E-01	1.11E-01	2.02E-02	7.57E-03	3.79E-03	2.17E-03	3.88E-04	6.78E-05	2.53E-05	1.28E-05	7.54E-06
SSW	5.59E-01	1.50E-01	2.77E-02	1.08E-02	5.61E-03	3.43E-03	7.82E-04	1.61E-04	5.61E-05	2.53E-05	1.35E-05
SW	3.81E-01	9.86E-02	1.75E-02	6.49E-03	3.18E-03	1.80E-03	3.07E-04	5.36E-05	2.02E-05	1.01E-05	5.94E-06
WSW	2.34E-01	5.91E-02	1.03E-02	3.89E-03	1.98E-03	1.17E-03	2.33E-04	4.65E-05	1.75E-05	8.64E-06	4.94E-06
W	2.01E-01	5.42E-02	1.03E-02	4.06E-03	2.13E-03	1.30E-03	2.99E-04	6.11E-05	2.12E-05	9.53E-06	5.07E-06
WNW	2.71E-01	7.43E-02	1.35E-02	5.05E-03	2.51E-03	1.45E-03	2.64E-04	4.78E-05	1.76E-05	8.57E-06	4.92E-06
NW	4.53E-01	1.24E-01	2.28E-02	8.56E-03	4.20E-03	2.41E-03	4.11E-04	7.01E-05	2.56E-05	1.27E-05	7.40E-06
NNW	5.35E-01	1.56E-01	2.98E-02	1.16E-02	5.97E-03	3.53E-03	6.82E-04	1.21E-04	4.30E-05	2.09E-05	1.21E-05
N	7.19E-01	1.96E-01	3.67E-02	1.48E-02	7.84E-03	4.88E-03	1.17E-03	2.61E-04	9.45E-05	4.40E-05	2.39E-05
NNE	3.98E-01	1.03E-01	1.90E-02	7.51E-03	3.98E-03	2.48E-03	6.18E-04	1.49E-04	5.78E-05	2.79E-05	1.54E-05
NE	1.55E-01	3.96E-02	7.36E-03	2.88E-03	1.51E-03	9.21E-04	2.15E-04	4.71E-05	1.73E-05	8.09E-06	4.44E-06
ENE	9.47E-02	2.42E-02	4.57E-03	1.82E-03	9.74E-04	6.04E-04	1.55E-04	3.83E-05	1.51E-05	7.34E-06	4.05E-06
E	9.71E-02	2.44E-02	4.40E-03	1.71E-03	8.98E-04	5.35E-04	1.25E-04	2.87E-05	1.10E-05	5.34E-06	2.97E-06
ESE	1.14E-01	3.00E-02	5.58E-03	2.24E-03	1.19E-03	7.40E-04	1.86E-04	4.44E-05	1.68E-05	7.98E-06	4.36E-06
SE	1.08E-01	2.64E-02	4.83E-03	1.91E-03	1.02E-03	6.35E-04	1.66E-04	4.46E-05	1.87E-05	9.61E-06	5.54E-06
SSE	2.02E-01	5.24E-02	9.80E-03	3.91E-03	2.06E-03	1.27E-03	2.97E-04	6.31E-05	2.23E-05	1.02E-05	5.52E-06

COOPER NUCLEAR STATION - COMBINED RELEASE - FIRST SEMI-ANNUAL 1981
INDIVIDUAL ANNUAL GAMMA AIR DOSE (MILLIRADS)

SECTOR	DISTANCE IN MILES 0.500	1.000	2.000	3.000	4.000	5.000	10.00	20.00	30.00	40.00	50.00
S	5.78E+00	1.38E+00	1.58E-01	3.35E-02	1.04E-02	4.27E-03	5.55E-04	1.03E-04	3.90E-05	1.98E-05	1.18E-05
SSW	4.49E+00	1.19E+00	2.34E-01	9.52E-02	5.03E-02	3.07E-02	6.46E-03	1.10E-03	2.80E-04	9.04E-05	3.49E-05
SW	2.91E+00	7.17E-01	9.30E-02	2.43E-02	8.74E-03	3.84E-03	3.96E-04	6.69E-05	2.51E-05	1.26E-05	7.38E-06
WSW	2.84E+00	7.02E-01	1.28E-01	4.82E-02	2.44E-02	2.28E-02	2.86E-03	4.16E-04	9.70E-05	2.97E-05	1.15E-05
W	2.86E+00	7.81E-01	1.47E-01	5.57E-02	2.77E-02	1.61E-02	2.68E-03	2.80E-04	5.39E-05	1.66E-05	7.41E-06
WNW	3.68E+00	1.07E+00	2.00E-01	7.66E-02	3.79E-02	2.19E-02	3.35E-03	2.98E-04	5.07E-05	1.53E-05	7.39E-06
NW	5.37E+00	1.45E+00	2.78E-01	1.03E-01	5.32E-02	3.12E-02	5.37E-03	5.97E-04	1.11E-04	3.16E-05	1.32E-05
NNW	5.09E+00	1.35E+00	2.58E-01	1.03E-01	5.42E-02	3.32E-02	7.21E-03	1.29E-03	3.52E-04	1.21E-04	4.84E-05
N	7.59E+00	1.97E+00	3.75E-01	1.50E-01	8.06E-02	5.00E-02	1.19E-02	2.47E-03	7.90E-04	3.06E-04	1.31E-04
NNE	6.44E+00	1.69E+00	3.23E-01	1.31E-01	7.00E-02	4.29E-02	9.68E-03	1.73E-03	4.77E-04	1.59E-04	6.27E-05
NE	6.41E+00	1.63E+00	2.50E-01	7.00E-02	2.70E-02	1.13E-02	6.29E-04	8.04E-05	2.97E-05	1.43E-05	8.14E-06
ENE	7.20E+00	1.93E+00	3.87E-01	1.56E-01	8.36E-02	5.13E-02	1.15E-02	1.98E-03	5.21E-04	1.66E-04	5.94E-05
E	7.90E+00	2.09E+00	2.78E-01	6.59E-02	2.00E-02	7.04E-03	2.99E-04	5.75E-05	2.37E-05	1.23E-05	7.37E-06
ESE	8.29E+00	2.14E+00	3.06E-01	7.91E-02	2.58E-02	9.97E-03	4.56E-04	7.25E-05	2.80E-05	1.39E-05	8.01E-06
SE	7.46E+00	1.92E+00	2.64E-01	6.55E-02	2.11E-02	7.85E-03	3.67E-04	7.13E-05	2.98E-05	1.56E-05	9.22E-06
SSE	8.81E+00	2.28E+00	4.41E-01	1.78E-01	9.05E-02	5.48E-02	1.08E-02	1.45E-03	3.05E-04	7.98E-05	2.58E-05

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.07E-01 99.49%	1.07E-01 99.55%	1.07E-01 99.96%	1.07E-01 99.54%	1.07E-01 99.61%	1.07E-01 95.97%	1.11E-01 99.59%	4.69E-01 99.91%
GROUND	3.52E-04 0.33%	3.52E-04 0.33%	3.52E-04 0.33%	3.52E-04 0.33%	3.52E-04 0.33%	3.52E-04 0.32%	3.52E-04 0.32%	4.13E-04 0.09%
INHAL	4.20E-06 0.00%	7.53E-06 0.01%	2.94E-05 0.03%	4.73E-06 0.00%	4.07E-06 0.00%	4.20E-04 0.38%	9.41E-05 0.08%	0.0 0.0 %
VEGET	1.59E-04 0.15%	1.02E-04 0.09%	6.66E-04 0.62%	8.18E-05 0.08%	3.48E-05 0.03%	2.17E-03 1.95%	8.01E-06 0.01%	0.0 0.0 %
COW MILK	2.83E-05 0.03%	9.48E-06 0.01%	6.15E-05 0.06%	5.12E-05 0.05%	2.29E-05 0.02%	1.46E-03 1.31%	5.29E-06 0.00%	0.0 0.0 %
MEAT	9.16E-06 0.01%	1.97E-05 0.02%	1.50E-05 0.01%	9.07E-06 0.01%	3.02E-06 0.00%	8.59E-05 0.08%	8.53E-07 0.0 %	0.0 0.0 %
TOTAL	1.07E-01	1.07E-01	1.08E-01	1.07E-01	1.07E-01	1.11E-01	1.11E-01	4.69E-01

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	9.39E-06	3.12E-05	1.57E-03
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.03%	0.34%
KR 85M	3.34E-04	3.34E-04	3.34E-04	3.34E-04	3.34E-04	3.34E-04	3.45E-04	1.22E-03
	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.26%
KR 87	1.03E-01	1.03E-01	1.03E-01	1.03E-01	1.03E-01	1.03E-01	1.07E-01	4.59E-01
	96.55%	96.55%	96.55%	96.55%	96.55%	96.55%	96.58%	97.93%
KR 88	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.40E-03	3.36E-03
	2.14%	2.14%	2.14%	2.14%	2.14%	2.14%	2.09%	0.72%
XE133	3.41E-04	3.41E-04	3.41E-04	3.41E-04	3.41E-04	3.41E-04	3.65E-04	1.16E-03
	0.32%	0.32%	0.32%	0.32%	0.32%	0.32%	0.33%	0.25%
XE135	6.91E-04	6.91E-04	6.91E-04	6.91E-04	6.91E-04	6.91E-04	7.10E-04	2.23E-03
	0.65%	0.65%	0.65%	0.65%	0.65%	0.65%	0.64%	0.48%
XE135M	1.88E-06	1.88E-06	1.88E-06	1.88E-06	1.88E-06	1.88E-06	1.89E-06	3.10E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE138	2.36E-05	2.36E-05	2.36E-05	2.36E-05	2.36E-05	2.36E-05	2.39E-05	4.94E-05
	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.01%
KR 89	2.18E-08	2.18E-08	2.18E-08	2.18E-08	2.18E-08	2.18E-08	2.21E-08	5.17E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
KR 83M	7.54E-10	7.54E-10	7.54E-10	7.54E-10	7.54E-10	7.54E-10	5.88E-08	2.14E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE137	9.87E-09	9.87E-09	9.87E-09	9.87E-09	9.87E-09	9.87E-09	1.16E-08	1.81E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE133M	4.22E-06	4.22E-06	4.22E-06	4.22E-06	4.22E-06	4.22E-06	4.71E-06	3.95E-05
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE131M	2.44E-06	2.44E-06	2.44E-06	2.44E-06	2.44E-06	2.44E-06	3.03E-06	3.00E-05
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.11E-01	4.69E-01

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	3.21E-07
	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
I 133	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.87E-07
	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.05%
SR 89	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.50E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.92E-05
	4.69%	4.69%	4.69%	4.69%	4.69%	4.69%	4.69%	4.65%
CS137	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	3.45E-05
	8.40%	8.40%	8.40%	8.40%	8.40%	8.40%	8.40%	8.34%
BA140	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	8.85E-07
	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.21%
I 131	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	5.21E-08
	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
CO 58	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	2.24E-07
	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
CO 60	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	3.51E-04
	84.86%	84.86%	84.86%	84.86%	84.86%	84.86%	84.86%	84.96%
MN 54	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	6.72E-06
	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.62%
CR 51	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	2.04E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	6.76E-08
	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
TOTAL	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	4.13E-04

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	3.62E-07	9.19E-08	4.92E-07	6.38E-07	1.08E-06	2.10E-04	0.0	0.0
	8.61%	1.22%	1.67%	13.50%	26.62%	50.06%	0.0 %	0.0 %
I 133	3.27E-07	5.22E-07	6.47E-07	1.02E-06	1.76E-06	1.57E-04	0.0	0.0
	7.79%	6.93%	2.20%	21.51%	43.22%	37.49%	0.0 %	0.0 %
SR 89	2.41E-08	7.22E-07	8.40E-07	0.0	0.0	0.0	3.73E-06	0.0
	0.57%	9.58%	2.86%	0.0 %	0.0 %	0.0 %	3.96%	0.0 %
SR 90	1.53E-06	1.62E-07	2.47E-05	0.0	0.0	0.0	2.77E-06	0.0
	36.42%	2.15%	83.95%	0.0 %	0.0 %	0.0 %	2.95%	0.0 %
CS134	9.71E-07	1.44E-08	6.87E-07	1.43E-06	4.79E-07	0.0	1.68E-07	0.0
	23.12%	0.19%	2.34%	30.22%	11.77%	0.0 %	0.18%	0.0 %
CS137	6.74E-07	1.41E-08	1.08E-06	1.27E-06	4.52E-07	0.0	1.59E-07	0.0
	16.06%	0.19%	3.66%	26.96%	11.12%	0.0 %	0.17%	0.0 %
BA140	5.42E-08	3.60E-06	8.54E-07	9.77E-10	3.30E-10	0.0	2.61E-05	0.0
	1.29%	47.80%	2.90%	0.02%	0.0 %	0.0 %	27.76%	0.0 %
I 131	8.75E-08	2.23E-08	1.19E-07	1.54E-07	2.62E-07	5.09E-05	0.0	0.0
	2.09%	0.30%	0.41%	3.27%	6.45%	12.12%	0.0 %	0.0 %
CO 58	5.91E-10	2.32E-08	0.0	4.21E-10	0.0	0.0	2.54E-07	0.0
	0.01%	0.31%	0.0 %	0.0 %	0.0 %	0.0 %	0.27%	0.0 %
CO 60	1.49E-07	2.20E-06	0.0	1.08E-07	0.0	0.0	5.73E-05	0.0
	3.54%	29.16%	0.0 %	2.29%	0.0 %	0.0 %	60.90%	0.0 %
MN 54	1.67E-08	1.56E-07	0.0	9.77E-08	2.40E-08	0.0	3.52E-06	0.0
	0.40%	2.08%	0.0 %	2.07%	0.59%	0.0 %	3.74%	0.0 %
CR 51	2.54E-10	6.44E-09	0.0	0.0	5.35E-11	1.47E-10	3.48E-08	0.0
	0.0 %	0.09%	0.0 %	0.0 %	0.0 %	0.0 %	0.04%	0.0 %
I 131	2.38E-09	6.04E-10	3.24E-09	4.20E-09	7.12E-09	1.38E-06	0.0	0.0
	0.06%	0.0 %	0.01%	0.09%	0.18%	0.33%	0.0 %	0.0 %
ZN 65	1.37E-09	1.20E-09	9.12E-10	2.83E-09	1.86E-09	0.0	2.43E-08	0.0
	0.03%	0.02%	0.0 %	0.06%	0.05%	0.0 %	0.03%	0.0 %
TOTAL	4.20E-06	7.53E-06	2.94E-05	4.73E-06	4.07E-06	4.20E-04	9.41E-05	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = VEGET

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	3.27E-06	1.09E-06	4.69E-06	5.77E-06	9.74E-06	1.87E-03	0.0	0.0
	2.06%	1.07%	0.70%	7.05%	27.95%	86.03%	0.0 %	0.0 %
I 133	2.60E-11	5.39E-11	5.21E-11	7.81E-11	1.34E-10	1.26E-08	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	4.60E-06	1.58E-05	1.61E-04	0.0	0.0	0.0	0.0	0.0
	2.90%	15.52%	24.12%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	1.07E-04	1.02E-05	4.30E-04	0.0	0.0	0.0	0.0	0.0
	67.23%	10.03%	64.59%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.94E-05	4.38E-07	1.71E-05	3.50E-05	1.11E-05	0.0	3.87E-06	0.0
	12.24%	0.43%	2.56%	42.74%	31.93%	0.0 %	48.33%	0.0 %
CS137	1.49E-05	4.84E-07	3.00E-05	3.52E-05	1.18E-05	0.0	4.12E-06	0.0
	9.39%	0.48%	4.5 %	43.02%	33.80%	0.0 %	51.48%	0.0 %
BA140	1.40E-06	2.89E-05	2.25E-05	2.43E-08	8.11E-09	0.0	1.44E-08	0.0
	0.88%	28.44%	3.38%	0.03%	0.02%	0.0 %	0.18%	0.0 %
I 131	5.02E-07	1.67E-07	7.21E-07	8.87E-07	1.50E-06	2.87E-04	0.0	0.0
	0.32%	0.16%	0.11%	1.08%	4.30%	13.22%	0.0 %	0.0 %
CO 58	7.03E-08	4.03E-07	0.0	2.78E-08	0.0	0.0	0.0	0.0
	0.04%	0.40%	0.0 %	0.03%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	7.36E-06	4.01E-05	0.0	2.98E-06	0.0	0.0	0.0	0.0
	4.64%	39.52%	0.0 %	3.65%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	3.81E-07	3.84E-06	0.0	1.76E-06	5.12E-07	0.0	0.0	0.0
	0.24%	3.78%	0.0 %	2.14%	1.47%	0.0 %	0.0 %	0.0 %
CR 51	5.29E-10	8.42E-08	0.0	0.0	1.01E-10	3.04E-10	6.40E-10	0.0
	0.0 %	0.08%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	2.84E-08	9.48E-09	4.08E-08	5.02E-08	8.47E-08	1.63E-06	0.0	0.0
	0.02%	0.0 %	0.0 %	0.06%	0.24%	0.75%	0.0 %	0.0 %
ZN 65	7.69E-08	6.77E-08	4.99E-08	1.51E-07	9.81E-08	0.0	0.0	0.0
	0.05%	0.07%	0.0 %	0.18%	0.28%	0.0 %	0.0 %	0.0 %
TOTAL*	1.59E-04	1.02E-04	6.66E-04	8.18E-05	3.48E-05	2.17E-03	8.01E-06	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = COW MILK

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.17E-06	6.72E-07	3.21E-06	3.84E-06	6.47E-06	1.24E-03	0.0	0.0
	7.68%	12.27%	5.22%	7.50%	28.30%	85.38%	0.0 %	0.0 %
I 133	2.26E-08	4.35E-08	4.56E-08	6.67E-08	1.14E-07	1.09E-05	0.0	0.0
	0.08%	0.79%	0.07%	0.13%	0.50%	0.75%	0.0 %	0.0 %
SR 89	2.02E-07	6.26E-07	7.06E-06	0.0	0.0	0.0	0.0	0.0
	0.71%	11.43%	11.49%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	4.48E-06	4.07E-07	1.80E-05	0.0	0.0	0.0	0.0	0.0
	15.84%	7.42%	29.30%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.17E-05	2.67E-07	1.16E-05	2.31E-05	7.32E-06	0.0	2.57E-06	0.0
	41.17%	4.87%	18.84%	45.10%	32.03%	0.0 %	48.54%	0.0 %
CS137	8.80E-06	2.94E-07	2.02E-05	2.31E-05	7.71E-06	0.0	2.72E-06	0.0
	31.09%	5.36%	32.89%	45.12%	33.73%	0.0 %	51.45%	0.0 %
BA140	4.47E-08	8.44E-07	7.27E-07	7.62E-10	2.54E-10	0.0	4.56E-10	0.0
	0.16%	15.39%	1.18%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.34E-07	1.03E-07	4.93E-07	5.91E-07	9.94E-07	1.91E-04	0.0	0.0
	1.18%	1.89%	0.80%	1.15%	4.35%	13.12%	0.0 %	0.0 %
CO 58	3.76E-09	1.94E-08	0.0	1.45E-09	0.0	0.0	0.0	0.0
	0.01%	0.35%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	4.12E-07	2.02E-05	0.0	1.63E-07	0.0	0.0	0.0	0.0
	1.46%	36.93%	0.0 %	0.32%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	5.24E-09	4.73E-08	0.0	2.35E-08	6.85E-09	0.0	0.0	0.0
	0.02%	0.86%	0.0 %	0.05%	0.03%	0.0 %	0.0 %	0.0 %
CR 51	6.79E-11	9.71E-09	0.0	0.0	1.27E-11	3.88E-11	8.07E-11	0.0
	0.0 %	0.18%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.89E-08	5.85E-09	2.79E-08	3.34E-08	5.63E-08	1.08E-05	0.0	0.0
	0.07%	0.11%	0.05%	0.07%	0.25%	0.74%	0.0 %	0.0 %
ZN 65	1.49E-07	1.18E-07	9.57E-08	2.86E-07	1.85E-07	0.0	0.0	0.0
	0.53%	2.15%	0.16%	0.56%	0.81%	0.0 %	0.0 %	0.0 %
TOTAL	2.83E-05	5.48E-06	6.15E-05	5.12E-05	2.29E-05	1.46E-03	5.29E-06	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.29E-07	5.06E-08	1.73E-07	2.27E-07	3.87E-07	7.39E-05	0.0	0.0
	1.41%	0.26%	1.15%	2.51%	12.80%	86.03%	0.0 %	0.0 %
I 133	1.36E-14	3.33E-14	2.65E-14	4.25E-14	7.35E-14	6.56E-12	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	5.35E-08	2.31E-07	1.87E-06	0.0	0.0	0.0	0.0	0.0
	0.58%	1.17%	12.42%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	1.75E-06	1.86E-07	7.10E-06	0.0	0.0	0.0	0.0	0.0
	19.14%	0.95%	47.27%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	2.56E-06	5.64E-08	1.74E-06	3.81E-06	1.22E-06	0.0	4.17E-07	0.0
	27.98%	0.29%	11.56%	42.02%	40.42%	0.0 %	48.90%	0.0 %
CS137	1.98E-06	6.12E-08	3.00E-06	3.76E-06	1.27E-06	0.0	4.35E-07	0.0
	21.57%	0.31%	19.94%	41.52%	41.96%	0.0 %	51.01%	0.0 %
BA140	6.91E-08	1.75E-06	1.09E-06	1.25E-09	4.23E-10	0.0	7.35E-10	0.0
	0.75%	8.86%	7.24%	0.01%	0.01%	0.0 %	0.09%	0.0 %
I 131	1.99E-08	7.78E-09	2.66E-08	3.50E-08	5.95E-08	1.14E-05	0.0	0.0
	0.22%	0.04%	0.18%	0.39%	1.97%	13.22%	0.0 %	0.0 %
CO 58	1.98E-08	1.42E-07	0.0	8.27E-09	0.0	0.0	0.0	0.0
	0.22%	0.72%	0.0 %	0.09%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.52E-06	1.71E-05	0.0	1.07E-06	0.0	0.0	0.0	0.0
	27.46%	86.60%	0.0 %	11.84%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	7.66E-09	9.71E-08	0.0	3.75E-08	1.10E-08	0.0	0.0	0.0
	0.08%	0.49%	0.0 %	0.41%	0.37%	0.0 %	0.0 %	0.0 %
CR 51	2.33E-11	4.65E-09	0.0	0.0	4.78E-12	1.36E-11	2.95E-11	0.0
	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.13E-09	4.40E-10	1.50E-09	1.98E-09	3.36E-09	6.43E-07	0.0	0.0
	0.01%	0.0 %	0.01%	0.02%	0.11%	0.75%	0.0 %	0.0 %
ZN 65	5.20E-08	5.75E-08	3.40E-08	1.08E-07	7.11E-08	0.0	0.0	0.0
	0.57%	0.29%	0.23%	1.19%	2.35%	0.0 %	0.0 %	0.0 %
TOTAL	9.16E-06	1.97E-05	1.50E-05	9.07E-06	3.02E-06	8.59E-05	8.53E-07	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	9.39E-06 0.0 %	9.39E-06 0.0 %	9.39E-06 0.0 %	9.39E-06 0.0 %	9.39E-06 0.0 %	9.39E-06 0.0 %	3.12E-05 0.03%	1.57E-03 0.34%
KR 85M	3.34E-04 0.31%	3.34E-04 0.31%	3.34E-04 0.31%	3.34E-04 0.31%	3.34E-04 0.31%	3.34E-04 0.30%	3.45E-04 0.31%	1.22E-03 0.26%
KR 87	1.03E-01 96.05%	1.03E-01 96.11%	1.03E-01 95.54%	1.03E-01 96.10%	1.03E-01 96.17%	1.03E-01 92.66%	1.07E-01 96.19%	4.59E-01 97.85%
KR 88	2.29E-03 2.13%	2.29E-03 2.13%	2.29E-03 2.12%	2.29E-03 2.13%	2.29E-03 2.13%	2.29E-03 2.05%	2.30E-03 2.07%	3.36E-03 0.72%
XE133	3.41E-04 0.32%	3.41E-04 0.32%	3.41E-04 0.32%	3.41E-04 0.32%	3.41E-04 0.32%	3.41E-04 0.31%	3.65E-04 0.33%	1.16E-03 0.25%
XE135	6.91E-04 0.64%	6.91E-04 0.64%	6.91E-04 0.64%	6.91E-04 0.64%	6.91E-04 0.64%	6.91E-04 0.62%	7.10E-04 0.64%	2.23E-03 0.48%
XE135M	1.88E-06 0.0 %	1.88E-06 0.0 %	1.88E-06 0.0 %	1.88E-06 0.0 %	1.88E-06 0.0 %	1.88E-06 0.0 %	1.89E-06 0.0 %	3.10E-06 0.0 %
XE138	2.36E-05 0.02%	2.36E-05 0.02%	2.36E-05 0.02%	2.36E-05 0.02%	2.36E-05 0.02%	2.36E-05 0.02%	2.39E-05 0.02%	4.94E-05 0.01%
KR 89	2.18E-08 0.0 %	2.18E-08 0.0 %	2.19E-08 0.0 %	2.18E-08 0.0 %	2.18E-08 0.0 %	2.18E-08 0.0 %	2.21E-08 0.0 %	5.17E-08 0.0 %
KR 83M	7.54E-10 0.0 %	7.54E-10 0.0 %	7.54E-10 0.0 %	7.54E-10 0.0 %	7.54E-10 0.0 %	7.54E-10 0.0 %	5.88E-08 0.0 %	2.14E-07 0.0 %
XE137	9.87E-09 0.0 %	9.87E-09 0.0 %	9.87E-09 0.0 %	9.87E-09 0.0 %	9.87E-09 0.0 %	9.87E-09 0.0 %	1.16E-08 0.0 %	1.81E-07 0.0 %
XE133M	4.22E-06 0.0 %	4.22E-06 0.0 %	4.22E-06 0.0 %	4.22E-06 0.0 %	4.22E-06 0.0 %	4.22E-06 0.0 %	4.71E-06 0.0 %	3.95E-05 0.0 %
XE131M	2.44E-06 0.0 %	2.44E-06 0.0 %	2.44E-06 0.0 %	2.44E-06 0.0 %	2.44E-06 0.0 %	2.44E-06 0.0 %	3.03E-06 0.0 %	3.00E-05 0.0 %
I 131	6.20E-06 0.0 %	2.17E-06 0.0 %	9.83E-06 0.0 %	1.07E-05 0.01%	1.79E-05 0.02%	3.40E-03 3.05%	2.69E-07 0.0 %	3.21E-07 0.0 %
I 133	5.04E-07 0.0 %	7.19E-07 0.0 %	8.47E-07 0.0 %	1.24E-06 0.0 %	2.03E-06 0.0 %	1.68E-04 0.15%	1.54E-07 0.0 %	1.87E-07 0.0 %
SR 89	4.88E-06 0.0 %	1.73E-05 0.02%	1.70E-04 0.16%	1.29E-10 0.0 %	1.29E-10 0.0 %	1.29E-10 0.0 %	3.73E-06 0.0 %	1.50E-10 0.0 %
SR 90	1.14E-04 0.11%	1.09E-05 0.01%	4.80E-04 0.44%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	2.77E-06 0.0 %	0.0 0.0 %
CS134	5.11E-05 0.05%	1.73E-05 0.02%	4.76E-05 0.04%	7.98E-05 0.07%	1.66E-05 0.01%	1.65E-05 0.01%	2.35E-05 0.02%	1.42E-05 0.0 %

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL* (CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	5.59E-05	3.04E-05	8.38E-05	9.29E-05	5.07E-05	2.95E-05	3.70E-05	3.45E-05
	0.05%	0.03%	0.08%	0.09%	0.05%	0.03%	0.03%	0.0 %
BA140	2.34E-06	3.59E-05	2.60E-05	8.02E-07	7.84E-07	7.75E-07	2.69E-05	8.85E-07
	0.0 %	0.03%	0.02%	0.0 %	0.0 %	0.0 %	0.02%	0.0 %
I 131	9.87E-07	3.44E-07	1.40E-06	1.71E-06	2.86E-06	5.41E-04	4.29E-08	5.21E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.49%	0.0 %	0.0 %
CO 58	2.85E-07	7.78E-07	1.91E-07	2.29E-07	1.91E-07	1.91E-07	4.44E-07	2.24E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	3.09E-04	3.60E-04	2.99E-04	3.03E-04	2.99E-04	2.99E-04	3.56E-04	3.51E-04
	0.29%	0.34%	0.28%	0.28%	0.28%	0.27%	0.32%	0.07%
MN 54	6.14E-06	9.87E-06	5.73E-06	7.64E-06	6.28E-06	5.73E-06	9.25E-06	6.72E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CR 51	1.81E-08	1.22E-07	1.72E-08	1.72E-08	1.74E-08	1.77E-08	5.28E-08	2.04E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	5.31E-08	1.86E-08	7.57E-08	9.21E-08	1.54E-07	2.91E-05	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.03%	0.0 %	0.0 %
ZN 65	3.39E-07	3.03E-07	2.40E-07	6.06E-07	4.15E-07	5.88E-08	8.31E-08	6.76E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.07E-01	1.07E-01	1.08E-01	1.07E-01	1.07E-01	1.11E-01	1.11E-01	4.69E-01

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.84E-03	9.84E-03	9.84E-03	9.84E-03	9.84E-03	9.84E-03	1.00E-02	2.24E-02
	80.37%	79.91%	78.99%	78.83%	80.87%	25.79%	80.96%	90.47%
GROUND	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.37E-03
	16.43%	16.32%	16.15%	16.11%	16.53%	5.27%	16.29%	9.53%
INHAL	7.93E-06	1.42E-05	1.78E-05	1.30E-05	1.07E-05	1.49E-03	2.97E-04	0.0
	0.07%	0.12%	0.14%	0.10%	0.09%	3.74%	2.32%	0.0 %
VEGET	2.44E-04	3.30E-04	4.01E-04	3.56E-04	1.74E-04	1.46E-02	3.05E-05	0.0
	2.00%	2.68%	3.22%	2.85%	1.43%	38.23%	0.25%	0.0 %
COW MILK	1.04E-04	2.66E-05	1.62E-04	2.20E-04	1.17E-04	9.72E-03	2.02E-05	0.0
	0.85%	0.22%	1.30%	1.76%	0.96%	25.46%	0.16%	0.0 %
MEAT	1.50E-05	1.08E-04	2.52E-05	4.23E-05	1.59E-05	5.77E-04	1.25E-06	0.0
	0.29%	0.87%	0.20%	0.34%	0.13%	1.51%	0.01%	0.0 %
TOTAL	1.22E-02	1.23E-02	1.25E-02	1.25E-02	1.22E-02	3.82E-02	1.24E-02	2.48E-02

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM 4)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	8.95E-07 0.6 %	8.95E-07 0.6 %	8.95E-07 0.6 %	8.95E-07 0.6 %	8.95E-07 0.6 %	8.95E-07 0.6 %	2.98E-06 0.83%	1.50E-04 0.67%
KR 85M	3.35E-04 3.41%	3.35E-04 3.41%	3.35E-04 3.41%	3.35E-04 3.41%	3.35E-04 3.41%	3.35E-04 3.41%	3.47E-04 3.47%	1.23E-03 5.47%
KR 87	7.10E-04 7.23%	7.10E-04 7.23%	7.10E-04 7.23%	7.10E-04 7.23%	7.10E-04 7.23%	7.10E-04 7.23%	7.97E-04 7.97%	3.42E-03 15.25%
KR 88	6.00E-03 60.98%	6.00E-03 60.98%	6.00E-03 60.98%	6.00E-03 60.98%	6.00E-03 60.98%	6.00E-03 60.98%	6.83E-03 60.29%	8.83E-03 39.32%
XE133	4.14E-04 4.20%	4.14E-04 4.20%	4.14E-04 4.20%	4.14E-04 4.20%	4.14E-04 4.20%	4.14E-04 4.20%	4.43E-04 4.43%	1.41E-03 6.29%
XE135	2.17E-03 22.02%	2.17E-03 22.02%	2.17E-03 22.02%	2.17E-03 22.02%	2.17E-03 22.02%	2.17E-03 22.02%	2.23E-03 22.25%	7.01E-03 31.23%
XE135M	1.05E-05 0.11%	1.05E-05 0.11%	1.05E-05 0.11%	1.05E-05 0.11%	1.05E-05 0.11%	1.05E-05 0.11%	1.06E-05 0.11%	1.74E-05 0.08%
XE138	1.31E-04 1.33%	1.31E-04 1.33%	1.31E-04 1.33%	1.31E-04 1.33%	1.31E-04 1.33%	1.31E-04 1.33%	1.32E-04 1.32%	2.74E-04 1.22%
KR 89	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.14E-08 0.0 %	7.35E-08 0.0 %
KR 89M	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	2.42E-07 0.0 %	3.81E-07 0.0 %
XE137	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	2.27E-08 0.0 %	3.55E-07 0.0 %
XE133M	1.01E-05 0.10%	1.01E-05 0.10%	1.01E-05 0.10%	1.01E-05 0.10%	1.01E-05 0.10%	1.01E-05 0.10%	1.13E-05 0.11%	9.44E-05 0.42%
XE131M	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	7.73E-07 0.0 %	1.86E-06 0.04%
TOTAL	9.84E-03	9.84E-03	9.84E-03	9.84E-03	9.84E-03	9.84E-03	1.00E-02	2.24E-02

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : CONCRETE RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAIRED)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.55E-06 0.11%
I 133	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	2.30E-07 0.0 %
SR 89	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	4.59E-12 0.0 %
CS134	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	6.42E-05 2.72%
CS137	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.53E-04 6.45%
BA140	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	8.46E-07 0.04%
I 131	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	1.16E-07 0.0 %
CO 58	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	6.69E-06 0.28%
CO 60	1.75E-03 86.80%	1.75E-03 86.80%	1.75E-03 86.80%	1.75E-03 86.80%	1.75E-03 86.80%	1.75E-03 86.80%	1.75E-03 86.80%	2.06E-03 86.88%
MN 54	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	7.94E-05 3.35%
CR 51	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	2.12E-07 0.0 %
ZN 65	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.46E-06 0.15%
I 133	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	7.40E-10 0.0 %
TOTAL	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.37E-03

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.15E-06 26.93%	5.46E-07 3.84%	2.93E-06 16.96%	3.79E-05 29.16%	5.43E-06 60.27%	1.25E-03 87.46%	0.0 0.0 %	0.0 0.0 %
I 133	2.14E-07 2.69%	3.42E-07 2.41%	4.25E-07 2.46%	6.67E-07 5.13%	1.15E-06 10.88%	1.03E-04 7.24%	0.0 0.0 %	0.0 0.0 %
SR 89	7.87E-10 0.0 %	2.36E-08 0.17%	2.74E-08 0.16%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	1.22E-07 0.04%	0.0 0.0 %
SR 90	5.26E-07 6.59%	5.56E-08 0.39%	8.50E-06 49.22%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	9.54E-07 0.33%	0.0 0.0 %
CS134	2.13E-06 26.63%	3.15E-08 0.22%	1.50E-06 8.72%	3.13E-06 24.03%	1.05E-06 9.82%	0.0 0.0 %	3.69E-07 0.13%	0.0 0.0 %
CS137	1.95E-06 24.42%	4.07E-08 0.29%	3.11E-06 18.03%	3.68E-06 28.31%	1.31E-06 12.24%	0.0 0.0 %	4.61E-07 0.16%	0.0 0.0 %
BA140	3.37E-08 0.42%	2.24E-06 15.73%	5.30E-07 3.07%	6.06E-10 0.0 %	2.05E-10 0.0 %	0.0 0.0 %	1.62E-05 5.65%	0.0 0.0 %
I 131	1.30E-07 1.63%	3.31E-08 0.23%	1.77E-07 1.03%	2.30E-07 1.77%	3.90E-07 3.65%	7.57E-05 5.30%	0.0 0.0 %	0.0 0.0 %
CO 58	1.54E-08 0.19%	6.06E-07 4.26%	0.0 0.0 %	1.10E-08 0.08%	0.0 0.0 %	0.0 0.0 %	6.51E-06 2.30%	0.0 0.0 %
CO 60	5.93E-07 7.42%	8.77E-06 61.68%	0.0 0.0 %	4.31E-07 3.32%	0.0 0.0 %	0.0 0.0 %	2.29E-04 79.71%	0.0 0.0 %
MN 54	1.50E-07 1.88%	1.40E-06 9.86%	0.0 0.0 %	8.15E-07 6.13%	2.15E-07 2.02%	0.0 0.0 %	3.16E-05 11.01%	0.0 0.0 %
CR 51	1.92E-09 0.02%	4.87E-08 0.34%	0.0 0.0 %	0.0 0.0 %	4.09E-10 0.0 %	1.11E-09 0.0 %	2.63E-07 0.09%	0.0 0.0 %
ZN 65	9.20E-08 1.15%	8.05E-08 0.57%	6.11E-04 0.35%	1.90E-07 1.46%	1.25E-07 1.17%	0.0 0.0 %	1.63E-06 0.57%	0.0 0.0 %
I 133	5.36E-10 0.0 %	8.55E-10 0.0 %	1.05E-09 0.0 %	1.67E-09 0.01%	2.84E-09 0.03%	2.58E-07 0.02%	0.0 0.0 %	0.0 0.0 %
TOTAL	7.98E-06	1.42E-05	1.73E-05	1.30E-05	1.07E-05	1.43E-03	2.87E-04	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = VEGET

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.44E-05	8.14E-06	3.50E-05	4.31E-05	1.27E-05	1.40E-02	0.0	0.0
	9.99%	2.47%	9.73%	12.05%	41.87%	95.71%	0.0 %	0.0 %
I 133	2.92E-11	6.05E-11	5.84E-11	9.76E-11	1.50E-10	1.41E-06	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	1.23E-07	4.23E-07	4.31E-06	0.0	0.0	0.0	0.0	0.0
	0.05%	0.13%	1.07%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	3.77E-05	3.50E-06	1.52E-04	0.0	0.0	0.0	0.0	0.0
	15.41%	1.09%	37.62%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	6.34E-05	1.43E-06	5.57E-05	1.14E-04	4.63E-05	0.0	1.26E-05	0.0
	25.95%	0.43%	13.89%	32.04%	20.91%	0.0 %	41.41%	0.0 %
CS137	6.46E-05	2.10E-06	1.30E-04	1.53E-04	5.10E-05	0.0	1.79E-05	0.0
	26.43%	0.64%	32.39%	42.79%	29.47%	0.0 %	58.52%	0.0 %
BA140	1.28E-06	2.64E-05	2.04E-05	2.21E-08	1.41E-09	0.0	1.32E-08	0.0
	0.52%	7.99%	5.12%	0.0 %	0.0 %	0.0 %	0.04%	0.0 %
I 131	1.09E-06	3.65E-07	1.57E-06	1.93E-06	3.26E-06	6.26E-04	0.0	0.0
	0.45%	0.11%	3.93%	0.54%	1.88%	4.29%	0.0 %	0.0 %
CO 58	1.98E-06	1.14E-05	0.0	1.04E-07	0.0	0.0	0.0	0.0
	0.81%	3.45%	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	4.20E-05	2.29E-04	0.0	1.70E-05	0.0	0.0	0.0	0.0
	17.16%	69.31%	0.0 %	4.77%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	4.31E-06	4.35E-05	0.0	1.29E-05	5.08E-06	0.0	0.0	0.0
	1.76%	13.17%	0.0 %	3.58%	3.34%	0.0 %	0.0 %	0.0 %
CR 51	5.33E-09	8.49E-07	0.0	0.0	1.02E-09	3.06E-09	5.44E-09	0.0
	0.0 %	0.26%	0.0 %	0.0 %	0.0 %	0.0 %	0.02%	0.0 %
ZN 65	3.57E-06	3.14E-06	2.32E-06	6.99E-06	4.56E-06	0.0	0.0	0.0
	1.46%	0.95%	3.53%	1.95%	2.62%	0.0 %	0.0 %	0.0 %
I 133	9.39E-14	1.95E-13	1.49E-13	2.82E-13	4.84E-13	4.54E-11	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	2.44E-04	3.30E-04	6.01E-04	3.56E-04	1.74E-04	1.46E-02	3.05E-05	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAN-REM)
PATHWAY = COW MILK

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.62E-05 15.57%	5.02E-06 18.48%	2.40E-05 14.77%	2.87E-05 13.94%	4.83E-05 41.43%	9.29E-03 95.59%	0.0 0.0 %	0.0 0.0 %
I 133	2.53E-08 0.02%	4.88E-08 0.18%	5.12E-08 0.03%	7.49E-08 0.04%	1.28E-07 0.11%	1.22E-05 0.13%	0.0 0.0 %	0.0 0.0 %
SR 89	5.42E-09 0.0 %	1.68E-08 0.06%	1.89E-07 0.12%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 90	1.58E-05 1.52%	1.44E-07 0.54%	6.36E-06 3.92%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CS134	3.80E-05 36.50%	8.72E-07 3.28%	3.79E-05 23.33%	7.55E-05 36.27%	2.39E-05 20.51%	0.0 0.0 %	8.39E-06 41.56%	0.0 0.0 %
CS137	3.81E-05 36.57%	1.27E-06 4.79%	8.76E-05 54.02%	1.00E-04 45.49%	3.34E-05 28.65%	0.0 0.0 %	1.18E-05 58.43%	0.0 0.0 %
BA140	4.08E-08 0.04%	7.70E-07 2.90%	6.64E-07 0.41%	6.96E-10 0.0 %	2.32E-10 0.0 %	0.0 0.0 %	4.16E-10 0.0 %	0.0 0.0 %
I 131	7.27E-07 0.70%	2.25E-07 0.85%	1.07E-06 0.66%	1.29E-06 0.58%	2.17E-06 1.86%	4.16E-04 4.28%	0.0 0.0 %	0.0 0.0 %
CO 58	1.06E-07 0.10%	5.47E-07 2.06%	0.0 0.0 %	4.10E-08 0.02%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CO 60	2.35E-06 2.25%	1.15E-05 43.42%	0.0 0.0 %	9.31E-07 0.42%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
MN 54	5.93E-08 0.06%	5.35E-07 2.01%	0.0 0.0 %	2.07E-07 0.12%	1.75E-08 0.01%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CR 51	6.83E-10 0.0 %	9.78E-08 0.37%	0.0 0.0 %	0.0 0.0 %	1.29E-10 0.0 %	3.90E-10 0.0 %	8.12E-10 0.0 %	0.0 0.0 %
ZN 65	6.94E-06 6.66%	5.48E-06 20.64%	4.45E-06 2.74%	1.33E-05 6.03%	8.61E-06 7.34%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
I 133	8.15E-11 0.0 %	1.57E-10 0.0 %	1.65E-10 0.0 %	2.41E-10 0.0 %	4.12E-10 0.0 %	3.94E-08 0.0 %	0.0 0.0 %	0.0 0.0 %
TOTAL	1.04E-04	2.66E-05	1.63E-04	2.20E-04	1.17E-04	9.72E-03	2.02E-05	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAN-REM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	9.67E-07	3.78E-07	1.29E-06	1.70E-06	2.49E-06	5.52E-04	0.0	0.0
	2.68%	0.45%	5.13%	4.61%	18.13%	95.71%	0.0 %	0.0 %
I 133	1.53E-14	3.75E-14	2.98E-14	4.77E-14	8.25E-14	7.36E-12	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	1.44E-09	6.20E-09	5.91E-08	0.0	0.0	0.0	0.0	0.0
	0.0 %	0.7 %	0.20%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	6.19E-07	6.59E-08	2.51E-06	0.0	0.0	0.0	0.0	0.0
	1.72%	0.06%	9.96%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	8.37E-06	1.84E-07	5.67E-06	1.24E-05	1.93E-06	0.0	1.36E-06	0.0
	23.24%	0.17%	22.53%	29.40%	25.04%	0.0 %	41.93%	0.0 %
CS137	8.56E-06	2.65E-07	1.30E-05	1.63E-05	5.50E-06	0.0	1.89E-06	0.0
	23.77%	0.25%	51.58%	38.54%	34.48%	0.0 %	58.04%	0.0 %
BA140	6.31E-08	1.59E-06	9.93E-07	1.15E-09	3.86E-10	0.0	6.72E-10	0.0
	0.18%	1.48%	3.94%	0.0 %	0.0 %	0.0 %	0.02%	0.0 %
I 131	4.33E-08	1.69E-08	5.79E-08	7.62E-08	1.30E-07	2.48E-05	0.0	0.0
	0.12%	0.02%	0.23%	0.18%	0.81%	4.29%	0.0 %	0.0 %
CO 58	5.58E-07	4.08E-06	0.0	2.31E-07	0.0	0.0	0.0	0.0
	1.55%	3.72%	0.0 %	0.55%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	1.43E-05	9.73E-05	0.0	6.12E-06	0.0	0.0	0.0	0.0
	39.79%	88.48%	0.0 %	14.46%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	8.68E-08	1.10E-06	0.0	4.25E-07	1.25E-07	0.0	0.0	0.0
	0.24%	1.00%	0.0 %	1.00%	0.79%	0.0 %	0.0 %	0.0 %
ZR 95	2.35E-10	4.68E-08	0.0	0.0	4.61E-11	1.37E-10	2.97E-10	0.0
	0.0 %	0.04%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	2.42E-06	2.07E-06	1.62E-06	5.01E-06	1.31E-06	0.0	0.0	0.0
	6.71%	2.49%	5.42%	11.84%	20.75%	0.0 %	0.0 %	0.0 %
I 133	4.91E-17	1.20E-16	9.59E-17	1.54E-16	2.66E-16	2.37E-14	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	3.60E-05	1.09E-04	2.52E-05	4.23E-05	1.59E-05	5.77E-04	3.25E-06	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	8.95E-07 0.0 %	8.95E-07 0.0 %	8.95E-07 0.0 %	8.95E-07 0.0 %	8.95E-07 0.0 %	8.95E-07 0.0 %	2.98E-06 0.02%	1.50E-04 0.61%
KR 85M	3.35E-04 2.74%	3.35E-04 2.72%	3.35E-04 2.69%	3.35E-04 2.69%	3.35E-04 2.76%	3.35E-04 0.88%	3.47E-04 2.81%	1.23E-03 4.95%
KR 87	7.70E-04 6.29%	7.70E-04 6.25%	7.70E-04 6.18%	7.70E-04 6.17%	7.70E-04 6.33%	7.70E-04 2.02%	7.97E-04 6.45%	3.42E-03 13.80%
KR 88	6.00E-03 49.01%	6.00E-03 48.67%	6.00E-03 48.17%	6.00E-03 48.07%	6.00E-03 49.31%	6.00E-03 15.71%	6.03E-03 48.81%	8.83E-03 35.57%
XE133	4.14E-04 3.38%	4.14E-04 3.35%	4.14E-04 3.32%	4.14E-04 3.31%	4.14E-04 3.40%	4.14E-04 1.09%	4.43E-04 3.59%	1.41E-03 5.69%
XE135	2.17E-03 17.70%	2.17E-03 17.58%	2.17E-03 17.40%	2.17E-03 17.36%	2.17E-03 17.81%	2.17E-03 5.68%	2.23E-03 18.07%	7.01E-03 28.25%
XE135M	1.05E-05 0.09%	1.05E-05 0.09%	1.05E-05 0.08%	1.05E-05 0.08%	1.05E-05 0.09%	1.05E-05 0.03%	1.06E-05 0.09%	1.74E-05 0.07%
XE138	1.31E-04 1.07%	1.31E-04 1.06%	1.31E-04 1.05%	1.31E-04 1.05%	1.31E-04 1.08%	1.31E-04 0.34%	1.32E-04 1.07%	2.74E-04 1.10%
KR 89	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.10E-08 0.0 %	3.14E-08 0.0 %	7.35E-08 0.0 %
KR 83M	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	3.11E-09 0.0 %	2.42E-07 0.0 %	8.81E-07 0.0 %
XE137	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	1.93E-08 0.0 %	2.27E-08 0.0 %	3.55E-07 0.0 %
XE133M	1.01E-05 0.08%	1.01E-05 0.08%	1.01E-05 0.08%	1.01E-05 0.08%	1.01E-05 0.08%	1.01E-05 0.03%	1.03E-05 0.09%	9.44E-05 0.38%
XE131M	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	6.39E-07 0.0 %	7.93E-07 0.0 %	7.86E-06 0.03%
I 131	4.59E-05 0.37%	1.62E-05 0.13%	6.53E-05 0.52%	7.95E-05 0.64%	1.32E-04 1.09%	2.51E-02 65.65%	2.10E-06 0.02%	2.55E-05 0.01%
I 133	5.29E-07 0.0 %	5.80E-07 0.0 %	6.65E-07 0.0 %	9.11E-07 0.0 %	1.47E-06 0.01%	1.16E-04 0.30%	1.09E-07 0.0 %	2.30E-07 0.0 %
SR 89	1.31E-07 0.0 %	4.69E-07 0.0 %	4.57E-06 0.04%	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	1.22E-07 0.0 %	4.39E-12 0.0 %
SR 90	4.04E-05 0.33%	3.80E-06 0.03%	1.69E-04 1.36%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	9.56E-07 0.0 %	0.0 0.0 %
CS134	1.67E-04 1.35%	5.74E-05 0.47%	1.56E-04 1.25%	2.69E-04 2.08%	1.20E-04 0.93%	5.51E-05 0.14%	1.78E-05 0.01%	6.42E-05 0.26%

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL* (CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	2.44E-04	1.34E-04	3.64E-04	4.03E-04	2.22E-04	1.31E-04	1.63E-04	1.53E-04
	1.99%	1.09%	2.92%	3.23%	1.82%	0.34%	1.32%	0.62%
BA140	2.15E-06	3.17E-05	2.35E-05	7.65E-07	7.49E-07	7.40E-07	1.70E-05	8.46E-07
	0.02%	0.26%	0.19%	0.0 %	0.0 %	0.0 %	0.14%	0.0 %
I 131	2.09E-05	7.35E-07	2.97E-06	3.62E-06	6.04E-06	1.14E-03	9.56E-08	1.16E-07
	0.02%	0.0 %	0.02%	0.03%	0.05%	2.99%	0.0 %	0.0 %
CO 58	8.38E-06	2.22E-05	5.71E-06	6.78E-06	5.71E-06	5.71E-06	1.23E-05	6.69E-06
	0.07%	0.18%	0.05%	0.05%	0.05%	0.01%	0.10%	0.03%
CO 60	1.81E-03	2.09E-03	1.75E-03	1.77E-03	1.75E-03	1.75E-03	1.98E-03	2.06E-03
	14.75%	16.97%	14.02%	14.18%	14.35%	4.58%	15.99%	8.28%
MN 54	7.23E-05	1.14E-04	6.77E-05	8.91E-05	7.39E-05	6.77E-05	9.93E-05	7.94E-05
	0.59%	0.93%	0.54%	0.71%	0.61%	0.18%	0.80%	0.32%
CR 51	1.88E-07	1.22E-06	1.80E-07	1.80E-07	1.81E-07	1.84E-07	4.50E-07	2.12E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	1.60E-05	1.44E-05	1.14E-05	2.85E-05	1.96E-05	3.01E-06	4.63E-06	3.46E-06
	0.13%	0.12%	0.09%	0.23%	0.16%	0.0 %	0.04%	0.01%
I 133	1.23E-09	1.62E-09	1.83E-09	2.52E-09	3.90E-09	2.98E-07	6.08E-10	7.40E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.22E-02	1.23E-02	1.25E-02	1.25E-02	1.22E-02	3.82E-02	1.24E-02	2.48E-02

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)

PATHWAY	WHOLE BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.17E-01 97.53%	1.17E-01 97.53%	1.17E-01 96.90%	1.17E-01 97.38%	1.17E-01 97.70%	1.17E-01 74.07%	1.21E-01 97.72%	4.91E-01 99.44%
GROUND	2.36E-03 1.97%	2.36E-03 1.97%	2.36E-03 1.96%	2.36E-03 1.97%	2.36E-03 1.98%	2.36E-03 1.50%	2.36E-03 1.92%	2.78E-03 0.56%
INHAL	1.22E-05 0.01%	2.17E-05 0.02%	4.67E-05 0.04%	1.77E-05 0.01%	1.47E-05 0.01%	1.95E-03 1.24%	3.81E-04 0.31%	0.0 0.0 %
VEGET	4.03E-04 0.34%	4.42E-04 0.36%	1.07E-03 0.89%	4.38E-04 0.37%	2.03E-04 0.17%	1.68E-02 11.21%	3.85E-05 0.03%	0.0 0.0 %
COW MILK	1.33E-04 0.11%	3.21E-05 0.03%	2.24E-04 0.19%	2.71E-04 0.23%	1.39E-04 0.12%	1.12E-02 7.47%	2.55E-05 0.02%	0.0 0.0 %
MEAT	4.52E-05 0.04%	1.27E-04 0.11%	4.02E-05 0.03%	5.14E-05 0.04%	1.90E-05 0.02%	6.63E-04 0.44%	4.10E-06 0.00%	0.0 0.0 %
TOTAL	1.20E-01	1.20E-01	1.21E-01	1.20E-01	1.20E-01	1.50E-01	1.23E-01	4.94E-01

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	3.42E-05 0.0 %	1.72E-04 0.35%
KR 85M	6.69E-04 0.57%	6.69E-04 0.57%	6.69E-04 0.57%	6.69E-04 0.57%	6.69E-04 0.57%	6.69E-04 0.57%	5.92E-04 0.57%	2.45E-03 0.50%
KR 87	1.04E-01 89.07%	1.04E-01 89.07%	1.04E-01 89.07%	1.04E-01 89.07%	1.04E-01 89.07%	1.04E-01 89.07%	1.08E-01 89.23%	4.62E-01 94.15%
KR 88	8.29E-03 7.10%	8.29E-03 7.10%	8.29E-03 7.10%	8.29E-03 7.10%	8.29E-03 7.10%	8.29E-03 7.10%	8.33E-03 6.91%	1.22E-02 2.48%
XE133	7.55E-04 0.65%	7.55E-04 0.65%	7.55E-04 0.65%	7.55E-04 0.65%	7.55E-04 0.65%	7.55E-04 0.65%	8.08E-04 0.67%	2.59E-03 0.52%
XE135	2.86E-03 2.45%	2.86E-03 2.45%	2.86E-03 2.45%	2.86E-03 2.45%	2.86E-03 2.45%	2.86E-03 2.45%	2.94E-03 2.44%	9.24E-03 1.88%
XE135M	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.25E-05 0.01%	2.05E-05 0.0 %
XE138	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.56E-04 0.13%	3.24E-04 0.07%
KR 89	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.34E-08 0.0 %	1.25E-07 0.0 %
KR 83M	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.91E-07 0.0 %	1.09E-06 0.0 %
XE137	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	3.43E-08 0.0 %	5.36E-07 0.0 %
XE133M	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.60E-05 0.01%	1.34E-04 0.03%
XE131M	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.82E-06 0.0 %	3.79E-05 0.0 %
TOTAL	1.17E-01	1.17E-01	1.17E-01	1.17E-01	1.17E-01	1.17E-01	1.21E-01	4.91E-01

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1991 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.51E-06	6.38E-07	3.42E-06	4.34E-06	1.52E-06	1.46E-01	0.0	0.0
	20.61%	2.94%	7.11%	24.98%	50.99%	78.96%	0.0 %	0.0 %
I 133	5.41E-07	8.64E-07	1.07E-06	1.04E-06	2.91E-06	2.61E-04	0.0	0.0
	4.45%	3.97%	2.30%	2.49%	19.74%	14.10%	0.0 %	0.0 %
SR 89	2.49E-08	1.46E-01	8.68E-01	0.0	0.0	0.0	3.85E-06	0.0
	0.20%	1.43%	1.86%	0.0 %	0.0 %	0.0 %	1.01%	0.0 %
SR 90	2.05E-06	2.17E-01	4.32E-05	0.0	0.0	0.0	1.73E-06	0.0
	16.87%	1.09%	71.11%	0.0 %	0.0 %	0.0 %	0.94%	0.0 %
CS134	3.10E-06	4.59E-08	2.19E-06	4.55E-06	1.53E-06	0.0	5.37E-07	0.0
	25.42%	0.21%	4.69%	25.63%	10.36%	0.0 %	0.14%	0.0 %
CS137	2.62E-06	5.48E-08	4.19E-06	4.96E-06	1.70E-06	0.0	6.20E-07	0.0
	21.54%	0.25%	8.97%	27.93%	11.48%	0.0 %	0.15%	0.0 %
BA140	8.19E-08	5.84E-06	1.38E-06	1.58E-09	5.34E-10	0.0	4.23E-05	0.0
	0.67%	26.84%	2.96%	0.0 %	0.0 %	0.0 %	11.12%	0.0 %
I 131	9.75E-04	2.23E-08	1.19E-07	1.54E-07	2.62E-07	5.09E-05	0.0	0.0
	0.72%	0.10%	0.26%	0.87%	1.78%	2.75%	0.0 %	0.0 %
CO 58	1.60E-08	6.29E-07	0.0	1.14E-08	0.0	0.0	6.86E-06	0.0
	0.13%	2.89%	0.0 %	0.06%	0.0 %	0.0 %	1.80%	0.0 %
CO 60	7.41E-07	1.10E-05	0.0	5.40E-07	0.0	0.0	2.40E-04	0.0
	6.09%	50.41%	0.0 %	3.04%	0.0 %	0.0 %	75.09%	0.0 %
MN 54	1.67E-07	1.56E-06	0.0	9.73E-07	2.34E-07	0.0	1.51E-05	0.0
	1.37%	7.16%	0.0 %	5.49%	1.62%	0.0 %	9.22%	0.0 %
CR 51	2.17E-09	5.51E-08	0.0	0.0	4.54E-10	1.26E-09	2.98E-07	0.0
	0.02%	0.25%	0.0 %	0.0 %	0.0 %	0.0 %	0.09%	0.0 %
I 131	2.36E-09	6.04E-10	3.24E-09	4.20E-09	7.12E-09	1.38E-07	0.0	0.0
	0.02%	0.0 %	0.0 %	0.02%	0.05%	0.07%	0.0 %	0.0 %
ZN 65	9.34E-08	8.17E-08	6.20E-06	1.92E-07	1.21E-07	0.0	1.65E-06	0.0
	0.77%	0.38%	0.13%	1.08%	0.86%	0.0 %	0.44%	0.0 %
I 131	1.30E-07	3.11E-06	1.77E-07	2.30E-07	4.08E-07	7.57E-05	0.0	0.0
	1.07%	0.15%	0.38%	1.30%	2.65%	4.16%	0.0 %	0.0 %
I 133	5.36E-10	8.55E-10	1.06E-09	1.03E-09	2.88E-09	2.58E-07	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.02%	0.01%	0.0 %	0.0 %
TOTAL	1.22E-05	2.17E-05	4.62E-05	1.17E-05	1.47E-05	1.85E-01	3.91E-04	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.87E-06 0.10%
I 133	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	4.17E-07 0.02%
SR 89	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.55E-10 0.0 %
CS134	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	8.45E-05 3.00%
CS137	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.87E-04 6.73%
BA140	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.05%	1.73E-06 0.06%
I 131	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	5.21E-08 0.0 %
CO 58	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	6.92E-06 0.25%
CO 60	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.41E-03 86.60%
MN 54	7.34E-05 3.11%	7.34E-05 3.11%	7.34E-05 3.11%	7.34E-05 3.11%	7.34E-05 3.11%	7.34E-05 3.11%	7.34E-05 3.11%	8.61E-05 3.10%
CR 51	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	2.31E-07 0.0 %
I 131	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.71E-09 0.0 %
ZN 65	3.07E-06 0.13%	3.07E-06 0.13%	3.07E-06 0.13%	3.07E-06 0.13%	3.07E-06 0.13%	3.07E-06 0.13%	3.07E-06 0.13%	3.53E-06 0.13%
I 131	9.56E-09 0.0 %	9.56E-09 0.0 %	9.56E-09 0.0 %	9.56E-09 0.0 %	9.56E-09 0.0 %	9.56E-09 0.0 %	9.56E-09 0.0 %	1.16E-07 0.0 %
I 133	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	7.40E-10 0.0 %
TOTAL	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.78E-03

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = VEGET

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.77E-05	9.23E-06	3.97E-05	4.89E-05	8.25E-05	1.58E-02	0.0	0.0
	6.87%	2.14%	3.72%	11.15%	39.54%	94.45%	0.0 %	0.0 %
I 133	5.52E-11	1.14E-10	1.19E-10	1.66E-10	2.34E-10	2.67E-08	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	4.72E-06	1.62E-05	1.65E-04	0.0	0.0	0.0	0.0	0.0
	1.17%	3.75%	15.45%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	1.44E-04	1.38E-05	5.82E-04	0.0	0.0	0.0	0.0	0.0
	35.82%	3.19%	54.52%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	8.29E-05	1.87E-06	7.28E-05	1.49E-04	4.74E-05	0.0	1.05E-05	0.0
	20.56%	0.43%	6.82%	34.04%	22.75%	0.0 %	42.85%	0.0 %
CS137	7.95E-05	2.58E-06	1.60E-04	1.88E-04	6.28E-05	0.0	2.20E-05	0.0
	19.72%	0.60%	15.00%	42.84%	30.11%	0.0 %	57.06%	0.0 %
BA140	2.68E-06	5.53E-05	4.31E-05	4.64E-09	1.53E-08	0.0	2.16E-08	0.0
	0.66%	12.90%	4.04%	0.01%	0.0 %	0.0 %	0.07%	0.0 %
I 131	5.02E-07	1.67E-07	7.21E-07	8.87E-07	1.50E-06	2.87E-04	0.0	0.0
	0.12%	0.04%	0.07%	0.20%	0.72%	1.71%	0.0 %	0.0 %
CO 58	2.05E-06	1.18E-05	0.0	8.12E-07	0.0	0.0	0.0	0.0
	0.51%	2.74%	0.0 %	0.19%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	4.93E-05	2.69E-04	0.0	2.00E-05	0.0	0.0	0.0	0.0
	12.23%	62.30%	0.0 %	4.56%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	4.59E-06	4.73E-05	0.0	2.16E-05	6.32E-06	0.0	0.0	0.0
	1.16%	10.96%	0.0 %	4.94%	3.03%	0.0 %	0.0 %	0.0 %
CR 51	5.86E-09	9.32E-07	0.0	0.0	1.12E-09	1.17E-07	1.08E-07	0.0
	0.0 %	0.22%	0.0 %	0.0 %	0.0 %	0.0 %	0.02%	0.0 %
I 131	2.84E-08	9.48E-09	4.08E-08	5.02E-08	8.47E-08	1.63E-05	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.01%	0.04%	0.10%	0.0 %	0.0 %
ZN 65	3.05E-05	3.21E-06	2.17E-06	7.14E-05	4.65E-06	0.0	0.0	0.0
	0.08%	0.74%	0.22%	1.63%	2.23%	0.0 %	0.0 %	0.0 %
I 131	1.03E-06	3.65E-07	1.57E-06	1.93E-06	3.26E-06	6.26E-04	0.0	0.0
	0.27%	0.09%	0.15%	0.49%	1.56%	3.73%	0.0 %	0.0 %
I 133	9.39E-14	1.95E-13	1.88E-13	2.82E-13	4.84E-13	4.54E-11	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	4.00E-04	4.32E-04	1.07E-03	4.39E-04	2.09E-04	1.68E-02	1.85E-05	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = COW MILK

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.84E-05	5.60E-06	2.72E-05	4.26E-05	5.49E-05	1.05E-02	0.0	0.0
	13.89%	17.76%	12.14%	11.99%	19.28%	94.26%	0.0 %	0.0 %
I 133	4.79E-08	9.22E-08	9.58E-08	1.92E-07	2.42E-07	2.32E-05	0.0	0.0
	0.04%	0.29%	0.04%	0.05%	0.17%	0.21%	0.0 %	0.0 %
SR 89	2.08E-07	6.43E-07	1.25E-06	0.0	0.0	0.0	0.0	0.0
	0.16%	2.01%	4.24%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	6.07E-06	5.56E-07	2.44E-05	0.0	0.0	0.0	0.0	0.0
	4.58%	1.72%	10.98%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	4.97E-05	1.14E-06	4.54E-05	9.86E-05	3.12E-05	0.0	1.10E-05	0.0
	37.50%	3.55%	22.09%	36.31%	22.40%	0.0 %	43.01%	0.0 %
CS137	4.69E-05	1.57E-06	1.09E-04	1.23E-04	4.11E-05	0.0	1.45E-05	0.0
	35.40%	4.89%	48.22%	45.42%	27.40%	0.0 %	56.98%	0.0 %
BA140	8.56E-08	1.61E-06	1.32E-06	1.46E-09	4.96E-10	0.0	8.73E-10	0.0
	0.06%	5.04%	0.62%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.34E-07	1.03E-07	4.93E-07	5.71E-07	9.94E-07	1.91E-04	0.0	0.0
	0.25%	0.32%	0.22%	0.22%	0.71%	1.71%	0.0 %	0.0 %
CO 58	1.10E-07	5.67E-07	0.0	4.25E-08	0.0	0.0	0.0	0.0
	0.08%	1.77%	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.76E-06	1.36E-05	0.0	1.03E-05	0.0	0.0	0.0	0.0
	2.08%	42.41%	0.0 %	0.40%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	6.45E-08	5.83E-07	0.0	2.90E-07	8.44E-08	0.0	0.0	0.0
	0.05%	1.82%	0.0 %	0.11%	0.06%	0.0 %	0.0 %	0.0 %
CR 51	7.51E-10	1.07E-07	0.0	0.0	1.40E-10	4.29E-10	8.93E-10	0.0
	0.0 %	0.34%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.89E-08	5.85E-09	2.79E-08	3.44E-08	5.63E-08	1.08E-05	0.0	0.0
	0.01%	0.02%	0.01%	0.01%	0.04%	0.10%	0.0 %	0.0 %
ZN 65	7.09E-06	5.60E-06	4.54E-06	1.36E-05	8.79E-06	0.0	0.0	0.0
	5.35%	17.48%	2.03%	5.00%	6.31%	0.0 %	0.0 %	0.0 %
I 131	1.27E-07	2.25E-07	1.87E-06	1.20E-05	2.12E-06	4.10E-04	0.0	0.0
	0.55%	0.70%	0.84%	0.91%	1.55%	3.71%	0.0 %	0.0 %
I 133	8.15E-11	1.57E-10	1.63E-10	2.93E-10	4.12E-10	3.94E-09	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.33E-04	3.21E-05	2.25E-04	2.71E-04	1.39E-04	1.12E-02	2.55E-05	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.10E-06 2.43%	4.28E-07 0.34%	1.47E-06 3.64%	1.93E-06 3.75%	3.28E-06 11.28%	6.26E-04 94.46%	0.0 0.0 %	0.0 0.0 %
I 133	2.89E-14 0.0 %	7.07E-14 0.0 %	5.63E-14 0.0 %	9.02E-14 0.0 %	1.55E-13 0.0 %	1.39E-11 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 89	5.49E-08 0.12%	2.37E-07 0.19%	1.92E-06 4.77%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 90	2.37E-06 5.25%	2.52E-07 0.20%	9.61E-06 23.98%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CS134	1.09E-05 24.20%	2.40E-07 0.19%	7.41E-06 18.43%	1.63E-05 31.63%	5.21E-06 27.49%	0.0 0.0 %	1.78E-06 43.34%	0.0 0.0 %
CS137	1.05E-05 23.32%	3.26E-07 0.26%	1.60E-05 39.76%	2.01E-05 39.07%	6.76E-06 35.67%	0.0 0.0 %	2.32E-06 56.50%	0.0 0.0 %
BA140	1.32E-07 0.29%	3.44E-06 2.62%	2.08E-06 5.17%	2.40E-09 0.0 %	8.09E-10 0.0 %	0.0 0.0 %	1.41E-09 0.03%	0.0 0.0 %
I 131	1.99E-08 0.04%	7.78E-09 0.0 %	2.66E-08 0.07%	3.50E-08 0.07%	5.95E-08 0.31%	1.14E-05 1.71%	0.0 0.0 %	0.0 0.0 %
CO 58	5.78E-07 1.28%	4.15E-06 3.26%	0.0 0.0 %	2.42E-07 0.47%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CO 60	1.69E-05 37.29%	1.14E-04 89.91%	0.0 0.0 %	7.20E-06 14.00%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
MN 54	9.84E-08 0.21%	1.20E-06 0.94%	0.0 0.0 %	4.62E-07 0.90%	1.36E-07 0.72%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CR 51	2.58E-10 0.0 %	5.15E-08 0.04%	0.0 0.0 %	0.0 0.0 %	5.29E-11 0.0 %	1.51E-10 0.0 %	1.27E-10 0.0 %	0.0 0.0 %
I 131	1.13E-09 0.0 %	4.40E-10 0.0 %	1.50E-09 0.0 %	1.98E-09 0.0 %	3.35E-09 0.02%	6.43E-07 0.10%	0.0 0.0 %	0.0 0.0 %
ZN 65	2.47E-06 5.47%	2.73E-06 2.14%	1.65E-06 4.11%	5.12E-06 9.96%	1.38E-06 17.82%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
I 131	4.43E-08 0.10%	1.69E-08 0.01%	5.73E-08 0.14%	7.62E-08 0.15%	1.30E-07 0.68%	2.49E-05 3.73%	0.0 0.0 %	0.0 0.0 %
I 133	4.91E-17 0.0 %	1.20E-16 0.0 %	9.58E-17 0.0 %	1.54E-16 0.0 %	2.65E-16 0.0 %	2.37E-14 0.0 %	0.0 0.0 %	0.0 0.0 %
TOTAL	4.52E-05	1.27E-04	4.02E-05	5.14E-05	1.90E-05	6.63E-04	4.10E-06	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAN-REM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.03E-05 0.0 %	1.42E-05 0.0 %	1.72E-03 0.35%
KR 85M	6.69E-04 0.56%	6.69E-04 0.56%	6.69E-04 0.56%	6.69E-04 0.56%	6.69E-04 0.56%	6.69E-04 0.45%	6.92E-04 0.56%	2.45E-03 0.50%
KR 87	1.04E-01 86.87%	1.04E-01 86.86%	1.04E-01 86.30%	1.04E-01 86.74%	1.04E-01 87.02%	1.04E-01 69.53%	1.08E-01 87.20%	4.62E-01 93.62%
KR 88	8.29E-03 6.92%	8.29E-03 6.92%	8.29E-03 6.88%	8.29E-03 6.91%	8.29E-03 6.93%	8.29E-03 5.54%	8.33E-03 6.75%	1.22E-02 2.47%
XE133	7.55E-04 0.63%	7.55E-04 0.63%	7.55E-04 0.63%	7.55E-04 0.63%	7.55E-04 0.63%	7.55E-04 0.50%	8.09E-04 0.66%	2.59E-03 0.52%
XE135	2.86E-03 2.39%	2.86E-03 2.39%	2.86E-03 2.37%	2.86E-03 2.38%	2.86E-03 2.39%	2.86E-03 1.91%	2.94E-03 2.38%	9.24E-03 1.87%
XE135M	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.01%	1.24E-05 0.0 %	1.25E-05 0.01%	2.05E-05 0.0 %
XE138	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.13%	1.55E-04 0.10%	1.56E-04 0.13%	3.24E-04 0.07%
KR 89	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.27E-08 0.0 %	5.34E-08 0.0 %	1.25E-07 0.0 %
KR 83M	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.86E-09 0.0 %	3.01E-07 0.0 %	1.09E-06 0.0 %
XE137	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	2.92E-08 0.0 %	1.43E-08 0.0 %	5.36E-07 0.0 %
XE138M	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.01%	1.43E-05 0.0 %	1.60E-05 0.01%	1.34E-04 0.03%
XE131M	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.08E-06 0.0 %	3.82E-06 0.0 %	3.79E-05 0.0 %
I 131	5.21E-05 0.04%	1.83E-05 0.02%	7.41E-05 0.06%	9.01E-05 0.08%	1.50E-04 0.11%	2.85E-02 19.02%	2.36E-06 0.0 %	2.87E-06 0.0 %
I 133	9.32E-07 0.0 %	1.38E-06 0.0 %	1.51E-06 0.0 %	2.17E-06 0.0 %	3.58E-06 0.0 %	2.85E-04 0.19%	5.43E-07 0.0 %	4.17E-07 0.0 %
SR 89	5.01E-06 0.0 %	1.78E-05 0.01%	1.75E-04 0.15%	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	1.85E-06 0.0 %	1.55E-10 0.0 %
SR 90	1.55E-04 0.13%	1.43E-05 0.01%	6.49E-04 0.54%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	1.73E-05 0.0 %	0.0 0.0 %
CS134	2.18E-04 0.18%	7.49E-05 0.06%	2.03E-04 0.17%	3.40E-04 0.28%	1.57E-04 0.13%	7.16E-05 0.05%	1.01E-04 0.04%	8.35E-05 0.02%

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAN-REM)
PATHWAY = *TOTAL* (CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	3.00E-04	1.65E-04	4.49E-04	4.95E-04	2.73E-04	1.60E-04	2.00E-04	1.87E-04
	0.25%	0.14%	0.37%	0.41%	0.23%	0.11%	0.16%	0.04%
BA140	4.50E-06	6.76E-05	4.95E-05	1.57E-06	1.53E-06	1.52E-06	4.39E-05	1.73E-06
	0.0 %	0.06%	0.04%	0.0 %	0.0 %	0.0 %	0.04%	0.0 %
I 131	9.87E-07	3.44E-07	1.40E-06	1.71E-06	2.96E-06	5.41E-04	4.29E-08	5.21E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.36%	0.0 %	0.0 %
CO 58	8.66E-06	2.30E-05	5.91E-06	7.01E-06	5.91E-06	5.91E-06	1.28E-05	6.92E-06
	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %	0.01%	0.0 %
CO 60	2.12E-03	2.45E-03	2.05E-03	2.07E-03	2.05E-03	2.05E-03	2.33E-03	2.41E-03
	1.77%	2.05%	1.70%	1.73%	1.71%	1.37%	1.89%	0.49%
MN 54	7.84E-05	1.24E-04	7.34E-05	9.68E-05	8.02E-05	7.34E-05	1.09E-04	8.61E-05
	0.07%	0.10%	0.06%	0.08%	0.07%	0.05%	0.09%	0.02%
CR 51	2.06E-07	1.34E-06	1.97E-07	1.97E-07	1.97E-07	2.02E-07	5.03E-07	2.33E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	5.31E-08	1.86E-08	7.57E-08	9.21E-08	1.54E-07	2.91E-05	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.02%	0.0 %	0.0 %
ZN 65	1.64E-05	1.47E-05	1.17E-05	2.91E-05	2.00E-05	3.07E-06	4.72E-06	3.53E-06
	0.01%	0.01%	0.0 %	0.02%	0.02%	0.0 %	0.0 %	0.0 %
I 131	2.09E-06	7.35E-07	2.97E-06	3.62E-06	6.04E-06	1.14E-03	9.50E-08	1.14E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.70%	0.0 %	0.0 %
I 133	1.23E-09	1.62E-09	1.83E-09	2.52E-09	3.90E-09	2.98E-07	6.08E-10	7.40E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.20E-01	1.20E-01	1.21E-01	1.20E-01	1.20E-01	1.50E-01	1.23E-01	4.94E-01

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.70E-01	1.69E+00
	99.64%	99.72%	99.07%	99.65%	99.79%	93.80%	99.86%	99.98%
GROUND	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	4.13E-04
	0.10%	0.10%	0.10%	0.10%	0.10%	0.09%	0.09%	0.02%
INHAL	4.20E-06	7.53E-06	2.94E-05	4.73E-06	4.07E-06	4.20E-04	9.41E-05	0.0
	0.00%	0.00%	0.01%	0.00%	0.00%	0.11%	0.03%	0.0 %
VEGET	5.08E-04	3.25E-04	2.13E-03	2.62E-04	1.11E-04	6.95E-03	2.56E-05	0.0
	0.14%	0.09%	0.59%	0.07%	0.03%	1.83%	0.01%	0.0 %
COW MILK	2.85E-04	5.51E-05	6.18E-04	5.15E-04	2.30E-04	1.46E-02	5.32E-05	0.0
	0.08%	0.02%	0.17%	0.14%	0.06%	3.86%	0.01%	0.0 %
MEAT	1.23E-04	2.64E-04	2.01E-04	1.21E-04	4.04E-05	1.15E-03	1.14E-05	0.0
	0.03%	0.07%	0.06%	0.03%	0.01%	0.30%	0.00%	0.0 %
TOTAL	3.57E-01	3.57E-01	3.59E-01	3.57E-01	3.57E-01	3.79E-01	3.71E-01	1.69E+00

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	8.45E-04	8.45E-04	8.45E-04	8.45E-04	8.45E-04	8.45E-04	2.81E-03	1.42E-01
	0.24%	0.24%	0.24%	0.24%	0.24%	0.24%	0.76%	8.40%
KR 85M	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.35E-03	1.39E-03	4.93E-03
	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.38%	0.29%
KR 87	3.36E-01	3.36E-01	3.36E-01	3.36E-01	3.36E-01	3.36E-01	3.47E-01	1.49E+00
	94.39%	94.39%	94.39%	94.39%	94.39%	94.39%	93.87%	88.49%
KR 88	7.07E-03	7.07E-03	7.07E-03	7.07E-03	7.07E-03	7.07E-03	7.10E-03	1.04E-02
	1.99%	1.99%	1.99%	1.99%	1.99%	1.99%	1.92%	0.62%
XE133	8.05E-03	8.05E-03	8.05E-03	8.05E-03	8.05E-03	8.05E-03	8.63E-03	2.75E-02
	2.26%	2.26%	2.26%	2.26%	2.26%	2.26%	2.33%	1.63%
XE135	2.38E-03	2.38E-03	2.38E-03	2.38E-03	2.38E-03	2.38E-03	2.45E-03	7.70E-03
	0.67%	0.67%	0.67%	0.67%	0.67%	0.67%	0.66%	0.46%
XE135M	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.78E-06	1.28E-05
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE138	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.04E-04	1.05E-04	2.18E-04
	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.01%
KR 89	8.69E-07	8.69E-07	8.69E-07	8.69E-07	8.69E-07	8.69E-07	8.80E-07	2.06E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
KR 83M	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.54E-07	5.58E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE137	2.41E-07	2.41E-07	2.41E-07	2.41E-07	2.41E-07	2.41E-07	2.83E-07	4.43E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE133M	3.82E-05	3.82E-05	3.82E-05	3.82E-05	3.82E-05	3.82E-05	4.26E-05	3.57E-04
	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.02%
XE131M	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.42E-04	1.41E-03
	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.04%	0.08%
TOTAL	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.56E-01	3.70E-01	1.69E+00

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	2.64E-07	3.21E-07
	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%
I 133	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.54E-07	1.87E-07
	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.05%
SR 89	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.29E-10	1.50E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.65E-05	1.92E-05
	4.69%	4.69%	4.69%	4.69%	4.69%	4.69%	4.69%	4.65%
CS137	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	2.95E-05	3.45E-05
	8.40%	8.40%	8.40%	8.40%	8.40%	8.40%	8.40%	8.34%
BA140	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	7.75E-07	8.85E-07
	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.22%	0.21%
I 131	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	5.21E-08
	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
CO 58	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	2.24E-07
	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%
CO 60	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	2.99E-04	3.51E-04
	84.86%	84.86%	84.86%	84.86%	84.86%	84.86%	84.86%	84.96%
MN 54	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	5.73E-06	6.72E-06
	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.63%	1.62%
CR 51	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	1.72E-08	2.04E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	5.88E-08	6.76E-08
	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
TOTAL	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	3.52E-04	4.13E-04

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	3.62E-07	9.19E-08	4.92E-07	6.36E-07	1.08E-06	2.10E-04	0.0	0.0
	8.61%	1.22%	1.67%	13.50%	26.62%	50.06%	0.0 %	0.0 %
I 133	3.27E-07	5.22E-07	6.47E-07	1.02E-06	1.76E-06	1.57E-04	0.0	0.0
	7.79%	6.93%	2.20%	21.51%	43.22%	37.49%	0.0 %	0.0 %
SR 89	2.41E-08	7.22E-07	8.40E-07	0.0	0.0	0.0	3.73E-06	0.0
	0.57%	9.58%	2.86%	0.0 %	0.0 %	0.0 %	3.96%	0.0 %
SR 90	1.53E-06	1.62E-07	2.47E-05	0.0	0.0	0.0	2.77E-06	0.0
	36.42%	2.15%	83.95%	0.0 %	0.0 %	0.0 %	2.95%	0.0 %
CS134	9.71E-07	1.44E-08	6.87E-07	1.43E-06	4.79E-07	0.0	1.68E-07	0.0
	23.12%	0.19%	2.34%	30.22%	11.77%	0.0 %	0.18%	0.0 %
CS137	6.74E-07	1.41E-08	1.08E-06	1.27E-06	4.52E-07	0.0	1.59E-07	0.0
	16.06%	0.19%	3.66%	26.96%	11.12%	0.0 %	0.17%	0.0 %
BA140	5.42E-08	3.60E-06	8.54E-07	9.77E-10	3.30E-10	0.0	2.61E-05	0.0
	1.29%	47.80%	2.90%	0.02%	0.0 %	0.0 %	27.76%	0.0 %
I 131	8.75E-08	2.23E-08	1.19E-07	1.54E-07	2.62E-07	5.09E-05	0.0	0.0
	2.09%	0.30%	0.41%	3.27%	6.45%	12.12%	0.0 %	0.0 %
CO 58	5.91E-10	2.32E-08	0.0	4.21E-10	0.0	0.0	2.54E-07	0.0
	0.01%	0.31%	0.0 %	0.0 %	0.0 %	0.0 %	0.27%	0.0 %
CO 60	1.49E-07	2.20E-06	0.0	1.08E-07	0.0	0.0	5.73E-05	0.0
	3.54%	29.16%	0.0 %	2.29%	0.0 %	0.0 %	60.90%	0.0 %
MN 54	1.67E-08	1.56E-07	0.0	9.77E-08	2.40E-08	0.0	3.52E-06	0.0
	0.40%	2.08%	0.0 %	2.07%	0.59%	0.0 %	3.74%	0.0 %
CR 51	2.54E-10	6.44E-09	0.0	0.0	5.35E-11	1.47E-10	3.48E-08	0.0
	0.0 %	0.09%	0.0 %	0.0 %	0.0 %	0.0 %	0.04%	0.0 %
I 131	2.38E-09	6.04E-10	3.24E-09	4.20E-09	7.12E-09	1.38E-06	0.0	0.0
	0.06%	0.0 %	0.01%	0.09%	0.18%	0.33%	0.0 %	0.0 %
ZN 65	1.37E-09	1.20E-09	9.12E-10	2.83E-09	1.86E-09	0.0	2.43E-08	0.0
	0.03%	0.02%	0.0 %	0.06%	0.05%	0.0 %	0.03%	0.0 %
TOTAL	4.20E-06	7.53E-06	2.94E-05	4.73E-06	4.07E-06	4.20E-04	9.41E-05	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = VEGET

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.05E-05	3.49E-06	1.50E-05	1.85E-05	3.11E-05	5.98E-03	0.0	0.0
	2.06%	1.07%	0.70%	7.05%	27.95%	86.03%	0.0 %	0.0 %
I 133	8.32E-11	1.72E-10	1.66E-10	2.50E-10	4.29E-10	4.02E-08	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	1.47E-05	5.04E-05	5.13E-04	0.0	0.0	0.0	0.0	0.0
	2.90%	15.52%	24.12%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	3.41E-04	3.26E-05	1.38E-03	0.0	0.0	0.0	0.0	0.0
	67.23%	10.03%	64.59%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	6.21E-05	1.40E-06	5.46E-05	1.12E-04	3.56E-05	0.0	1.24E-05	0.0
	12.24%	0.43%	2.56%	42.74%	31.93%	0.0 %	48.33%	0.0 %
CS137	4.77E-05	1.55E-06	9.60E-05	1.13E-04	3.77E-05	0.0	1.32E-05	0.0
	9.39%	0.48%	4.51%	43.02%	33.80%	0.0 %	51.48%	0.0 %
BA140	4.47E-06	9.24E-05	7.20E-05	7.76E-08	2.60E-08	0.0	4.61E-08	0.0
	0.88%	28.44%	3.38%	0.03%	0.02%	0.0 %	0.18%	0.0 %
I 131	1.61E-06	5.36E-07	2.31E-06	2.84E-06	4.79E-06	9.19E-04	0.0	0.0
	0.32%	0.16%	0.11%	1.08%	4.30%	13.22%	0.0 %	0.0 %
CO 58	2.25E-07	1.29E-06	0.0	8.89E-08	0.0	0.0	0.0	0.0
	0.04%	0.40%	0.0 %	0.03%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.36E-05	1.28E-04	0.0	9.54E-06	0.0	0.0	0.0	0.0
	4.64%	39.52%	0.0 %	3.65%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	1.22E-06	1.23E-05	0.0	5.61E-06	1.64E-06	0.0	0.0	0.0
	0.24%	3.78%	0.0 %	2.14%	1.47%	0.0 %	0.0 %	0.0 %
CR 51	1.69E-09	2.69E-07	0.0	0.0	3.25E-10	9.73E-10	2.05E-09	0.0
	0.0 %	0.08%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	9.10E-08	3.03E-08	1.31E-07	1.61E-07	2.71E-07	5.20E-05	0.0	0.0
	0.02%	0.0 %	0.0 %	0.06%	0.24%	0.75%	0.0 %	0.0 %
ZN 65	2.46E-07	2.17E-07	1.59E-07	4.81E-07	3.14E-07	0.0	0.0	0.0
	0.05%	0.07%	0.0 %	0.18%	0.28%	0.0 %	0.0 %	0.0 %
TOTAL	5.08E-04	3.25E-04	2.13E-03	2.62E-04	1.11E-04	6.95E-03	2.56E-05	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = COW MILK

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.19E-05	6.76E-06	3.23E-05	3.87E-05	6.50E-05	1.25E-02	0.0	0.0
	7.68%	12.27%	5.22%	7.50%	28.30%	85.38%	0.0 %	0.0 %
I 133	2.27E-07	4.37E-07	4.59E-07	6.71E-07	1.15E-06	1.10E-04	0.0	0.0
	0.08%	0.79%	0.07%	0.13%	0.50%	0.75%	0.0 %	0.0 %
SR 89	2.03E-06	6.30E-06	7.10E-05	0.0	0.0	0.0	0.0	0.0
	0.71%	11.43%	11.49%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	4.51E-05	4.09E-06	1.81E-04	0.0	0.0	0.0	0.0	0.0
	15.84%	7.42%	29.30%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.17E-04	2.68E-06	1.16E-04	2.32E-04	7.36E-05	0.0	2.58E-05	0.0
	41.17%	4.87%	18.84%	45.10%	32.03%	0.0 %	48.54%	0.0 %
CS137	8.84E-05	2.95E-06	2.03E-04	2.32E-04	7.75E-05	0.0	2.74E-05	0.0
	31.09%	5.36%	32.89%	45.12%	33.73%	0.0 %	51.45%	0.0 %
BA140	4.50E-07	8.48E-06	7.31E-06	7.66E-09	2.56E-09	0.0	4.59E-09	0.0
	0.16%	15.39%	1.18%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.36E-06	1.04E-06	4.96E-06	5.94E-06	1.00E-05	1.92E-03	0.0	0.0
	1.18%	1.89%	0.80%	1.15%	4.35%	13.12%	0.0 %	0.0 %
CO 58	3.78E-08	1.95E-07	0.0	1.46E-08	0.0	0.0	0.0	0.0
	0.01%	0.35%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	4.14E-06	2.04E-05	0.0	1.64E-06	0.0	0.0	0.0	0.0
	1.46%	36.93%	0.0 %	0.32%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	5.26E-08	4.75E-07	0.0	2.37E-07	6.88E-08	0.0	0.0	0.0
	0.02%	0.86%	0.0 %	0.05%	0.03%	0.0 %	0.0 %	0.0 %
CR 51	6.83E-10	9.76E-08	0.0	0.0	1.27E-10	3.90E-10	8.11E-10	0.0
	0.0 %	0.18%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.90E-07	5.88E-08	2.81E-07	3.36E-07	5.66E-07	1.09E-04	0.0	0.0
	0.07%	0.11%	0.05%	0.07%	0.25%	0.74%	0.0 %	0.0 %
ZN 65	1.50E-06	1.19E-06	9.62E-07	2.87E-06	1.86E-06	0.0	0.0	0.0
	0.53%	2.15%	0.16%	0.56%	0.81%	0.0 %	0.0 %	0.0 %
TOTAL	2.85E-04	5.51E-05	6.18E-04	5.15E-04	2.30E-04	1.46E-02	5.32E-05	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.73E-06	6.77E-07	2.31E-06	3.04E-06	5.18E-06	9.89E-04	0.0	0.0
	1.41%	0.26%	1.15%	2.51%	12.80%	86.03%	0.0 %	0.0 %
I 133	1.82E-13	4.46E-13	3.55E-13	5.69E-13	9.84E-13	8.78E-11	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	7.16E-07	3.09E-06	2.50E-05	0.0	0.0	0.0	0.0	0.0
	0.58%	1.17%	12.42%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	2.35E-05	2.50E-06	9.50E-05	0.0	0.0	0.0	0.0	0.0
	19.14%	0.95%	47.27%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	3.43E-05	7.54E-07	2.32E-05	5.10E-05	1.63E-05	0.0	5.58E-06	0.0
	27.98%	0.29%	11.56%	42.02%	40.42%	0.0 %	48.90%	0.0 %
CS137	2.64E-05	8.19E-07	4.01E-05	5.04E-05	1.70E-05	0.0	5.82E-06	0.0
	21.57%	0.31%	19.94%	41.52%	41.96%	0.0 %	51.01%	0.0 %
BA140	9.24E-07	2.34E-05	1.45E-05	1.68E-08	5.66E-09	0.0	9.84E-09	0.0
	0.75%	8.86%	7.24%	0.01%	0.01%	0.0 %	0.09%	0.0 %
I 131	2.66E-07	1.04E-07	3.56E-07	4.68E-07	7.96E-07	1.52E-04	0.0	0.0
	0.22%	0.04%	0.18%	0.39%	1.97%	13.22%	0.0 %	0.0 %
CO 58	2.64E-07	1.90E-06	0.0	1.11E-07	0.0	0.0	0.0	0.0
	0.22%	0.72%	0.0 %	0.09%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	3.37E-05	2.28E-04	0.0	1.44E-05	0.0	0.0	0.0	0.0
	27.46%	86.60%	0.0 %	11.94%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	1.02E-07	1.30E-06	0.0	5.01E-07	1.48E-07	0.0	0.0	0.0
	0.08%	0.49%	0.0 %	0.41%	0.37%	0.0 %	0.0 %	0.0 %
CR 51	3.12E-10	6.22E-08	0.0	0.0	6.39E-11	1.82E-10	3.95E-10	0.0
	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.51E-08	5.89E-09	2.01E-08	2.65E-08	4.50E-08	8.61E-06	0.0	0.0
	0.01%	0.0 %	0.01%	0.02%	0.11%	0.75%	0.0 %	0.0 %
ZN 65	6.97E-07	7.69E-07	4.65E-07	1.44E-06	9.52E-07	0.0	0.0	0.0
	0.57%	0.29%	0.23%	1.19%	2.35%	0.0 %	0.0 %	0.0 %
TOTAL	1.23E-04	2.64E-04	2.01E-04	1.21E-04	4.04E-05	1.15E-03	1.14E-05	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 198; : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	8.45E-04 0.24%	8.45E-04 0.24%	8.45E-04 0.24%	8.45E-04 0.24%	8.45E-04 0.24%	8.45E-04 0.22%	2.81E-03 0.76%	1.42E-01 8.39%
KR 85M	1.35E-03 0.38%	1.35E-03 0.38%	1.35E-03 0.38%	1.35E-03 0.38%	1.35E-03 0.38%	1.35E-03 0.36%	1.39E-03 0.38%	4.93E-03 0.29%
KR 87	3.36E-01 94.06%	3.36E-01 94.13%	3.36E-01 93.52%	3.36E-01 94.06%	3.36E-01 94.20%	3.36E-01 88.54%	3.47E-01 93.74%	1.49E+00 88.47%
KR 88	7.07E-03 1.98%	7.07E-03 1.98%	7.07E-03 1.97%	7.07E-03 1.98%	7.07E-03 1.98%	7.07E-03 1.86%	7.10E-03 1.92%	1.04E-02 0.62%
XE133	8.05E-03 2.26%	8.05E-03 2.26%	8.05E-03 2.24%	8.05E-03 2.26%	8.05E-03 2.26%	8.05E-03 2.12%	8.63E-03 2.33%	2.75E-02 1.63%
XE135	2.38E-03 0.67%	2.38E-03 0.67%	2.38E-03 0.66%	2.38E-03 0.67%	2.38E-03 0.67%	2.38E-03 0.63%	2.45E-03 0.66%	7.70E-03 0.46%
XE135M	7.73E-06 0.0 %	7.73E-06 0.0 %	7.73E-06 0.0 %	7.73E-06 0.0 %	7.73E-06 0.0 %	7.73E-06 0.0 %	7.78E-06 0.0 %	1.28E-05 0.0 %
XE138	1.04E-04 0.03%	1.04E-04 0.03%	1.04E-04 0.03%	1.04E-04 0.03%	1.04E-04 0.03%	1.04E-04 0.03%	1.05E-04 0.03%	2.18E-04 0.01%
KR 89	8.69E-07 0.0 %	8.69E-07 0.0 %	8.69E-07 0.0 %	8.69E-07 0.0 %	8.69E-07 0.0 %	8.69E-07 0.0 %	8.80E-07 0.0 %	2.06E-06 0.0 %
KR 83M	1.97E-09 0.0 %	1.97E-09 0.0 %	1.97E-09 0.0 %	1.97E-09 0.0 %	1.97E-09 0.0 %	1.97E-09 0.0 %	1.54E-07 0.0 %	5.58E-07 0.0 %
XE137	2.41E-07 0.0 %	2.41E-07 0.0 %	2.41E-07 0.0 %	2.41E-07 0.0 %	2.41E-07 0.0 %	2.41E-07 0.0 %	2.83E-07 0.0 %	4.43E-06 0.0 %
XE133M	3.82E-05 0.01%	3.82E-05 0.01%	3.82E-05 0.01%	3.82E-05 0.01%	3.82E-05 0.01%	3.82E-05 0.01%	4.26E-05 0.01%	3.57E-04 0.02%
XE131M	1.14E-04 0.03%	1.14E-04 0.03%	1.14E-04 0.03%	1.14E-04 0.03%	1.14E-04 0.03%	1.14E-04 0.03%	1.42E-04 0.04%	1.41E-03 0.08%
I 131	3.47E-05 0.0 %	1.13E-05 0.0 %	5.03E-05 0.01%	6.11E-05 0.02%	1.03E-04 0.03%	1.97E-02 5.19%	2.64E-07 0.0 %	3.21E-07 0.0 %
I 133	7.08E-07 0.0 %	1.11E-06 0.0 %	1.26E-06 0.0 %	1.84E-06 0.0 %	3.06E-06 0.0 %	2.67E-04 0.07%	1.54E-07 0.0 %	1.87E-07 0.0 %
SR 89	1.75E-05 0.0 %	6.05E-05 0.02%	6.10E-04 0.17%	1.29E-10 0.0 %	1.29E-10 0.0 %	1.29E-10 0.0 %	3.73E-06 0.0 %	1.50E-10 0.0 %
SR 90	4.11E-04 0.12%	3.93E-05 0.01%	1.68E-03 0.47%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	2.77E-06 0.0 %	0.0 0.0 %
CS134	2.31E-04 0.06%	2.13E-05 0.0 %	2.11E-04 0.06%	4.13E-04 0.12%	1.42E-04 0.04%	1.65E-05 0.0 %	6.04E-05 0.02%	1.92E-05 0.0 %

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL*(CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	1.93E-04	3.49E-05	3.70E-04	4.26E-04	1.62E-04	2.95E-05	7.61E-05	3.45E-05
	0.05%	0.0 %	0.10%	0.12%	0.05%	0.0 %	0.02%	0.0 %
BA140	6.68E-06	1.29E-04	9.55E-05	8.78E-07	8.09E-07	7.75E-07	2.70E-05	8.85E-07
	0.0 %	0.04%	0.03%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	5.36E-06	1.74E-06	7.74E-06	9.44E-06	1.59E-05	3.04E-03	4.29E-08	5.21E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.80%	0.0 %	0.0 %
CO 58	7.18E-07	3.59E-06	1.91E-07	4.05E-07	1.91E-07	1.91E-07	4.44E-07	2.24E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	3.60E-04	6.78E-04	2.99E-04	3.24E-04	2.99E-04	2.99E-04	3.56E-04	3.51E-04
	0.10%	0.19%	0.08%	0.09%	0.08%	0.08%	0.10%	0.02%
MN 54	7.12E-06	1.99E-05	5.73E-06	1.22E-05	7.61E-06	5.73E-06	9.25E-06	6.72E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CR 51	2.02E-08	4.53E-07	1.72E-08	1.72E-08	1.78E-08	1.89E-08	5.53E-08	2.04E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.01E-07	9.79E-08	4.37E-07	5.30E-07	8.91E-07	1.71E-04	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.05%	0.0 %	0.0 %
ZN 65	2.51E-06	2.23E-06	1.65E-06	4.86E-06	3.19E-06	5.88E-08	8.31E-08	6.76E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	3.57E-01	3.57E-01	3.59E-01	3.57E-01	3.57E-01	3.79E-01	3.71E-01	1.69E+00

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.62E-02	1.41E-01
	91.13%	90.29%	89.40%	89.22%	91.03%	22.26%	94.59%	98.35%
GROUND	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.47E-03
	4.12%	4.09%	4.04%	3.99%	4.35%	1.01%	4.12%	1.65%
INHAL	7.98E-06	1.42E-05	1.73E-05	1.30E-05	1.07E-05	1.93E-03	2.87E-04	0.0
	0.02%	0.03%	0.03%	0.03%	0.02%	0.71%	0.59%	0.0 %
VEGET	7.82E-04	1.06E-03	1.28E-03	1.14E-03	5.56E-04	4.67E-02	9.76E-05	0.0
	1.60%	2.14%	2.58%	2.26%	1.15%	23.33%	0.23%	0.0 %
COW MILK	1.05E-03	2.67E-04	1.63E-03	2.21E-03	1.17E-03	9.77E-02	2.03E-04	0.0
	2.14%	0.54%	3.27%	4.39%	2.42%	44.83%	0.42%	0.0 %
MEAT	4.82E-04	1.44E-03	3.37E-04	5.67E-04	2.13E-04	1.72E-03	4.35E-05	0.0
	0.99%	2.92%	0.68%	1.12%	0.44%	3.86%	0.09%	0.0 %
TOTAL	4.89E-02	4.93E-02	4.98E-02	5.05E-02	4.85E-02	2.00E-01	4.88E-02	1.43E-01

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	1.48E-04	1.48E-04	1.48E-04	1.48E-04	1.48E-04	1.48E-04	4.92E-04	2.48E-02
	0.33%	0.33%	0.33%	0.33%	0.33%	0.33%	1.07%	17.66%
KR 85M	1.27E-03	1.27E-03	1.27E-03	1.27E-03	1.27E-03	1.27E-03	1.41E-03	4.65E-03
	2.85%	2.85%	2.85%	2.85%	2.85%	2.85%	2.84%	3.31%
KR 87	2.14E-03	2.14E-03	2.14E-03	2.14E-03	2.14E-03	2.14E-03	2.22E-03	9.53E-03
	4.81%	4.81%	4.81%	4.81%	4.81%	4.81%	4.80%	6.77%
KR 88	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.91E-02	2.79E-02
	42.66%	42.66%	42.66%	42.66%	42.66%	42.66%	41.31%	19.85%
XE133	1.16E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02	1.24E-02	3.96E-02
	26.02%	26.02%	26.02%	26.02%	26.02%	26.02%	26.81%	28.12%
XE135	9.65E-03	9.65E-03	9.65E-03	9.65E-03	9.65E-03	9.65E-03	9.92E-03	1.12E-02
	21.68%	21.68%	21.68%	21.68%	21.68%	21.68%	21.45%	22.18%
XE135M	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.91E-05	6.42E-05
	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.08%	0.05%
XE138	5.10E-04	5.10E-04	5.10E-04	5.10E-04	5.10E-04	5.10E-04	5.16E-04	1.07E-03
	1.15%	1.15%	1.15%	1.15%	1.15%	1.15%	1.12%	0.76%
KR 89	9.48E-07	9.48E-07	9.48E-07	9.48E-07	9.48E-07	9.48E-07	9.60E-07	2.25E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
KR 89M	9.03E-09	9.03E-09	9.03E-09	9.03E-09	9.03E-09	9.03E-09	1.04E-07	2.56E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE137	3.73E-07	3.73E-07	3.73E-07	3.73E-07	3.73E-07	3.73E-07	4.11E-07	6.84E-06
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
XE138M	1.37E-04	1.37E-04	1.37E-04	1.37E-04	1.37E-04	1.37E-04	1.53E-04	1.29E-03
	0.31%	0.31%	0.31%	0.31%	0.31%	0.31%	0.33%	0.91%
XE131M	4.39E-05	4.39E-05	4.39E-05	4.39E-05	4.39E-05	4.39E-05	5.44E-05	5.39E-04
	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.12%	0.38%
TOTAL	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.45E-02	4.62E-02	1.41E-01

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.10E-06 0.10%	2.55E-06 0.11%
I 133	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	1.89E-07 0.0 %	2.30E-07 0.0 %
SR 89	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	3.78E-12 0.0 %	4.59E-12 0.0 %
CS134	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	5.51E-05 2.74%	6.42E-05 2.72%
CS137	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.31E-04 6.50%	1.53E-04 6.45%
BA140	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	7.40E-07 0.04%	8.46E-07 0.04%
I 131	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	1.16E-07 0.0 %
CO 58	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	5.71E-06 0.28%	6.69E-06 0.28%
CO 60	1.75E-03 86.88%	1.75E-03 86.88%	1.75E-03 86.88%	1.75E-03 86.88%	1.75E-03 86.88%	1.75E-03 86.88%	1.75E-03 86.88%	2.06E-03 86.88%
MN 54	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	6.77E-05 3.36%	7.94E-05 3.35%
CR 51	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	1.80E-07 0.0 %	2.12E-07 0.0 %
ZN 65	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.01E-06 0.15%	3.46E-06 0.15%
I 133	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	7.10E-10 0.0 %
TOTAL	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.01E-03	2.37E-03

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.15E-06	5.46E-07	2.94E-06	3.79E-06	6.43E-06	1.25E-03	0.0	0.0
	26.93%	3.84%	16.96%	29.16%	60.27%	87.40%	0.0 %	0.0 %
I 133	2.14E-07	3.42E-07	4.25E-07	6.07E-07	1.15E-06	1.03E-04	0.0	0.0
	2.69%	2.41%	2.45%	5.13%	10.80%	7.21%	0.0 %	0.0 %
SR 89	7.87E-10	2.36E-08	2.74E-08	0.0	0.0	0.0	1.22E-07	0.0
	0.0 %	0.17%	0.16%	0.0 %	0.0 %	0.0 %	0.04%	0.0 %
SR 90	5.26E-07	5.56E-08	8.50E-06	0.0	0.0	0.0	9.54E-07	0.0
	6.59%	0.39%	49.22%	0.0 %	0.0 %	0.0 %	0.33%	0.0 %
CS134	2.13E-06	3.15E-07	1.50E-05	3.13E-06	1.05E-06	0.0	3.59E-07	0.0
	26.63%	2.22%	8.72%	24.03%	9.82%	0.0 %	0.13%	0.0 %
CS137	1.95E-06	4.07E-08	1.13E-06	3.69E-06	1.31E-06	0.0	4.61E-07	0.0
	24.42%	0.29%	14.03%	28.31%	12.24%	0.0 %	0.16%	0.0 %
BA140	1.37E-08	2.24E-06	5.30E-07	6.06E-10	2.05E-10	0.0	1.62E-05	0.0
	0.42%	15.73%	3.07%	0.0 %	0.0 %	0.0 %	5.65%	0.0 %
I 131	1.30E-07	3.31E-08	1.77E-07	2.30E-07	3.90E-07	7.57E-05	0.0	0.0
	1.63%	0.23%	1.03%	1.77%	3.65%	5.30%	0.0 %	0.0 %
CO 58	1.54E-08	6.06E-07	0.0	1.10E-08	0.0	0.0	6.61E-06	0.0
	0.19%	4.25%	0.0 %	0.03%	0.0 %	0.0 %	2.30%	0.0 %
CO 60	5.93E-07	8.77E-06	0.0	4.31E-07	0.0	0.0	2.29E-04	0.0
	7.42%	61.68%	0.0 %	1.62%	0.0 %	0.0 %	79.71%	0.0 %
MN 54	1.50E-07	1.40E-06	0.0	8.15E-07	2.15E-07	0.0	3.16E-05	0.0
	1.88%	9.86%	0.0 %	3.11%	2.02%	0.0 %	11.01%	0.0 %
CR 51	1.92E-09	4.87E-08	0.0	0.0	9.06E-10	1.11E-09	2.58E-07	0.0
	0.02%	0.34%	0.0 %	0.0 %	0.0 %	0.0 %	0.09%	0.0 %
ZR 95	9.20E-08	8.05E-08	6.11E-08	1.90E-07	1.25E-07	0.0	1.63E-06	0.0
	1.15%	0.57%	0.35%	1.46%	1.17%	0.0 %	0.57%	0.0 %
I 144	5.36E-10	8.55E-10	1.06E-09	1.07E-09	2.80E-09	2.58E-07	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.01%	0.03%	0.02%	0.0 %	0.0 %
TOTAL	7.98E-06	1.42E-05	1.71E-05	1.30E-05	1.07E-05	1.43E-04	2.87E-04	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAN-REM)
PATHWAY = VEGET

NUCLIDE	BODY	GI-LLI	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	7.81E-05 9.99%	2.69E-05 2.47%	1.13E-04 8.73%	1.39E-04 12.09%	2.33E-04 41.87%	4.47E-02 95.71%	0.0 0.0 %	0.0 0.0 %
I 133	9.34E-11 0.0 %	1.93E-10 0.0 %	1.87E-10 0.0 %	2.80E-10 0.0 %	4.81E-10 0.0 %	4.51E-08 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 89	3.94E-07 0.05%	1.35E-06 0.13%	1.39E-05 1.07%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 90	1.20E-04 15.41%	1.15E-05 1.09%	4.85E-04 37.82%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CS134	2.04E-04 25.95%	4.59E-06 0.43%	1.79E-04 13.89%	3.65E-04 32.04%	1.16E-04 20.91%	0.0 0.0 %	4.04E-05 41.41%	0.0 0.0 %
CS137	2.07E-04 26.43%	6.71E-06 0.64%	4.16E-04 32.39%	4.89E-04 42.79%	1.63E-04 29.37%	0.0 0.0 %	5.71E-05 58.52%	0.0 0.0 %
BA140	4.08E-06 0.52%	8.43E-05 7.99%	6.59E-05 5.12%	1.08E-08 0.0 %	2.37E-08 0.0 %	0.0 0.0 %	4.21E-08 0.04%	0.0 0.0 %
I 131	3.50E-06 0.45%	1.17E-06 0.11%	5.02E-06 0.39%	6.18E-06 0.54%	1.04E-05 1.84%	2.00E-03 4.29%	0.0 0.0 %	0.0 0.0 %
CO 59	6.34E-06 0.81%	3.54E-05 3.45%	0.0 0.0 %	2.51E-06 0.22%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CO 60	1.34E-04 17.16%	7.12E-04 69.31%	0.0 0.0 %	5.44E-05 4.77%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
MN 54	1.38E-05 1.76%	1.34E-04 13.17%	0.0 0.0 %	6.36E-05 5.58%	1.86E-05 3.34%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CR 51	1.70E-08 0.0 %	2.71E-06 0.26%	0.0 0.0 %	0.0 0.0 %	1.27E-09 0.0 %	9.86E-09 0.0 %	2.06E-08 0.02%	0.0 0.0 %
ZN 65	1.14E-05 1.46%	1.41E-05 0.95%	7.41E-06 0.58%	2.24E-05 1.96%	1.46E-05 2.62%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
I 133	3.08E-13 0.0 %	6.22E-13 0.0 %	6.01E-13 0.0 %	9.02E-13 0.0 %	1.55E-12 0.0 %	1.45E-10 0.0 %	0.0 0.0 %	0.0 0.0 %
TOTAL	7.82E-04	1.03E-03	1.28E-03	1.14E-03	5.55E-04	4.67E-02	9.76E-05	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MARREM)
PATHWAY = COW MILK

NUCLIDE	BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.63E-04 15.57%	5.05E-05 10.00%	2.41E-04 14.77%	2.09E-04 13.08%	4.86E-04 41.43%	9.34E-02 95.59%	0.0 0.0 %	0.0 0.0 %
I 133	2.55E-07 0.02%	4.90E-07 0.10%	5.15E-07 0.03%	7.53E-07 0.05%	1.29E-06 0.11%	1.23E-04 0.13%	0.0 0.0 %	0.0 0.0 %
SR 89	5.45E-08 0.0 %	1.69E-07 0.06%	1.90E-06 0.12%	0.0 0.0 %	0.0 0.0 %	0. %	0.0 0.0 %	0.0 0.0 %
SR 90	1.59E-05 1.52%	1.44E-06 0.54%	6.39E-05 1.92%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CS134	3.83E-04 36.58%	8.77E-06 1.78%	3.80E-04 23.33%	7.59E-04 34.27%	2.40E-04 20.51%	0.0 0.0 %	8.44E-05 41.56%	0.0 0.0 %
CS137	3.83E-04 36.57%	1.29E-05 4.79%	9.81E-04 34.02%	1.01E-03 45.49%	1.36E-04 23.65%	0.0 0.0 %	1.19E-04 58.44%	0.0 0.0 %
BA140	4.11E-07 0.04%	1.74E-06 2.90%	6.67E-06 0.41%	1.08E-09 0.0 %	2.33E-09 0.0 %	0.0 0.0 %	4.19E-09 0.0 %	0.0 0.0 %
I 131	7.31E-06 0.70%	2.26E-06 0.85%	1.08E-05 0.66%	1.29E-05 0.58%	2.18E-05 1.80%	4.18E-03 4.28%	0.0 0.0 %	0.0 0.0 %
CO 58	1.07E-06 0.10%	5.50E-06 2.06%	0.0 0.0 %	4.14E-07 0.02%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CO 60	2.36E-05 2.25%	1.16E-04 43.52%	0.0 0.0 %	9.46E-06 0.42%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
MN 54	5.96E-07 0.06%	5.38E-06 2.01%	0.0 0.0 %	2.09E-06 0.12%	1.78E-07 0.01%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CR 51	6.87E-09 0.0 %	9.88E-07 0.37%	0.0 0.0 %	0.0 0.0 %	1.29E-09 0.0 %	3.92E-09 0.0 %	8.17E-09 0.0 %	0.0 0.0 %
ZN 65	6.98E-05 6.66%	5.51E-05 20.64%	4.97E-05 2.74%	1.33E-04 6.83%	8.65E-05 7.48%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
I 133	8.20E-10 0.0 %	1.58E-09 0.0 %	1.66E-09 0.0 %	2.42E-09 0.0 %	4.14E-09 0.0 %	3.96E-07 0.0 %	0.0 0.0 %	0.0 0.0 %
TOTAL	1.05E-03	2.67E-04	1.64E-03	2.21E-03	1.17E-03	9.77E-02	2.03E-04	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.29E-05	5.06E-06	1.78E-05	2.22E-05	1.81E-05	1.39E-03	0.0	0.0
	2.68%	0.45%	5.13%	4.01%	13.13%	95.71%	0.0 %	0.0 %
I 133	2.04E-13	5.01E-13	3.99E-13	6.39E-13	1.10E-12	9.85E-11	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	1.52E-08	8.30E-04	6.71E-07	0.0	0.0	0.0	0.0	0.0
	0.0 %	0.0 %	0.20%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	8.29E-06	8.81E-07	3.36E-05	0.0	0.0	0.0	0.0	0.0
	1.72%	0.06%	9.96%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.12E-04	2.46E-06	7.59E-05	1.07E-04	5.34E-05	0.0	1.82E-05	0.0
	23.24%	0.17%	22.53%	29.40%	25.04%	0.0 %	41.93%	0.0 %
CS137	1.15E-04	3.55E-06	1.74E-04	2.18E-04	7.36E-05	0.0	2.52E-05	0.0
	23.77%	0.25%	51.58%	58.54%	34.48%	0.0 %	58.04%	0.0 %
BA140	8.44E-07	2.13E-05	1.33E-05	1.53E-08	5.17E-09	0.0	8.99E-09	0.0
	0.18%	1.48%	1.94%	0.0 %	0.0 %	0.0 %	0.02%	0.0 %
I 131	5.80E-07	2.27E-07	7.15E-07	1.02E-06	1.78E-06	3.31E-04	0.0	0.0
	0.12%	0.02%	0.21%	0.18%	0.81%	4.29%	0.0 %	0.0 %
CO 58	7.47E-06	5.36E-05	0.0	3.12E-06	0.0	0.0	0.0	0.0
	1.55%	3.72%	0.0 %	0.55%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	1.92E-04	1.30E-03	0.0	8.19E-05	0.0	0.0	0.0	0.0
	39.79%	90.40%	0.0 %	14.46%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	1.16E-06	1.47E-05	0.0	5.08E-06	1.67E-06	0.0	0.0	0.0
	0.24%	1.02%	0.0 %	1.00%	0.79%	0.0 %	0.0 %	0.0 %
CR 51	3.15E-09	6.25E-07	0.0	0.0	6.44E-10	1.84E-09	3.98E-07	0.0
	0.0 %	0.04%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	3.24E-05	3.57E-05	2.14E-05	6.71E-05	4.43E-05	0.0	0.0	0.0
	6.71%	2.48%	6.42%	11.84%	20.75%	0.0 %	0.0 %	0.0 %
I 133	6.58E-16	1.61E-15	1.29E-15	2.05E-15	3.55E-15	3.17E-14	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	4.82E-04	1.44E-03	1.33E-04	5.67E-04	2.13E-04	7.72E-01	4.35E-05	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	1.48E-04 0.30%	1.48E-04 0.30%	1.48E-04 0.30%	1.48E-04 0.29%	1.48E-04 0.11%	1.48E-04 0.07%	3.92E-04 1.01%	2.48E-02 17.37%
KR 85M	1.27E-03 2.60%	1.27E-03 2.57%	1.27E-03 2.55%	1.27E-03 2.52%	1.27E-03 2.62%	1.27E-03 0.63%	1.31E-03 2.69%	4.65E-03 3.25%
KR 87	2.14E-03 4.39%	2.14E-03 4.35%	2.14E-03 4.30%	2.14E-03 4.25%	2.14E-03 4.42%	2.14E-03 1.07%	2.22E-03 4.56%	9.53E-03 6.66%
KR 88	1.90E-02 38.88%	1.90E-02 38.52%	1.90E-02 38.14%	1.90E-02 37.68%	1.90E-02 39.18%	1.90E-02 9.50%	1.91E-02 39.08%	2.79E-02 19.53%
XE133	1.16E-02 23.71%	1.16E-02 23.49%	1.15E-02 23.26%	1.16E-02 22.96%	1.16E-02 23.89%	1.16E-02 5.79%	1.24E-02 25.42%	3.96E-02 27.66%
XE135	9.65E-03 19.75%	9.65E-03 19.57%	9.65E-03 19.38%	9.65E-03 19.12%	9.65E-03 19.90%	9.65E-03 4.83%	9.92E-03 20.30%	3.12E-02 21.81%
XE135M	3.89E-05 0.08%	3.89E-05 0.08%	3.89E-05 0.08%	3.89E-05 0.08%	3.89E-05 0.08%	3.89E-05 0.02%	3.91E-05 0.08%	6.42E-05 0.04%
XE138	5.10E-04 1.04%	5.10E-04 1.03%	5.10E-04 1.02%	5.10E-04 1.01%	5.10E-04 1.05%	5.10E-04 0.26%	5.16E-04 1.06%	1.07E-03 0.75%
KR 89	9.48E-07 0.0 %	9.48E-07 0.0 %	9.48E-07 0.0 %	9.48E-07 0.0 %	9.48E-07 0.0 %	9.48E-07 0.0 %	9.60E-07 0.0 %	2.25E-06 0.0 %
KR 83M	9.03E-09 0.0 %	9.03E-09 0.0 %	9.03E-09 0.0 %	9.03E-09 0.0 %	9.03E-09 0.0 %	9.03E-09 0.0 %	7.04E-07 0.0 %	2.56E-06 0.0 %
XE137	3.73E-07 0.0 %	3.73E-07 0.0 %	3.73E-07 0.0 %	3.73E-07 0.0 %	3.73E-07 0.0 %	3.73E-07 0.0 %	4.37E-07 0.0 %	5.84E-06 0.0 %
XE138M	1.37E-04 0.28%	1.37E-04 0.28%	1.37E-04 0.27%	1.37E-04 0.27%	1.37E-04 0.28%	1.37E-04 0.07%	1.53E-04 0.31%	1.28E-03 0.90%
XE131M	4.39E-05 0.09%	4.39E-05 0.09%	4.39E-05 0.09%	4.39E-05 0.09%	4.39E-05 0.09%	4.39E-05 0.02%	5.49E-05 0.11%	5.39E-04 0.38%
I 131	2.58E-04 0.51%	8.42E-05 0.17%	3.75E-04 0.75%	4.55E-04 0.90%	7.65E-04 1.58%	1.47E-01 71.42%	2.10E-06 0.0 %	2.55E-06 0.0 %
I 133	6.59E-07 0.0 %	1.02E-06 0.0 %	1.13E-06 0.0 %	1.61E-06 0.0 %	2.63E-06 0.0 %	2.27E-04 0.11%	1.85E-01 0.0 %	2.38E-07 0.0 %
SR 89	4.69E-01 0.0 %	1.68E-05 0.0 %	1.64E-05 0.03%	1.78E-12 0.0 %	1.78E-12 0.0 %	1.78E-12 0.0 %	1.22E-01 0.0 %	4.39E-12 0.0 %
SR 90	1.45E-04 0.28%	1.12E-05 0.02%	5.91E-04 1.19%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	9.56E-01 0.0 %	0.0 0.0 %
CS134	7.55E-04 1.56%	2.59E-05 0.16%	6.91E-04 1.39%	1.15E-03 2.61%	3.66E-04 0.76%	3.51E-05 0.01%	1.48E-04 0.41%	5.42E-05 0.04%

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL* (CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	8.37E-04	1.54E-04	1.60E-03	1.85E-03	7.05E-04	1.11E-04	3.32E-04	1.53E-04
	1.71%	0.31%	3.22%	3.66%	1.45%	0.07%	0.68%	0.11%
BA140	6.11E-06	1.16E-04	9.70E-05	8.34E-07	7.72E-07	7.40E-07	1.70E-05	8.46E-07
	0.01%	0.24%	0.17%	0.0 %	0.0 %	0.0 %	0.03%	0.0 %
I 131	1.16E-05	3.78E-06	1.69E-05	2.05E-05	3.44E-05	6.59E-03	9.56E-08	1.16E-07
	0.02%	0.0 %	0.03%	0.04%	0.07%	1.30%	0.0 %	0.0 %
CO 58	2.06E-05	1.02E-04	5.71E-06	1.18E-05	5.71E-06	5.71E-06	1.23E-05	6.69E-06
	0.04%	0.21%	0.01%	0.02%	0.01%	0.0 %	0.03%	0.0 %
CO 60	2.10E-03	3.91E-03	1.75E-03	1.89E-03	1.75E-03	1.75E-03	1.98E-03	2.06E-03
	4.29%	7.92%	3.51%	3.75%	3.60%	0.87%	4.04%	1.44%
MN 54	8.34E-05	2.28E-04	6.77E-05	1.41E-04	8.89E-05	6.77E-05	9.93E-05	7.94E-05
	0.17%	0.46%	0.14%	0.28%	0.18%	0.03%	0.20%	0.06%
CR 51	2.09E-07	4.55E-06	1.80E-07	1.80E-07	1.85E-07	1.96E-07	4.76E-07	2.12E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
ZN 65	1.17E-04	1.04E-04	7.68E-05	2.26E-04	1.49E-04	3.01E-06	4.63E-06	3.46E-06
	0.24%	0.21%	0.15%	0.45%	0.31%	0.0 %	0.0 %	0.0 %
I 133	1.96E-09	3.04E-09	3.31E-09	4.78E-09	7.63E-09	6.55E-07	6.08E-10	7.40E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	4.89E-02	4.93E-02	4.98E-02	5.05E-02	4.85E-02	2.00E-01	4.88E-02	1.43E-01

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : CORRECTED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)

PATHWAY	WHOLE BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.08E-01	4.08E-01	4.08E-01	4.08E-01	4.08E-01	4.08E-01	4.16E-01	1.83E+00
	98.62%	98.57%	97.98%	98.24%	98.05%	69.10%	99.24%	99.85%
GROUND	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.35E-03	2.36E-03	2.36E-03	2.78E-03
	0.58%	0.57%	0.57%	0.57%	0.56%	0.41%	0.56%	0.15%
INHAL	1.22E-05	2.11E-05	4.67E-05	1.77E-05	1.47E-05	1.85E-04	4.81E-06	0.0
	0.00%	0.01%	0.01%	0.00%	0.00%	0.12%	0.00%	0.0 %
VEGET	1.29E-03	1.38E-03	3.91E-03	1.90E-03	6.67E-04	5.36E-02	1.23E-04	0.0
	0.32%	0.34%	0.94%	0.46%	0.16%	9.26%	0.03%	0.0 %
COW MILK	1.33E-03	3.22E-04	2.25E-03	2.73E-03	1.40E-03	1.12E-01	2.36E-04	0.0
	0.33%	0.08%	0.55%	0.67%	0.35%	19.39%	0.05%	0.0 %
MEAT	6.05E-04	1.70E-03	5.38E-04	6.89E-04	2.56E-04	8.87E-03	5.49E-05	0.0
	0.15%	0.42%	0.13%	0.17%	0.06%	1.53%	0.01%	0.0 %
TOTAL	4.06E-01	4.06E-01	4.09E-01	4.08E-01	4.05E-01	5.79E-01	4.19E-01	1.83E+00

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAIREM)
PATHWAY = PLUME

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	9.93E-04 0.25%	9.93E-04 0.25%	9.93E-04 0.25%	9.93E-04 0.25%	9.93E-04 0.25%	9.93E-04 0.25%	1.38E-03 0.19%	1.65E-01 9.11%
KR 85M	2.62E-03 0.65%	2.62E-03 0.65%	2.62E-03 0.65%	2.62E-03 0.65%	2.62E-03 0.65%	2.62E-03 0.65%	2.70E-03 0.65%	9.58E-03 0.52%
KR 87	3.38E-01 84.43%	3.38E-01 84.43%	3.38E-01 84.43%	3.38E-01 84.43%	3.38E-01 84.43%	3.38E-01 84.43%	3.50E-01 83.93%	1.50E+00 82.20%
KR 88	2.61E-02 6.51%	2.61E-02 6.51%	2.61E-02 6.51%	2.61E-02 6.51%	2.61E-02 6.51%	2.61E-02 6.51%	2.62E-02 6.29%	1.83E-02 2.10%
XE133	1.96E-02 4.91%	1.96E-02 4.91%	1.96E-02 4.91%	1.96E-02 4.91%	1.96E-02 4.91%	1.96E-02 4.91%	2.10E-02 5.06%	6.71E-02 3.67%
XE135	1.20E-02 3.01%	1.20E-02 3.01%	1.20E-02 3.01%	1.20E-02 3.01%	1.20E-02 3.01%	1.20E-02 3.01%	1.24E-02 2.97%	3.89E-02 2.13%
XE135M	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.69E-05 0.01%	1.70E-05 0.0 %
XE138	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.22E-04 0.15%	1.29E-03 0.07%
KR 89	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.94E-06 0.0 %	4.31E-06 0.0 %
KR 83M	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	8.57E-07 0.0 %	1.12E-06 0.0 %
XE137	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	7.20E-07 0.0 %	1.18E-05 0.0 %
XE133M	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.95E-04 0.05%	1.64E-03 0.09%
XE131M	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.96E-04 0.05%	1.95E-03 0.11%
TOTAL	4.00E-01	4.00E-01	4.00E-01	4.00E-01	4.00E-01	4.00E-01	4.16E-01	1.63E+00

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NRPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = GROUND

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.36E-06 0.10%	2.87E-06 0.10%
I 133	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	3.43E-07 0.01%	4.17E-07 0.02%
SR 89	1.13E-10 0.0 %	1.13E-10 0.0 %	1.13E-10 0.0 %	1.13E-10 0.0 %	1.13E-10 0.0 %	1.13E-10 0.0 %	1.13E-10 0.0 %	1.55E-10 0.0 %
CS134	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	7.16E-05 3.03%	8.35E-05 3.00%
CS137	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.60E-04 6.78%	1.87E-04 6.73%
BA140	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.52E-06 0.06%	1.73E-06 0.06%
I 131	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	4.29E-08 0.0 %	5.21E-08 0.0 %
CO 58	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	5.91E-06 0.25%	6.92E-06 0.25%
CO 60	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.05E-03 86.51%	2.41E-03 86.60%
MN 54	1.34E-05 3.11%	1.34E-05 3.11%	1.34E-05 3.11%	1.34E-05 3.11%	1.34E-05 3.11%	1.34E-05 3.11%	1.34E-05 3.11%	8.61E-05 4.10%
CR 51	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	1.97E-07 0.0 %	2.33E-07 0.0 %
I 131	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.25E-09 0.0 %	2.73E-09 0.0 %
ZN 65	1.07E-06 0.13%	1.07E-06 0.13%	1.07E-06 0.13%	1.07E-06 0.13%	1.07E-06 0.13%	1.07E-06 0.13%	1.07E-06 0.13%	3.53E-06 0.13%
I 131	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	9.56E-08 0.0 %	1.16E-07 0.0 %
I 133	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	6.08E-10 0.0 %	7.40E-10 0.0 %
TOTAL	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.36E-03	2.78E-03

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM 4)
PATHWAY = INHAL

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	2.51E-06 20.61%	6.38E-07 2.04%	3.42E-06 1.33%	4.43E-05 24.98%	1.52E-06 50.99%	1.46E-03 78.96%	0.0 0.0 %	0.0 0.0 %
I 133	5.41E-07 4.45%	8.64E-07 3.97%	1.07E-06 2.30%	1.68E-06 9.49%	2.91E-06 19.74%	2.61E-04 14.10%	0.0 0.0 %	0.0 0.0 %
SR 89	2.49E-08 0.20%	1.46E-07 3.43%	8.59E-07 1.86%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	3.85E-06 1.01%	0.0 0.0 %
SR 90	2.05E-06 16.87%	2.17E-07 1.00%	1.32E-05 71.11%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	3.73E-06 0.97%	0.0 0.0 %
CS134	3.10E-06 25.42%	4.59E-08 0.21%	2.19E-06 4.69%	4.55E-06 25.68%	1.54E-06 10.36%	0.0 0.0 %	5.37E-07 0.14%	0.0 0.0 %
CS137	2.62E-06 21.54%	5.48E-08 0.25%	4.19E-06 8.97%	4.96E-06 27.95%	1.76E-06 11.93%	0.0 0.0 %	6.20E-07 0.16%	0.0 0.0 %
BA140	8.79E-08 0.72%	5.84E-06 26.84%	1.34E-06 2.96%	1.58E-09 0.0 %	5.34E-10 0.0 %	0.0 0.0 %	4.23E-05 11.12%	0.0 0.0 %
I 131	8.75E-08 0.72%	2.23E-09 0.10%	1.19E-07 0.26%	1.54E-07 0.87%	2.62E-07 1.78%	5.09E-05 2.75%	0.0 0.0 %	0.0 0.0 %
CO 58	1.60E-08 0.13%	6.29E-07 2.89%	0.0 0.0 %	1.14E-04 0.06%	0.0 0.0 %	0.0 0.0 %	6.86E-06 1.80%	0.0 0.0 %
CO 60	7.41E-07 6.09%	1.10E-05 50.41%	0.0 0.0 %	5.90E-07 3.04%	0.0 0.0 %	0.0 0.0 %	2.86E-04 75.06%	0.0 0.0 %
MN 54	1.67E-07 1.37%	1.56E-06 7.16%	0.0 0.0 %	9.73E-07 5.49%	2.34E-07 1.62%	0.0 0.0 %	3.51E-05 9.22%	0.0 0.0 %
CR 51	2.17E-09 0.02%	5.51E-08 0.25%	0.0 0.0 %	0.0 0.0 %	4.58E-10 0.0 %	1.26E-09 0.0 %	2.98E-07 0.08%	0.0 0.0 %
I 131	2.38E-09 0.02%	6.04E-10 0.0 %	3.24E-09 0.0 %	4.29E-09 0.02%	1.12E-09 0.05%	1.38E-06 0.07%	0.0 0.0 %	0.0 0.0 %
ZN 65	9.34E-08 0.77%	8.17E-08 0.38%	6.20E-06 0.13%	1.92E-07 1.09%	1.21E-07 0.86%	0.0 0.0 %	1.65E-06 0.43%	0.0 0.0 %
I 131	1.30E-07 1.07%	3.31E-08 0.15%	1.77E-07 0.37%	2.30E-07 1.30%	4.20E-07 2.65%	7.57E-05 4.10%	0.0 0.0 %	0.0 0.0 %
I 133	5.36E-10 0.0 %	8.55E-10 0.0 %	1.04E-09 0.0 %	1.67E-09 0.0 %	2.89E-09 0.02%	2.58E-07 0.01%	0.0 0.0 %	0.0 0.0 %
TOTAL	1.22E-05	2.17E-05	4.67E-05	1.77E-05	1.47E-05	1.85E-03	3.81E-04	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = VEGET

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	8.85E-05 6.97%	2.95E-05 2.14%	1.27E-04 3.72%	1.52E-04 11.15%	2.66E-04 32.54%	5.06E-02 94.45%	0.0 0.0 %	0.0 0.0 %
I 133	1.77E-10 0.0 %	3.66E-10 0.0 %	3.53E-10 0.0 %	5.30E-10 0.0 %	9.10E-10 0.0 %	8.53E-08 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 89	1.51E-05 1.17%	5.18E-05 3.75%	5.27E-04 15.45%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
SR 90	4.62E-04 35.82%	4.41E-05 3.19%	1.85E-03 54.52%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CS134	2.65E-04 20.55%	5.98E-06 0.43%	2.34E-04 6.82%	4.77E-04 34.04%	1.52E-04 22.75%	0.0 0.0 %	5.28E-05 42.85%	0.0 0.0 %
CS137	2.54E-04 19.72%	8.26E-06 0.60%	5.13E-04 15.00%	6.01E-04 42.84%	2.01E-04 30.11%	0.0 0.0 %	7.03E-05 57.06%	0.0 0.0 %
BA140	8.56E-06 0.66%	1.77E-04 12.80%	1.38E-04 4.04%	1.48E-07 0.01%	4.95E-08 0.0 %	0.0 0.0 %	8.93E-08 0.07%	0.0 0.0 %
I 131	1.61E-06 0.12%	5.36E-07 0.04%	2.31E-06 0.07%	2.84E-06 0.20%	4.79E-06 0.72%	9.19E-04 1.71%	0.0 0.0 %	0.0 0.0 %
CO 58	6.57E-06 0.51%	3.77E-05 2.73%	0.0 0.0 %	2.68E-06 0.19%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CO 60	1.58E-04 12.23%	8.60E-04 62.30%	0.0 0.0 %	6.39E-05 4.56%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
MN 54	1.50E-05 1.16%	1.51E-04 10.94%	0.0 0.0 %	6.92E-05 4.94%	2.02E-05 3.03%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
CR 51	1.87E-08 0.0 %	2.98E-06 0.22%	0.0 0.0 %	0.0 0.0 %	3.59E-09 0.0 %	1.08E-08 0.0 %	2.27E-08 0.02%	0.0 0.0 %
I 131	9.10E-08 0.0 %	3.03E-08 0.0 %	1.31E-07 0.0 %	1.61E-07 0.01%	2.71E-07 0.04%	5.20E-05 0.10%	0.0 0.0 %	0.0 0.0 %
ZN 65	1.17E-05 0.90%	1.03E-05 0.74%	7.57E-06 0.22%	2.29E-05 1.63%	1.43E-05 2.23%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %
I 131	3.50E-06 0.27%	1.17E-06 0.08%	5.02E-06 0.15%	6.18E-06 0.44%	1.04E-05 1.56%	2.00E-03 3.73%	0.0 0.0 %	0.0 0.0 %
I 133	3.00E-11 0.0 %	6.22E-11 0.0 %	6.01E-11 0.0 %	9.02E-11 0.0 %	1.55E-10 0.0 %	1.45E-08 0.0 %	0.0 0.0 %	0.0 0.0 %
TOTAL	1.29E-03	1.39E-03	3.41E-03	1.40E-03	5.67E-04	5.36E-02	1.23E-04	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MAREM)
PATHWAY = COW MILK

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.85E-04	5.72E-05	2.73E-04	3.27E-04	5.51E-04	1.06E-01	0.0	0.0
	13.89%	17.76%	12.14%	11.90%	39.28%	94.20%	0.0 %	0.0 %
I 133	4.82E-07	9.27E-07	9.73E-07	1.92E-06	2.44E-06	2.33E-04	0.0	0.0
	0.04%	0.29%	0.04%	0.05%	0.17%	0.21%	0.0 %	0.0 %
SR 89	2.09E-06	6.47E-05	1.29E-05	0.0	0.0	0.0	0.0	0.0
	0.16%	2.01%	3.24%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	6.10E-05	5.53E-06	2.45E-04	0.0	0.0	0.0	0.0	0.0
	4.58%	1.72%	10.90%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	5.00E-04	1.15E-05	4.97E-04	9.91E-04	4.14E-04	0.0	1.10E-04	0.0
	37.50%	3.55%	22.09%	36.31%	22.40%	0.0 %	43.01%	0.0 %
CS137	4.72E-04	1.57E-05	1.08E-03	1.24E-03	4.13E-04	0.0	1.46E-04	0.0
	35.40%	4.89%	48.22%	45.42%	29.48%	0.0 %	56.98%	0.0 %
BA140	8.60E-07	1.62E-05	1.40E-05	1.47E-08	4.89E-09	0.0	8.77E-09	0.0
	0.06%	5.04%	0.62%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.36E-06	1.04E-06	4.96E-06	5.24E-06	1.00E-05	1.92E-03	0.0	0.0
	0.25%	0.32%	0.22%	0.22%	0.71%	1.71%	0.0 %	0.0 %
CO 58	1.11E-06	5.70E-06	0.0	4.27E-07	0.0	0.0	0.0	0.0
	0.08%	1.77%	0.0 %	0.02%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.77E-05	1.35E-04	0.0	1.10E-05	0.0	0.0	0.0	0.0
	2.08%	42.31%	0.0 %	0.40%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	6.49E-07	5.86E-06	0.0	2.92E-06	8.48E-07	0.0	0.0	0.0
	0.05%	1.82%	0.0 %	0.11%	0.06%	0.0 %	0.0 %	0.0 %
CR 51	7.55E-09	1.08E-06	0.0	0.0	1.41E-09	4.31E-09	8.98E-09	0.0
	0.0 %	0.34%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.96E-07	5.88E-08	2.81E-07	1.36E-07	5.60E-07	1.09E-04	0.0	0.0
	0.01%	0.02%	0.01%	0.01%	0.04%	0.10%	0.0 %	0.0 %
ZN 65	7.13E-05	5.63E-05	4.56E-05	1.36E-04	5.84E-05	0.0	0.0	0.0
	5.35%	17.48%	2.03%	5.30%	3.31%	0.0 %	0.0 %	0.0 %
I 131	7.31E-06	2.26E-06	1.08E-05	1.29E-05	2.13E-05	4.19E-03	0.0	0.0
	0.55%	0.70%	0.48%	0.47%	1.55%	3.73%	0.0 %	0.0 %
I 133	8.20E-10	1.58E-09	1.86E-09	2.92E-09	4.19E-09	3.98E-07	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	1.33E-03	3.22E-04	2.25E-03	2.71E-03	1.40E-03	1.12E-01	2.50E-04	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = MEAT

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
I 131	1.47E-05	5.74E-06	1.96E-05	2.59E-05	4.32E-05	8.38E-03	0.0	0.0
	2.43%	0.34%	3.64%	3.75%	17.28%	94.46%	0.0 %	0.0 %
I 133	3.86E-13	9.47E-13	7.54E-13	1.21E-12	2.09E-12	1.86E-10	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 89	7.35E-07	1.17E-06	2.57E-05	0.0	0.0	0.0	0.0	0.0
	0.12%	0.19%	4.77%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
SR 90	3.18E-05	3.38E-06	1.29E-04	0.0	0.0	0.0	0.0	0.0
	5.25%	0.20%	23.90%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CS134	1.46E-04	3.22E-06	9.92E-05	2.18E-04	6.98E-05	0.0	2.38E-05	0.0
	24.20%	0.19%	18.43%	31.63%	27.49%	0.0 %	43.38%	0.0 %
CS137	1.41E-04	4.37E-06	2.14E-04	2.69E-04	9.05E-05	0.0	3.11E-05	0.0
	23.32%	0.26%	39.76%	39.07%	35.67%	0.0 %	56.59%	0.0 %
BA140	1.77E-06	4.47E-05	2.70E-05	3.21E-08	1.09E-08	0.0	1.80E-08	0.0
	0.29%	2.62%	5.17%	0.0 %	0.0 %	0.0 %	0.03%	0.0 %
I 131	2.66E-07	1.04E-07	3.56E-07	4.68E-07	7.90E-07	1.52E-04	0.0	0.0
	0.04%	0.0 %	0.07%	0.07%	0.31%	1.71%	0.0 %	0.0 %
CO 58	7.14E-06	5.55E-05	0.0	3.24E-06	0.0	0.0	0.0	0.0
	1.28%	3.26%	0.0 %	0.47%	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.26E-04	1.53E-03	0.0	1.03E-05	0.0	0.0	0.0	0.0
	37.29%	89.31%	0.0 %	14.80%	0.0 %	0.0 %	0.0 %	0.0 %
MN 54	1.26E-06	1.60E-05	0.0	6.18E-06	1.82E-06	0.0	0.0	0.0
	0.21%	0.94%	0.0 %	0.90%	0.72%	0.0 %	0.0 %	0.0 %
CR 51	3.46E-09	6.82E-07	0.0	0.0	7.08E-10	2.02E-09	4.17E-09	0.0
	0.0 %	0.04%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	1.51E-08	5.89E-08	2.01E-08	2.65E-08	4.50E-08	8.61E-06	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.02%	0.10%	0.0 %	0.0 %
ZN 65	3.31E-05	3.65E-05	2.21E-05	6.86E-05	4.52E-05	0.0	0.0	0.0
	5.47%	2.14%	4.11%	9.96%	17.82%	0.0 %	0.0 %	0.0 %
I 131	5.80E-07	2.27E-07	7.75E-07	1.02E-06	1.73E-06	3.31E-04	0.0	0.0
	0.10%	0.01%	0.14%	0.15%	0.68%	3.73%	0.0 %	0.0 %
I 133	6.58E-16	1.61E-15	1.28E-15	2.05E-15	3.55E-15	3.17E-13	0.0	0.0
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	6.05E-04	1.70E-03	5.34E-04	6.89E-04	2.54E-04	8.87E-03	5.49E-05	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (4ANREM)
PATHWAY = *TOTAL*

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
KR 85	9.93E-04 0.24%	9.93E-04 0.24%	9.93E-04 0.24%	9.93E-04 0.24%	9.93E-04 0.25%	9.93E-04 0.17%	3.30E-03 0.79%	1.66E-01 9.10%
KR 85M	2.62E-03 0.64%	2.62E-03 0.64%	2.62E-03 0.64%	2.62E-03 0.64%	2.62E-03 0.65%	2.62E-03 0.45%	2.70E-03 0.64%	9.58E-03 0.52%
KR 87	3.38E-01 83.26%	3.38E-01 83.22%	3.38E-01 82.65%	3.38E-01 82.94%	3.38E-01 83.45%	3.38E-01 58.34%	3.50E-01 83.35%	1.50E+00 82.07%
KR 88	2.61E-02 6.42%	2.61E-02 6.42%	2.61E-02 6.37%	2.61E-02 6.40%	2.61E-02 6.44%	2.61E-02 4.50%	2.62E-02 6.24%	3.83E-02 2.09%
XE133	1.96E-02 4.84%	1.96E-02 4.84%	1.96E-02 4.80%	1.96E-02 4.82%	1.96E-02 4.85%	1.96E-02 3.39%	2.10E-02 5.02%	6.71E-02 3.66%
XE135	1.20E-02 2.96%	1.20E-02 2.96%	1.20E-02 2.94%	1.20E-02 2.95%	1.20E-02 2.97%	1.20E-02 2.08%	1.24E-02 2.95%	3.89E-02 2.13%
XE135M	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.01%	4.66E-05 0.0 %	4.69E-05 0.01%	7.70E-05 0.0 %
XE138	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.15%	6.15E-04 0.11%	6.22E-04 0.15%	1.29E-03 0.07%
KR 89	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.82E-06 0.0 %	1.84E-06 0.0 %	4.31E-06 0.0 %
KR 83M	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	1.10E-08 0.0 %	8.57E-07 0.0 %	3.12E-06 0.0 %
XE137	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	6.14E-07 0.0 %	7.20E-07 0.0 %	1.13E-05 0.0 %
XE133M	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.04%	1.75E-04 0.01%	1.95E-04 0.05%	1.64E-03 0.09%
XE131M	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.04%	1.58E-04 0.01%	1.96E-04 0.05%	1.95E-03 0.11%
I 131	2.93E-04 0.07%	9.55E-05 0.02%	4.26E-04 0.10%	5.16E-04 0.13%	8.69E-04 0.21%	1.66E-01 20.71%	2.36E-06 0.0 %	2.87E-06 0.0 %
I 133	1.37E-06 0.0 %	2.13E-06 0.0 %	2.39E-06 0.0 %	1.45E-06 0.0 %	5.69E-06 0.0 %	4.94E-04 0.07%	3.43E-07 0.0 %	4.17E-07 0.0 %
SR 89	1.79E-05 0.0 %	6.22E-05 0.02%	6.27E-04 0.15%	1.33E-10 0.0 %	1.33E-10 0.0 %	1.33E-10 0.0 %	3.85E-06 0.0 %	1.55E-10 0.0 %
SR 90	5.57E-04 0.14%	5.42E-05 0.01%	2.27E-03 0.55%	0.0 0.0 %	0.0 0.0 %	0.0 0.0 %	4.78E-05 0.0 %	0.0 0.0 %
CS134	9.86E-04 0.24%	9.23E-05 0.02%	9.03E-04 0.22%	1.78E-03 0.43%	6.09E-04 0.15%	7.16E-05 0.01%	2.59E-04 0.06%	8.35E-05 0.0 %

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
NEPA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (MANREM)
PATHWAY = *TOTAL* (CONTINUED)

NUCLIDE	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
CS137	1.03E-03	1.89E-04	1.97E-03	2.27E-03	8.67E-04	1.60E-04	4.08E-04	1.87E-04
	0.25%	0.05%	0.48%	0.56%	0.21%	0.03%	0.10%	0.01%
BA140	1.28E-05	2.45E-04	1.83E-04	1.71E-06	1.58E-06	1.52E-06	4.40E-05	1.73E-06
	0.0 %	0.06%	0.04%	0.0 %	0.0 %	0.0 %	0.01%	0.0 %
I 131	5.36E-06	1.74E-06	7.79E-06	9.44E-06	1.59E-05	3.04E-03	4.29E-08	5.21E-08
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.53%	0.0 %	0.0 %
CO 58	2.13E-05	1.05E-04	5.91E-06	1.22E-05	5.91E-06	5.91E-06	1.28E-05	6.92E-06
	0.0 %	0.03%	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
CO 60	2.46E-03	4.58E-03	2.05E-03	2.22E-03	2.05E-03	2.05E-03	2.33E-03	2.41E-03
	0.61%	1.13%	0.50%	0.54%	0.50%	0.35%	0.56%	0.13%
MN 54	9.05E-05	2.48E-04	7.34E-05	1.53E-04	9.65E-05	7.34E-05	1.09E-04	8.61E-05
	0.02%	0.06%	0.02%	0.04%	0.02%	0.01%	0.03%	0.0 %
CR 51	2.29E-07	5.00E-06	1.97E-07	1.97E-07	2.03E-07	2.15E-07	5.31E-07	2.33E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
I 131	3.01E-07	9.79E-08	4.37E-07	5.30E-07	8.91E-07	1.71E-04	2.25E-09	2.73E-09
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.03%	0.0 %	0.0 %
ZN 65	1.19E-04	1.06E-04	7.64E-05	2.31E-04	1.52E-04	3.07E-06	4.72E-06	3.53E-06
	0.03%	0.03%	0.02%	0.06%	0.04%	0.0 %	0.0 %	0.0 %
I 131	1.16E-05	3.78E-06	1.69E-05	2.05E-05	3.44E-05	6.59E-03	9.56E-08	1.16E-07
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	1.14%	0.0 %	0.0 %
I 133	1.96E-09	3.04E-09	3.33E-09	4.70E-09	7.63E-09	6.55E-07	6.08E-10	7.40E-10
	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %	0.0 %
TOTAL	4.06E-01	4.06E-01	4.09E-01	4.04E-01	4.05E-01	5.79E-01	4.19E-01	1.83E+00

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATION
AT 0.50 MILES N

ANNUAL BETA AIR DOSE = 1.13E+01 MILLRADS
ANNUAL GAMMA AIR DOSE = 6.88E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.62E+00	4.62E+00	4.62E+00	4.62E+00	4.62E+00	4.62E+00	4.73E+00	1.60E+01
GROUND	8.17E-03	8.17E-03	8.17E-03	8.17E-03	8.17E-03	8.17E-03	8.17E-03	9.60E-03
VEGET								
ADULT	2.88E-03	1.63E-03	9.67E-03	1.23E-03	4.34E-04	9.34E-03	1.24E-04	0.0
TEEN	3.41E-03	1.77E-03	1.30E-02	1.92E-03	6.47E-04	7.97E-03	2.24E-04	0.0
CHILD	5.23E-03	1.23E-03	2.40E-02	3.15E-03	1.02E-03	1.24E-02	3.35E-04	0.0
MEAT								
ADULT	1.21E-04	2.82E-04	1.75E-04	1.08E-04	3.63E-05	1.04E-03	9.94E-06	0.0
TEEN	6.95E-05	1.54E-04	1.29E-04	8.60E-05	2.88E-05	7.51E-04	9.12E-06	0.0
CHILD	7.57E-05	8.00E-05	2.05E-04	1.09E-04	3.57E-05	1.13E-03	1.05E-05	0.0
COW MILK								
ADULT	7.14E-04	1.50E-04	9.48E-04	8.71E-04	4.19E-04	2.95E-02	8.47E-05	0.0
TEEN	7.70E-04	1.91E-04	1.58E-03	1.52E-03	7.32E-04	4.68E-02	1.70E-04	0.0
CHILD	8.09E-04	1.43E-04	3.44E-03	2.55E-03	1.20E-03	9.30E-02	2.56E-04	0.0
INFANT	9.62E-04	1.53E-04	5.39E-03	4.98E-03	1.95E-03	2.26E-01	4.54E-04	0.0
GOATMILK								
ADULT	1.95E-03	1.39E-04	2.30E-03	2.42E-03	9.58E-04	3.54E-02	2.54E-04	0.0
TEEN	2.00E-03	1.84E-04	3.86E-03	4.22E-03	1.67E-03	5.61E-02	5.09E-04	0.0
CHILD	1.85E-03	1.44E-04	8.53E-03	7.06E-03	2.71E-03	1.12E-01	7.67E-04	0.0
INFANT	1.97E-03	1.44E-04	1.32E-02	1.[illegible]E-02	4.34E-03	2.71E-01	1.30E-03	0.0
INHAL								
ADULT	3.04E-05	5.92E-05	1.92E-04	3.14E-05	2.74E-05	2.58E-03	6.02E-04	0.0
TEEN	2.99E-05	5.98E-05	2.19E-04	4.26E-05	3.76E-05	3.31E-03	9.10E-04	0.0
CHILD	2.47E-05	2.58E-05	2.20E-04	4.05E-05	3.50E-05	3.99E-03	7.55E-04	0.0
INFANT	1.24E-05	9.48E-06	1.04E-04	3.25E-05	2.26E-05	3.67E-03	5.56E-04	0.0

COOPER NUCLEAR STATION : FIRST QUARTERLY PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATION
AT 0.50 MILES SSE

ANNUAL BETA AIR DOSE = 1.42E+01 MILLIRADS
ANNUAL GAMMA AIR DOSE = 8.60E+00 MILLIRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.78E+00	5.78E+00	5.78E+00	5.78E+00	5.78E+00	5.78E+00	5.92E+00	2.01E+01
GROUND	1.17E-02	1.17E-02	1.17E-02	1.17E-02	1.17E-02	1.17E-02	1.17E-02	1.37E-02
VEGET								
ADULT	4.27E-03	2.39E-03	1.46E-02	1.76E-03	6.22E-04	1.42E-02	1.76E-04	0.0
TEEN	5.06E-03	2.59E-03	1.96E-02	2.73E-03	9.25E-04	1.21E-02	3.19E-04	0.0
CHILD	7.82E-03	1.81E-03	3.62E-02	4.48E-03	1.45E-03	1.88E-02	4.76E-04	0.0
MEAT								
ADULT	1.75E-04	4.06E-04	2.61E-04	1.55E-04	5.23E-05	1.57E-03	1.41E-05	0.0
TEEN	1.90E-04	2.22E-04	1.91E-04	1.23E-04	4.15E-05	1.14E-03	1.30E-05	0.0
CHILD	1.10E-04	1.15E-04	3.04E-04	1.55E-04	5.14E-05	1.72E-03	1.49E-05	0.0
COW MILK								
ADULT	1.03E-03	2.21E-04	1.40E-03	1.25E-03	6.11E-04	4.48E-02	1.20E-04	0.0
TEEN	1.11E-03	2.83E-04	2.32E-03	2.18E-03	1.07E-03	7.09E-02	2.41E-04	0.0
CHILD	1.19E-03	2.12E-04	5.05E-03	3.65E-03	1.75E-03	1.41E-01	3.63E-04	0.0
INFANT	1.42E-03	2.29E-04	7.91E-03	7.15E-03	2.86E-03	3.42E-01	6.45E-04	0.0
GOATMILK								
ADULT	2.79E-03	2.08E-04	3.37E-03	3.45E-03	1.38E-03	5.47E-02	3.63E-04	0.0
TEEN	2.87E-03	2.76E-04	5.64E-03	6.01E-03	2.40E-03	8.51E-02	7.23E-04	0.0
CHILD	2.68E-03	2.16E-04	1.24E-02	1.01E-02	3.90E-03	1.69E-01	1.09E-03	0.0
INFANT	2.88E-03	2.16E-04	1.93E-02	1.93E-02	6.26E-03	4.11E-01	1.93E-03	0.0
INHAL								
ADULT	2.24E-05	4.68E-05	1.60E-04	2.26E-05	2.22E-05	2.24E-03	4.27E-04	0.0
TEEN	2.28E-05	4.78E-05	1.81E-04	3.07E-05	3.06E-05	2.87E-03	6.51E-04	0.0
CHILD	1.97E-05	2.09E-05	1.83E-04	2.93E-05	2.85E-05	3.47E-03	5.42E-04	0.0
INFANT	1.01E-05	7.73E-06	8.64E-05	2.91E-05	1.85E-05	3.19E-03	4.10E-04	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATION
AT 0.50 MILES

ANNUAL BETA AIR DOSE = 4.54E-01 MILLIRADS
ANNUAL GAMMA AIR DOSE = 7.19E-01 MILLIRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.83E-01	4.83E-01	4.83E-01	4.83E-01	4.83E-01	4.83E-01	4.97E-01	9.30E-01
GROUND	7.77E-02	7.77E-02	7.77E-02	7.77E-02	7.77E-02	7.77E-02	7.77E-02	9.13E-02
VEGET								
ADULT	7.84E-03	1.18E-02	9.38E-03	8.73E-03	3.18E-03	9.35E-02	7.98E-04	0.0
TEEN	8.18E-03	1.24E-02	1.34E-02	1.35E-02	4.67E-03	7.97E-02	1.46E-03	0.0
CHILD	1.01E-02	8.04E-03	2.74E-02	2.21E-02	7.27E-03	1.23E-01	2.18E-03	0.0
MEAT								
ADULT	7.95E-04	2.64E-03	4.73E-04	8.59E-04	3.23E-04	1.09E-02	6.40E-05	0.0
TEEN	4.78E-04	1.42E-03	3.75E-04	6.79E-04	2.53E-04	7.90E-03	5.90E-05	0.0
CHILD	5.55E-04	1.19E-04	6.56E-04	8.52E-04	3.09E-04	1.19E-02	6.82E-05	0.0
COW MILK								
ADULT	4.42E-03	1.21E-03	3.93E-03	6.31E-03	3.50E-03	3.02E-01	5.46E-04	0.0
TEEN	4.82E-03	1.47E-03	6.94E-03	1.10E-02	6.12E-03	4.78E-01	1.10E-03	0.0
CHILD	5.13E-03	1.01E-03	1.63E-02	1.84E-02	9.98E-03	9.45E-01	1.66E-03	0.0
INFANT	6.69E-03	2.26E-03	2.71E-02	3.65E-02	1.63E-02	2.30E+00	2.95E-03	0.0
GOATMILK								
ADULT	1.15E-02	6.93E-04	1.09E-02	1.60E-02	6.87E-03	3.63E-01	1.64E-03	0.0
TEEN	1.16E-02	8.89E-04	1.78E-02	2.79E-02	1.20E-02	5.74E-01	3.29E-03	0.0
CHILD	9.86E-03	6.68E-04	4.19E-02	4.69E-02	1.96E-02	1.13E+00	4.97E-03	0.0
INFANT	1.10E-02	8.01E-04	6.83E-02	9.11E-02	3.17E-02	2.76E+00	8.86E-03	0.0
INHAL								
ADULT	9.73E-05	1.93E-04	1.84E-04	1.38E-04	1.10E-04	1.42E-02	3.14E-03	0.0
TEEN	9.36E-05	1.81E-04	2.26E-04	1.47E-04	1.51E-04	1.75E-02	4.60E-03	0.0
CHILD	7.19E-05	7.04E-05	2.59E-04	1.76E-04	1.48E-04	1.98E-02	3.74E-03	0.0
INFANT	4.03E-05	2.51E-05	1.90E-04	1.08E-04	8.92E-05	1.81E-02	2.45E-03	0.0

COOPER NUCLEAR STATION : SECOND QUARTERLY PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATION
AT 0.50 MILES SSW

ANNUAL BETA AIR DOSE = 3.56E-01 MILLIRADS
ANNUAL GAMMA AIR DOSE = 5.59E-01 MILLIRADS

PATHWAY	WHOLE BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.75E-01	3.75E-01	3.75E-01	3.75E-01	3.75E-01	3.75E-01	3.79E-01	7.24E-01
GROUND	5.33E-02	5.33E-02	5.33E-02	5.33E-02	5.33E-02	5.33E-02	5.33E-02	6.26E-02
VEGET								
ADULT	5.37E-03	8.06E-03	6.43E-03	5.97E-03	2.16E-03	6.19E-02	5.46E-04	0.0
TEEN	5.60E-03	8.48E-03	9.21E-03	9.26E-03	3.18E-03	5.28E-02	9.97E-04	0.0
CHILD	5.92E-03	5.51E-03	1.84E-02	1.51E-02	4.95E-03	8.16E-02	1.49E-03	0.0
MEAT								
ADULT	5.44E-04	1.81E-03	3.23E-04	5.87E-04	2.20E-04	1.23E-03	4.30E-05	0.0
TEEN	3.27E-04	9.73E-04	2.56E-04	4.65E-04	1.72E-04	5.29E-03	4.04E-05	0.0
CHILD	3.80E-04	4.92E-04	4.48E-04	5.83E-04	2.11E-04	7.90E-03	4.67E-05	0.0
COW MILK								
ADULT	3.01E-03	8.25E-04	2.69E-03	4.30E-03	2.36E-03	2.00E-01	3.73E-04	0.0
TEEN	3.28E-03	5.96E-04	4.72E-03	7.49E-03	4.13E-03	3.17E-01	7.51E-04	0.0
CHILD	3.48E-03	6.89E-04	1.11E-02	1.26E-02	6.72E-03	6.26E-01	1.13E-03	0.0
INFANT	4.51E-03	1.54E-03	1.85E-02	2.49E-02	1.10E-02	1.52E+00	2.02E-03	0.0
GOAT MILK								
ADULT	7.08E-03	4.67E-04	6.84E-03	1.09E-02	4.66E-03	2.40E-01	1.12E-03	0.0
TEEN	7.69E-03	5.99E-04	1.21E-02	1.90E-02	8.13E-03	3.80E-01	2.25E-03	0.0
CHILD	6.71E-03	4.50E-04	2.86E-02	3.20E-02	1.33E-02	7.51E-01	3.40E-03	0.0
INFANT	7.42E-03	5.42E-04	4.66E-02	6.22E-02	2.15E-02	1.83E+00	6.06E-03	0.0
INHAL								
ADULT	9.07E-05	1.61E-04	1.58E-04	1.13E-04	8.65E-05	1.95E-02	2.67E-03	0.0
TEEN	7.69E-05	1.50E-04	1.80E-04	1.53E-04	1.19E-04	1.45E-02	4.91E-03	0.0
CHILD	5.03E-05	5.01E-05	2.14E-04	1.44E-04	1.09E-04	1.52E-02	1.17E-03	0.0
INFANT	3.22E-05	2.07E-05	1.22E-04	1.12E-04	6.94E-05	1.49E-02	2.09E-03	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATED
AT 0.50 MILES .

ANNUAL BETA AIR DOSE = 1.18E+01 MILLIRADS
ANNUAL GAMMA AIR DOSE = 7.59E+00 MILLIRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.10E+00	5.10E+00	5.10E+00	5.10E+00	5.10E+00	5.10E+00	5.22E+00	1.69E+01
GROUND	8.58E-02	8.58E-02	8.58E-02	8.58E-02	8.58E-02	8.58E-02	8.58E-02	1.01E-01
VEGET								
ADULT	1.07E-02	1.34E-02	1.99E-02	9.98E-03	3.61E-03	1.03E-01	9.22E-04	0.0
TEEN	1.16E-02	1.41E-02	2.04E-02	1.05E-02	5.31E-03	8.77E-02	1.68E-03	0.0
CHILD	1.53E-02	9.27E-03	5.14E-02	2.51E-02	8.29E-03	1.36E-01	2.51E-03	0.0
MEAT								
ADULT	9.16E-04	2.92E-03	6.48E-04	9.07E-04	3.59E-04	1.19E-02	7.40E-05	0.0
TEEN	5.48E-04	1.57E-03	5.03E-04	7.05E-04	2.82E-04	8.65E-03	6.81E-05	0.0
CHILD	6.31E-04	1.98E-04	8.61E-04	9.61E-04	1.45E-04	1.31E-02	7.87E-05	0.0
COW MILK								
ADULT	5.13E-03	1.38E-03	4.69E-03	7.14E-03	1.92E-03	3.32E-01	6.30E-04	0.0
TEEN	5.59E-03	1.66E-03	8.51E-03	1.25E-02	6.85E-03	5.25E-01	1.27E-03	0.0
CHILD	5.94E-03	1.16E-03	1.97E-02	2.10E-02	1.12E-02	1.04E+00	1.91E-03	0.0
INFANT	7.65E-03	2.41E-03	3.25E-02	4.14E-02	1.93E-02	2.52E+00	3.41E-03	0.0
GOATMILK								
ADULT	1.35E-02	8.32E-04	1.23E-02	1.84E-02	7.82E-03	3.98E-01	1.89E-03	0.0
TEEN	1.36E-02	1.07E-03	2.17E-02	3.21E-02	1.37E-02	6.30E-01	3.90E-03	0.0
CHILD	1.17E-02	8.12E-04	5.09E-02	5.49E-02	2.23E-02	1.25E+00	5.74E-03	0.0
INFANT	1.29E-02	5.95E-04	8.15E-02	1.05E-01	4.60E-02	3.03E+00	1.02E-02	0.0
INHAL								
ADULT	1.28E-04	2.52E-04	1.76E-03	1.78E-04	1.38E-04	1.67E-02	3.74E-03	0.0
TEEN	1.24E-04	2.41E-04	4.44E-04	2.30E-04	1.99E-04	2.09E-02	5.51E-03	0.0
CHILD	9.66E-05	9.62E-05	4.70E-04	2.17E-04	1.79E-04	2.30E-02	4.49E-03	0.0
INFANT	5.28E-05	3.49E-05	2.54E-04	1.70E-04	1.12E-04	2.18E-02	1.02E-03	0.0

COOPER NUCLEAR STATION : FIRST SEMI-ANNUAL PERIOD 1981 : COMBINED RELEASE
SPECIAL LOCATION # 1 LOCATION
AT 0.50 MILES SSE

ANNUAL BETA AIR DOSE = 1.44E+01 MILLIRADS
ANNUAL GAMMA AIR DOSE = 8.81E+00 MILLIRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.91E+00	5.91E+00	5.91E+00	5.91E+00	5.91E+00	5.91E+00	6.06E+00	2.04E+01
GROUND	3.84E-02	3.84E-02	3.84E-02	3.84E-02	3.84E-02	3.84E-02	3.84E-02	4.51E-02
VEGET								
ADULT	7.90E-03	6.45E-03	1.79E-02	4.81E-03	1.76E-03	5.22E-02	4.54E-04	0.0
TEEN	7.90E-03	6.86E-03	2.43E-02	7.46E-03	2.58E-03	4.46E-02	8.27E-04	0.0
CHILD	1.13E-02	4.58E-03	4.58E-02	1.22E-02	4.02E-03	6.90E-02	1.24E-03	0.0
MEAT								
ADULT	4.51E-04	1.31E-03	4.29E-04	4.55E-04	1.64E-04	6.81E-03	3.65E-05	0.0
TEEN	2.67E-04	7.11E-04	3.24E-04	3.60E-04	1.32E-04	4.35E-03	3.36E-05	0.0
CHILD	3.03E-04	3.63E-04	5.37E-04	4.54E-04	1.62E-04	6.57E-03	3.97E-05	0.0
COW MILK								
ADULT	2.60E-03	6.57E-04	2.81E-03	3.50E-04	1.33E-03	1.69E-01	3.11E-04	0.0
TEEN	2.84E-03	8.12E-04	4.81E-03	6.11E-03	3.37E-03	2.66E-01	6.24E-04	0.0
CHILD	4.07E-03	5.91E-04	1.09E-02	1.02E-02	5.50E-03	3.26E-01	9.47E-04	0.0
INFANT	3.93E-03	1.03E-03	1.77E-02	2.03E-02	9.03E-03	1.28E+00	1.67E-03	0.0
GOATMILK								
ADULT	6.85E-03	4.67E-04	6.91E-03	9.09E-03	3.89E-03	2.01E-01	9.32E-04	0.0
TEEN	6.96E-03	6.10E-04	1.10E-02	1.59E-02	6.79E-03	3.19E-01	1.87E-03	0.0
CHILD	8.23E-03	4.58E-04	2.73E-02	2.66E-02	1.11E-02	6.31E-01	2.83E-03	0.0
INFANT	6.91E-03	5.14E-04	4.35E-02	5.15E-02	1.73E-02	1.53E+00	5.02E-03	0.0
INHAL								
ADULT	5.04E-05	1.02E-04	2.12E-04	6.32E-05	5.71E-05	8.81E-03	1.29E-03	0.0
TEEN	5.02E-05	1.00E-04	2.46E-04	8.57E-05	7.81E-05	8.54E-03	1.92E-03	0.0
CHILD	4.14E-05	4.14E-05	2.57E-04	8.14E-05	7.26E-05	9.05E-03	1.50E-03	0.0
INFANT	2.25E-05	1.51E-05	1.19E-04	6.53E-05	4.63E-05	9.06E-03	1.05E-03	0.0

APPENDIX D

X/Q AND DOSE CALCULATION

MODELS AND ASSUMPTIONS

1.0 INTRODUCTION

The transport and dilution of radioactive materials in the form of aerosols, vapors, or gases released into the atmosphere from a nuclear power station are a function of the state of the atmosphere along the plume path, the topography of the region, and the characteristics of the effluents themselves. For a routine airborne release, the concentration of radioactive material in the surrounding region depends on the amount of effluent released, the height of the release, the momentum and buoyancy of the emitted plume, the wind speed, atmospheric stability, and airflow patterns of the site.

In order to evaluate the impact of a nuclear power station under normal operating conditions in a year of "typical" weather conditions, the routine diffusion estimates of effluent relative concentrations (X/Q) within a radius of 50 miles from the station are required. The method of evaluating atmospheric dispersion of gaseous effluents, based on the U.S. Nuclear Regulatory Commission (NRC) Regulatory Guide 1.111 (1976), is described here.

2.0 METEOROLOGICAL DATA

Basic meterological parameters influencing effluent dispersion in the atmosphere are wind speed, wind direction, and atmospheric stability. The following guidelines are used in the categorization of meterological data.

2.1 WIND SPEED

Wind speeds representing the conditions at the actual release height are used when the release is considered to be elevated. Wind speeds measured at the 10-meter level are used when the effluent plume is considered to be a ground release.

2.2 WIND DIRECTION

Wind direction, defined as the direction from which the wind is blowing, is grouped into 16 compass-point sectors corresponding to 22.5-degree sectors.

2.3 ATMOSPHERIC STABILITY

Atmospheric stability is divided into seven categories to represent Pasquill stability classes A (extremely unstable) through G (extremely stable). The method for evaluating the atmospheric stability is based on vertical temperature difference between the release point and the 10-meter level. Criteria for classifying atmospheric stability in terms of Pasquill stability classes A through G are presented as follows:

Stability Classification	Pasquill Category	(degrees)	(°C/100m)
Extremely unstable	A	$\theta \geq 22.5$	$\Delta T \leq -1.9$
Moderately unstable	B	$22.5 > \theta \geq 17.5$	$-1.9 < \Delta T \leq -1.7$
Slightly unstable	C	$17.5 > \theta \geq 12.5$	$-1.7 < \Delta T \leq -1.5$
Neutral	D	$12.5 > \theta \geq 3.8$	$-1.5 < \Delta T \leq -0.5$
Slightly stable	E	$7.5 > \theta \geq 2.1$	$-0.5 < \Delta T \leq 1.5$
Moderately stable	F	$3.8 > \theta \geq$	$1.5 < \Delta T \leq 4.0$
Extremely stable	G	$2.1 > \theta$	$4.0 < \Delta T$

2.4 JOINT FREQUENCY DISTRIBUTION

Joint frequency distributions of wind direction and wind speed by atmospheric stability class are used as meteorological data input for routine diffusion estimates. The compilation of joint frequency distributions is done on quarterly, semi-annual, and annual basis. Wind speeds are grouped according to the Beaufort wind scale (i.e., calm, 1-4, 4-8, 8-13, 13-19, 19-25, 25-32, 32-39, 39-45 and greater than 45 mph). Wind directions are divided into 16 compass-point directions (22.5-degree sectors).

3.0 RELEASE MODE

For nuclear power stations, most gaseous effluents are released through tall stacks, through vents located near the tops of buildings, or through combinations of the two. They are dispersed by variations of wind direction and speed, and by turbulence (mixing action) of the atmosphere. Gaseous effluents released from tall stacks generally produce peak ground-level concentrations near or beyond the site boundary, whereas near-ground level releases produce monotonically decreasing concentrations from the release point to all locations downwind. Under certain conditions, the effluent plume may become entrained in the aerodynamic wake of a building and mix rapidly down to the ground level.

Methods have been developed to estimate the effective release height, which is defined as the sum of the physical height of the release point and the rise of the plume above the stacks, for calculations of effluent concentrations at all downwind locations. The important parameters in these methods include the initial release height, the location of the release point in relation to obstructions, size and shape of the release point, the initial vertical velocity of the effluent, the heat content of the effluent, ambient wind speed and temperature, and atmospheric stability.

The acceptable method that is used to determine the release mode is described below.

3.1 EFFLUENT RELEASE MODE

For effluents exhausted from release points that are higher than twice the height of adjacent solid structures, the effective release height (h_e) is determined from

$$h_e = h_s + h_{pr} - h_t \qquad (3\text{-}1)$$

where h_s = physical height of the release point above the ground;
h_{pr} = rise of the plume above the release point; and
h_t = minimum terrain height above the stack base between the release point and the point for which the calculation is made (h_t must be greater than or equal to zero).

For effluents released from points less than or equal to the height of adjacent solid structures, a ground-level release is assumed ($h_e = 0$).

For effluents released from vents or other points that are less than twice the height of adjacent solid structures, the effluent plume is considered as an elevated release whenever the vertical exit velocity (W_o) of the plume is at least five times the horizontal wind speed (U) at the height of release, i.e., $W_o/U \geq 5.0$. If W_o/U is less than 1.0, or unknown, a ground-level release is assumed ($h_e = 0$).

For cases where the ratio of plume exit velocity to horizontal wind speed is between one and five, a mixed release mode is assumed, in which the plume is considered as an elevated release during part of the time and as a ground-level release ($h_e = 0$) during the remainder of the time. An entrainment coefficient, E_t, is determined for such cases from the following relations:

$$E_t = 2.58 - 1.58\ (W_o/U) \text{ for } 1 < W_o/U \leq 1.5 \quad (3\text{-}2)$$

and

$$E_t = 0.3 - 0.06\ (W_o/U) \text{ for } 1.5 < W_o/U \leq 5.0 \quad (3\text{-}3)$$

The release is considered to occur as an elevated release 100 $(1\text{-}E_t)$ percent of the time, as a ground release $100E_t$ percent of the time. Each of these cases is evaluated separately and the concentration is calculated according to the fraction of time each type of release occurs.

3.2 PLUME RISE CALCULATION

Nuclear power stations generally have cold plumes, so that the plume rise is calculated from Briggs' (1969) momentum rise formulae. For neutral or unstable atmosphere, the smaller value of h_{pr} calculated from the following equations is used:

$$h_{pr} = 1.44\ (W_o/U)^{2/3}\ (x/D)^{1/3}\ D \quad (3\text{-}4)$$

and

$$h_{pr} = 3\ (W_o/U)\ D \quad (3\text{-}5)$$

where D = inside diameter of the stack or other release points;
W_o = vertical exit velocity of the plume;
U = mean wind speed at the height of release; and
x = downwind distance from the release point.

For stable atmosphere, the results from Equations (3-4) and (3-5) are compared with the results from the following equations:

$$h_{pr} = 4\ (F_m/S)^{1/4} \quad (3\text{-}6)$$

and

$$h_{pr} = 1.5\ (F_m/U)^{1/3}\ S^{-1/6} \quad (3\text{-}7)$$

and the smallest value for h_{pr} is used. In the foregoing relations

$F_m = W_o^2 D^2/4$ = momentum flux parameter;

$S = \frac{g}{T_a}\ \frac{\delta\theta}{\delta Z}$ = stability parameter

g = acceleration of gravity; and

T_a = ambient air temperature

The quality $\delta\theta/\delta Z$ represents the vertical potential temperature gradient given by:

Stability Class	$\delta\theta/\delta Z$ (°K/m)
A	-0.020
B	-0.018
C	-0.016
D	-0.010
E	0.020
F	0.035
G	0.050

When the vertical exit velocity of the plume is less than 1.5 times the horizontal mean wind speed, a height correction for aerodynamic downwash C, given by

$$C = 3(1.5 - W_o/U)D \tag{3-8}$$

is subtracted from Equation (3-1)

3.3 DIFFUSION MODEL

The Gaussian straight-line trajectory model, which assumes that the air flow transports and diffuses effluents along a straight line through the entire region of interest in the airflow direction, is modified to account for various modes of effluent releases. In the case of an elevated release, plume rise due to momentum or buoyancy effects is incorporated into the calculation. For those effluents that are entrained into the wake cavity region of a building, mixing of effluent into the wake cavity is usually assumed. The mixing zone can constitute a plume with an initial cross section of one-half or more of the cross-sectional area of the building.

The mathematical equation used in the Gaussion straight-line trajectory model is:

$$\left[\frac{X}{Q}\right]_i = 2.032 \sum_j \sum_k \frac{f_{ijk}}{xU_{jk}\Sigma_{zk}} \exp\left[-\frac{1}{2}\frac{h_e^2}{\sigma_{zk}^2}\right] \tag{3-9}$$

$$\Sigma_{zk} = (\sigma_{zk}^2 + 0.5\, D_z^2/\pi)^{1/2} \leq \sqrt{3\sigma_{zk}} \tag{3-10}$$

where
- i = index identifying downwind direction section;
- j = index identifying wind speed class;
- k = index identifying atmospheric stability class;
- $\left[\frac{X}{Q}\right]$ = average effluent concentration normalized by source strength at the specific downwind distance;
- f = joint frequency distribution of wind direction, wind speed class, and atmospheric stability class;
- x = distance from the release point to a receptor;
- U = wind speed;
- Σ_z = vertical plume spread with a volumetric building wake correction for a release within the building wake cavity;
- σ_z = vertical plume spread without volumetric building wake correction; and
- D_z = maximum adjacent building height either up or downwind of the release point.

The term Σ_{zk} given in Equations (3-9) and (3-10) is used for ground-level release ($h_e = 0$) within the building wake cavity. For an elevated release, no volumetric building wake correction needs to be considered, i.e., $\Sigma_{zk} = \sigma_{zk}$.

The X/Q dose calculations were performed by means of a computer program XOQDOQ (U.S. NRC 1977).

4.0 GASEOUS EFFLUENT DOSE CALCULATION MODELS AND ASSUMPTIONS

Calculations of dose ratios through gaseous pathways are performed by means of a computer program called GASPAR, (U.S. NRC 1977) which has been formulated according to the requirements of U.S. NRC Regulatory Guide 1.109. The pathways used in the program's calculations are direct plume, ground level deposition, inhalation, ingestion of vegetation contaminated by radioiodine deposition, ingestion of milk from cows which consume the contaminated vegetation, and ingestion of meat from beef that consume the contaminated vegetation.

GASPAR computes both individual doses and population doses. For each case, both building vent releases and elevated stack releases are taken into account when computing the doses. The doses from the building vent releases and elevated stack releases are added together to obtain total dose. The dose calculations for individuals are performed considering four different age groups: infant (0-1 years age), child (1-11 years age), teenager (12-18 years age), and adult (over 18 years age). For each age group and each pathway, radiation doses are calculated for total body, GI-tract, bone, liver, kidney, thyroid, lung and skin.

The analytical methods employed in GASPAR for computing individual and population doses are described in U.S. NRC Regulatory Guide 1.109.