

NLS2005031  
Enclosure 1

**Radioactive Effluent Release Report**  
**Cooper Nuclear Station, Docket 50-298, DPR-46**

**NEBRASKA PUBLIC POWER DISTRICT  
COOPER NUCLEAR STATION**

**RADIOACTIVE EFFLUENT RELEASE REPORT**

**January 1, 2004 through December 31, 2004**

USNRC Docket 50-298

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## **INTRODUCTION**

This report summarizes meteorological data and doses from radioactive effluents for the Cooper Nuclear Station for the period January through December, 2004. The data presented is consistent with guidance provided in Regulatory Guide 1.21 of the U.S. Nuclear Regulatory Commission (Revision 1, 1974) for reporting meteorological data and radioactive effluent data.

The report is organized into three parts. Appendix A presents the effluent and waste disposal source term data. Appendix B presents a summary of onsite meteorological data for the report period, including atmospheric diffusion estimates and a description of the atmospheric diffusion model. Appendix C presents the doses from liquid and gaseous radioactive effluents. Descriptions of the dose calculation models are also included.

**APPENDIX A**  
**SOURCE TERMS**  
**EFFLUENT AND WASTE DISPOSAL REPORTS**  
**SUPPLEMENTAL INFORMATION**

## EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

January 1, 2004 through December 31, 2004

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 is included in the Meteorological Section of the Annual Radioactive Material Release Report - Radioactive Effluents.

Facility Cooper Nuclear Station License DPR-46.

### A. Regulatory Limits

#### 1. Gaseous Waste Effluents

- a. The dose rates due to radioactive materials released in gaseous effluents offsite shall be limited to the following:
  1. Noble Gases: Less than or equal to 500 mrem/yr to the total body and less than or equal to 3000 mrem/yr to the skin.
  2. I-131, I-133, tritium, and all radionuclides in particulate form with half-lives greater than or equal to 8 days: Less than or equal to 1500 mrem/yr to any organ.
- b. The air dose due to noble gases released in gaseous effluents offsite shall be limited to the following:
  1. During any calendar quarter: Less than or equal to 5 mrad from gamma radiation and less than or equal to 10 mrad from beta radiation.
  2. During any calendar year: Less than or equal to 10 mrad from gamma radiation and less than or equal to 20 mrad from beta radiation.
- c. The dose to a member of the public due to I-131, I-133, and radioactive materials in particulate form with half-lives greater than 8 days in gaseous effluents offsite shall be limited to the following:
  1. During any calendar quarter: Less than or equal to 7.5 mrem to any organ.
  2. During any calendar year: Less than or equal to 15 mrem to any organ.

#### 2. Liquid Waste Effluents

- a. January 1, 2004 through December 31, 2004

The concentration of radioactive material in water offsite due to radioactive liquid effluents shall not exceed the concentration specified in 10 CFR 20 Part 20.1302 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall not exceed  $2 \times 10^{-4}$   $\mu\text{Ci/ml}$  total activity. (CNS Technical Specification Amendment 174 Implementation)

- b. The dose to a member of the public due to radioactive material in liquid effluents offsite shall be limited to the following:
  - 1. During any calendar quarter: Less than or equal to 1.5 mrem to the total body and less than or equal to 5 mrem to any organ.
  - 2. During any calendar year: Less than or equal to 3 mrem to the total body and less than or equal to 10 mrem to any organ.

**B. Maximum Permissible Concentrations**

- 1. Water: Covered in Section A.2.
- 2. Air: Covered in Section A.1.

**C. Average Energy**

The average energy (E) of the radionuclide mixtures of fission and activation gases released is not applicable. This information is not utilized for dose or release calculations.

**D. 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:

**1. Gaseous Effluents**

**a. Fission and Activation Gases:**

Radioactivity and radionuclide composition is determined by laboratory HPGe detector analysis in correlation with continuous gross radioactivity monitoring by a beta scintillation 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 HPGe detector gamma spectrometer.

**c. Particulates:**

Particulate filters provide continuous sample collection. These filters are analyzed for radioactivity and radionuclide composition in the laboratory by a HPGe detector gamma spectrometer. An aliquot of a filter composite from each release point was analyzed for Sr-89, Sr-90, and gross alpha by an offsite laboratory.

**d. Tritium:**

A portable sampling apparatus is utilized to collect a quarterly sample of each radioactive vent effluent. These samples are analyzed using a liquid scintillation counter.

## 2. Liquid Effluents

### a. Principal gamma emitters and dissolved and entrained gases:

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

### b. Tritium:

An aliquot of a monthly composite is analyzed using a liquid scintillation counter.

### c. Sr-89 and Sr-90:

An aliquot from a quarterly composite is analyzed by an offsite laboratory.

### d. Gross alpha:

An aliquot from a monthly composite is analyzed by gas flow proportional counting.

### e. Fe-55:

An aliquot from a quarterly composite is analyzed by an offsite laboratory.

## E. Batch Releases

### a. Liquid

1.	Number of batch releases	0	
2.	Total time period for batch releases	N/A	minutes
3.	Maximum time period for batch release	N/A	minutes
4.	Average time period for batch release	N/A	minutes
5.	Minimum time period for batch release	N/A	minutes
6.	Average stream flow during periods of release of effluent into a flowing stream:	N/A	liters/minute



b. Gaseous

1.	Number of batch releases	0	
2.	Total time period for batch releases	N/A	minutes
3.	Maximum time period for batch release	N/A	minutes
4.	Average time period for batch release	N/A	minutes
5.	Minimum time period for batch release	N/A	minutes

F. Abnormal Release

a. Liquid

1.	Number of releases:	0	
2.	Total activity released	0	Ci

b. Gaseous

1.	Number of releases:	0	
2.	Total activity released	0	Ci

**TABLE 1A  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
GASEOUS EFFLUENTS-SUMMATION OF ALL RELEASES**

	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR	EST. TOTAL ERROR %
<b>A. Fission and activation gases</b>						
1. Total release	Ci	1.04E+01	1.74E+00	1.54E+00	6.45E+00	2.0E+01
2. Average release rate for period	μCi/sec	1.32E+00	2.21E-01	1.94E-01	8.12E-01	
<b>B. Iodines</b>						
1. Total iodine 131	Ci	1.18E-04	1.17E-04	1.07E-04	1.42E-04	3.0E+01
2. Average release rate for period	μCi/sec	1.50E-05	1.49E-05	1.34E-05	1.79E-05	
<b>C. Particulates</b>						
1. Particulates with half-lives >8 days	Ci	1.36E-05	1.32E-05	2.09E-05	1.83E-03	5.0E+01
2. Average release rate for period	μCi/sec	1.73E-06	1.68E-06	2.63E-06	2.30E-04	
3. Gross alpha radioactivity	Ci	2.72E-06	0.00E+00	1.80E-08	5.12E-06	
<b>D. Tritium</b>						
1. Total release	Ci	9.32E+00	6.80E+00	1.10E+01	6.97E+00	3.0E+01
2. Average release rate for period	μCi/sec	1.20E+00	8.65E-01	1.38E+00	8.77E-01	

**TABLE 1B**  
**EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT**  
**GASEOUS EFFLUENT-ELEVATED RELEASE**  
**CONTINUOUS MODE \*BATCH**

	NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
1.	Fission gases					
	argon-41	Ci	6.40E-02	0.00E+00	0.00E+00	3.31E-02
	krypton-83m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-85m	Ci	3.40E-01	0.00E+00	0.00E+00	3.40E-01
	krypton-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-87	Ci	1.40E+00	1.30E-01	5.30E-02	1.32E+00
	krypton-88	Ci	1.10E+00	2.20E-03	7.20E-03	1.08E+00
	krypton-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-133	Ci	1.20E-01	0.00E+00	0.00E+00	1.74E-01
	xenon-135m	Ci	1.40E+00	3.40E-01	3.20E-01	9.87E-01
	xenon-135	Ci	1.60E+00	6.80E-02	5.80E-02	9.32E-01
	xenon-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-138	Ci	4.30E+00	1.20E+00	1.10E+00	1.50E+00
	Total for period	Ci	1.03E+01	1.74E+00	1.54E+00	6.37E+00
2.	Iodines					
	iodine-131	Ci	3.00E-05	2.90E-05	2.69E-05	6.00E-05
	iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	iodine-133	Ci	1.29E-04	1.34E-04	4.41E-05	6.30E-05
	iodine-134	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	iodine-135	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total for period	Ci	1.59E-04	1.63E-04	7.10E-05	1.23E-04

\* No batch discharges were made

**TABLE 1B**  
**EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT**  
**GASEOUS EFFLUENT-ELEVATED RELEASE (continued)**  
**CONTINUOUS MODE    \*BATCH**

NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
3.    Particulates					
chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	1.29E-06
manganese-54	Ci	0.00E+00	2.25E-08	0.00E+00	1.72E-06
manganese-56	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt-58	Ci	0.00E+00	0.00E+00	0.00E+00	7.39E-07
cobalt-60	Ci	0.00E+00	0.00E+00	9.40E-07	7.25E-06
zinc-65	Ci	0.00E+00	0.00E+00	0.00E+00	1.15E-05
zinc-69	Ci	0.00E+00	1.95E-07	0.00E+00	0.00E+00
rubidium-88	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rubidium-89	Ci	1.21E-03	3.84E-03	8.36E-03	7.81E-03
strontium-89	Ci	2.05E-06	2.72E-06	2.62E-06	6.37E-04
strontium-90	Ci	5.02E-08	2.27E-08	0.00E+00	2.06E-07
strontium-91	Ci	9.27E-05	1.22E-04	1.38E-04	9.86E-05
strontium-92	Ci	0.00E+00	0.00E+00	0.00E+00	3.15E-05
niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zirconium-97	Ci	0.00E+00	0.00E+00	0.00E+00	8.76E-08
technetium-99m	Ci	0.00E+00	0.00E+00	0.00E+00	1.63E-07
silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	3.47E-06
tellurium-132	Ci	0.00E+00	0.00E+00	1.99E-07	1.27E-07
cesium-137	Ci	1.99E-07	0.00E+00	0.00E+00	5.01E-07
cesium-138	Ci	6.51E-03	6.85E-03	1.22E-02	1.49E-02
barium-139	Ci	7.25E-03	9.46E-03	1.12E-02	8.70E-03
barium-140	Ci	6.40E-06	1.04E-05	8.78E-06	5.47E-06
lanthanum-140	Ci	4.39E-06	6.99E-06	6.78E-06	4.95E-06
cerium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
praesodymium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total for period	Ci	1.51E-02	2.03E-02	3.19E-02	3.22E-02
Total for period with >8d half life	Ci	8.70E-06	1.32E-05	1.23E-05	6.69E-04

\* No batch discharges were made

**TABLE 1C**  
**EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT**  
**GASEOUS EFFLUENT-BUILDING VENT RELEASES)**  
**CONTINUOUS MODE \*BATCH**

	NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
1.	Fission gases					
	krypton-83m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-85m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-87	Ci	4.90E-02	0.00E+00	0.00E+00	0.00E+00
	krypton-88	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	krypton-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-131m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-135m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-135	Ci	1.10E-02	0.00E+00	0.00E+00	8.65E-02
	xenon-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	xenon-138	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total for period	Ci	6.00E-02	0.00E+00	0.00E+00	8.65E-02
2.	Iodines					
	iodine-131	Ci	8.79E-05	8.81E-05	7.98E-05	8.20E-05
	iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	iodine-133	Ci	1.43E-04	1.65E-04	1.45E-04	1.19E-04
	iodine-134	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	iodine-135	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total for period	Ci	2.31E-04	2.53E-04	2.25E-04	2.01E-04
3.	Particulates					
	chromium-51	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	manganese-54	Ci	0.00E+00	0.00E+00	0.00E+00	6.50E-07
	cobalt-57	Ci	0.00E+00	0.00E+00	4.72E-08	7.94E-08
	cobalt-58	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	cobalt-60	Ci	0.00E+00	5.38E-08	3.03E-06	1.56E-05
	zinc-65	Ci	0.00E+00	0.00E+00	0.00E+00	4.81E-06
	rubidium-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	strontium-89	Ci	4.89E-06	0.00E+00	5.52E-06	1.14E-03
	strontium-90	Ci	0.00E+00	0.00E+00	0.00E+00	3.29E-07

**TABLE 1C**  
**EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT**  
**GASEOUS EFFLUENT-BUILDING VENT RELEASES) (continued)**  
**CONTINUOUS MODE    \*BATCH**

strontium-91	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-92	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
yttrium-91m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
technicium-99m	Ci	0.00E+00	0.00E+00	0.00E+00	7.48E-06
silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cesium-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cesium-138	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium-139	Ci	5.93E-03	6.18E-03	1.21E-02	5.47E-03
barium-140	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
lanthanum-140	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cerium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
praseodymium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total for period	Ci	5.93E-03	6.18E-03	1.21E-02	6.64E-03
Total for period >8 day half life	Ci	4.89E-06	5.38E-08	8.60E-06	1.16E-03

\* No batch discharges were made

**TABLE 2A  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
LIQUID EFFLUENTS-SUMMATION OF ALL RELEASES**

	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR	EST. TOTAL ERROR %
<b>A. Fission and activation products</b>						
1. Total release (not including tritium, gases or alpha)	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2. Average diluted concentration during period	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
<b>B. Tritium</b>						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2. Average diluted concentration during period	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
<b>C. Dissolved and entrained gases</b>						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
2. Average diluted concentration during period	uCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
<b>D. Gross alpha radioactivity</b>						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
<b>E. Volume of waste released (prior to dilution)</b>						
1. Total release	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
<b>F. Volume of dilution water used during period</b>						
1. Total release	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

**TABLE 2B  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
LIQUID EFFLUENTS  
CONTINUOUS MODE\* BATCH MODE**

NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
NONE	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total for period	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00

\* No continuous mode discharges were made



TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS  
 PERIOD January 1, 2004 TO December 31, 2004

A. Solid Waste Shipped Offsite for Burial or Disposal (Not Irradiated Fuel)

1. Type of Waste

	Unit	12 Month Period	Est. Total Error %
a. Spent resins, filter sludges evaporator bottoms, etc.	m3	1.67E+01	N/A
	Ci	5.42E+02	15%
b. Dry compressible waste, contaminated equip, etc.	m3	5.23E+01	N/A
	Ci	4.68E+00	25%
c. Irradiated components, control rods, etc.	m3	0.00E+00	N/A
	Ci	0.00E+00	
d. Other	m3	0.00E+00	N/A
	Ci	0.00E+00	

2. Estimate of Major Nuclide Composition (By Type of Waste), Percent %

a. americium-241	1.95E - 05	iron-59	7.67E - 01
antimony-122	4.89E - 07	lanthanum-140	1.57E - 06
antimony-124	7.27E - 02	manganese-54	1.67E + 01
barium-140	1.06E - 03	nickel-63	5.92E - 01
carbon-14	1.84E - 01	plutonium-238	4.46E - 05
cerium-141	1.22E - 03	plutonium-239	3.17E - 05
cerium-144	1.67E - 01	plutonium-241	3.23E - 03
cesium-134	1.49E - 01	rubidium-86	5.72E - 03
cesium-137	4.37E - 01	ruthenium-106	6.07E - 03
chromium-51	4.46E - 01	silver-110m	8.69E + 00
cobalt-57	3.06E - 02	strontium-89	1.46E - 01
cobalt-58	1.43E + 00	strontium-90	2.18E - 02
cobalt-60	4.30E + 01	technetium-99	2.77E - 02
curium-242	5.33E - 05	technetium-99m	3.50E - 07
curium-244	2.42E - 05	tellurium-132	7.49E - 09
iodine-129	2.43E - 04	tin-113	1.09E - 03
iodine-131	2.54E - 04	tritium	2.84E - 02
iodine-133	2.56E - 14	xenon-131m	2.77E - 03
iron-55	2.47E + 01	zinc-65	2.42E + 00

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (continued)  
 PERIOD January 1, 2004 TO December 31, 2004

b.			
	americium-241	4.57E - 05	lanthanum-140
	antimony-122	6.11E - 05	manganese-54
	barium-140	3.38E - 03	nickel-63
	carbon-14	1.33E + 00	plutonium-238
	cerium-141	1.03E - 02	plutonium-239
	cerium-144	9.51E - 50	plutonium-241
	cesium-134	1.08E + 00	rubidium-86
	cesium-137	3.40E + 00	ruthenium-106
	chromium-51	6.16E - 02	silver-110m
	cobalt-57	3.06E - 03	strontium-89
	cobalt-58	1.48E - 01	strontium-90
	cobalt-60	4.60E + 01	technetium-99
	curium-242	8.38E - 05	technetium-99m
	curium-244	5.90E - 05	tellurium-132
	iodine-129	8.40E - 01	tin-113
	iodine-131	1.77E - 03	tritium
	iodine-133	5.11E - 12	xenon-131m
	iron-55	3.83E + 01	zinc-65
	iron-59	4.19E - 02	zirconium-95

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
83	Exclusive Use Vehicle	Clive, UT
1	Exclusive Use Vehicle	Barnwell, SC

4. Solidification Agent

No shipments required solidification during this period.

B. Irradiated Fuel Shipments (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
0	N/A	N/A

**GASEOUS RADIOACTIVE WASTES  
CUMULATIVE DOSE DATA**

A.	Maximum gamma air dose		<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>Annual</u>
	Site boundary*		N	N	NNW	N	N
	1. Total	mrad	3.09E-04	8.76E-05	1.16E-04	2.28E-04	1.00E-03
	Percent of Technical						
	2. Specification Limit		0.01%	<0.01%	<0.01%	<0.01%	0.01%
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrad	3.02E-04	5.01E-05	1.01E-04	3.27E-04	8.70E-04
	Percent of Technical						
	2. Specification Limit		0.01%	<0.01%	<0.01%	0.01%	0.01%
B.	Maximum beta air dose						
	Site boundary*		N	N	NNW	N	N
	1. Total	mrad	3.24E-04	4.97E-05	6.06E-05	1.92E-04	8.15E-04
	Percent of Technical						
	2. Specification Limit		<0.01%	<0.01%	<0.01%	<0.01%	<0.01%
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrad	2.28E-04	2.84E-05	5.28E-05	2.18E-04	5.71E-04
	Percent of Technical						
	2. Specification Limit		<0.01%	<0.01%	<0.01%	<0.01%	<0.01%
C.	Maximum organ dose due to I-131, I-133, and particulates (>8 day half lives)						
	Site boundary*		N	N	NNW	N	N
	1. Total	mrem	5.05E-02	8.14E-02	7.37E-02	1.64E-01	2.62E-01
	Percent of Technical						
	2. Specification Limit		0.67%	1.09%	0.98%	2.18%	1.75%
	3. Organ		Thyroid	Thyroid	Thyroid	Bone	Thyroid
	4. Exposed Individual		Infant	Infant	Infant	Child	Infant
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrem	1.67E-02	1.21E-02	2.22E-02	5.55E-02	7.22E-02
	Percent of Technical						
	2. Specification Limit		0.22%	0.16%	0.30%	0.74%	0.48%
	3. Organ		Thyroid	Thyroid	Thyroid	Bone	Thyroid
	4. Exposed Individual		Infant	Infant	Infant	Child	Infant
D.	Maximum organ dose rate due to I-131, I-133, tritium, and particulates (>8 day half-lives) was 0.262 mrem/year which was 1.75% of the Technical Specification Limit.						
E.	All radioactive noble gas effluent monitors were set to automatically alarm when the monitor alarm set point, determined as specified in the Offsite Dose Assessment Manual (ODAM), was exceeded. This is required to ensure that the 500 mrem/yr to the total body and the 3000 mrem/yr to the skin limits are not exceeded.						

\*Resident and Site Boundary Key: N is 0.67 miles North, NNW is 0.69 miles North-northwest SSE is 0.8 miles South-southeast, NW residence is 0.90 miles Northwest

**LIQUID RADIOACTIVE WASTES  
CUMULATIVE DOSE DATA**

A. Maximum whole body dose		<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>Annual</u>
1. Total	mrem	0	0	0	0	0
2. Percent of Technical Specification Limit		0.00%	0.00%	0.00%	0.00%	0.00
B. Maximum Organ Dose						
1. Total	mrem	0	0	0	0	0
2. Percent of Technical Specification Limit		0.00%	0.00	0.00	0.00%	0.00

## SUPPLEMENTAL INFORMATION

A. Unplanned Releases:

None

B. NPPD Initiated Changes to the Process Control Program:

The information provided below provides a summary of a change made to the Process Control Program (PCP) during the reporting period of January 1 - December 31, 2004. This change did not reduce the overall conformance of the solidified waste product to existing criteria for solid waste. This change has been reviewed and found acceptable by the Station Operation Review Committee.

The Process Control Program specified the General Eastern 100DP Dew Point Hydrometer as the instrument which provides data for determining % relative humidity. The specifying of a specific instrument in detail that is neither required nor necessary to be included in the Process Control Program. Therefore, reference to General Eastern 100DP Dew Point Hydrometer was removed from the PCP.

C. Changes to the Offsite Dose Assessment Manual:

In accordance with Technical Specification (TS) 5.5.1.c.3, a complete, legible copy of the entire Offsite Dose Assessment Manual (ODAM) is being submitted along with the 2004 Annual Radioactive Effluent Release Report. The specific changes are identified with revision bars in the right-hand margin of the affected pages; pages revised during 2004 are identified as such by date in the lower right-hand corner of the affected pages.

D. Reports Required by the Offsite Dose Assessment Manual:

The following information is being reported per the requirements of ODAM Specification D 3.3.1, Condition B, Required Action B.2.2. This information describes a condition in which a radiation effluent monitor was inoperable for a continuous period of greater than 31 days.

The Service Water (SW) radiation effluent monitor was declared inoperable on November 3, 2003. This was due to higher than expected background radiation in the area of the effluent monitor. Therefore, ODAM Specification D 3.3.1, Required Action D.1 was implemented requiring daily grab samples of the SW effluent be taken. These daily grab samples provide continued confirmation that no radioactive releases have occurred. Modifications to the monitor were completed and the Service Water (SW) radiation effluent monitor channels A and B were declared operable April 7, 2004.

The following information is being reported per the requirements of ODAM Specification D 3.3.2, Condition I, Required Action I.2.2. This information describes conditions in which particulate and iodine sampling via auxiliary sampling equipment as required by ODAM Specification D 3.3.2, Condition I, Required Action I.1., was out of service or inoperable.

On February 10, 2004 with the Multi Purpose Facility auxiliary sampler in service the sampler was found to be overheating and was removed from service. The sampler was replaced and samples were not continuously collected as required for approximately 10 minutes.

**APPENDIX B**  
**METEOROLOGY**

## CONTENTS

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## METEOROLOGICAL DATA SUMMARIES

Meteorological data collected onsite for the period January 1, 2004, through December 31, 2004, were reduced, validated, summarized for analysis, and included in appropriate dose calculations. Hourly data summaries are provided for all pertinent parameters and for the joint frequency distributions (JFD's) of wind speed and wind direction by atmospheric stability class.

### DATA RECOVERY

Data recovery statistics are provided in Table 1 for all pertinent meteorological parameters. Average data recovery for all parameters in 2004 was approximately 91%. This data recovery was impacted by the upgrade of the entire meteorological monitoring system in September and October that resulted in overall data recoveries for some parameters falling below 90%. During this period, the 10-meter backup tower data was used for wind speed, wind direction, and temperature. Additionally, it is appropriate to substitute the standard deviation of wind direction ( $\sigma$  theta) for missing data in the calculation of atmospheric stability. For the 100-meter wind speed and direction, the 10-meter wind speed and direction were substituted and the appropriate log-wind law applied to the speed up to 100 meters. The resultant Joint Frequency Distribution (JFD) used in calculating the annual radiological effluents dose assessment had an annual data recovery of over 99%.

		<u>Lowest Data Recovery</u>	<u>Average Data Recovery</u>
January 1 - March 31, 2004	(Q1)	97.4%	98.8%
April 1 - June 30, 2004	(Q2)	35.8%	94.8%
First Semiannual Period - January 1 - June 30, 2004	(SEM1)	67.0%	96.8%
July 1 - September 30, 2004	(Q3)	80.8%	87.9%
October 1 - December 31, 2004	(Q4)	72.1%	80.8%
Second Semiannual Period - July 1 - December 31, 2004	(SEM2)	76.5%	84.4%
Annual Period - January 1 - December 31, 2004	(ANN)	71.8%	90.6%



## WIND AT 100-METER LEVEL AND 10-METER LEVEL

	<u>Predominant Wind Direction at 100m Level</u>		<u>Predominant Wind Direction at 10m Level</u>	
Q1	Northwest	11.6%	South	11.5%
Q2	South	18.2%	South	18.3%
SEM1	South	14.5%	South	14.9%
Q3	South	19.0%	South-Southeast	18.8%
Q4	South	11.9%	South	13.3%
SEM2	South	15.6%	South	15.3%
ANN	South	15.0%	South	15.1%

	<u>Mean Wind Speed at 100m Level</u>	<u>Mean Wind Speed at 10m Level</u>
Q1	15.6 MPH	9.2 MPH
Q2	14.2 MPH	8.5 MPH
SEM1	14.9 MPH	8.8 MPH
Q3	11.4 MPH	6.5 MPH
Q4	14.6 MPH	8.4 MPH
SEM2	12.9 MPH	7.4 MPH
ANN	14.0 MPH	8.1 MPH

	<u>Maximum Hourly Average Wind Speed/(Date at 100m Level)</u>	<u>Maximum Hourly Average Wind Speed/(Date at 10m Level)</u>
Q1	38.6 MPH/(04/03/27)	28.3 MPH/(04/03/13)
Q2	41.3 MPH/(04/04/18)	31.9 MPH/(04/04/28)
SEM1	41.3 MPH/(04/04/18)	31.9 MPH/(04/04/28)
Q3	41.6 MPH/(04/07/21)	23.8 MPH/(04/07/21)
Q4	41.3 MPH/(04/12/12)	30.7 MPH/(04/12/12)
SEM2	41.6 MPH/(04/07/21)	30.7 MPH/(04/12/12)
ANN	41.6 MPH/(04/07/21)	31.9 MPH/(04/04/28)

## TEMPERATURE AT 10-METER LEVEL

	<u>Mean Hourly Average Temperature</u>	<u>Average Daily Maximum</u>	<u>Average Daily Minimum</u>
Q1	38.7 Degrees F	47.4 Degrees F	30.1 Degrees F
Q2	64.3 Degrees F	73.7 Degrees F	54.6 Degrees F
SEM1	48.5 Degrees F	57.3 Degrees F	39.6 Degrees F
Q3	71.7 Degrees F	81.5 Degrees F	62.5 Degrees F
Q4	45.2 Degrees F	54.4 Degrees F	35.9 Degrees F
SEM2	58.4 Degrees F	67.9 Degrees F	49.2 Degrees F
ANN	53.5 Degrees F	62.7 Degrees F	44.4 Degrees F

	<u>Maximum Temperature (Date)</u>	<u>Minimum Temperature (Date)</u>
Q1	75.5 Degrees F (04/03/26)	-5.7 Degrees F (04/01/06)
Q2	94.8 Degrees F (04/05/06)	27.7 Degrees F (04/04/11)
SEM1	94.8 Degrees F (04/05/06)	-5.7 Degrees F (04/01/06)
Q3	97.8 Degrees F (04/07/20)	36.4 Degrees F (04/09/29)
Q4	82.0 Degrees F (04/10/03)	-2.1 Degrees F (04/12/24)
SEM2	97.8 Degrees F (04/07/20)	-2.1 Degrees F (04/12/24)
ANN	97.8 Degrees F (04/07/20)	-5.7 Degrees F (04/01/06)

## PRECIPITATION

	<u>Total Precipitation</u>	<u>Maximum Daily Precipitation Total/ (Date)</u>	<u>Maximum Hourly Precipitation Total/ (Date)</u>
Q1	3.65 Inches	1.37 Inches (04/03/27)	0.43 Inches (04/03/17)
Q2	10.03 Inches	1.72 Inches (04/05/29)	1.29 Inches (04/05/29)
SEM1	13.68 Inches	1.72 Inches (04/05/29)	1.29 Inches (04/05/29)
Q3	7.96 Inches	1.02 Inches (04/07/24)	0.57 Inches (04/08/26)
Q4	0.83 Inches	0.22 Inches (04/12/05)	0.07 Inches (04/12/05)
SEM2	8.79 Inches	1.02 Inches (04/07/24)	0.57 Inches (04/08/26)
ANN	22.47 Inches	1.72 Inches (04/05/29)	1.29 Inches (04/05/29)

## ATMOSPHERIC STABILITY

Atmospheric stability is determined through classification of differential temperature data based on JFD of the 100-meter wind and the delta T (100m - 10m) stability data.

	<u>Unstable Conditions Classes A-C</u>	<u>Neutral Conditions Class D</u>	<u>Stable Conditions Classes E-G</u>
Q1	6%	43%	50%
Q2	17%	45%	38%
SEM1	12%	44%	44%
Q3	16%	38%	46%
Q4	14%	49%	37%
SEM2	15%	44%	41%
ANN	14%	44%	43%

**TABLE 1. Meteorological Data Recovery**

Data Recovery (% of total Observations)

	January- March 2004	April- June 2004	January- June 2004	July- Sept. 2004	October- Dec. 2004	July- Dec. 2004	January- Dec. 2004
100m wind speed	97.4	98.1	97.8	80.8	72.1	76.5	87.1
100m wind direction	98.3	98.1	98.2	80.8	72.1	76.5	87.3
100m ambient temperature	98.3	98.1	98.2	80.8	72.1	76.5	87.3
60m wind speed	98.3	98.1	98.2	80.8	72.1	76.5	87.3
60m wind direction	98.3	35.8	67.0	80.8	72.1	76.5	71.8
60m ambient temperature	98.3	98.1	98.2	80.8	72.1	99.8	87.3
10m wind speed	100.0	99.8	99.9	99.7	100.0	99.8	99.9
10m wind direction	99.9	99.7	99.8	99.7	100.0	99.8	99.8
10m ambient temperature	100.0	99.8	99.9	99.7	100.0	76.5	99.9
10m dew point	98.3	98.1	98.2	80.8	72.1	76.5	87.3
100m-10m delta T	98.3	98.1	98.2	80.8	72.1	76.5	87.3
100m-60m delta T	98.3	98.1	98.2	80.8	72.1	76.5	87.3
60m-10m delta T	98.3	98.1	98.2	80.8	72.1	76.5	87.3
Precipitation	100.0	100.0	100.0	100.0	72.1	86.1	93.0
100m JFD	99.9	99.8	99.8	99.7	99.9	99.8	99.8
10m JFD	99.8	99.7	99.8	99.7	99.9	99.8	99.8

JFD - Joint Frequency Distribution of wind speed, wind direction and atmospheric stability.

BS

## MONTHLY SUMMARY TABLES OF HOURLY METEOROLOGICAL DATA

The tables presented in this section provide a summary of hourly averages of measured meteorological parameters. The tables provide summaries by month for the annual period January through December, 2004. Summaries for the first quarter, second quarter, third quarter, fourth quarter, and semiannual periods are also provided. The parameters provided are listed below.

- \* 10 meter ambient temperature.
- \* Wind direction frequencies at 10 meters and 100 meters.
- \* Precipitation.

Any missing or non-measured data are indicated by a field of 9's.

**10-Meter Ambient Temperature**  
**and**  
**10-Meter Dew Point Temperature**

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

JANUARY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	22.0	31	11.5	31	63.8	31	2.4	31	19.2
2	31	21.6	31	11.0	31	63.6	31	2.4	31	18.8
3	31	21.4	31	10.8	31	63.8	31	2.4	31	18.6
4	31	21.1	31	10.6	31	63.9	31	2.3	31	18.4
5	31	20.7	31	10.5	31	64.5	31	2.4	31	18.1
6	31	20.3	31	10.7	31	66.3	31	2.4	31	17.9
7	31	20.0	31	10.3	31	65.9	31	2.4	31	17.6
8	31	19.7	31	10.0	31	66.0	31	2.4	31	17.3
9	31	20.2	31	10.8	31	66.7	31	2.5	31	17.9
10	31	21.7	31	11.6	31	64.8	31	2.6	31	19.1
11	31	23.5	31	12.2	31	62.0	31	2.6	31	20.4
12	31	25.2	31	12.9	31	59.6	31	2.6	31	21.7
13	31	26.5	31	13.5	31	58.1	31	2.7	31	22.7
14	31	27.8	31	13.7	31	56.0	31	2.7	31	23.5
15	31	28.9	31	14.0	31	54.5	31	2.7	31	24.2
16	31	29.6	31	14.1	31	53.4	31	2.7	31	24.7
17	31	29.2	31	14.0	31	53.9	31	2.7	31	24.4
18	31	27.6	31	13.7	31	56.5	31	2.6	31	23.3
19	31	26.4	31	13.5	31	58.7	31	2.6	31	22.5
20	31	25.4	31	13.4	31	60.8	31	2.6	31	21.8
21	31	24.5	31	13.2	31	62.7	31	2.6	31	21.2
22	31	23.7	31	12.8	31	63.5	31	2.5	31	20.5
23	31	22.9	31	12.2	31	63.6	31	2.5	31	19.9
24	31	22.2	31	11.8	31	64.3	31	2.4	31	19.4
HOURLY MEAN		23.8		12.2		61.5		2.5		20.5
AVG DAILY MAX		32.0		19.7		74.5		3.4		27.4
AVG DAILY MIN		16.1		5.2		50.5		1.8		13.9
ABSOLUTE MAX		59.8		47.1		95.1		8.4		50.0
ABSOLUTE MIN		-5.7		-19.3		28.5		.5		-6.8
TOTAL OBS		744		744		744		744		744

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

FEBRUARY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	29	25.3	29	16.1	29	68.1	29	2.8	29	22.4
2	29	24.8	29	15.5	29	67.9	29	2.7	29	21.9
3	29	24.3	29	15.2	29	68.4	29	2.7	29	21.5
4	29	23.9	29	15.1	29	69.2	29	2.7	29	21.2
5	29	23.7	29	14.9	29	69.0	29	2.6	29	21.0
6	29	23.3	29	14.8	29	70.1	29	2.7	29	20.8
7	29	23.0	29	14.7	29	70.4	29	2.7	29	20.5
8	29	22.9	29	14.6	29	70.6	29	2.7	29	20.5
9	29	23.8	29	15.3	29	70.1	29	2.7	29	21.3
10	29	25.6	29	16.3	29	68.2	29	2.8	29	22.7
11	29	27.5	29	17.0	29	64.9	29	2.9	29	24.1
12	29	29.5	29	18.0	29	62.6	29	3.0	29	25.7
13	29	31.4	29	19.0	29	60.9	29	3.1	29	27.1
14	29	33.0	29	19.7	29	58.8	29	3.2	29	28.3
15	29	34.0	29	20.3	29	58.3	29	3.2	29	29.1
16	29	34.7	29	20.6	29	57.6	29	3.3	29	29.6
17	29	34.7	29	20.6	29	57.7	29	3.3	29	29.6
18	29	33.6	29	20.7	29	60.3	29	3.3	29	29.0
19	29	31.8	29	20.0	29	62.3	29	3.2	29	27.7
20	29	30.4	29	19.5	29	64.5	29	3.1	29	26.6
21	29	29.1	29	18.8	29	65.6	29	3.1	29	25.6
22	29	28.0	29	18.3	29	67.2	29	3.0	29	24.8
23	29	27.4	29	17.9	29	67.7	29	3.0	29	24.3
24	29	26.8	29	17.5	29	68.0	29	2.9	29	23.8
HOURLY MEAN		28.0		17.5		65.3		2.9		24.6
AVG DAILY MAX		35.8		23.1		78.0		3.6		30.7
AVG DAILY MIN		19.8		10.7		53.3		2.3		17.5
ABSOLUTE MAX		59.1		43.7		92.0		7.4		49.0
ABSOLUTE MIN		-2.3		-9.2		26.6		.8		-3.0
TOTAL OBS		696		696		696		696		696

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

MARCH

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	43.2	30	31.1	30	62.7	30	5.0	30	38.5
2	31	42.4	30	30.6	30	63.3	30	4.9	30	37.9
3	31	41.6	30	30.5	30	64.9	30	4.9	30	37.4
4	31	41.0	30	30.5	30	66.1	30	4.9	30	37.0
5	31	40.5	30	30.0	30	66.0	30	4.8	30	36.6
6	31	40.0	30	29.5	30	66.3	30	4.7	30	36.0
7	31	39.7	30	29.2	30	66.2	30	4.6	30	35.8
8	31	40.3	30	29.5	30	65.7	30	4.7	30	36.2
9	31	42.0	30	29.9	30	63.0	30	4.8	30	37.3
10	31	44.2	30	30.7	30	60.0	30	4.9	30	38.9
11	30	46.5	29	31.5	29	57.6	29	5.1	29	40.4
12	31	48.8	29	32.2	29	54.3	29	5.2	29	42.0
13	31	50.6	29	32.6	29	51.8	29	5.3	29	43.1
14	31	51.7	29	32.6	29	50.3	29	5.3	29	43.7
15	31	52.4	29	32.8	29	50.0	29	5.4	29	44.2
16	31	52.5	29	33.1	29	50.9	29	5.5	29	44.4
17	31	52.6	29	33.3	29	51.9	29	5.6	29	44.5
18	31	52.0	29	33.2	29	52.8	29	5.6	29	44.2
19	31	50.4	29	33.0	29	54.7	29	5.5	29	43.2
20	31	48.3	29	32.6	29	57.3	29	5.4	29	42.0
21	31	46.9	29	32.4	29	58.9	29	5.3	29	41.1
22	31	45.9	29	32.5	29	60.7	29	5.3	29	40.6
23	31	44.8	29	31.9	29	61.4	29	5.2	29	39.8
24	31	44.0	29	31.4	29	61.6	29	5.1	29	39.2
HOURLY MEAN		45.9		31.5		59.2		5.1		40.1
AVG DAILY MAX		54.6		37.9		74.5		6.4		45.8
AVG DAILY MIN		37.6		25.4		43.3		4.0		33.8
ABSOLUTE MAX		75.5		60.8		92.8		13.3		66.2
ABSOLUTE MIN		20.0		8.8		20.9		1.8		17.9
TOTAL OBS		743		706		706		706		706

B10

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

JAN-MAR HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	122	35.9	119	23.6	119	62.1	119	4.0	119	31.2
2	122	35.2	119	23.2	119	62.5	119	3.9	119	30.7
3	122	34.5	119	22.9	119	63.3	119	3.9	119	30.3
4	122	33.9	119	22.8	119	64.5	119	3.9	119	29.9
5	122	33.5	119	22.6	119	64.8	119	3.9	119	29.6
6	122	32.9	119	22.4	119	65.7	119	3.8	119	29.2
7	122	32.7	119	22.2	119	65.9	119	3.8	119	29.0
8	122	33.4	119	22.4	119	65.1	119	3.9	119	29.4
9	122	34.9	119	22.9	119	63.2	119	4.0	119	30.4
10	122	37.0	119	23.6	119	60.4	119	4.0	119	31.8
11	121	39.1	118	24.0	118	57.2	118	4.1	118	33.1
12	122	41.2	118	24.6	118	54.5	118	4.1	118	34.5
13	122	42.9	118	25.1	118	52.6	118	4.2	118	35.5
14	122	44.2	118	25.4	118	50.8	118	4.2	118	36.3
15	122	45.1	119	25.7	119	49.9	119	4.3	119	37.0
16	122	45.7	119	25.9	119	49.4	119	4.3	119	37.4
17	122	45.6	119	25.9	119	49.8	119	4.3	119	37.3
18	122	44.7	119	25.8	119	51.5	119	4.3	119	36.8
19	122	43.1	119	25.6	119	53.7	119	4.3	119	35.8
20	122	41.2	119	25.4	119	56.3	119	4.3	119	34.8
21	122	39.8	119	25.1	119	58.1	119	4.2	119	33.9
22	122	38.7	119	24.8	119	59.7	119	4.2	119	33.2
23	122	37.7	119	24.4	119	60.3	119	4.1	119	32.5
24	122	36.9	119	24.0	119	61.2	119	4.0	119	31.9
HOURLY MEAN		38.7		24.2		58.4		4.1		33.0
AVG DAILY MAX		47.4		30.6		73.5		5.1		39.0
AVG DAILY MIN		30.1		17.8		44.6		3.1		26.6
ABSOLUTE MAX		88.2		60.8		95.1		13.3		69.2
ABSOLUTE MIN		-5.7		-19.3		16.8		.5		-6.8
TOTAL OBS		2927		2852		2852		2852		2852

B11

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

APRIL

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	52.5	28	36.3	28	53.0	28	5.8	28	45.5
2	30	51.4	28	36.1	28	54.5	28	5.7	28	44.9
3	30	50.2	28	35.5	28	55.4	28	5.6	28	44.1
4	30	49.0	28	35.6	28	58.4	28	5.7	28	43.5
5	30	48.2	28	35.5	28	59.7	28	5.7	28	43.1
6	30	47.5	28	35.1	28	60.3	28	5.6	28	42.6
7	30	47.6	28	35.5	28	61.2	28	5.7	28	42.8
8	30	50.0	28	36.4	28	58.1	28	5.9	28	44.4
9	30	52.9	28	36.4	28	53.0	28	5.9	28	45.8
10	30	55.9	28	36.6	28	48.7	28	6.0	28	47.3
11	30	58.6	28	36.4	28	44.4	28	6.0	28	48.5
12	30	60.9	28	36.4	28	41.4	28	5.9	28	49.5
13	30	62.5	28	36.5	28	39.6	28	5.9	28	50.3
14	30	63.8	28	36.7	28	38.3	28	6.0	28	50.9
15	30	64.7	29	36.6	29	37.3	29	5.9	29	51.2
16	30	65.4	29	36.4	29	36.3	29	5.9	29	51.4
17	30	65.5	29	36.4	29	36.1	29	5.9	29	51.5
18	30	65.0	29	36.5	29	37.0	29	5.9	29	51.3
19	30	63.2	29	36.7	29	39.5	29	6.0	29	50.7
20	30	60.4	29	37.0	29	43.1	29	6.0	29	49.4
21	30	58.2	29	36.8	29	45.7	29	6.0	29	48.3
22	30	56.7	29	36.7	29	47.8	29	5.9	29	47.5
23	30	55.3	29	36.2	29	48.9	29	5.8	29	46.6
24	30	54.1	29	36.2	29	50.9	29	5.8	29	46.0
HOURLY MEAN		56.6		36.3		47.8		5.9		47.4
AVG DAILY MAX		66.6		42.0		67.1		7.2		52.5
AVG DAILY MIN		46.2		30.5		31.5		4.6		41.3
ABSOLUTE MAX		88.2		58.5		85.0		12.3		69.2
ABSOLUTE MIN		27.7		17.8		16.8		2.6		25.0
TOTAL OBS		720		682		682		682		682

B12

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

MAY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	-----		-----		-----		-----		-----	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	31	61.0	31	50.5	31	69.1	31	9.9	31	55.3
2	31	60.3	31	50.5	31	70.7	31	9.8	31	55.0
3	31	59.9	31	50.6	31	72.0	31	9.9	31	54.8
4	31	59.1	31	50.2	31	72.9	31	9.8	31	54.3
5	31	58.7	31	50.2	31	73.9	31	9.8	31	54.1
6	31	58.4	31	50.2	31	74.5	31	9.8	31	54.0
7	31	59.2	31	50.6	31	73.5	31	9.9	31	54.5
8	31	61.7	31	51.4	31	69.4	31	10.2	31	56.1
9	31	64.4	31	51.9	31	64.5	31	10.4	31	57.5
10	31	66.8	31	51.7	31	59.5	31	10.3	31	58.5
11	31	69.1	31	51.7	31	55.2	31	10.3	31	59.4
12	31	71.0	31	51.9	31	52.4	31	10.3	31	60.2
13	31	72.2	31	51.7	31	50.1	31	10.3	31	60.6
14	31	72.8	31	51.7	31	49.5	31	10.2	31	60.8
15	31	73.8	31	51.9	31	48.2	31	10.2	31	61.2
16	31	74.6	31	51.4	31	46.3	31	10.1	31	61.3
17	31	74.7	31	51.2	31	45.9	31	10.1	31	61.3
18	31	73.8	31	51.3	31	47.4	31	10.1	31	61.1
19	31	72.3	31	51.3	31	49.7	31	10.1	31	60.4
20	31	69.5	31	51.5	31	54.3	31	10.2	31	59.4
21	31	66.8	31	51.4	31	58.9	31	10.2	31	58.3
22	31	65.3	31	51.1	31	61.2	31	10.1	31	57.5
23	31	63.8	31	50.9	31	63.6	31	10.0	31	56.8
24	31	62.6	31	50.7	31	66.1	31	9.9	31	56.1
HOURLY MEAN		66.3		51.2		60.4		10.1		57.9
AVG DAILY MAX		76.2		55.6		78.3		11.7		62.8
AVG DAILY MIN		56.4		46.6		43.3		8.6		51.9
ABSOLUTE MAX		94.8		69.6		89.2		18.0		73.6
ABSOLUTE MIN		31.1		20.3		22.2		2.8		29.5
TOTAL OBS		744		744		744		744		744

B13

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

JUNE

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	65.3	30	55.1	30	70.0	30	11.3	30	59.6
2	30	64.6	30	55.1	30	71.7	30	11.3	30	59.2
3	30	63.9	30	54.8	30	72.6	30	11.2	30	58.8
4	30	63.2	30	54.7	30	74.2	30	11.2	30	58.4
5	30	62.9	30	54.7	30	75.1	30	11.2	30	58.3
6	30	62.9	30	55.0	30	76.0	30	11.4	30	58.5
7	30	64.3	30	55.7	30	74.2	30	11.6	30	59.4
8	30	66.6	30	56.2	30	69.7	30	11.8	30	60.7
9	30	69.0	30	55.2	30	63.1	30	11.4	30	61.1
10	28	70.7	28	55.5	28	59.6	28	11.4	28	61.9
11	29	72.3	29	55.3	29	56.3	29	11.4	29	62.4
12	30	74.4	30	55.4	30	53.1	30	11.4	30	63.3
13	30	75.7	30	55.3	30	50.4	30	11.4	30	63.7
14	29	76.7	29	54.6	29	47.5	29	11.0	29	63.8
15	30	76.8	30	54.8	30	47.9	30	11.1	30	63.8
16	30	77.0	30	55.1	30	48.3	30	11.2	30	64.1
17	30	76.5	30	55.4	30	49.6	30	11.3	30	64.0
18	30	76.0	30	55.2	30	50.3	30	11.2	30	63.7
19	30	74.9	30	55.3	30	52.0	30	11.3	30	63.4
20	30	72.5	30	56.0	30	57.2	30	11.6	30	62.8
21	30	69.9	30	56.1	30	62.2	30	11.6	30	61.9
22	30	68.3	30	56.1	30	65.5	30	11.6	30	61.2
23	30	67.2	30	55.8	30	67.2	30	11.5	30	60.6
24	30	66.5	30	55.8	30	68.9	30	11.6	30	60.4
HOURLY MEAN		69.9		55.4		61.8		11.4		61.5
AVG DAILY MAX		78.3		59.7		78.8		13.1		65.5
AVG DAILY MIN		61.2		50.3		45.5		9.5		56.3
ABSOLUTE MAX		90.5		68.9		88.7		17.6		74.0
ABSOLUTE MIN		48.1		35.8		22.4		5.2		46.0
TOTAL OBS		716		716		716		716		716

B14

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2004

APR-JUN HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	91	59.6	89	47.6	89	64.4	89	9.1	89	53.7
2	91	58.8	89	47.5	89	65.9	89	9.1	89	53.2
3	91	58.0	89	47.2	89	67.0	89	9.0	89	52.8
4	91	57.1	89	47.1	89	68.8	89	9.0	89	52.3
5	91	56.6	89	47.1	89	69.8	89	9.0	89	52.1
6	91	56.3	89	47.0	89	70.5	89	9.0	89	51.9
7	91	57.0	89	47.6	89	69.9	89	9.2	89	52.5
8	91	59.5	89	48.3	89	65.9	89	9.4	89	54.0
9	91	62.1	89	48.1	89	60.4	89	9.3	89	55.0
10	89	64.4	87	48.1	87	56.1	87	9.3	87	56.0
11	90	66.7	88	48.0	88	52.1	88	9.3	88	56.9
12	91	68.8	89	48.2	89	49.2	89	9.3	89	57.9
13	91	70.2	89	48.2	89	46.9	89	9.3	89	58.4
14	90	71.1	88	47.9	88	45.3	88	9.1	88	58.6
15	91	71.8	90	47.9	90	44.6	90	9.1	90	58.9
16	91	72.3	90	47.8	90	43.7	90	9.1	90	59.0
17	91	72.2	90	47.8	90	44.0	90	9.1	90	59.0
18	91	71.6	90	47.9	90	45.0	90	9.2	90	58.8
19	91	70.2	90	47.9	90	47.1	90	9.2	90	58.3
20	91	67.5	90	48.3	90	51.7	90	9.3	90	57.3
21	91	65.0	90	48.2	90	55.7	90	9.3	90	56.2
22	91	63.4	90	48.1	90	58.3	90	9.3	90	55.5
23	91	62.1	90	47.8	90	60.1	90	9.1	90	54.8
24	91	61.1	90	47.7	90	62.1	90	9.1	90	54.3
HOURLY MEAN		64.3		47.8		56.8		9.2		55.7
AVG DAILY MAX		73.7		52.6		74.9		10.7		60.4
AVG DAILY MIN		54.6		42.6		40.2		7.6		50.0
ABSOLUTE MAX		94.8		69.6		89.2		18.0		74.0
ABSOLUTE MIN		27.7		17.8		16.8		2.6		25.0
TOTAL OBS		2180		2142		2142		2142		2142

BIS

PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

JAN-JUN HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	182	45.0	179	33.5	179	64.6	179	6.2	179	40.1
2	182	44.3	179	33.2	179	65.4	179	6.2	179	39.6
3	182	43.6	179	32.9	179	66.3	179	6.1	179	39.2
4	182	42.9	179	32.8	179	67.6	179	6.1	179	38.8
5	182	42.5	179	32.7	179	68.1	179	6.1	179	38.6
6	182	42.1	179	32.6	179	69.0	179	6.1	179	38.3
7	182	42.4	179	32.7	179	68.7	179	6.2	179	38.5
8	182	43.6	179	33.1	179	66.7	179	6.3	179	39.2
9	182	45.5	179	33.3	179	63.5	179	6.3	179	40.2
10	180	47.3	177	33.5	177	60.2	177	6.3	177	41.2
11	180	49.5	177	33.9	177	56.8	177	6.4	177	42.5
12	182	51.7	178	34.5	178	54.0	178	6.5	178	43.8
13	182	53.2	178	34.8	178	51.9	178	6.5	178	44.6
14	181	54.2	177	34.8	177	50.2	177	6.4	177	45.1
15	182	55.2	179	35.1	179	49.4	179	6.4	179	45.7
16	182	55.7	179	35.2	179	48.8	179	6.5	179	45.9
17	182	55.6	179	35.2	179	49.2	179	6.5	179	45.9
18	182	54.7	179	35.2	179	50.7	179	6.5	179	45.5
19	182	53.2	179	35.0	179	52.8	179	6.5	179	44.7
20	182	51.1	179	35.1	179	56.2	179	6.5	179	43.7
21	182	49.3	179	34.8	179	59.1	179	6.5	179	42.8
22	182	48.0	179	34.6	179	61.0	179	6.4	179	42.1
23	182	47.0	179	34.2	179	62.1	179	6.4	179	41.4
24	182	46.1	179	34.0	179	63.4	179	6.3	179	40.8
HOURLY MEAN		48.5		34.0		59.4		6.3		42.0
AVG DAILY MAX		57.3		39.7		75.2		7.6		47.5
AVG DAILY MIN		39.6		28.2		44.6		5.1		35.8
ABSOLUTE MAX		94.8		69.6		95.1		18.0		74.0
ABSOLUTE MIN		-5.7		-19.3		16.8		.5		-6.8
TOTAL OBS		4363		4288		4288		4288		4288

B16

PROGRAM: WETEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

JULY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	70.0	31	62.6	31	77.8	31	14.5	31	65.4
2	31	69.6	31	62.3	31	77.9	31	14.3	31	65.1
3	31	68.9	31	61.9	31	78.7	31	14.1	31	64.5
4	31	68.2	31	61.6	31	79.6	31	14.0	31	64.2
5	31	67.5	31	61.3	31	80.8	31	13.9	31	63.8
6	31	67.0	31	61.1	31	81.5	31	13.8	31	63.4
7	31	67.7	31	61.7	31	81.4	31	14.0	31	64.0
8	31	69.3	31	62.3	31	78.4	31	14.3	31	65.0
9	31	71.7	31	63.0	31	74.4	31	14.6	31	66.3
10	31	74.0	31	63.2	31	69.3	31	14.7	31	67.2
11	31	76.0	31	62.9	31	64.4	31	14.5	31	67.7
12	31	77.6	31	62.9	31	61.3	31	14.5	31	68.3
13	31	78.6	31	63.1	31	59.7	31	14.6	31	68.7
14	31	78.9	31	63.2	31	59.5	31	14.6	31	68.8
15	31	79.7	31	63.4	31	58.5	31	14.7	31	69.2
16	31	80.1	31	63.7	31	58.6	31	14.9	31	69.5
17	31	79.9	31	63.9	31	59.2	31	15.0	31	69.6
18	31	79.4	31	63.8	31	59.8	31	14.9	31	69.4
19	31	78.4	31	64.3	31	62.7	31	15.2	31	69.3
20	31	76.0	31	64.6	31	68.1	31	15.4	31	68.7
21	31	73.7	31	64.5	31	73.0	31	15.4	31	67.9
22	31	72.6	31	64.2	31	75.2	31	15.3	31	67.3
23	31	71.7	31	63.9	31	76.8	31	15.2	31	66.8
24	31	71.1	31	63.1	31	76.2	31	14.7	31	66.1
HOURLY MEAN		73.7		63.0		70.5		14.6		66.9
AVG DAILY MAX		81.5		66.7		84.3		16.5		70.8
AVG DAILY MIN		66.2		59.3		54.2		12.9		62.5
ABSOLUTE MAX		97.8		77.5		91.3		23.0		81.0
ABSOLUTE MIN		53.8		48.0		40.6		8.4		52.0
TOTAL OBS		744		744		744		744		744

B17



PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

AUGUST

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	65.8	31	58.1	31	76.4	31	12.6	31	61.3
2	31	65.0	31	57.6	31	77.1	31	12.3	31	60.6
3	31	64.4	31	57.4	31	78.2	31	12.3	31	60.3
4	31	63.9	31	57.1	31	78.6	31	12.1	31	60.0
5	31	63.3	31	56.7	31	79.3	31	12.0	31	59.5
6	31	62.9	31	56.6	31	80.1	31	12.0	31	59.3
7	31	63.2	31	57.0	31	80.3	31	12.1	31	59.6
8	31	65.2	31	57.7	31	76.9	31	12.4	31	60.9
9	31	67.8	31	58.3	31	71.6	31	12.6	31	62.2
10	31	70.9	31	58.6	31	65.5	31	12.7	31	63.5
11	31	73.2	31	58.4	31	60.3	31	12.6	31	64.3
12	31	74.9	31	58.3	31	57.0	31	12.6	31	64.9
13	31	76.3	31	58.5	31	54.6	31	12.6	31	65.5
14	31	77.7	31	58.5	31	52.3	31	12.6	31	66.0
15	31	78.9	31	58.8	31	50.9	31	12.8	31	66.6
16	31	79.4	31	59.1	31	50.6	31	12.9	31	66.9
17	31	79.0	31	59.3	31	51.9	31	13.1	31	66.9
18	31	78.0	31	59.8	31	54.4	31	13.3	31	66.8
19	31	75.8	31	60.3	31	59.2	31	13.4	31	66.3
20	31	72.5	31	60.4	31	66.1	31	13.5	31	65.1
21	31	70.4	31	59.9	31	69.8	31	13.3	31	64.1
22	31	69.1	31	59.5	31	71.9	31	13.1	31	63.3
23	31	67.7	31	59.0	31	74.0	31	12.9	31	62.5
24	31	66.8	31	58.6	31	75.1	31	12.7	31	61.9
HOURLY MEAN		70.5		58.5		67.2		12.7		63.3
AVG DAILY MAX		79.8		62.3		83.2		14.4		67.6
AVG DAILY MIN		62.1		54.6		49.2		11.1		58.4
ABSOLUTE MAX		94.7		75.9		89.3		21.8		80.2
ABSOLUTE MIN		49.8		41.5		35.6		6.6		47.2
TOTAL OBS		744		744		744		744		744

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

SEPTEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	65.5	13	56.2	13	71.6	13	11.6	13	60.2
2	30	64.3	13	55.8	13	72.8	13	11.4	13	59.6
3	30	63.3	13	55.5	13	73.8	13	11.3	13	59.2
4	30	62.6	13	55.2	13	75.0	13	11.3	13	58.7
5	30	61.8	13	55.0	13	76.8	13	11.2	13	58.2
6	30	60.7	13	54.7	13	77.2	13	11.1	13	57.8
7	30	60.5	13	55.0	13	77.5	13	11.2	13	58.1
8	30	61.6	13	55.9	13	71.5	13	11.5	13	60.0
9	30	64.5	13	56.3	13	63.1	13	11.6	13	61.7
10	29	69.0	12	56.9	12	57.0	12	11.8	12	63.4
11	29	73.2	12	56.7	12	50.2	12	11.6	12	64.7
12	29	76.9	12	56.1	12	44.9	12	11.4	12	65.4
13	29	79.3	12	55.6	12	41.8	12	11.1	12	65.7
14	29	81.1	12	55.1	12	39.7	12	10.9	12	65.8
15	29	82.3	12	54.7	12	38.6	12	10.8	12	65.9
16	29	82.8	12	54.9	12	40.3	12	10.9	12	65.9
17	30	82.4	12	55.3	12	41.2	12	11.0	12	65.9
18	30	81.3	12	55.9	12	43.9	12	11.3	12	65.7
19	30	78.3	12	56.5	12	50.0	12	11.5	12	64.6
20	30	74.2	12	56.6	12	57.1	12	11.6	12	63.3
21	30	71.4	12	56.9	12	61.4	12	11.8	12	62.7
22	30	69.5	12	56.7	12	64.5	12	11.7	12	61.9
23	30	68.0	12	56.3	12	67.3	12	11.6	12	61.0
24	30	66.8	12	56.2	12	69.9	12	11.6	12	60.5
HOURLY MEAN		70.8		55.8		59.9		11.4		62.2
AVG DAILY MAX		83.2		58.5		79.9		12.5		66.1
AVG DAILY MIN		59.1		52.7		38.3		10.0		57.1
ABSOLUTE MAX		91.9		68.9		86.8		17.6		72.2
ABSOLUTE MIN		36.4		46.0		28.4		7.8		49.3
TOTAL OBS		713		297		297		297		297

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

JUL-SEP HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	92	67.1	75	59.7	75	76.1	75	13.2	75	62.8
2	92	66.3	75	59.2	75	76.7	75	13.0	75	62.3
3	92	65.6	75	58.9	75	77.6	75	12.9	75	61.9
4	92	65.0	75	58.6	75	78.4	75	12.8	75	61.5
5	92	64.2	75	58.3	75	79.5	75	12.6	75	61.1
6	92	63.6	75	58.1	75	80.2	75	12.6	75	60.8
7	92	63.9	75	58.6	75	80.2	75	12.8	75	61.2
8	92	65.4	75	59.3	75	76.6	75	13.0	75	62.4
9	92	68.1	75	59.9	75	71.3	75	13.2	75	63.8
10	91	71.3	74	60.2	74	65.7	74	13.4	74	65.1
11	91	74.2	74	60.0	74	60.4	74	13.2	74	65.8
12	91	76.5	74	59.9	74	56.9	74	13.2	74	66.4
13	91	78.1	74	59.9	74	54.7	74	13.2	74	66.9
14	91	79.2	74	59.9	74	53.3	74	13.2	74	67.1
15	91	80.3	74	60.0	74	52.1	74	13.2	74	67.6
16	91	80.7	74	60.3	74	52.2	74	13.4	74	67.8
17	92	80.4	74	60.6	74	53.2	74	13.5	74	67.9
18	92	79.6	74	60.9	74	55.0	74	13.6	74	67.7
19	92	77.5	74	61.4	74	59.2	74	13.9	74	67.3
20	92	74.2	74	61.5	74	65.5	74	14.0	74	66.3
21	92	71.8	74	61.4	74	69.8	74	13.9	74	65.4
22	92	70.4	74	61.0	74	72.1	74	13.8	74	64.8
23	92	69.1	74	60.6	74	74.0	74	13.6	74	64.1
24	92	68.2	74	60.1	74	74.7	74	13.4	74	63.5
HOURLY MEAN		71.7		59.9		67.4		13.3		64.6
AVG DAILY MAX		81.5		63.5		83.1		14.9		68.7
AVG DAILY MIN		62.5		56.2		49.4		11.6		59.9
ABSOLUTE MAX		97.8		77.5		91.3		23.0		81.0
ABSOLUTE MIN		36.4		41.5		28.4		6.6		47.2
TOTAL OBS		2201		1785		1785		1785		1785

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

OCTOBER

10.0 METERS LEVEL

HOURLY	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	54.4	5	47.6	5	71.1	5	9.3	5	52.7
2	31	53.5	5	47.1	5	70.9	5	9.1	5	52.2
3	31	52.7	5	47.2	5	72.3	5	9.2	5	52.0
4	31	51.7	5	47.2	5	72.9	5	9.1	5	51.9
5	31	50.7	5	47.3	5	74.9	5	9.2	5	51.5
6	31	50.2	5	47.3	5	76.4	5	9.2	5	51.3
7	31	49.5	5	47.6	5	77.1	5	9.2	5	51.4
8	31	49.5	5	48.1	5	77.5	5	9.4	5	51.7
9	31	51.1	5	49.3	5	74.9	5	9.8	5	53.4
10	31	54.4	5	49.5	5	68.2	5	9.8	5	54.9
11	31	57.8	5	49.3	5	61.6	5	9.7	5	56.1
12	31	60.7	5	49.0	5	56.1	5	9.6	5	57.2
13	31	63.2	5	48.6	5	51.2	5	9.5	5	58.1
14	31	64.8	5	47.3	5	47.1	5	9.1	5	58.2
15	31	65.9	5	46.3	5	44.9	5	8.9	5	58.1
16	30	66.4	5	46.7	5	45.9	5	8.9	5	58.0
17	31	65.9	6	47.2	6	51.3	6	9.0	6	57.3
18	31	64.6	6	46.8	6	54.0	6	8.9	6	56.4
19	31	62.5	6	46.5	6	56.9	6	8.9	6	55.3
20	31	60.0	6	45.5	6	58.2	6	8.8	6	54.4
21	31	58.0	6	45.7	6	60.5	6	8.9	6	54.0
22	31	56.6	6	46.2	6	62.2	6	9.0	6	53.9
23	31	55.8	6	47.2	6	65.2	6	9.2	6	53.9
24	31	54.7	6	47.4	6	67.5	6	9.2	6	53.5
HOURLY MEAN		57.3		47.4		63.0		9.2		54.5
AVG DAILY MAX		67.4		55.0		78.8		11.6		60.0
AVG DAILY MIN		47.1		40.8		48.4		7.3		48.0
ABSOLUTE MAX		82.0		65.7		89.4		15.9		70.3
ABSOLUTE MIN		30.3		25.2		23.8		3.5		35.8
TOTAL OBS		743		128		128		128		128

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

NOVEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	-----		-----		-----		-----		-----	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
1	30	43.0	30	33.3	30	69.3	30	5.4	30	39.0
2	30	42.4	30	33.1	30	70.4	30	5.4	30	38.6
3	30	41.9	30	32.9	30	71.3	30	5.3	30	38.2
4	30	41.3	30	32.7	30	71.9	30	5.3	30	37.8
5	30	40.5	30	32.4	30	73.2	30	5.2	30	37.3
6	30	39.9	30	32.3	30	74.4	30	5.2	30	36.9
7	30	39.7	30	32.0	30	74.2	30	5.2	30	36.7
8	30	39.7	30	31.8	30	73.7	30	5.1	30	36.5
9	30	40.9	30	32.6	30	72.6	30	5.2	30	37.5
10	30	43.0	30	33.3	30	69.3	30	5.3	30	39.0
11	30	45.6	30	33.9	30	65.1	30	5.4	30	40.6
12	30	47.9	30	33.8	30	60.4	30	5.4	30	41.8
13	30	49.7	30	33.4	30	56.3	30	5.3	30	42.6
14	30	51.1	30	33.4	30	53.7	30	5.3	30	43.4
15	30	51.8	30	33.0	30	51.9	30	5.3	30	43.6
16	30	51.9	30	32.6	30	51.0	30	5.2	30	43.5
17	30	51.0	30	32.5	30	52.0	30	5.2	30	43.0
18	30	49.2	30	32.2	30	54.7	30	5.2	30	42.0
19	30	47.5	30	32.3	30	57.7	30	5.2	30	41.2
20	30	46.4	30	32.6	30	60.3	30	5.2	30	40.6
21	30	45.4	30	32.7	30	62.6	30	5.3	30	40.1
22	30	44.4	30	32.6	30	64.4	30	5.3	30	39.5
23	30	43.4	30	32.4	30	66.2	30	5.2	30	38.9
24	30	42.6	30	32.4	30	68.0	30	5.2	30	38.4
HOURLY MEAN		45.0		32.8		64.4		5.3		39.9
AVG DAILY MAX		53.1		38.2		78.1		6.4		45.1
AVG DAILY MIN		36.9		27.7		49.3		4.3		33.8
ABSOLUTE MAX		78.3		57.7		94.5		12.1		61.7
ABSOLUTE MIN		23.8		13.3		17.2		2.1		21.5
TOTAL OBS		720		720		720		720		720

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

MONTHLY HOUR AVERAGES

DECEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	30.3	31	19.9	31	65.6	31	3.3	31	27.0
2	31	29.7	31	19.6	31	66.7	31	3.2	31	26.4
3	31	29.0	31	19.3	31	67.4	31	3.2	31	25.9
4	31	28.4	31	19.2	31	68.7	31	3.2	31	25.5
5	31	27.8	31	19.0	31	69.5	31	3.2	31	25.0
6	31	27.6	31	18.8	31	69.8	31	3.2	31	24.8
7	31	27.4	31	18.5	31	69.7	31	3.1	31	24.6
8	31	27.4	31	18.4	31	69.4	31	3.1	31	24.5
9	31	28.0	31	18.8	31	68.8	31	3.1	31	25.1
10	31	30.1	31	19.7	31	65.9	31	3.2	31	26.7
11	31	32.8	31	20.6	31	61.5	31	3.4	31	28.7
12	31	35.4	31	21.3	31	57.2	31	3.4	31	30.5
13	31	37.8	31	21.7	31	53.1	31	3.5	31	32.1
14	31	39.8	31	22.2	31	50.3	31	3.5	31	33.4
15	31	41.1	31	22.4	31	48.5	31	3.6	31	34.2
16	31	41.6	31	22.5	31	47.8	31	3.6	31	34.6
17	31	40.8	31	22.1	31	48.5	31	3.5	31	34.0
18	31	38.7	31	21.6	31	51.2	31	3.4	31	32.7
19	31	36.7	31	21.5	31	55.1	31	3.5	31	31.5
20	31	35.5	31	21.4	31	57.2	31	3.5	31	30.7
21	31	34.3	31	21.0	31	59.1	31	3.4	31	29.9
22	31	33.2	31	20.6	31	60.6	31	3.4	31	29.1
23	31	32.1	31	20.3	31	62.7	31	3.3	31	28.2
24	31	31.6	31	20.2	31	63.4	31	3.3	31	27.9
HOURLY MEAN		33.2		20.4		60.7		3.3		28.9
AVG DAILY MAX		42.6		26.5		74.8		4.2		36.0
AVG DAILY MIN		23.8		14.0		46.4		2.6		21.2
ABSOLUTE MAX		66.9		48.9		89.7		8.9		55.0
ABSOLUTE MIN		-2.1		-9.6		27.7		.8		-3.0
TOTAL OBS		744		744		744		744		744

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

OCT-DEC HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	92	42.6	66	28.1	66	67.7	66	4.7	66	34.4
2	92	41.8	66	27.8	66	68.7	66	4.7	66	33.9
3	92	41.2	66	27.6	66	69.5	66	4.6	66	33.5
4	92	40.5	66	27.5	66	70.5	66	4.6	66	33.1
5	92	39.7	66	27.2	66	71.6	66	4.6	66	32.6
6	92	39.2	66	27.1	66	72.4	66	4.5	66	32.3
7	92	38.9	66	26.9	66	72.3	66	4.5	66	32.1
8	92	38.9	66	26.7	66	72.0	66	4.5	66	32.0
9	92	40.0	66	27.4	66	71.0	66	4.6	66	32.9
10	92	42.5	66	28.1	66	67.6	66	4.7	66	34.4
11	92	45.4	66	28.8	66	63.1	66	4.8	66	36.2
12	92	48.0	66	29.1	66	58.5	66	4.8	66	37.7
13	92	50.3	66	29.1	66	54.4	66	4.8	66	38.9
14	92	51.9	66	29.2	66	51.6	66	4.8	66	39.8
15	92	52.9	66	29.0	66	49.8	66	4.7	66	40.3
16	91	53.2	66	28.9	66	49.1	66	4.7	66	40.4
17	92	52.6	67	29.0	67	50.3	67	4.8	67	40.1
18	92	50.9	67	28.6	67	53.0	67	4.7	67	39.0
19	92	48.9	67	28.6	67	56.4	67	4.7	67	38.0
20	92	47.3	67	28.5	67	58.7	67	4.7	67	37.3
21	92	45.9	67	28.4	67	60.8	67	4.7	67	36.6
22	92	44.8	67	28.3	67	62.5	67	4.7	67	36.0
23	92	43.7	67	28.1	67	64.5	67	4.7	67	35.3
24	92	43.0	67	28.1	67	65.8	67	4.7	67	34.9
HOURLY MEAN		45.2		28.2		62.6		4.7		35.9
AVG DAILY MAX		54.4		34.3		76.6		5.8		42.2
AVG DAILY MIN		35.9		22.5		47.9		3.8		29.2
ABSOLUTE MAX		82.0		65.7		94.5		15.9		70.3
ABSOLUTE MIN		-2.1		-9.6		17.2		.8		-3.0
TOTAL OBS		2207		1592		1592		1592		1592

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

JUL-DEC HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER OBS	(DEG F)	NUMBER OBS	(DEG F)	NUMBER OBS	(%)	NUMBER OBS	(GM/M3)	NUMBER OBS	(DEG F)
1	184	54.9	141	44.9	141	72.2	141	9.2	141	49.5
2	184	54.1	141	44.5	141	72.9	141	9.1	141	49.0
3	184	53.4	141	44.3	141	73.8	141	9.0	141	48.6
4	184	52.7	141	44.0	141	74.7	141	8.9	141	48.2
5	184	52.0	141	43.8	141	75.8	141	8.9	141	47.7
6	184	51.4	141	43.6	141	76.5	141	8.8	141	47.4
7	184	51.4	141	43.7	141	76.5	141	8.9	141	47.6
8	184	52.1	141	44.1	141	74.4	141	9.0	141	48.2
9	184	54.0	141	44.7	141	71.1	141	9.2	141	49.3
10	183	56.8	140	45.1	140	66.6	140	9.3	140	50.6
11	183	59.7	140	45.3	140	61.7	140	9.2	140	51.8
12	183	62.2	140	45.4	140	57.6	140	9.2	140	52.9
13	183	64.1	140	45.4	140	54.5	140	9.2	140	53.7
14	183	65.5	140	45.4	140	52.5	140	9.2	140	54.3
15	183	66.5	140	45.4	140	51.0	140	9.2	140	54.7
16	182	67.0	140	45.5	140	50.8	140	9.3	140	54.9
17	184	66.5	141	45.6	141	51.8	141	9.4	141	54.7
18	184	65.2	141	45.5	141	54.0	141	9.4	141	54.1
19	184	63.2	141	45.8	141	57.9	141	9.5	141	53.3
20	184	60.8	141	45.9	141	62.3	141	9.6	141	52.5
21	184	58.9	141	45.7	141	65.5	141	9.6	141	51.7
22	184	57.6	141	45.5	141	67.5	141	9.5	141	51.1
23	184	56.4	141	45.2	141	69.5	141	9.4	141	50.4
24	184	55.6	141	44.9	141	70.5	141	9.3	141	49.9
HOURLY MEAN		58.4		45.0		65.1		9.2		51.1
AVG DAILY MAX		67.9		49.7		80.1		10.6		56.2
AVG DAILY MIN		49.2		40.3		48.6		7.9		45.4
ABSOLUTE MAX		97.8		77.5		94.5		23.0		81.0
ABSOLUTE MIN		-2.1		-9.6		17.2		.8		-3.0
TOTAL OBS		4408		3377		3377		3377		3377

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PROGRAM: WETTEMP  
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY 2004

JAN-DEC HOUR AVERAGES

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	366	49.9	320	38.5	320	67.9	320	7.5	320	44.2
2	366	49.2	320	38.2	320	68.7	320	7.5	320	43.8
3	366	48.5	320	37.9	320	69.6	320	7.4	320	43.3
4	366	47.9	320	37.8	320	70.7	320	7.4	320	43.0
5	366	47.3	320	37.6	320	71.5	320	7.3	320	42.6
6	366	46.8	320	37.4	320	72.3	320	7.3	320	42.3
7	366	46.9	320	37.6	320	72.1	320	7.4	320	42.5
8	366	47.9	320	37.9	320	70.1	320	7.5	320	43.2
9	366	49.8	320	38.3	320	66.9	320	7.6	320	44.2
10	363	52.1	317	38.6	317	63.0	317	7.6	317	45.3
11	363	54.7	317	39.0	317	59.0	317	7.6	317	46.6
12	365	56.9	318	39.3	318	55.6	318	7.7	318	47.8
13	365	58.7	318	39.5	318	53.1	318	7.7	318	48.6
14	364	59.9	317	39.5	317	51.2	317	7.6	317	49.1
15	365	60.9	319	39.7	319	50.1	319	7.7	319	49.6
16	364	61.3	319	39.7	319	49.7	319	7.7	319	49.9
17	366	61.1	320	39.8	320	50.4	320	7.8	320	49.8
18	366	60.0	320	39.7	320	52.2	320	7.8	320	49.2
19	366	58.3	320	39.8	320	55.1	320	7.8	320	48.5
20	366	56.0	320	39.8	320	58.9	320	7.9	320	47.6
21	366	54.1	320	39.6	320	61.9	320	7.8	320	46.7
22	366	52.8	320	39.4	320	63.9	320	7.8	320	46.0
23	366	51.7	320	39.0	320	65.4	320	7.7	320	45.4
24	366	50.9	320	38.8	320	66.5	320	7.6	320	44.8
HOURLY MEAN		53.5		38.8		61.9		7.6		46.0
AVG DAILY MAX		62.7		44.1		77.4		8.9		51.3
AVG DAILY MIN		44.4		33.5		46.4		6.4		40.1
ABSOLUTE MAX		97.8		77.5		95.1		23.0		81.0
ABSOLUTE MIN		-5.7		-19.3		16.8		.5		-6.8
TOTAL OBS		8771		7665		7665		7665		7665

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**Wind Direction Frequencies**

**10-Meter Level**

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JANUARY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	22.6	9.7	00.0	3.2	3.2	3.2	6.5	00.0	12.9	9.7	00.0	3.2	3.2	00.0	9.7	12.9	00.0	100.
2	25.8	3.2	3.2	6.5	3.2	00.0	9.7	16.1	3.2	9.7	00.0	3.2	00.0	3.2	00.0	12.9	00.0	100.
3	25.8	00.0	6.5	3.2	3.2	3.2	6.5	9.7	6.5	6.5	3.2	6.5	00.0	00.0	3.2	16.1	00.0	100.
4	22.6	3.2	3.2	00.0	3.2	6.5	6.5	6.5	9.7	6.5	00.0	9.7	00.0	3.2	3.2	16.1	00.0	100.
5	25.8	3.2	3.2	00.0	6.5	3.2	6.5	9.7	6.5	3.2	3.2	9.7	00.0	00.0	6.5	12.9	00.0	100.
6	25.8	3.2	3.2	3.2	3.2	3.2	3.2	6.5	9.7	6.5	6.5	3.2	3.2	00.0	6.5	12.9	00.0	100.
7	19.4	6.5	3.2	00.0	3.2	00.0	9.7	9.7	00.0	12.9	3.2	3.2	3.2	00.0	6.5	19.4	00.0	100.
8	9.7	9.7	6.5	00.0	3.2	3.2	6.5	6.5	6.5	3.2	12.9	3.2	00.0	3.2	3.2	22.6	00.0	100.
9	22.6	00.0	6.5	00.0	3.2	00.0	6.5	12.9	6.5	6.5	3.2	6.5	00.0	00.0	9.7	16.1	00.0	100.
10	29.0	00.0	3.2	3.2	3.2	00.0	6.5	6.5	12.9	3.2	3.2	6.5	3.2	3.2	3.2	12.9	00.0	100.
11	19.4	6.5	3.2	3.2	3.2	00.0	3.2	6.5	12.9	3.2	6.5	6.5	3.2	3.2	9.7	9.7	00.0	100.
12	12.9	00.0	3.2	3.2	6.5	00.0	3.2	6.5	9.7	9.7	3.2	9.7	6.5	3.2	9.7	12.9	00.0	100.
13	12.9	3.2	00.0	3.2	6.5	00.0	6.5	6.5	6.5	6.5	00.0	9.7	12.9	6.5	9.7	9.7	00.0	100.
14	9.7	00.0	6.5	00.0	6.5	3.2	00.0	9.7	6.5	6.5	3.2	6.5	16.1	6.5	9.7	9.7	00.0	100.
15	12.9	3.2	3.2	00.0	6.5	3.2	6.5	6.5	6.5	3.2	3.2	9.7	12.9	6.5	9.7	6.5	00.0	100.
16	9.7	6.5	00.0	3.2	9.7	00.0	3.2	12.9	3.2	3.2	6.5	9.7	12.9	00.0	3.2	16.1	00.0	100.
17	9.7	9.7	00.0	6.5	6.5	3.2	3.2	12.9	3.2	3.2	12.9	6.5	3.2	3.2	6.5	9.7	00.0	100.
18	9.7	6.5	00.0	6.5	6.5	3.2	3.2	12.9	12.9	00.0	9.7	3.2	00.0	9.7	00.0	16.1	00.0	100.
19	9.7	3.2	6.5	3.2	3.2	00.0	6.5	9.7	9.7	9.7	6.5	6.5	3.2	3.2	6.5	12.9	00.0	100.
20	3.2	6.5	6.5	3.2	00.0	3.2	00.0	12.9	16.1	3.2	3.2	00.0	9.7	3.2	3.2	22.6	3.2	100.
21	12.9	6.5	00.0	3.2	9.7	00.0	3.2	12.9	12.9	3.2	3.2	00.0	6.5	00.0	9.7	16.1	00.0	100.
22	12.9	6.5	00.0	3.2	9.7	00.0	3.2	12.9	9.7	6.5	6.5	00.0	3.2	3.2	12.9	9.7	00.0	100.
23	9.7	6.5	00.0	3.2	6.5	3.2	00.0	12.9	12.9	9.7	00.0	00.0	3.2	9.7	3.2	19.4	00.0	100.
24	6.7	10.0	00.0	6.7	6.7	00.0	3.3	6.7	16.7	6.7	00.0	00.0	3.3	6.7	6.7	20.0	00.0	100.
ALL	15.9	4.7	2.8	2.8	5.1	1.7	4.7	9.4	8.9	5.9	4.2	5.1	4.6	3.2	6.3	14.4	.1	100.

NUMBER OF OBS = 743

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

FEBRUARY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	6.9	10.3	00.0	6.9	00.0	6.9	6.9	13.8	10.3	00.0	3.4	3.4	00.0	10.3	13.8	6.9	00.0	100.
2	6.9	6.9	00.0	3.4	6.9	00.0	10.3	10.3	6.9	6.9	3.4	6.9	3.4	3.4	17.2	6.9	00.0	100.
3	6.9	3.4	3.4	3.4	6.9	00.0	10.3	10.3	6.9	10.3	3.4	3.4	3.4	3.4	17.2	6.9	00.0	100.
4	3.4	00.0	3.4	6.9	6.9	00.0	20.7	3.4	10.3	3.4	3.4	3.4	3.4	6.9	13.8	10.3	00.0	100.
5	6.9	00.0	3.4	6.9	3.4	10.3	10.3	10.3	6.9	3.4	00.0	3.4	6.9	6.9	13.8	6.9	00.0	100.
6	6.9	00.0	6.9	6.9	00.0	6.9	13.8	6.9	6.9	00.0	3.4	6.9	00.0	13.8	13.8	6.9	00.0	100.
7	10.3	3.4	3.4	3.4	3.4	00.0	20.7	6.9	6.9	00.0	6.9	3.4	3.4	6.9	13.8	6.9	00.0	100.
8	6.9	00.0	6.9	00.0	6.9	3.4	17.2	10.3	6.9	3.4	3.4	3.4	00.0	10.3	20.7	00.0	00.0	100.
9	6.9	00.0	6.9	3.4	3.4	3.4	10.3	10.3	17.2	3.4	3.4	00.0	3.4	00.0	24.1	3.4	00.0	100.
10	10.3	6.9	3.4	00.0	3.4	6.9	10.3	10.3	3.4	10.3	6.9	3.4	3.4	00.0	20.7	00.0	00.0	100.
11	10.3	6.9	6.9	00.0	3.4	10.3	00.0	13.8	6.9	3.4	3.4	3.4	6.9	3.4	20.7	00.0	00.0	100.
12	10.3	6.9	3.4	3.4	3.4	6.9	00.0	10.3	13.8	6.9	00.0	13.8	00.0	00.0	20.7	00.0	00.0	100.
13	6.9	3.4	6.9	3.4	3.4	00.0	3.4	13.8	17.2	6.9	6.9	3.4	3.4	10.3	10.3	00.0	00.0	100.
14	10.3	3.4	3.4	3.4	6.9	3.4	6.9	13.8	6.9	10.3	6.9	3.4	00.0	10.3	10.3	00.0	00.0	100.
15	13.8	3.4	3.4	00.0	6.9	3.4	3.4	20.7	6.9	6.9	3.4	6.9	3.4	3.4	13.8	00.0	00.0	100.
16	6.9	6.9	3.4	6.9	3.4	6.9	6.9	10.3	10.3	10.3	00.0	3.4	3.4	10.3	10.3	00.0	00.0	100.
17	10.3	3.4	3.4	3.4	6.9	6.9	10.3	3.4	6.9	10.3	10.3	00.0	00.0	6.9	17.2	00.0	00.0	100.
18	6.9	3.4	3.4	6.9	6.9	00.0	10.3	10.3	6.9	10.3	00.0	3.4	3.4	00.0	20.7	6.9	00.0	100.
19	6.9	6.9	3.4	00.0	3.4	3.4	10.3	13.8	3.4	10.3	00.0	6.9	00.0	00.0	17.2	13.8	00.0	100.
20	6.9	6.9	00.0	6.9	3.4	3.4	6.9	13.8	13.8	6.9	00.0	6.9	00.0	3.4	10.3	10.3	00.0	100.
21	6.9	6.9	6.9	00.0	00.0	3.4	10.3	10.3	6.9	13.8	00.0	3.4	3.4	00.0	17.2	10.3	00.0	100.
22	6.9	6.9	00.0	3.4	6.9	00.0	10.3	10.3	3.4	10.3	3.4	00.0	6.9	00.0	13.8	17.2	00.0	100.
23	13.8	3.4	00.0	3.4	3.4	3.4	17.2	00.0	10.3	3.4	6.9	00.0	6.9	3.4	20.7	3.4	00.0	100.
24	6.9	6.9	00.0	3.4	3.4	3.4	13.8	13.8	10.3	00.0	3.4	6.9	00.0	6.9	13.8	6.9	00.0	100.
ALL	8.2	4.5	3.4	3.6	4.3	3.9	10.1	10.5	8.6	6.3	3.4	4.2	2.7	5.0	16.1	5.2	00.0	100.

NUMBER OF OBS = 696

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NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

MARCH

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.9	00.0	00.0	3.2	3.2	6.5	3.2	9.7	16.1	6.5	6.5	00.0	9.7	6.5	12.9	3.2	00.0	100.
2	12.9	00.0	00.0	00.0	9.7	3.2	3.2	12.9	22.6	00.0	3.2	3.2	12.9	3.2	9.7	3.2	00.0	100.
3	6.5	00.0	3.2	00.0	3.2	6.5	3.2	12.9	9.7	9.7	00.0	3.2	19.4	3.2	9.7	9.7	00.0	100.
4	6.5	3.2	00.0	3.2	00.0	00.0	9.7	16.1	9.7	6.5	00.0	3.2	9.7	12.9	6.5	12.9	00.0	100.
5	6.5	6.5	3.2	3.2	3.2	00.0	6.5	19.4	6.5	6.5	3.2	00.0	6.5	16.1	3.2	9.7	00.0	100.
6	9.7	6.5	3.2	00.0	00.0	00.0	12.9	12.9	16.1	3.2	00.0	00.0	6.5	16.1	6.5	6.5	00.0	100.
7	6.5	3.2	00.0	00.0	00.0	6.5	12.9	6.5	19.4	00.0	00.0	6.5	3.2	19.4	3.2	12.9	00.0	100.
8	9.7	3.2	00.0	00.0	00.0	6.5	9.7	22.6	9.7	3.2	00.0	3.2	6.5	12.9	6.5	6.5	00.0	100.
9	6.5	00.0	6.5	00.0	00.0	6.5	9.7	16.1	16.1	3.2	00.0	3.2	6.5	9.7	6.5	9.7	00.0	100.
10	00.0	00.0	3.2	00.0	00.0	00.0	12.9	19.4	12.9	6.5	3.2	00.0	3.2	9.7	12.9	16.1	00.0	100.
11	3.3	00.0	3.3	00.0	00.0	3.3	13.3	13.3	13.3	10.0	3.3	00.0	00.0	13.3	10.0	13.3	00.0	100.
12	3.2	00.0	00.0	00.0	3.2	3.2	6.5	16.1	12.9	9.7	3.2	00.0	3.2	6.5	19.4	12.9	00.0	100.
13	3.2	3.2	00.0	00.0	3.2	3.2	3.2	6.5	25.8	9.7	3.2	00.0	3.2	9.7	16.1	9.7	00.0	100.
14	9.7	00.0	3.2	00.0	3.2	9.7	6.5	3.2	19.4	6.5	00.0	6.5	3.2	9.7	16.1	3.2	00.0	100.
15	3.2	00.0	3.2	3.2	3.2	3.2	6.5	3.2	19.4	6.5	3.2	3.2	3.2	6.5	22.6	9.7	00.0	100.
16	3.2	00.0	6.5	00.0	3.2	3.2	3.2	9.7	19.4	3.2	3.2	3.2	6.5	3.2	22.6	9.7	00.0	100.
17	6.5	6.5	00.0	00.0	3.2	6.5	6.5	6.5	19.4	3.2	3.2	00.0	3.2	00.0	22.6	12.9	00.0	100.
18	9.7	3.2	00.0	00.0	00.0	3.2	6.5	6.5	12.9	12.9	3.2	00.0	6.5	6.5	12.9	16.1	00.0	100.
19	6.5	3.2	6.5	00.0	00.0	00.0	6.5	16.1	16.1	3.2	3.2	00.0	3.2	9.7	9.7	16.1	00.0	100.
20	6.5	16.1	00.0	00.0	00.0	00.0	6.5	6.5	19.4	6.5	3.2	6.5	00.0	9.7	12.9	6.5	00.0	100.
21	9.7	9.7	3.2	00.0	00.0	00.0	3.2	16.1	16.1	3.2	3.2	00.0	9.7	6.5	12.9	6.5	00.0	100.
22	6.5	9.7	6.5	3.2	00.0	00.0	3.2	12.9	12.9	3.2	3.2	9.7	9.7	6.5	3.2	9.7	00.0	100.
23	6.5	3.2	6.5	00.0	00.0	00.0	00.0	9.7	16.1	6.5	3.2	9.7	3.2	12.9	9.7	12.9	00.0	100.
24	9.7	3.2	6.5	00.0	3.2	3.2	00.0	6.5	22.6	00.0	00.0	6.5	12.9	9.7	6.5	9.7	00.0	100.
ALL	6.9	3.4	2.7	.7	1.7	3.1	6.5	11.7	16.0	5.4	2.3	2.8	6.3	9.2	11.4	10.0	00.0	100.

NUMBER OF OBS = 743

B30

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-MAR

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	14.3	6.6	00.0	4.4	2.2	5.5	5.5	7.7	13.2	5.5	3.3	2.2	4.4	5.5	12.1	7.7	00.0	100.
2	15.4	3.3	1.1	3.3	6.6	1.1	7.7	13.2	11.0	5.5	2.2	4.4	5.5	3.3	8.8	7.7	00.0	100.
3	13.2	1.1	4.4	2.2	4.4	3.3	6.6	11.0	7.7	8.8	2.2	4.4	7.7	2.2	9.9	11.0	00.0	100.
4	11.0	2.2	2.2	3.3	3.3	2.2	12.1	8.8	9.9	5.5	1.1	5.5	4.4	7.7	7.7	13.2	00.0	100.
5	13.2	3.3	3.3	3.3	4.4	4.4	7.7	13.2	6.6	4.4	2.2	4.4	4.4	7.7	7.7	9.9	00.0	100.
6	14.3	3.3	4.4	3.3	1.1	3.3	9.9	8.8	11.0	3.3	3.3	3.3	3.3	9.9	8.8	8.8	00.0	100.
7	12.1	4.4	2.2	1.1	2.2	2.2	14.3	7.7	8.8	4.4	3.3	4.4	3.3	8.8	7.7	13.2	00.0	100.
8	8.8	4.4	4.4	00.0	3.3	4.4	11.0	13.2	7.7	3.3	5.5	3.3	2.2	8.8	9.9	9.9	00.0	100.
9	12.1	00.0	6.6	1.1	2.2	3.3	8.8	13.2	13.2	4.4	2.2	3.3	3.3	3.3	13.2	9.9	00.0	100.
10	13.2	2.2	3.3	1.1	2.2	2.2	9.9	12.1	9.9	6.6	4.4	3.3	3.3	4.4	12.1	9.9	00.0	100.
11	11.1	4.4	4.4	1.1	2.2	4.4	5.6	11.1	11.1	5.6	4.4	3.3	3.3	6.7	13.3	7.8	00.0	100.
12	8.8	2.2	2.2	2.2	4.4	3.3	3.3	11.0	12.1	8.8	2.2	7.7	3.3	3.3	16.5	8.8	00.0	100.
13	7.7	3.3	2.2	2.2	4.4	1.1	4.4	8.8	16.5	7.7	3.3	4.4	6.6	8.8	12.1	6.6	00.0	100.
14	9.9	1.1	4.4	1.1	5.5	5.5	4.4	8.8	11.0	7.7	3.3	5.5	6.6	8.8	12.1	4.4	00.0	100.
15	9.9	2.2	3.3	1.1	5.5	3.3	5.5	9.9	11.0	5.5	3.3	6.6	6.6	5.5	15.4	5.5	00.0	100.
16	6.6	4.4	3.3	3.3	5.5	3.3	4.4	11.0	11.0	5.5	3.3	5.5	7.7	4.4	12.1	8.8	00.0	100.
17	8.8	6.6	1.1	3.3	5.5	5.5	6.6	7.7	9.9	5.5	8.8	2.2	2.2	3.3	15.4	7.7	00.0	100.
18	8.8	4.4	1.1	4.4	4.4	2.2	6.6	9.9	11.0	7.7	4.4	2.2	3.3	5.5	11.0	13.2	00.0	100.
19	7.7	4.4	5.5	1.1	2.2	1.1	7.7	13.2	9.9	7.7	3.3	4.4	2.2	4.4	11.0	14.3	00.0	100.
20	5.5	9.9	2.2	3.3	1.1	2.2	4.4	11.0	16.5	5.5	2.2	4.4	3.3	5.5	8.8	13.2	1.1	100.
21	9.9	7.7	3.3	1.1	3.3	1.1	5.5	13.2	12.1	6.6	2.2	1.1	6.6	2.2	13.2	11.0	00.0	100.
22	8.8	7.7	2.2	3.3	5.5	00.0	5.5	12.1	8.8	6.6	4.4	3.3	6.6	3.3	9.9	12.1	00.0	100.
23	9.9	4.4	2.2	2.2	3.3	2.2	5.5	7.7	13.2	6.6	3.3	3.3	4.4	8.8	11.0	12.1	00.0	100.
24	7.8	6.7	2.2	3.3	4.4	2.2	5.6	8.9	16.7	2.2	1.1	4.4	5.6	7.8	8.9	12.2	00.0	100.
ALL	10.4	4.2	3.0	2.3	3.7	2.9	7.0	10.5	11.2	5.9	3.3	4.0	4.6	5.8	11.2	9.9	.0	100.

NUMBER OF OBS = 2182

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APRIL

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	6.7	6.7	6.7	00.0	3.3	6.7	3.3	13.3	6.7	6.7	6.7	6.7	3.3	3.3	10.0	10.0	00.0	100.
2	10.0	6.7	3.3	3.3	3.3	3.3	00.0	3.3	16.7	3.3	3.3	00.0	10.0	3.3	13.3	16.7	00.0	100.
3	13.3	3.3	13.3	3.3	00.0	6.7	00.0	6.7	13.3	6.7	6.7	00.0	3.3	13.3	3.3	6.7	00.0	100.
4	13.3	3.3	13.3	00.0	6.7	3.3	00.0	13.3	6.7	6.7	6.7	00.0	6.7	13.3	3.3	3.3	00.0	100.
5	13.3	10.0	3.3	10.0	00.0	3.3	00.0	3.3	13.3	6.7	00.0	13.3	00.0	6.7	13.3	3.3	00.0	100.
6	23.3	3.3	00.0	10.0	00.0	00.0	6.7	6.7	10.0	10.0	3.3	3.3	00.0	10.0	3.3	10.0	00.0	100.
7	20.0	6.7	00.0	3.3	3.3	3.3	00.0	10.0	20.0	6.7	00.0	6.7	00.0	6.7	6.7	6.7	00.0	100.
8	10.0	00.0	10.0	13.3	00.0	10.0	3.3	10.0	10.0	6.7	00.0	00.0	3.3	00.0	10.0	13.3	00.0	100.
9	13.3	3.3	6.7	6.7	10.0	3.3	13.3	00.0	6.7	13.3	00.0	00.0	00.0	6.7	6.7	10.0	00.0	100.
10	10.0	6.7	3.3	6.7	6.7	6.7	00.0	13.3	6.7	20.0	00.0	00.0	00.0	3.3	10.0	6.7	00.0	100.
11	10.0	00.0	6.7	3.3	6.7	6.7	00.0	6.7	23.3	10.0	00.0	00.0	00.0	3.3	6.7	16.7	00.0	100.
12	13.3	3.3	6.7	3.3	3.3	6.7	00.0	6.7	23.3	13.3	00.0	00.0	00.0	00.0	10.0	10.0	00.0	100.
13	13.3	00.0	10.0	00.0	6.7	00.0	3.3	3.3	16.7	23.3	00.0	00.0	3.3	00.0	6.7	13.3	00.0	100.
14	10.0	6.7	3.3	6.7	3.3	3.3	3.3	00.0	13.3	23.3	3.3	00.0	00.0	6.7	3.3	13.3	00.0	100.
15	10.0	3.3	10.0	10.0	00.0	3.3	00.0	00.0	13.3	16.7	6.7	00.0	6.7	00.0	6.7	13.3	00.0	100.
16	6.7	6.7	6.7	6.7	00.0	3.3	10.0	00.0	13.3	10.0	6.7	6.7	00.0	6.7	6.7	10.0	00.0	100.
17	6.7	6.7	00.0	3.3	10.0	3.3	3.3	00.0	20.0	3.3	00.0	13.3	6.7	00.0	6.7	16.7	00.0	100.
18	16.7	3.3	00.0	3.3	10.0	3.3	3.3	3.3	20.0	3.3	3.3	3.3	6.7	3.3	10.0	6.7	00.0	100.
19	10.0	6.7	00.0	10.0	00.0	6.7	00.0	3.3	20.0	3.3	6.7	6.7	3.3	3.3	6.7	13.3	00.0	100.
20	20.0	3.3	3.3	3.3	6.7	00.0	00.0	6.7	10.0	13.3	3.3	6.7	3.3	3.3	6.7	6.7	3.3	100.
21	13.3	3.3	3.3	6.7	3.3	00.0	3.3	6.7	6.7	13.3	3.3	3.3	3.3	3.3	10.0	16.7	00.0	100.
22	16.7	3.3	3.3	00.0	6.7	00.0	00.0	10.0	6.7	13.3	13.3	00.0	00.0	3.3	3.3	20.0	00.0	100.
23	10.0	3.3	00.0	3.3	00.0	6.7	00.0	13.3	16.7	00.0	00.0	3.3	3.3	16.7	3.3	20.0	00.0	100.
24	13.3	00.0	6.7	00.0	3.3	3.3	00.0	6.7	16.7	6.7	00.0	6.7	3.3	6.7	3.3	23.3	00.0	100.
ALL	12.6	4.2	5.0	4.9	3.9	3.9	2.2	6.1	13.8	10.0	3.1	3.3	2.8	5.1	7.1	11.9	.1	100.

NUMBER OF OBS = 720

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

MAY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.9	3.2	3.2	3.2	3.2	00.0	3.2	6.5	29.0	6.5	3.2	00.0	00.0	3.2	3.2	19.4	00.0	100.
2	3.2	6.5	3.2	00.0	6.5	3.2	6.5	9.7	29.0	3.2	3.2	3.2	00.0	6.5	3.2	9.7	3.2	100.
3	12.9	00.0	00.0	3.2	9.7	3.2	3.2	16.1	16.1	9.7	3.2	00.0	3.2	00.0	12.9	6.5	00.0	100.
4	12.9	00.0	00.0	3.2	3.2	3.2	9.7	12.9	19.4	6.5	00.0	6.5	00.0	6.5	3.2	12.9	00.0	100.
5	00.0	00.0	00.0	00.0	3.2	3.2	9.7	12.9	12.9	9.7	3.2	9.7	3.2	00.0	6.5	25.8	00.0	100.
6	16.1	3.2	00.0	00.0	3.2	6.5	6.5	9.7	32.3	3.2	00.0	6.5	00.0	3.2	00.0	9.7	00.0	100.
7	9.7	00.0	6.5	6.5	3.2	00.0	16.1	00.0	29.0	9.7	00.0	00.0	9.7	3.2	3.2	3.2	00.0	100.
8	9.7	3.2	00.0	3.2	3.2	6.5	9.7	12.9	19.4	16.1	00.0	00.0	6.5	00.0	00.0	9.7	00.0	100.
9	12.9	6.5	3.2	00.0	6.5	3.2	16.1	00.0	16.1	12.9	3.2	00.0	6.5	3.2	00.0	9.7	00.0	100.
10	9.7	3.2	6.5	3.2	3.2	6.5	3.2	12.9	12.9	12.9	3.2	3.2	3.2	6.5	00.0	9.7	00.0	100.
11	6.5	3.2	3.2	3.2	00.0	00.0	9.7	19.4	19.4	9.7	00.0	00.0	3.2	6.5	00.0	16.1	00.0	100.
12	9.7	00.0	3.2	00.0	3.2	3.2	3.2	16.1	25.8	6.5	3.2	6.5	00.0	6.5	3.2	9.7	00.0	100.
13	9.7	00.0	6.5	00.0	3.2	00.0	6.5	12.9	32.3	3.2	00.0	00.0	3.2	6.5	9.7	6.5	00.0	100.
14	6.5	3.2	3.2	6.5	3.2	00.0	3.2	16.1	19.4	9.7	3.2	3.2	00.0	6.5	3.2	12.9	00.0	100.
15	9.7	00.0	3.2	3.2	3.2	00.0	6.5	12.9	29.0	6.5	3.2	00.0	00.0	9.7	3.2	9.7	00.0	100.
16	12.9	3.2	3.2	00.0	3.2	00.0	3.2	12.9	25.8	9.7	3.2	00.0	00.0	9.7	3.2	9.7	00.0	100.
17	9.7	3.2	3.2	3.2	3.2	00.0	00.0	12.9	19.4	19.4	3.2	00.0	3.2	6.5	3.2	9.7	00.0	100.
18	9.7	3.2	3.2	3.2	6.5	00.0	3.2	9.7	22.6	9.7	00.0	3.2	6.5	6.5	3.2	9.7	00.0	100.
19	16.1	3.2	00.0	3.2	6.5	00.0	6.5	12.9	29.0	3.2	00.0	00.0	00.0	6.5	3.2	9.7	00.0	100.
20	16.1	00.0	00.0	00.0	3.2	3.2	00.0	19.4	25.8	6.5	00.0	3.2	00.0	3.2	00.0	19.4	00.0	100.
21	12.9	3.2	00.0	00.0	3.2	3.2	00.0	12.9	25.8	3.2	00.0	6.5	00.0	6.5	6.5	16.1	00.0	100.
22	9.7	19.4	00.0	00.0	3.2	3.2	00.0	12.9	19.4	3.2	3.2	3.2	3.2	00.0	6.5	12.9	00.0	100.
23	12.9	3.2	3.2	00.0	6.5	00.0	6.5	9.7	19.4	12.9	00.0	3.2	3.2	00.0	6.5	12.9	00.0	100.
24	3.2	6.5	3.2	3.2	6.5	00.0	3.2	00.0	35.5	12.9	00.0	00.0	6.5	6.5	00.0	12.9	00.0	100.
ALL	10.2	3.2	2.4	2.0	4.2	2.0	5.6	11.4	23.5	8.6	1.6	2.4	2.6	4.7	3.5	11.8	.1	100.

NUMBER OF OBS = 744



NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUNE

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.0	00.0	00.0	00.0	3.3	00.0	6.7	16.7	16.7	6.7	3.3	6.7	3.3	3.3	6.7	16.7	00.0	100.
2	16.7	00.0	00.0	3.3	00.0	3.3	10.0	6.7	26.7	10.0	00.0	00.0	3.3	10.0	3.3	6.7	00.0	100.
3	3.3	00.0	00.0	3.3	3.3	00.0	00.0	20.0	16.7	13.3	3.3	3.3	10.0	3.3	3.3	16.7	00.0	100.
4	6.7	00.0	00.0	3.3	00.0	3.3	10.0	13.3	10.0	13.3	00.0	10.0	3.3	6.7	6.7	13.3	00.0	100.
5	10.0	00.0	00.0	00.0	00.0	6.7	10.0	20.0	10.0	6.7	3.3	00.0	3.3	3.3	3.3	16.7	6.7	100.
6	3.3	6.7	00.0	00.0	00.0	3.3	10.0	16.7	13.3	10.0	3.3	00.0	6.7	6.7	10.0	10.0	00.0	100.
7	13.8	6.9	00.0	00.0	3.4	00.0	10.3	13.8	13.8	13.8	6.9	00.0	6.9	3.4	3.4	3.4	00.0	100.
8	10.0	6.7	3.3	00.0	00.0	6.7	6.7	16.7	16.7	3.3	10.0	3.3	00.0	6.7	6.7	3.3	00.0	100.
9	6.7	3.3	00.0	3.3	6.7	00.0	6.7	13.3	16.7	13.3	10.0	00.0	00.0	3.3	10.0	6.7	00.0	100.
10	14.3	7.1	00.0	00.0	3.6	00.0	7.1	7.1	17.9	14.3	3.6	10.7	00.0	3.6	3.6	7.1	00.0	100.
11	13.8	3.4	00.0	3.4	3.4	00.0	6.9	13.8	17.2	10.3	00.0	3.4	6.9	3.4	3.4	10.3	00.0	100.
12	13.3	3.3	3.3	3.3	00.0	00.0	10.0	13.3	16.7	13.3	3.3	3.3	3.3	3.3	00.0	10.0	00.0	100.
13	16.7	6.7	3.3	00.0	00.0	00.0	6.7	13.3	23.3	6.7	6.7	00.0	3.3	3.3	3.3	6.7	00.0	100.
14	10.3	6.9	13.8	00.0	00.0	6.9	3.4	6.9	24.1	6.9	00.0	3.4	3.4	6.9	3.4	3.4	00.0	100.
15	13.3	6.7	3.3	3.3	00.0	00.0	10.0	10.0	23.3	6.7	00.0	3.3	3.3	6.7	00.0	10.0	00.0	100.
16	16.7	3.3	00.0	00.0	3.3	6.7	3.3	13.3	20.0	3.3	3.3	3.3	3.3	6.7	3.3	10.0	00.0	100.
17	13.3	13.3	6.7	00.0	3.3	00.0	6.7	16.7	16.7	00.0	3.3	00.0	3.3	6.7	3.3	6.7	00.0	100.
18	10.0	6.7	6.7	6.7	00.0	3.3	10.0	16.7	13.3	00.0	00.0	00.0	6.7	3.3	3.3	13.3	00.0	100.
19	16.7	6.7	3.3	6.7	00.0	3.3	13.3	13.3	10.0	6.7	00.0	00.0	3.3	3.3	00.0	13.3	00.0	100.
20	13.3	00.0	10.0	3.3	00.0	3.3	13.3	13.3	13.3	6.7	00.0	00.0	3.3	00.0	6.7	13.3	00.0	100.
21	6.7	6.7	6.7	3.3	00.0	00.0	13.3	6.7	13.3	6.7	00.0	00.0	00.0	6.7	10.0	20.0	00.0	100.
22	13.3	6.7	6.7	3.3	00.0	00.0	10.0	13.3	16.7	13.3	00.0	00.0	00.0	00.0	3.3	13.3	00.0	100.
23	6.7	00.0	00.0	6.7	3.3	00.0	6.7	16.7	23.3	00.0	6.7	3.3	3.3	00.0	6.7	16.7	00.0	100.
24	00.0	00.0	00.0	6.9	00.0	3.4	3.4	27.6	10.3	3.4	6.9	3.4	3.4	3.4	3.4	24.1	00.0	100.
ALL	10.8	4.2	2.8	2.5	1.4	2.1	8.1	14.1	16.7	7.8	3.1	2.4	3.5	4.3	4.5	11.3	.3	100.

NUMBER OF OBS = 714

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APR-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.9	3.3	3.3	1.1	3.3	2.2	4.4	12.1	17.6	6.6	4.4	4.4	2.2	3.3	6.6	15.4	00.0	100.
2	9.9	4.4	2.2	2.2	3.3	3.3	5.5	6.6	24.2	5.5	2.2	1.1	4.4	6.6	6.6	11.0	1.1	100.
3	9.9	1.1	4.4	3.3	4.4	3.3	1.1	14.3	15.4	9.9	4.4	1.1	5.5	5.5	6.6	9.9	00.0	100.
4	11.0	1.1	4.4	2.2	3.3	3.3	6.6	13.2	12.1	8.8	2.2	5.5	3.3	8.8	4.4	9.9	00.0	100.
5	7.7	3.3	1.1	3.3	1.1	4.4	6.6	12.1	12.1	7.7	2.2	7.7	2.2	3.3	7.7	15.4	2.2	100.
6	14.3	4.4	00.0	3.3	1.1	3.3	7.7	11.0	18.7	7.7	2.2	3.3	2.2	6.6	4.4	9.9	00.0	100.
7	14.4	4.4	2.2	3.3	3.3	1.1	8.9	7.8	21.1	10.0	2.2	2.2	5.6	4.4	4.4	4.4	00.0	100.
8	9.9	3.3	4.4	5.5	1.1	7.7	6.6	13.2	15.4	8.8	3.3	1.1	3.3	2.2	5.5	8.8	00.0	100.
9	11.0	4.4	3.3	3.3	7.7	2.2	12.1	4.4	13.2	13.2	4.4	00.0	2.2	4.4	5.5	8.8	00.0	100.
10	11.2	5.6	3.4	3.4	4.5	4.5	3.4	11.2	12.4	15.7	2.2	4.5	1.1	4.5	4.5	7.9	00.0	100.
11	10.0	2.2	3.3	3.3	3.3	2.2	5.6	13.3	20.0	10.0	00.0	1.1	3.3	4.4	3.3	14.4	00.0	100.
12	12.1	2.2	4.4	2.2	2.2	3.3	4.4	12.1	22.0	11.0	2.2	3.3	1.1	3.3	4.4	9.9	00.0	100.
13	13.2	2.2	6.6	00.0	3.3	00.0	5.5	9.9	24.2	11.0	2.2	00.0	3.3	3.3	6.6	8.8	00.0	100.
14	8.9	5.6	6.7	4.4	2.2	3.3	3.3	7.8	18.9	13.3	2.2	2.2	1.1	6.7	3.3	10.0	00.0	100.
15	11.0	3.3	5.5	5.5	1.1	1.1	5.5	7.7	22.0	9.9	3.3	1.1	3.3	5.5	3.3	11.0	00.0	100.
16	12.1	4.4	3.3	2.2	2.2	3.3	5.5	8.8	19.8	7.7	4.4	3.3	1.1	7.7	4.4	9.9	00.0	100.
17	9.9	7.7	3.3	2.2	5.5	1.1	3.3	9.9	18.7	7.7	2.2	4.4	4.4	4.4	4.4	11.0	00.0	100.
18	12.1	4.4	3.3	4.4	5.5	2.2	5.5	9.9	18.7	4.4	1.1	2.2	6.6	4.4	5.5	9.9	00.0	100.
19	14.3	5.5	1.1	6.6	2.2	3.3	6.6	9.9	19.8	4.4	2.2	2.2	2.2	4.4	3.3	12.1	00.0	100.
20	16.5	1.1	4.4	2.2	3.3	2.2	4.4	13.2	16.5	8.8	1.1	3.3	2.2	2.2	4.4	13.2	1.1	100.
21	11.0	4.4	3.3	3.3	2.2	1.1	5.5	8.8	15.4	7.7	1.1	3.3	1.1	5.5	8.8	17.6	00.0	100.
22	13.2	9.9	3.3	1.1	3.3	1.1	3.3	12.1	14.3	9.9	5.5	1.1	1.1	1.1	4.4	15.4	00.0	100.
23	9.9	2.2	1.1	3.3	3.3	2.2	4.4	13.2	19.8	4.4	2.2	3.3	3.3	5.5	5.5	16.5	00.0	100.
24	5.6	2.2	3.3	3.3	3.3	2.2	2.2	11.1	21.1	7.8	2.2	3.3	4.4	5.6	2.2	20.0	00.0	100.
ALL	11.2	3.9	3.4	3.1	3.2	2.7	5.3	10.6	18.0	8.8	2.6	2.7	2.9	4.7	5.0	11.7	.2	100.

NUMBER OF OBS = 2178

B35

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.1	4.9	1.6	2.7	2.7	3.8	4.9	9.9	15.4	6.0	3.8	3.3	3.3	4.4	9.3	11.5	00.0	100.
2	12.6	3.8	1.6	2.7	4.9	2.2	6.6	9.9	17.6	5.5	2.2	2.7	4.9	4.9	7.7	9.3	.5	100.
3	11.5	1.1	4.4	2.7	4.4	3.3	3.8	12.6	11.5	9.3	3.3	2.7	6.6	3.8	8.2	10.4	00.0	100.
4	11.0	1.6	3.3	2.7	3.3	2.7	9.3	11.0	11.0	7.1	1.6	5.5	3.8	8.2	6.0	11.5	00.0	100.
5	10.4	3.3	2.2	3.3	2.7	4.4	7.1	12.6	9.3	6.0	2.2	6.0	3.3	5.5	7.7	12.6	1.1	100.
6	14.3	3.8	2.2	3.3	1.1	3.3	8.8	9.9	14.8	5.5	2.7	3.3	2.7	8.2	6.6	9.3	00.0	100.
7	13.3	4.4	2.2	2.2	2.8	1.7	11.6	7.7	14.9	7.2	2.8	3.3	4.4	6.6	6.1	8.8	00.0	100.
8	9.3	3.8	4.4	2.7	2.2	6.0	8.8	13.2	11.5	6.0	4.4	2.2	2.7	5.5	7.7	9.3	00.0	100.
9	11.5	2.2	4.9	2.2	4.9	2.7	10.4	8.8	13.2	8.8	3.3	1.6	2.7	3.8	9.3	9.3	00.0	100.
10	12.2	3.9	3.3	2.2	3.3	3.3	6.7	11.7	11.1	11.1	3.3	3.9	2.2	4.4	8.3	8.9	00.0	100.
11	10.6	3.3	3.9	2.2	2.8	3.3	5.6	12.2	15.6	7.8	2.2	2.2	3.3	5.6	8.3	11.1	00.0	100.
12	10.4	2.2	3.3	2.2	3.3	3.3	3.8	11.5	17.0	9.9	2.2	5.5	2.2	3.3	10.4	9.3	00.0	100.
13	10.4	2.7	4.4	1.1	3.8	.5	4.9	9.3	20.3	9.3	2.7	2.2	4.9	6.0	9.3	7.7	00.0	100.
14	9.4	3.3	5.5	2.8	3.9	4.4	3.9	8.3	14.9	10.5	2.8	3.9	3.9	7.7	7.7	7.2	00.0	100.
15	10.4	2.7	4.4	3.3	3.3	2.2	5.5	8.8	16.5	7.7	3.3	3.8	4.9	5.5	9.3	8.2	00.0	100.
16	9.3	4.4	3.3	2.7	3.8	3.3	4.9	9.9	15.4	6.6	3.8	4.4	4.4	6.0	8.2	9.3	00.0	100.
17	9.3	7.1	2.2	2.7	5.5	3.3	4.9	8.8	14.3	6.6	5.5	3.3	3.3	3.8	9.9	9.3	00.0	100.
18	10.4	4.4	2.2	4.4	4.9	2.2	6.0	9.9	14.8	6.0	2.7	2.2	4.9	4.9	8.2	11.5	00.0	100.
19	11.0	4.9	3.3	3.8	2.2	2.2	7.1	11.5	14.8	6.0	2.7	3.3	2.2	4.4	7.1	13.2	00.0	100.
20	11.0	5.5	3.3	2.7	2.2	2.2	4.4	12.1	16.5	7.1	1.6	3.8	2.7	3.8	6.6	13.2	1.1	100.
21	10.4	6.0	3.3	2.2	2.7	1.1	5.5	11.0	13.7	7.1	1.6	2.2	3.8	3.8	11.0	14.3	00.0	100.
22	11.0	8.8	2.7	2.2	4.4	.5	4.4	12.1	11.5	8.2	4.9	2.2	3.8	2.2	7.1	13.7	00.0	100.
23	9.9	3.3	1.6	2.7	3.3	2.2	4.9	10.4	16.5	5.5	2.7	3.3	3.8	7.1	8.2	14.3	00.0	100.
24	6.7	4.4	2.8	3.3	3.9	2.2	3.9	10.0	18.9	5.0	1.7	3.9	5.0	6.7	5.6	16.1	00.0	100.
ALL	10.8	4.0	3.2	2.7	3.4	2.8	6.2	10.6	14.6	7.3	2.9	3.4	3.8	5.3	8.1	10.8	.1	100.

NUMBER OF OBS = 4360

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JULY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	00.0	3.2	00.0	6.5	3.2	6.5	6.5	16.1	12.9	00.0	6.5	00.0	6.5	6.5	16.1	00.0	100.
2	12.9	3.2	00.0	00.0	12.9	00.0	3.2	12.9	12.9	6.5	3.2	6.5	3.2	6.5	9.7	6.5	00.0	100.
3	6.5	00.0	6.5	6.5	3.2	00.0	00.0	12.9	12.9	9.7	6.5	00.0	3.2	6.5	9.7	16.1	00.0	100.
4	12.9	00.0	3.2	6.5	00.0	00.0	9.7	9.7	6.5	16.1	3.2	3.2	3.2	6.5	16.1	00.0	100.	
5	3.2	00.0	6.5	3.2	3.2	3.2	3.2	9.7	12.9	6.5	12.9	9.7	00.0	3.2	00.0	22.6	00.0	100.
6	3.2	00.0	3.2	6.5	00.0	3.2	3.2	9.7	16.1	9.7	6.5	16.1	00.0	6.5	6.5	9.7	00.0	100.
7	3.2	3.2	3.2	00.0	6.5	3.2	3.2	12.9	12.9	16.1	9.7	6.5	3.2	00.0	6.5	9.7	00.0	100.
8	9.7	00.0	3.2	6.5	3.2	6.5	9.7	16.1	12.9	9.7	9.7	00.0	00.0	00.0	00.0	12.9	00.0	100.
9	12.9	3.2	6.5	00.0	3.2	6.5	9.7	9.7	9.7	12.9	9.7	3.2	00.0	6.5	3.2	3.2	00.0	100.
10	12.9	6.5	3.2	3.2	6.5	3.2	6.5	9.7	9.7	6.5	6.5	6.5	3.2	3.2	9.7	3.2	00.0	100.
11	6.5	3.2	6.5	00.0	3.2	9.7	6.5	9.7	16.1	9.7	3.2	00.0	3.2	6.5	6.5	9.7	00.0	100.
12	9.7	3.2	9.7	00.0	6.5	9.7	6.5	9.7	12.9	9.7	3.2	3.2	00.0	00.0	12.9	3.2	00.0	100.
13	9.7	3.2	9.7	00.0	6.5	3.2	12.9	6.5	12.9	6.5	6.5	3.2	3.2	6.5	3.2	6.5	00.0	100.
14	9.7	6.5	9.7	6.5	6.5	00.0	12.9	6.5	12.9	6.5	6.5	3.2	00.0	3.2	6.5	3.2	00.0	100.
15	6.5	6.5	12.9	9.7	3.2	3.2	12.9	9.7	9.7	6.5	6.5	00.0	3.2	00.0	6.5	3.2	00.0	100.
16	9.7	6.5	9.7	3.2	3.2	3.2	16.1	19.4	3.2	6.5	3.2	3.2	00.0	3.2	6.5	3.2	00.0	100.
17	9.7	12.9	3.2	3.2	3.2	6.5	9.7	12.9	6.5	3.2	3.2	3.2	3.2	00.0	6.5	12.9	00.0	100.
18	19.4	12.9	6.5	00.0	3.2	3.2	12.9	19.4	00.0	00.0	3.2	6.5	3.2	00.0	6.5	3.2	00.0	100.
19	9.7	9.7	6.5	00.0	00.0	3.2	22.6	12.9	3.2	3.2	00.0	00.0	3.2	9.7	3.2	12.9	00.0	100.
20	9.7	6.5	00.0	00.0	3.2	6.5	12.9	12.9	3.2	6.5	00.0	3.2	9.7	3.2	3.2	19.4	00.0	100.
21	16.1	3.2	00.0	00.0	9.7	00.0	3.2	19.4	9.7	3.2	3.2	00.0	00.0	3.2	12.9	16.1	00.0	100.
22	9.7	00.0	00.0	3.2	9.7	00.0	3.2	12.9	12.9	6.5	3.2	3.2	3.2	00.0	12.9	19.4	00.0	100.
23	19.4	3.2	00.0	3.2	6.5	00.0	3.2	12.9	16.1	12.9	6.5	00.0	3.2	00.0	00.0	12.9	00.0	100.
24	6.5	3.2	00.0	3.2	3.2	6.5	00.0	19.4	12.9	6.5	00.0	00.0	12.9	3.2	00.0	22.6	00.0	100.
ALL	9.9	4.0	4.7	2.7	4.7	3.5	7.9	12.2	10.6	8.1	4.8	3.6	2.7	3.4	6.0	11.0	00.0	100.

NUMBER OF OBS = 744

B37

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

AUGUST

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	00.0	00.0	3.2	00.0	3.2	6.5	12.9	25.8	6.5	6.5	3.2	9.7	00.0	3.2	9.7	00.0	100.
2	12.9	00.0	00.0	6.5	00.0	00.0	12.9	12.9	32.3	3.2	00.0	00.0	00.0	3.2	6.5	9.7	00.0	100.
3	12.9	3.2	00.0	3.2	00.0	3.2	6.5	6.5	29.0	00.0	6.5	3.2	6.5	3.2	3.2	12.9	00.0	100.
4	9.7	6.5	00.0	3.2	3.2	00.0	6.5	12.9	16.1	9.7	00.0	3.2	00.0	12.9	3.2	12.9	00.0	100.
5	16.1	00.0	00.0	00.0	3.2	6.5	6.5	9.7	25.8	00.0	00.0	00.0	6.5	3.2	9.7	12.9	00.0	100.
6	9.7	00.0	00.0	00.0	00.0	3.2	12.9	22.6	9.7	6.5	3.2	3.2	00.0	3.2	3.2	22.6	00.0	100.
7	12.9	3.2	00.0	6.5	00.0	6.5	3.2	19.4	16.1	00.0	6.5	00.0	6.5	3.2	6.5	9.7	00.0	100.
8	12.9	6.5	00.0	6.5	3.2	00.0	12.9	9.7	22.6	3.2	00.0	00.0	3.2	6.5	6.5	6.5	00.0	100.
9	16.1	3.2	9.7	00.0	00.0	3.2	12.9	19.4	12.9	6.5	3.2	3.2	00.0	00.0	00.0	9.7	00.0	100.
10	9.7	3.2	3.2	6.5	00.0	9.7	9.7	25.8	6.5	6.5	00.0	3.2	00.0	00.0	00.0	16.1	00.0	100.
11	9.7	9.7	00.0	6.5	00.0	00.0	12.9	9.7	16.1	9.7	9.7	00.0	00.0	00.0	3.2	12.9	00.0	100.
12	6.5	3.2	9.7	6.5	00.0	00.0	6.5	16.1	19.4	3.2	6.5	3.2	00.0	00.0	3.2	16.1	00.0	100.
13	6.5	9.7	3.2	6.5	00.0	3.2	9.7	25.8	6.5	3.2	3.2	3.2	00.0	00.0	6.5	12.9	00.0	100.
14	9.7	6.5	00.0	9.7	00.0	00.0	12.9	22.6	9.7	3.2	3.2	00.0	6.5	00.0	3.2	12.9	00.0	100.
15	9.7	9.7	9.7	00.0	00.0	00.0	6.5	25.8	12.9	3.2	00.0	6.5	00.0	00.0	3.2	12.9	00.0	100.
16	12.9	6.5	3.2	9.7	00.0	00.0	3.2	25.8	16.1	3.2	00.0	00.0	3.2	3.2	00.0	12.9	00.0	100.
17	6.5	12.9	00.0	12.9	00.0	00.0	9.7	19.4	9.7	6.5	00.0	00.0	00.0	00.0	9.7	12.9	00.0	100.
18	6.5	6.5	6.5	3.2	3.2	00.0	6.5	19.4	12.9	6.5	00.0	00.0	3.2	00.0	6.5	19.4	00.0	100.
19	12.9	6.5	3.2	9.7	00.0	00.0	12.9	19.4	6.5	6.5	3.2	00.0	00.0	00.0	6.5	12.9	00.0	100.
20	16.1	00.0	6.5	00.0	00.0	3.2	9.7	3.2	29.0	00.0	00.0	3.2	00.0	6.5	6.5	16.1	00.0	100.
21	12.9	00.0	6.5	3.2	00.0	00.0	9.7	3.2	25.8	3.2	3.2	00.0	3.2	3.2	9.7	16.1	00.0	100.
22	16.1	00.0	3.2	00.0	00.0	3.2	6.5	6.5	19.4	6.5	3.2	3.2	00.0	6.5	16.1	9.7	00.0	100.
23	12.9	3.2	00.0	3.2	3.2	3.2	3.2	12.9	19.4	12.9	3.2	3.2	00.0	12.9	00.0	6.5	00.0	100.
24	9.7	00.0	00.0	00.0	6.5	00.0	6.5	16.1	19.4	6.5	6.5	3.2	00.0	3.2	12.9	9.7	00.0	100.
ALL	11.3	4.2	2.7	4.4	.9	2.0	8.6	15.7	17.5	4.8	2.8	1.9	2.0	3.0	5.4	12.8	00.0	100.

NUMBER OF OBS = 744

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

SEPTEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	00.0	00.0	3.3	00.0	00.0	6.7	10.0	33.3	20.0	6.7	3.3	00.0	6.7	00.0	6.7	3.3	00.0	100.
2	00.0	00.0	3.3	00.0	00.0	3.3	3.3	36.7	20.0	6.7	6.7	6.7	3.3	3.3	6.7	00.0	00.0	100.
3	00.0	00.0	00.0	00.0	00.0	10.0	3.3	40.0	20.0	6.7	6.7	00.0	00.0	10.0	3.3	00.0	00.0	100.
4	00.0	00.0	3.3	00.0	00.0	6.7	10.0	36.7	16.7	3.3	3.3	10.0	3.3	6.7	00.0	00.0	00.0	100.
5	00.0	3.3	00.0	00.0	00.0	3.3	16.7	26.7	30.0	6.7	00.0	6.7	00.0	00.0	3.3	3.3	00.0	100.
6	00.0	3.3	00.0	00.0	00.0	00.0	6.7	43.3	23.3	3.3	00.0	3.3	3.3	6.7	6.7	00.0	00.0	100.
7	00.0	3.3	00.0	00.0	00.0	00.0	6.7	36.7	16.7	6.7	6.7	00.0	3.3	10.0	3.3	00.0	6.7	100.
8	00.0	00.0	3.3	00.0	00.0	00.0	6.7	46.7	16.7	6.7	3.3	3.3	3.3	3.3	3.3	3.3	00.0	100.
9	3.3	00.0	00.0	00.0	00.0	3.3	3.3	23.3	40.0	10.0	10.0	3.3	00.0	00.0	00.0	3.3	00.0	100.
10	3.4	00.0	00.0	00.0	00.0	3.4	13.8	13.8	44.8	13.8	3.4	00.0	00.0	00.0	00.0	3.4	00.0	100.
11	00.0	3.4	00.0	00.0	00.0	6.9	13.8	13.8	48.3	6.9	00.0	3.4	00.0	00.0	3.4	00.0	00.0	100.
12	00.0	3.4	3.4	3.4	00.0	00.0	6.9	20.7	48.3	3.4	3.4	00.0	3.4	00.0	3.4	00.0	00.0	100.
13	3.4	00.0	3.4	3.4	00.0	3.4	00.0	31.0	44.8	00.0	00.0	3.4	3.4	00.0	3.4	00.0	00.0	100.
14	00.0	3.4	00.0	00.0	10.3	3.4	3.4	37.9	27.6	00.0	6.9	00.0	00.0	3.4	00.0	3.4	00.0	100.
15	3.4	00.0	00.0	3.4	3.4	6.9	13.8	24.1	31.0	00.0	3.4	00.0	00.0	6.9	00.0	3.4	00.0	100.
16	3.4	00.0	00.0	3.4	00.0	6.9	3.4	44.8	17.2	00.0	10.3	00.0	00.0	6.9	00.0	3.4	00.0	100.
17	00.0	3.3	00.0	3.3	3.3	6.7	10.0	23.3	26.7	3.3	3.3	3.3	00.0	6.7	00.0	6.7	00.0	100.
18	00.0	00.0	3.3	10.0	00.0	3.3	20.0	40.0	6.7	00.0	3.3	00.0	3.3	3.3	00.0	6.7	00.0	100.
19	3.3	00.0	3.3	3.3	3.3	00.0	33.3	26.7	3.3	3.3	3.3	3.3	00.0	6.7	00.0	6.7	00.0	100.
20	3.3	00.0	00.0	00.0	00.0	3.3	30.0	26.7	6.7	6.7	3.3	3.3	3.3	00.0	6.7	6.7	00.0	100.
21	00.0	00.0	00.0	00.0	3.3	3.3	33.3	20.0	13.3	3.3	00.0	3.3	3.3	3.3	3.3	10.0	00.0	100.
22	3.3	00.0	00.0	00.0	00.0	3.3	36.7	10.0	13.3	6.7	6.7	3.3	6.7	00.0	3.3	6.7	00.0	100.
23	00.0	00.0	3.3	00.0	00.0	00.0	23.3	26.7	13.3	6.7	3.3	3.3	6.7	3.3	00.0	10.0	00.0	100.
24	00.0	00.0	3.3	00.0	00.0	6.7	10.0	23.3	23.3	3.3	10.0	10.0	3.3	00.0	3.3	3.3	00.0	100.
ALL	1.1	1.0	1.4	1.3	1.0	3.8	13.3	29.5	23.7	4.8	4.2	2.9	2.4	3.4	2.5	3.5	.3	100.

NUMBER OF OBS = 713

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUL-SEP

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	6.5	00.0	2.2	1.1	2.2	4.3	7.6	17.4	20.7	8.7	3.3	3.3	5.4	2.2	5.4	9.8	00.0	100.
2	8.7	1.1	1.1	2.2	4.3	1.1	6.5	20.7	21.7	5.4	3.3	4.3	2.2	4.3	7.6	5.4	00.0	100.
3	6.5	1.1	2.2	3.3	1.1	4.3	3.3	19.6	20.7	5.4	6.5	1.1	3.3	6.5	5.4	9.8	00.0	100.
4	7.6	2.2	2.2	3.3	1.1	2.2	8.7	19.6	13.0	9.8	2.2	5.4	2.2	7.6	3.3	9.8	00.0	100.
5	6.5	1.1	2.2	1.1	2.2	4.3	8.7	15.2	22.8	4.3	4.3	5.4	2.2	2.2	4.3	13.0	00.0	100.
6	4.3	1.1	1.1	2.2	00.0	2.2	7.6	25.0	16.3	6.5	3.3	7.6	1.1	5.4	5.4	10.9	00.0	100.
7	5.4	3.3	1.1	2.2	2.2	3.3	4.3	22.8	15.2	7.6	7.6	2.2	4.3	4.3	5.4	6.5	2.2	100.
8	7.6	2.2	2.2	4.3	2.2	2.2	9.8	23.9	17.4	6.5	4.3	1.1	2.2	3.3	3.3	7.6	00.0	100.
9	10.9	2.2	5.4	00.0	1.1	4.3	8.7	17.4	20.7	9.8	7.6	3.3	00.0	2.2	1.1	5.4	00.0	100.
10	8.8	3.3	2.2	3.3	2.2	5.5	9.9	16.5	19.8	8.8	3.3	3.3	1.1	1.1	3.3	7.7	00.0	100.
11	5.5	5.5	2.2	2.2	1.1	5.5	11.0	11.0	26.4	8.8	4.4	1.1	1.1	2.2	4.4	7.7	00.0	100.
12	5.5	3.3	7.7	3.3	2.2	3.3	6.6	15.4	26.4	5.5	4.4	2.2	1.1	00.0	6.6	6.6	00.0	100.
13	6.6	4.4	5.5	3.3	2.2	3.3	7.7	20.9	20.9	3.3	3.3	3.3	2.2	2.2	4.4	6.6	00.0	100.
14	6.6	5.5	3.3	5.5	5.5	1.1	9.9	22.0	16.5	3.3	5.5	1.1	2.2	2.2	3.3	6.6	00.0	100.
15	6.6	5.5	7.7	4.4	2.2	3.3	11.0	19.8	17.6	3.3	3.3	2.2	1.1	2.2	3.3	6.6	00.0	100.
16	8.8	4.4	4.4	5.5	1.1	3.3	7.7	29.7	12.1	3.3	4.4	1.1	1.1	4.4	2.2	6.6	00.0	100.
17	5.4	9.8	1.1	6.5	2.2	4.3	9.8	18.5	14.1	4.3	2.2	2.2	1.1	2.2	5.4	10.9	00.0	100.
18	8.7	6.5	5.4	4.3	2.2	2.2	13.0	26.1	6.5	2.2	2.2	2.2	3.3	1.1	4.3	9.8	00.0	100.
19	8.7	5.4	4.3	4.3	1.1	1.1	22.8	19.6	4.3	4.3	2.2	1.1	1.1	5.4	3.3	10.9	00.0	100.
20	9.8	2.2	2.2	00.0	1.1	4.3	17.4	14.1	13.0	4.3	1.1	3.3	4.3	3.3	5.4	14.1	00.0	100.
21	9.8	1.1	2.2	1.1	4.3	1.1	15.2	14.1	16.3	3.3	2.2	1.1	2.2	3.3	8.7	14.1	00.0	100.
22	9.8	00.0	1.1	1.1	3.3	2.2	15.2	9.8	15.2	6.5	4.3	3.3	3.3	2.2	10.9	12.0	00.0	100.
23	10.9	2.2	1.1	2.2	3.3	1.1	9.8	17.4	16.3	10.9	4.3	2.2	3.3	5.4	00.0	9.8	00.0	100.
24	5.4	1.1	1.1	1.1	3.3	4.3	5.4	19.6	18.5	5.4	5.4	4.3	5.4	2.2	5.4	12.0	00.0	100.
ALL	7.5	3.1	3.0	2.8	2.2	3.1	9.9	19.0	17.2	5.9	4.0	2.8	2.4	3.2	4.7	9.2	.1	100.

NUMBER OF OBS = 2201

B40

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
 VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

OCTOBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	3.2	3.2	00.0	3.2	12.9	3.2	6.5	12.9	9.7	6.5	12.9	3.2	6.5	6.5	00.0	9.7	00.0	100.
2	3.2	3.2	00.0	12.9	3.2	3.2	6.5	6.5	19.4	6.5	3.2	6.5	3.2	6.5	9.7	6.5	00.0	100.
3	00.0	00.0	3.2	6.5	6.5	6.5	9.7	9.7	12.9	00.0	6.5	9.7	12.9	6.5	6.5	3.2	00.0	100.
4	00.0	00.0	3.2	6.5	9.7	3.2	16.1	6.5	12.9	6.5	9.7	00.0	9.7	12.9	3.2	00.0	00.0	100.
5	00.0	00.0	3.2	9.7	6.5	9.7	12.9	6.5	19.4	6.5	3.2	00.0	3.2	6.5	12.9	00.0	00.0	100.
6	00.0	00.0	3.2	9.7	00.0	9.7	12.9	12.9	9.7	9.7	6.5	00.0	9.7	12.9	3.2	00.0	00.0	100.
7	00.0	00.0	00.0	9.7	9.7	6.5	9.7	6.5	22.6	6.5	6.5	6.5	00.0	12.9	3.2	00.0	00.0	100.
8	00.0	00.0	3.2	12.9	6.5	3.2	12.9	12.9	19.4	00.0	00.0	3.2	3.2	9.7	3.2	9.7	00.0	100.
9	00.0	00.0	00.0	9.7	9.7	9.7	6.5	22.6	6.5	9.7	00.0	3.2	3.2	6.5	6.5	6.5	00.0	100.
10	00.0	00.0	00.0	9.7	6.5	6.5	9.7	19.4	12.9	6.5	00.0	00.0	3.2	16.1	6.5	3.2	00.0	100.
11	00.0	00.0	3.2	12.9	00.0	12.9	12.9	9.7	12.9	3.2	6.5	3.2	6.5	3.2	9.7	3.2	00.0	100.
12	00.0	00.0	00.0	9.7	6.5	9.7	19.4	6.5	12.9	9.7	3.2	3.2	3.2	3.2	9.7	3.2	00.0	100.
13	00.0	00.0	3.2	9.7	3.2	9.7	19.4	6.5	12.9	6.5	3.2	6.5	00.0	6.5	12.9	00.0	00.0	100.
14	00.0	00.0	3.2	9.7	6.5	12.9	6.5	9.7	9.7	9.7	6.5	00.0	3.2	9.7	12.9	00.0	00.0	100.
15	00.0	00.0	00.0	12.9	12.9	9.7	9.7	3.2	16.1	3.2	6.5	00.0	3.2	9.7	9.7	3.2	00.0	100.
16	00.0	00.0	00.0	10.0	13.3	3.3	13.3	6.7	13.3	3.3	6.7	00.0	6.7	10.0	00.0	13.3	00.0	100.
17	00.0	00.0	3.2	9.7	9.7	00.0	16.1	6.5	12.9	3.2	00.0	00.0	9.7	12.9	00.0	16.1	00.0	100.
18	3.2	00.0	3.2	9.7	6.5	12.9	9.7	6.5	9.7	3.2	00.0	00.0	6.5	6.5	3.2	19.4	00.0	100.
19	3.2	00.0	6.5	3.2	16.1	3.2	16.1	6.5	6.5	3.2	00.0	3.2	3.2	6.5	9.7	12.9	00.0	100.
20	00.0	3.2	3.2	6.5	3.2	12.9	12.9	12.9	6.5	00.0	00.0	6.5	9.7	00.0	9.7	12.9	00.0	100.
21	00.0	00.0	6.5	9.7	3.2	9.7	16.1	3.2	16.1	00.0	3.2	6.5	3.2	3.2	9.7	9.7	00.0	100.
22	3.2	00.0	3.2	12.9	6.5	3.2	12.9	6.5	12.9	6.5	3.2	6.5	3.2	6.5	6.5	6.5	00.0	100.
23	3.2	00.0	00.0	3.2	9.7	9.7	19.4	3.2	12.9	3.2	6.5	3.2	3.2	6.5	9.7	6.5	00.0	100.
24	00.0	3.2	00.0	9.7	6.5	6.5	9.7	6.5	19.4	00.0	3.2	6.5	9.7	6.5	3.2	9.7	00.0	100.
ALL	.8	.5	2.2	9.2	7.3	7.4	12.4	8.7	13.3	4.7	4.0	3.2	5.2	7.8	6.7	6.5	00.0	100.

NUMBER OF OBS = 743

B41



NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

NOVEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	20.0	00.0	00.0	10.0	00.0	00.0	6.7	3.3	16.7	10.0	00.0	3.3	6.7	6.7	10.0	6.7	00.0	100.
2	20.0	6.7	00.0	3.3	3.3	3.3	00.0	10.0	16.7	10.0	00.0	6.7	3.3	3.3	3.3	10.0	00.0	100.
3	10.0	6.7	3.3	00.0	00.0	6.7	00.0	13.3	16.7	13.3	3.3	3.3	00.0	10.0	6.7	6.7	00.0	100.
4	6.7	10.0	00.0	3.3	3.3	3.3	00.0	26.7	6.7	6.7	00.0	00.0	00.0	6.7	6.7	20.0	00.0	100.
5	10.0	10.0	00.0	00.0	3.3	3.3	13.3	10.0	13.3	3.3	3.3	3.3	3.3	6.7	6.7	10.0	00.0	100.
6	10.0	10.0	3.3	00.0	3.3	6.7	6.7	13.3	16.7	00.0	00.0	3.3	3.3	3.3	6.7	13.3	00.0	100.
7	16.7	10.0	3.3	3.3	3.3	00.0	00.0	16.7	16.7	6.7	00.0	00.0	00.0	10.0	00.0	13.3	00.0	100.
8	23.3	3.3	00.0	3.3	3.3	3.3	3.3	13.3	16.7	3.3	00.0	3.3	00.0	3.3	10.0	10.0	00.0	100.
9	20.0	13.3	00.0	3.3	3.3	00.0	6.7	10.0	23.3	00.0	3.3	00.0	00.0	3.3	3.3	10.0	00.0	100.
10	10.0	13.3	00.0	6.7	3.3	3.3	10.0	6.7	16.7	3.3	6.7	3.3	00.0	3.3	3.3	10.0	00.0	100.
11	20.0	6.7	6.7	00.0	10.0	3.3	6.7	00.0	23.3	6.7	3.3	6.7	00.0	00.0	3.3	3.3	00.0	100.
12	10.0	10.0	3.3	6.7	3.3	00.0	13.3	00.0	20.0	10.0	3.3	6.7	00.0	3.3	00.0	10.0	00.0	100.
13	10.0	10.0	00.0	6.7	6.7	6.7	3.3	3.3	16.7	6.7	10.0	3.3	00.0	3.3	3.3	10.0	00.0	100.
14	13.3	6.7	00.0	10.0	6.7	3.3	00.0	6.7	16.7	6.7	6.7	3.3	3.3	3.3	3.3	10.0	00.0	100.
15	13.3	6.7	6.7	6.7	00.0	6.7	00.0	3.3	13.3	10.0	6.7	6.7	3.3	3.3	3.3	10.0	00.0	100.
16	10.0	10.0	6.7	6.7	3.3	00.0	3.3	10.0	6.7	10.0	6.7	3.3	10.0	00.0	6.7	6.7	00.0	100.
17	6.7	16.7	10.0	6.7	00.0	00.0	10.0	3.3	10.0	6.7	6.7	10.0	3.3	00.0	6.7	3.3	00.0	100.
18	16.7	10.0	10.0	6.7	3.3	00.0	3.3	6.7	6.7	10.0	6.7	3.3	3.3	00.0	13.3	00.0	00.0	100.
19	20.0	10.0	10.0	00.0	6.7	00.0	6.7	3.3	13.3	3.3	3.3	6.7	3.3	3.3	6.7	3.3	00.0	100.
20	16.7	13.3	3.3	3.3	3.3	3.3	6.7	3.3	6.7	10.0	6.7	00.0	6.7	6.7	3.3	6.7	00.0	100.
21	23.3	6.7	10.0	00.0	00.0	3.3	6.7	3.3	6.7	13.3	6.7	00.0	3.3	10.0	3.3	3.3	00.0	100.
22	16.7	6.7	6.7	00.0	00.0	3.3	10.0	13.3	10.0	00.0	10.0	3.3	00.0	10.0	00.0	10.0	00.0	100.
23	20.0	6.7	3.3	10.0	00.0	00.0	00.0	6.7	10.0	6.7	16.7	3.3	00.0	6.7	10.0	00.0	00.0	100.
24	13.3	3.3	00.0	3.3	10.0	00.0	6.7	3.3	20.0	13.3	00.0	6.7	00.0	00.0	13.3	6.7	00.0	100.
ALL	14.9	8.6	3.6	4.2	3.3	2.5	5.1	7.9	14.2	7.1	4.6	3.8	2.2	4.4	5.6	8.1	00.0	100.

NUMBER OF OBS = 720

B42

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

DECEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	00.0	3.2	00.0	3.2	3.2	3.2	12.9	12.9	6.5	12.9	6.5	3.2	6.5	3.2	12.9	00.0	100.
2	6.5	3.2	00.0	3.2	00.0	3.2	3.2	3.2	19.4	9.7	6.5	3.2	9.7	00.0	12.9	12.9	3.2	100.
3	9.7	00.0	00.0	00.0	00.0	3.2	3.2	9.7	22.6	9.7	6.5	6.5	3.2	00.0	9.7	16.1	00.0	100.
4	19.4	6.5	00.0	00.0	00.0	00.0	6.5	6.5	12.9	12.9	00.0	6.5	6.5	9.7	9.7	3.2	00.0	100.
5	16.1	3.2	00.0	00.0	00.0	3.2	3.2	6.5	22.6	00.0	3.2	6.5	6.5	3.2	16.1	9.7	00.0	100.
6	12.9	3.2	3.2	00.0	00.0	00.0	6.5	6.5	19.4	3.2	6.5	6.5	00.0	6.5	16.1	9.7	00.0	100.
7	6.5	3.2	6.5	00.0	00.0	00.0	6.5	3.2	22.6	6.5	3.2	00.0	6.5	16.1	9.7	9.7	00.0	100.
8	6.5	6.5	3.2	00.0	3.2	00.0	6.5	6.5	16.1	6.5	3.2	3.2	00.0	6.5	16.1	16.1	00.0	100.
9	3.2	00.0	3.2	00.0	6.5	3.2	3.2	3.2	16.1	9.7	3.2	3.2	6.5	6.5	12.9	19.4	00.0	100.
10	3.2	3.2	00.0	3.2	00.0	6.5	6.5	6.5	12.9	12.9	3.2	3.2	6.5	6.5	6.5	19.4	00.0	100.
11	6.5	00.0	6.5	00.0	3.2	6.5	6.5	3.2	00.0	25.8	3.2	00.0	9.7	3.2	6.5	19.4	00.0	100.
12	3.2	3.2	00.0	3.2	9.7	3.2	6.5	00.0	6.5	12.9	16.1	6.5	3.2	00.0	12.9	12.9	00.0	100.
13	6.5	00.0	00.0	00.0	3.2	9.7	3.2	6.5	6.5	6.5	19.4	9.7	3.2	00.0	16.1	9.7	00.0	100.
14	6.5	00.0	00.0	00.0	00.0	12.9	3.2	3.2	6.5	6.5	9.7	12.9	9.7	3.2	19.4	6.5	00.0	100.
15	6.5	00.0	00.0	00.0	00.0	6.5	6.5	3.2	12.9	3.2	3.2	9.7	16.1	9.7	16.1	6.5	00.0	100.
16	3.2	6.5	00.0	00.0	00.0	9.7	3.2	3.2	12.9	3.2	3.2	9.7	16.1	3.2	12.9	12.9	00.0	100.
17	3.2	3.2	00.0	00.0	3.2	3.2	6.5	9.7	6.5	3.2	9.7	6.5	9.7	3.2	6.5	25.8	00.0	100.
18	6.5	3.2	00.0	00.0	6.5	3.2	12.9	3.2	9.7	6.5	6.5	6.5	00.0	6.5	16.1	12.9	00.0	100.
19	6.5	6.5	00.0	3.2	3.2	00.0	6.5	9.7	6.5	9.7	6.5	6.5	00.0	00.0	16.1	19.4	00.0	100.
20	9.7	3.2	00.0	3.2	00.0	9.7	3.2	9.7	9.7	9.7	3.2	00.0	3.2	3.2	12.9	19.4	00.0	100.
21	6.5	00.0	3.2	00.0	00.0	6.5	3.2	6.5	12.9	9.7	12.9	00.0	6.5	00.0	6.5	25.8	00.0	100.
22	19.4	3.2	00.0	00.0	00.0	00.0	9.7	12.9	9.7	3.2	6.5	12.9	00.0	3.2	9.7	9.7	00.0	100.
23	16.1	00.0	3.2	00.0	00.0	00.0	12.9	12.9	6.5	9.7	3.2	9.7	3.2	3.2	12.9	6.5	00.0	100.
24	19.4	00.0	3.2	00.0	00.0	3.2	6.5	12.9	9.7	6.5	9.7	6.5	00.0	6.5	6.5	9.7	00.0	100.
ALL	8.9	2.4	1.5	.7	1.7	4.0	5.8	6.7	12.2	8.1	6.7	5.9	5.4	4.4	11.8	13.6	.1	100.

NUMBER OF OBS = 744

B43

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

OCT-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.9	1.1	1.1	4.3	5.4	2.2	5.4	9.8	13.0	7.6	8.7	4.3	5.4	6.5	4.3	9.8	00.0	100.
2	9.8	4.3	00.0	6.5	2.2	3.3	3.3	6.5	18.5	8.7	3.3	5.4	5.4	3.3	8.7	9.8	1.1	100.
3	6.5	2.2	2.2	2.2	2.2	5.4	4.3	10.9	17.4	7.6	5.4	6.5	5.4	5.4	7.6	8.7	00.0	100.
4	8.7	5.4	1.1	3.3	4.3	2.2	7.6	13.0	10.9	8.7	3.3	2.2	5.4	9.8	6.5	7.6	00.0	100.
5	8.7	4.3	1.1	3.3	3.3	5.4	9.8	7.6	18.5	3.3	3.3	3.3	4.3	5.4	12.0	6.5	00.0	100.
6	7.6	4.3	3.3	3.3	1.1	5.4	8.7	10.9	15.2	4.3	4.3	3.3	4.3	7.6	8.7	7.6	00.0	100.
7	7.6	4.3	3.3	4.3	4.3	2.2	5.4	8.7	20.7	6.5	3.3	2.2	2.2	13.0	4.3	7.6	00.0	100.
8	9.8	3.3	2.2	5.4	4.3	2.2	7.6	10.9	17.4	3.3	1.1	3.3	1.1	6.5	9.8	12.0	00.0	100.
9	7.6	4.3	1.1	4.3	6.5	4.3	5.4	12.0	15.2	6.5	2.2	2.2	3.3	5.4	7.6	12.0	00.0	100.
10	4.3	5.4	00.0	6.5	3.3	5.4	8.7	10.9	14.1	7.6	3.3	2.2	3.3	8.7	5.4	10.9	00.0	100.
11	8.7	2.2	5.4	4.3	4.3	7.6	8.7	4.3	12.0	12.0	4.3	3.3	5.4	2.2	6.5	8.7	00.0	100.
12	4.3	4.3	1.1	6.5	6.5	4.3	13.0	2.2	13.0	10.9	7.6	5.4	2.2	2.2	7.6	8.7	00.0	100.
13	5.4	3.3	1.1	5.4	4.3	8.7	8.7	5.4	12.0	6.5	10.9	6.5	1.1	3.3	10.9	6.5	00.0	100.
14	6.5	2.2	1.1	6.5	4.3	9.8	3.3	6.5	10.9	7.6	7.6	5.4	5.4	5.4	12.0	5.4	00.0	100.
15	6.5	2.2	2.2	6.5	4.3	7.6	5.4	3.3	14.1	5.4	5.4	5.4	7.6	7.6	9.8	6.5	00.0	100.
16	4.4	5.5	2.2	5.5	5.5	4.4	6.6	6.6	11.0	5.5	5.5	4.4	11.0	4.4	6.6	11.0	00.0	100.
17	3.3	6.5	4.3	5.4	4.3	1.1	10.9	6.5	9.8	4.3	5.4	5.4	7.6	5.4	4.3	15.2	00.0	100.
18	8.7	4.3	4.3	5.4	5.4	5.4	8.7	5.4	8.7	6.5	4.3	3.3	3.3	4.3	10.9	10.9	00.0	100.
19	9.8	5.4	5.4	2.2	8.7	1.1	9.8	6.5	8.7	5.4	3.3	5.4	2.2	3.3	10.9	12.0	00.0	100.
20	8.7	6.5	2.2	4.3	2.2	8.7	7.6	8.7	7.6	6.5	3.3	2.2	6.5	3.3	8.7	13.0	00.0	100.
21	9.8	2.2	6.5	3.3	1.1	6.5	8.7	4.3	12.0	7.6	7.6	2.2	4.3	4.3	6.5	13.0	00.0	100.
22	13.0	3.3	3.3	4.3	2.2	2.2	10.9	10.9	10.9	3.3	6.5	7.6	1.1	6.5	5.4	8.7	00.0	100.
23	13.0	2.2	2.2	4.3	3.3	3.3	10.9	7.6	9.8	6.5	8.7	5.4	2.2	5.4	10.9	4.3	00.0	100.
24	10.9	2.2	1.1	4.3	5.4	3.3	7.6	7.6	16.3	6.5	4.3	6.5	3.3	4.3	7.6	8.7	00.0	100.
ALL	8.1	3.8	2.4	4.7	4.1	4.7	7.8	7.8	13.2	6.6	5.1	4.3	4.3	5.6	8.1	9.4	.0	100.

NUMBER OF OBS = 2207

B44

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUL-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	8.7	.5	1.6	2.7	3.8	3.3	6.5	13.6	16.8	8.2	6.0	3.8	5.4	4.3	4.9	9.8	00.0	100.
2	9.2	2.7	.5	4.3	3.3	2.2	4.9	13.6	20.1	7.1	3.3	4.9	3.8	3.8	8.2	7.6	.5	100.
3	6.5	1.6	2.2	2.7	1.6	4.9	3.8	15.2	19.0	6.5	6.0	3.8	4.3	6.0	6.5	9.2	00.0	100.
4	8.2	3.8	1.6	3.3	2.7	2.2	8.2	16.3	12.0	9.2	2.7	3.8	3.8	8.7	4.9	8.7	00.0	100.
5	7.6	2.7	1.6	2.2	2.7	4.9	9.2	11.4	20.7	3.8	3.8	4.3	3.3	3.8	8.2	9.8	00.0	100.
6	6.0	2.7	2.2	2.7	.5	3.8	8.2	17.9	15.8	5.4	3.8	5.4	2.7	6.5	7.1	9.2	00.0	100.
7	6.5	3.8	2.2	3.3	3.3	2.7	4.9	15.8	17.9	7.1	5.4	2.2	3.3	8.7	4.9	7.1	1.1	100.
8	8.7	2.7	2.2	4.9	3.3	2.2	8.7	17.4	17.4	4.9	2.7	2.2	1.6	4.9	6.5	9.8	00.0	100.
9	9.2	3.3	3.3	2.2	3.8	4.3	7.1	14.7	17.9	8.2	4.9	2.7	1.6	3.8	4.3	8.7	00.0	100.
10	6.6	4.4	1.1	4.9	2.7	5.5	9.3	13.7	16.9	8.2	3.3	2.7	2.2	4.9	4.4	9.3	00.0	100.
11	7.1	3.8	3.8	3.3	2.7	6.6	9.8	7.7	19.1	10.4	4.4	2.2	3.3	2.2	5.5	8.2	00.0	100.
12	4.9	3.8	4.4	4.9	4.4	3.8	9.8	8.7	19.7	8.2	6.0	3.8	1.6	1.1	7.1	7.7	00.0	100.
13	6.0	3.8	3.3	4.4	3.3	6.0	8.2	13.1	16.4	4.9	7.1	4.9	1.6	2.7	7.7	6.6	00.0	100.
14	6.6	3.8	2.2	6.0	4.9	5.5	6.6	14.2	13.7	5.5	6.6	3.3	3.8	3.8	7.7	6.0	00.0	100.
15	6.6	3.8	4.9	5.5	3.3	5.5	8.2	11.5	15.8	4.4	4.4	3.8	4.4	4.9	6.6	6.6	00.0	100.
16	6.6	4.9	3.3	5.5	3.3	3.8	7.1	18.1	11.5	4.4	4.9	2.7	6.0	4.4	4.4	8.8	00.0	100.
17	4.3	8.2	2.7	6.0	3.3	2.7	10.3	12.5	12.0	4.3	3.8	3.8	4.3	3.8	4.9	13.0	00.0	100.
18	8.7	5.4	4.9	4.9	3.8	3.8	10.9	15.8	7.6	4.3	3.3	2.7	3.3	2.7	7.6	10.3	00.0	100.
19	9.2	5.4	4.9	3.3	4.9	1.1	16.3	13.0	6.5	4.9	2.7	3.3	1.6	4.3	7.1	11.4	00.0	100.
20	9.2	4.3	2.2	2.2	1.6	6.5	12.5	11.4	10.3	5.4	2.2	2.7	5.4	3.3	7.1	13.6	00.0	100.
21	9.8	1.6	4.3	2.2	2.7	3.8	12.0	9.2	14.1	5.4	4.9	1.6	3.3	3.8	7.6	13.6	00.0	100.
22	11.4	1.6	2.2	2.7	2.7	2.2	13.0	10.3	13.0	4.9	5.4	5.4	2.2	4.3	8.2	10.3	00.0	100.
23	12.0	2.2	1.6	3.3	3.3	2.2	10.3	12.5	13.0	8.7	6.5	3.8	2.7	5.4	5.4	7.1	00.0	100.
24	8.2	1.6	1.1	2.7	4.3	3.8	6.5	13.6	17.4	6.0	4.9	5.4	4.3	3.3	6.5	10.3	00.0	100.
ALL	7.8	3.4	2.7	3.7	3.2	3.9	8.8	13.4	15.2	6.3	4.5	3.6	3.3	4.4	6.4	9.3	.1	100.

NUMBER OF OBS = 4408

B45

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.4	2.7	1.6	2.7	3.3	3.6	5.7	11.7	16.1	7.1	4.9	3.6	4.4	4.4	7.1	10.7	00.0	100.
2	10.9	3.3	1.1	3.6	4.1	2.2	5.7	11.7	18.9	6.3	2.7	3.8	4.4	4.4	7.9	8.5	.5	100.
3	9.0	1.4	3.3	2.7	3.0	4.1	3.8	13.9	15.3	7.9	4.6	3.3	5.5	4.9	7.4	9.8	00.0	100.
4	9.6	2.7	2.5	3.0	3.0	2.5	8.7	13.7	11.5	8.2	2.2	4.6	3.8	8.5	5.5	10.1	00.0	100.
5	9.0	3.0	1.9	2.7	2.7	4.6	8.2	12.0	15.0	4.9	3.0	5.2	3.3	4.6	7.9	11.2	.5	100.
6	10.1	3.3	2.2	3.0	.8	3.6	8.5	13.9	15.3	5.5	3.3	4.4	2.7	7.4	6.8	9.3	00.0	100.
7	9.9	4.1	2.2	2.7	3.0	2.2	8.2	11.8	16.4	7.1	4.1	2.7	3.8	7.7	5.5	7.9	.5	100.
8	9.0	3.3	3.3	3.8	2.7	4.1	8.7	15.3	14.5	5.5	3.6	2.2	2.2	5.2	7.1	9.6	00.0	100.
9	10.4	2.7	4.1	2.2	4.4	3.6	8.7	11.7	15.6	8.5	4.1	2.2	2.2	3.8	6.8	9.0	00.0	100.
10	9.4	4.1	2.2	3.6	3.0	4.4	8.0	12.7	14.0	9.6	3.3	3.3	2.2	4.7	6.3	9.1	00.0	100.
11	8.8	3.6	3.9	2.8	2.8	5.0	7.7	9.9	17.4	9.1	3.3	2.2	3.3	3.9	6.9	9.6	00.0	100.
12	7.7	3.0	3.8	3.6	3.8	3.6	6.8	10.1	18.4	9.0	4.1	4.7	1.9	2.2	8.8	8.5	00.0	100.
13	8.2	3.3	3.8	2.7	3.6	3.3	6.6	11.2	18.4	7.1	4.9	3.6	3.3	4.4	8.5	7.1	00.0	100.
14	8.0	3.6	3.8	4.4	4.4	4.9	5.2	11.3	14.3	8.0	4.7	3.6	3.8	5.8	7.7	6.6	00.0	100.
15	8.5	3.3	4.7	4.4	3.3	3.8	6.8	10.1	16.2	6.0	3.8	3.8	4.7	5.2	7.9	7.4	00.0	100.
16	8.0	4.7	3.3	4.1	3.6	3.6	6.0	14.0	13.5	5.5	4.4	3.6	5.2	5.2	6.3	9.1	00.0	100.
17	6.8	7.7	2.5	4.4	4.4	3.0	7.7	10.7	13.1	5.5	4.6	3.6	3.8	3.8	7.4	11.2	00.0	100.
18	9.6	4.9	3.6	4.6	4.4	3.0	8.5	12.8	11.2	5.2	3.0	2.5	4.1	3.8	7.9	10.9	00.0	100.
19	10.1	5.2	4.1	3.6	3.6	1.6	11.7	12.3	10.7	5.5	2.7	3.3	1.9	4.4	7.1	12.3	00.0	100.
20	10.1	4.9	2.7	2.5	1.9	4.4	8.5	11.7	13.4	6.3	1.9	3.3	4.1	3.6	6.8	13.4	.5	100.
21	10.1	3.8	3.8	2.2	2.7	2.5	8.7	10.1	13.9	6.3	3.3	1.9	3.6	3.8	9.3	13.9	00.0	100.
22	11.2	5.2	2.5	2.5	3.6	1.4	8.7	11.2	12.3	6.6	5.2	3.8	3.0	3.3	7.7	12.0	00.0	100.
23	10.9	2.7	1.6	3.0	3.3	2.2	7.7	11.5	14.8	7.1	4.6	3.6	3.3	6.3	6.8	10.7	00.0	100.
24	7.4	3.0	1.9	3.0	4.1	3.0	5.2	11.8	18.1	5.5	3.3	4.7	4.7	4.9	6.0	13.2	00.0	100.
ALL	9.3	3.7	2.9	3.2	3.3	3.3	7.5	12.0	14.9	6.8	3.7	3.5	3.5	4.8	7.2	10.0	.1	100.

NUMBER OF OBS = 8768

B46

**Wind Direction Frequencies**

**100-Meter Level**

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JANUARY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	12.9	00.0	3.2	3.2	9.7	00.0	3.2	6.5	19.4	3.2	00.0	3.2	00.0	6.5	19.4	00.0	100.
2	9.7	6.5	9.7	3.2	3.2	6.5	00.0	6.5	3.2	12.9	9.7	00.0	00.0	3.2	6.5	19.4	00.0	100.
3	9.7	6.5	6.5	3.2	3.2	3.2	9.7	6.5	3.2	6.5	9.7	00.0	6.5	00.0	3.2	22.6	00.0	100.
4	12.9	3.2	6.5	00.0	00.0	6.5	6.5	9.7	3.2	3.2	9.7	3.2	6.5	00.0	6.5	22.6	00.0	100.
5	19.4	3.2	3.2	00.0	00.0	6.5	00.0	12.9	6.5	3.2	9.7	3.2	6.5	00.0	3.2	22.6	00.0	100.
6	19.4	6.5	3.2	00.0	3.2	3.2	00.0	12.9	9.7	3.2	6.5	3.2	6.5	00.0	3.2	19.4	00.0	100.
7	16.1	00.0	6.5	00.0	3.2	00.0	6.5	6.5	12.9	3.2	6.5	6.5	3.2	00.0	3.2	25.8	00.0	100.
8	9.7	9.7	3.2	00.0	3.2	3.2	00.0	3.2	22.6	00.0	3.2	6.5	3.2	3.2	3.2	25.8	00.0	100.
9	19.4	3.2	6.5	00.0	3.2	00.0	6.5	00.0	22.6	00.0	3.2	00.0	9.7	00.0	6.5	19.4	00.0	100.
10	16.1	3.2	3.2	3.2	3.2	00.0	6.5	00.0	19.4	3.2	3.2	00.0	6.5	6.5	3.2	22.6	00.0	100.
11	19.4	3.2	6.5	3.2	3.2	00.0	3.2	3.2	9.7	9.7	3.2	6.5	3.2	6.5	9.7	9.7	00.0	100.
12	12.9	00.0	3.2	3.2	9.7	00.0	3.2	6.5	3.2	9.7	3.2	12.9	6.5	3.2	9.7	12.9	00.0	100.
13	6.5	00.0	3.2	3.2	6.5	3.2	3.2	3.2	9.7	6.5	00.0	9.7	12.9	6.5	6.5	19.4	00.0	100.
14	9.7	00.0	6.5	00.0	6.5	6.5	00.0	6.5	3.2	6.5	3.2	9.7	12.9	6.5	12.9	9.7	00.0	100.
15	9.7	6.5	00.0	3.2	6.5	3.2	00.0	9.7	6.5	6.5	3.2	3.2	19.4	3.2	12.9	6.5	00.0	100.
16	9.7	6.5	00.0	3.2	9.7	00.0	3.2	9.7	6.5	3.2	6.5	6.5	16.1	00.0	3.2	16.1	00.0	100.
17	6.5	9.7	00.0	3.2	9.7	00.0	3.2	12.9	6.5	00.0	3.2	16.1	6.5	3.2	6.5	12.9	00.0	100.
18	6.5	9.7	00.0	6.5	6.5	00.0	6.5	6.5	9.7	00.0	19.4	00.0	3.2	9.7	3.2	12.9	00.0	100.
19	3.2	6.5	3.2	6.5	3.2	3.2	3.2	3.2	16.1	6.5	6.5	6.5	3.2	6.5	6.5	16.1	00.0	100.
20	6.5	6.5	00.0	6.5	6.5	3.2	3.2	9.7	9.7	6.5	3.2	6.5	6.5	3.2	6.5	16.1	00.0	100.
21	3.2	6.5	3.2	3.2	00.0	6.5	6.5	6.5	9.7	9.7	3.2	6.5	3.2	3.2	3.2	25.8	00.0	100.
22	3.2	6.5	3.2	00.0	6.5	3.2	3.2	3.2	12.9	12.9	3.2	3.2	3.2	6.5	3.2	25.8	00.0	100.
23	9.7	6.5	3.2	00.0	6.5	3.2	3.2	3.2	12.9	12.9	00.0	6.5	6.5	00.0	9.7	16.1	00.0	100.
24	6.5	12.9	00.0	00.0	3.2	6.5	3.2	3.2	9.7	19.4	3.2	00.0	00.0	6.5	6.5	19.4	00.0	100.
ALL	10.6	5.6	3.4	2.3	4.6	3.2	3.4	6.2	9.8	6.9	5.2	4.8	6.5	3.2	6.0	18.3	00.0	100.

NUMBER OF OBS = 744

B48

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

FEBRUARY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	6.9	3.4	00.0	00.0	10.3	6.9	3.4	10.3	10.3	3.4	6.9	3.4	3.4	6.9	17.2	6.9	00.0	100.
2	6.9	3.4	00.0	00.0	6.9	6.9	10.3	10.3	10.3	00.0	6.9	3.4	00.0	6.9	20.7	6.9	00.0	100.
3	6.9	00.0	3.4	00.0	10.3	3.4	6.9	17.2	3.4	3.4	6.9	3.4	00.0	10.3	17.2	6.9	00.0	100.
4	6.9	00.0	3.4	3.4	3.4	6.9	3.4	20.7	3.4	3.4	6.9	00.0	6.9	6.9	13.8	10.3	00.0	100.
5	6.9	00.0	3.4	3.4	3.4	6.9	3.4	24.1	00.0	3.4	6.9	00.0	3.4	10.3	17.2	6.9	00.0	100.
6	6.9	00.0	3.4	3.4	3.4	6.9	6.9	20.7	3.4	00.0	3.4	3.4	3.4	6.9	20.7	6.9	00.0	100.
7	6.9	00.0	3.4	3.4	6.9	00.0	13.8	13.8	3.4	3.4	3.4	00.0	6.9	13.8	17.2	3.4	00.0	100.
8	6.9	00.0	3.4	3.4	6.9	3.4	10.3	13.8	3.4	3.4	3.4	00.0	3.4	13.8	20.7	3.4	00.0	100.
9	6.9	00.0	6.9	00.0	6.9	3.4	10.3	10.3	6.9	3.4	3.4	3.4	00.0	10.3	24.1	3.4	00.0	100.
10	3.4	3.4	6.9	3.4	00.0	3.4	10.3	17.2	3.4	3.4	3.4	3.4	6.9	00.0	24.1	6.9	00.0	100.
11	6.9	00.0	13.8	00.0	3.4	00.0	6.9	10.3	13.8	3.4	3.4	3.4	6.9	00.0	20.7	6.9	00.0	100.
12	10.3	00.0	6.9	6.9	6.9	3.4	3.4	6.9	17.2	3.4	3.4	6.9	3.4	00.0	20.7	00.0	00.0	100.
13	6.9	3.4	00.0	10.3	3.4	6.9	3.4	6.9	20.7	3.4	6.9	6.9	00.0	6.9	13.8	00.0	00.0	100.
14	6.9	6.9	3.4	3.4	3.4	6.9	3.4	6.9	17.2	6.9	10.3	3.4	00.0	10.3	10.3	00.0	00.0	100.
15	10.3	3.4	6.9	00.0	3.4	6.9	00.0	24.1	3.4	6.9	6.9	6.9	00.0	10.3	10.3	00.0	00.0	100.
16	6.9	6.9	3.4	3.4	3.4	6.9	6.9	10.3	6.9	13.8	3.4	3.4	3.4	10.3	10.3	00.0	00.0	100.
17	3.4	6.9	3.4	3.4	3.4	3.4	13.8	3.4	10.3	10.3	10.3	00.0	00.0	10.3	13.8	3.4	00.0	100.
18	10.3	3.4	3.4	00.0	6.9	3.4	13.8	6.9	3.4	13.8	3.4	3.4	6.9	3.4	17.2	00.0	00.0	100.
19	6.9	3.4	00.0	3.4	6.9	3.4	10.3	10.3	6.9	10.3	3.4	00.0	6.9	3.4	17.2	6.9	00.0	100.
20	10.3	3.4	00.0	6.9	6.9	3.4	3.4	13.8	6.9	10.3	00.0	3.4	6.9	3.4	13.8	6.9	00.0	100.
21	3.4	3.4	00.0	3.4	3.4	10.3	3.4	13.8	10.3	3.4	3.4	3.4	10.3	00.0	13.8	13.8	00.0	100.
22	3.4	3.4	00.0	3.4	10.3	3.4	6.9	6.9	10.3	6.9	6.9	3.4	6.9	00.0	13.8	13.8	00.0	100.
23	6.9	3.4	00.0	00.0	10.3	6.9	3.4	10.3	10.3	00.0	10.3	6.9	6.9	00.0	13.8	10.3	00.0	100.
24	10.3	3.4	00.0	00.0	6.9	10.3	00.0	13.8	10.3	3.4	6.9	6.9	3.4	3.4	13.8	6.9	00.0	100.
ALL	7.0	2.6	3.2	2.7	5.7	5.2	6.6	12.6	8.2	5.2	5.5	3.3	4.0	6.2	16.5	5.5	00.0	100.

NUMBER OF OBS = 696

B49



NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

MARCH

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.3	00.0	00.0	3.4	3.4	6.9	00.0	10.3	13.8	10.3	00.0	00.0	6.9	17.2	10.3	6.9	00.0	100.
2	10.3	00.0	00.0	3.4	3.4	3.4	3.4	10.3	10.3	10.3	3.4	00.0	17.2	10.3	6.9	6.9	00.0	100.
3	10.3	00.0	00.0	00.0	00.0	10.3	3.4	10.3	13.8	3.4	3.4	3.4	13.8	13.8	10.3	3.4	00.0	100.
4	3.4	3.4	00.0	00.0	3.4	00.0	10.3	10.3	13.8	3.4	3.4	6.9	10.3	20.7	3.4	6.9	00.0	100.
5	10.3	00.0	3.4	00.0	3.4	6.9	3.4	10.3	13.8	6.9	00.0	6.9	00.0	20.7	6.9	6.9	00.0	100.
6	10.3	3.4	00.0	3.4	00.0	3.4	6.9	13.8	10.3	6.9	3.4	00.0	00.0	20.7	10.3	6.9	00.0	100.
7	10.3	3.4	00.0	00.0	00.0	3.4	10.3	13.8	13.8	6.9	00.0	00.0	3.4	20.7	3.4	10.3	00.0	100.
8	10.3	00.0	6.9	00.0	00.0	3.4	13.8	6.9	13.8	10.3	00.0	00.0	3.4	13.8	6.9	10.3	00.0	100.
9	6.9	00.0	3.4	3.4	00.0	3.4	13.8	10.3	17.2	6.9	00.0	00.0	3.4	13.8	6.9	10.3	00.0	100.
10	3.4	00.0	00.0	3.4	00.0	3.4	10.3	17.2	10.3	6.9	6.9	00.0	00.0	10.3	13.8	13.8	00.0	100.
11	3.6	00.0	00.0	3.6	00.0	3.6	7.1	21.4	10.7	10.7	00.0	3.6	00.0	7.1	17.9	10.7	00.0	100.
12	00.0	3.6	00.0	00.0	00.0	3.6	3.6	17.9	10.7	10.7	7.1	00.0	3.6	7.1	17.9	14.3	00.0	100.
13	3.6	3.6	00.0	00.0	3.6	00.0	7.1	7.1	21.4	3.6	7.1	3.6	00.0	3.6	25.0	10.7	00.0	100.
14	3.4	00.0	3.4	00.0	3.4	00.0	13.8	00.0	24.1	3.4	3.4	6.9	00.0	10.3	17.2	10.3	00.0	100.
15	00.0	3.4	00.0	6.9	00.0	6.9	3.4	3.4	20.7	6.9	3.4	3.4	3.4	6.9	20.7	10.3	00.0	100.
16	6.9	00.0	3.4	3.4	3.4	00.0	6.9	10.3	13.8	6.9	3.4	00.0	6.9	3.4	17.2	13.8	00.0	100.
17	3.4	3.4	3.4	00.0	00.0	6.9	6.9	6.9	13.8	10.3	3.4	00.0	00.0	6.9	17.2	17.2	00.0	100.
18	6.9	10.3	00.0	00.0	00.0	3.4	3.4	6.9	10.3	13.8	3.4	6.9	3.4	10.3	10.3	10.3	00.0	100.
19	00.0	10.3	6.9	00.0	00.0	00.0	3.4	10.3	20.7	6.9	00.0	3.4	00.0	13.8	6.9	17.2	00.0	100.
20	00.0	3.6	10.7	00.0	00.0	00.0	3.6	14.3	17.9	7.1	00.0	3.6	3.6	3.6	17.9	14.3	00.0	100.
21	7.1	3.6	7.1	3.6	00.0	00.0	7.1	17.9	7.1	7.1	7.1	00.0	00.0	10.7	10.7	10.7	00.0	100.
22	10.7	00.0	10.7	00.0	3.6	00.0	3.6	17.9	14.3	3.6	00.0	3.6	3.6	14.3	10.7	3.6	00.0	100.
23	00.0	3.6	7.1	00.0	00.0	3.6	3.6	10.7	17.9	3.6	00.0	00.0	14.3	14.3	3.6	17.9	00.0	100.
24	7.1	00.0	7.1	00.0	00.0	3.6	3.6	14.3	10.7	7.1	00.0	3.6	3.6	17.9	10.7	10.7	00.0	100.
ALL	5.8	2.3	3.1	1.5	1.2	3.2	6.4	11.3	14.4	7.3	2.5	2.3	4.2	12.2	11.8	10.6	00.0	100.

NUMBER OF OBS = 688

B50

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-MAR

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.0	5.6	00.0	2.2	5.6	7.9	1.1	7.9	10.1	11.2	3.4	1.1	4.5	7.9	11.2	11.2	00.0	100.
2	9.0	3.4	3.4	2.2	4.5	5.6	4.5	9.0	7.9	7.9	6.7	1.1	5.6	6.7	11.2	11.2	00.0	100.
3	9.0	2.2	3.4	1.1	4.5	5.6	6.7	11.2	6.7	4.5	6.7	2.2	6.7	7.9	10.1	11.2	00.0	100.
4	7.9	2.2	3.4	1.1	2.2	4.5	6.7	13.5	6.7	3.4	6.7	3.4	7.9	9.0	7.9	13.5	00.0	100.
5	12.4	1.1	3.4	1.1	2.2	6.7	2.2	15.7	6.7	4.5	5.6	3.4	3.4	10.1	9.0	12.4	00.0	100.
6	12.4	3.4	2.2	2.2	2.2	4.5	4.5	15.7	7.9	3.4	4.5	2.2	3.4	9.0	11.2	11.2	00.0	100.
7	11.2	1.1	3.4	1.1	3.4	1.1	10.1	11.2	10.1	4.5	3.4	2.2	4.5	11.2	7.9	13.5	00.0	100.
8	9.0	3.4	4.5	1.1	3.4	3.4	7.9	7.9	13.5	4.5	2.2	2.2	3.4	10.1	10.1	13.5	00.0	100.
9	11.2	1.1	5.6	1.1	3.4	2.2	10.1	6.7	15.7	3.4	2.2	1.1	4.5	7.9	12.4	11.2	00.0	100.
10	7.9	2.2	3.4	3.4	1.1	2.2	9.0	11.2	11.2	4.5	4.5	1.1	4.5	5.6	13.5	14.6	00.0	100.
11	10.2	1.1	6.8	2.3	2.3	1.1	5.7	11.4	11.4	8.0	2.3	4.5	3.4	4.5	15.9	9.1	00.0	100.
12	8.0	1.1	3.4	3.4	5.7	2.3	3.4	10.2	10.2	8.0	4.5	6.8	4.5	3.4	15.9	9.1	00.0	100.
13	5.7	2.3	1.1	4.5	4.5	3.4	4.5	5.7	17.0	4.5	4.5	6.8	4.5	5.7	14.8	10.2	00.0	100.
14	6.7	2.2	4.5	1.1	4.5	4.5	5.6	4.5	14.6	5.6	5.6	6.7	4.5	9.0	13.5	6.7	00.0	100.
15	6.7	4.5	2.2	3.4	3.4	5.6	1.1	12.4	10.1	6.7	4.5	4.5	7.9	6.7	14.6	5.6	00.0	100.
16	7.9	4.5	2.2	3.4	5.6	2.2	5.6	10.1	9.0	7.9	4.5	3.4	9.0	4.5	10.1	10.1	00.0	100.
17	4.5	6.7	2.2	2.2	4.5	3.4	7.9	7.9	10.1	6.7	5.6	5.6	2.2	6.7	12.4	11.2	00.0	100.
18	7.9	7.9	1.1	2.2	4.5	2.2	7.9	6.7	7.9	9.0	9.0	3.4	4.5	7.9	10.1	7.9	00.0	100.
19	3.4	6.7	3.4	3.4	3.4	2.2	5.6	7.9	14.6	7.9	3.4	3.4	3.4	7.9	10.1	13.5	00.0	100.
20	5.7	4.5	3.4	4.5	4.5	2.3	3.4	12.5	11.4	8.0	1.1	4.5	5.7	3.4	12.5	12.5	00.0	100.
21	4.5	4.5	3.4	3.4	1.1	5.7	5.7	12.5	9.1	6.8	4.5	3.4	4.5	4.5	9.1	17.0	00.0	100.
22	5.7	3.4	4.5	1.1	6.8	2.3	4.5	9.1	12.5	8.0	3.4	3.4	4.5	6.8	9.1	14.8	00.0	100.
23	5.7	4.5	3.4	00.0	5.7	4.5	3.4	8.0	13.6	5.7	3.4	4.5	9.1	4.5	9.1	14.8	00.0	100.
24	8.0	5.7	2.3	00.0	3.4	6.8	2.3	10.2	10.2	10.2	3.4	3.4	2.3	9.1	10.2	12.5	00.0	100.
ALL	7.9	3.6	3.2	2.2	3.9	3.9	5.4	10.0	10.8	6.4	4.4	3.5	4.9	7.1	11.3	11.6	00.0	100.

NUMBER OF OBS = 2128

B51

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APRIL

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.7	3.6	7.1	00.0	7.1	7.1	00.0	3.6	14.3	3.6	3.6	3.6	7.1	7.1	3.6	17.9	00.0	100.
2	14.3	00.0	10.7	3.6	3.6	7.1	00.0	00.0	10.7	7.1	10.7	00.0	10.7	00.0	3.6	17.9	00.0	100.
3	14.3	3.6	10.7	3.6	3.6	7.1	00.0	00.0	10.7	7.1	10.7	00.0	7.1	3.6	3.6	14.3	00.0	100.
4	14.3	7.1	10.7	7.1	3.6	3.6	00.0	00.0	10.7	7.1	10.7	00.0	3.6	10.7	00.0	10.7	00.0	100.
5	14.3	14.3	10.7	3.6	3.6	3.6	00.0	00.0	7.1	10.7	7.1	3.6	3.6	7.1	3.6	7.1	00.0	100.
6	7.1	17.9	7.1	3.6	7.1	00.0	3.6	00.0	7.1	10.7	10.7	00.0	3.6	3.6	7.1	10.7	00.0	100.
7	14.3	3.6	10.7	10.7	7.1	00.0	3.6	00.0	10.7	10.7	3.6	7.1	00.0	3.6	7.1	7.1	00.0	100.
8	10.7	3.6	7.1	14.3	3.6	3.6	7.1	3.6	10.7	10.7	00.0	00.0	3.6	3.6	3.6	14.3	00.0	100.
9	14.3	7.1	00.0	7.1	10.7	3.6	3.6	10.7	7.1	10.7	3.6	00.0	00.0	7.1	7.1	7.1	00.0	100.
10	14.3	3.6	3.6	7.1	3.6	3.6	00.0	7.1	14.3	17.9	3.6	00.0	00.0	3.6	14.3	3.6	00.0	100.
11	14.3	00.0	7.1	3.6	7.1	00.0	00.0	7.1	17.9	17.9	00.0	00.0	00.0	00.0	10.7	14.3	00.0	100.
12	17.9	00.0	7.1	3.6	3.6	3.6	00.0	7.1	17.9	14.3	3.6	00.0	00.0	00.0	10.7	10.7	00.0	100.
13	21.4	00.0	7.1	3.6	3.6	00.0	3.6	3.6	10.7	25.0	3.6	00.0	00.0	3.6	7.1	7.1	00.0	100.
14	17.9	3.6	3.6	7.1	00.0	3.6	00.0	00.0	14.3	21.4	7.1	00.0	00.0	3.6	7.1	10.7	00.0	100.
15	10.3	00.0	13.8	6.9	00.0	00.0	3.4	00.0	13.8	13.8	6.9	3.4	3.4	3.4	6.9	13.8	00.0	100.
16	10.3	6.9	3.4	6.9	00.0	6.9	3.4	00.0	13.8	10.3	3.4	6.9	3.4	3.4	10.3	10.3	00.0	100.
17	13.8	3.4	3.4	3.4	6.9	3.4	3.4	00.0	20.7	3.4	00.0	10.3	6.9	00.0	10.3	10.3	00.0	100.
18	13.8	6.9	00.0	00.0	6.9	6.9	3.4	6.9	17.2	3.4	3.4	3.4	6.9	3.4	6.9	10.3	00.0	100.
19	20.7	6.9	00.0	3.4	3.4	6.9	00.0	3.4	17.2	10.3	3.4	6.9	3.4	00.0	3.4	10.3	00.0	100.
20	20.7	00.0	3.4	6.9	3.4	6.9	00.0	10.3	10.3	6.9	6.9	00.0	6.9	3.4	10.3	3.4	00.0	100.
21	20.7	00.0	3.4	6.9	3.4	6.9	00.0	10.3	6.9	10.3	6.9	3.4	3.4	00.0	10.3	6.9	00.0	100.
22	13.8	6.9	00.0	3.4	6.9	3.4	00.0	10.3	10.3	10.3	6.9	00.0	3.4	6.9	6.9	10.3	00.0	100.
23	10.3	6.9	00.0	6.9	00.0	6.9	00.0	13.8	6.9	6.9	00.0	6.9	6.9	3.4	13.8	10.3	00.0	100.
24	10.3	6.9	00.0	00.0	3.4	13.8	00.0	6.9	13.8	3.4	00.0	6.9	3.4	6.9	6.9	17.2	00.0	100.
ALL	14.4	4.7	5.4	5.1	4.3	4.5	1.5	4.4	12.3	10.6	4.8	2.6	3.7	3.7	7.3	10.7	00.0	100.

NUMBER OF OBS = 682

B52

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

MAY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	6.5	3.2	3.2	3.2	9.7	3.2	3.2	12.9	19.4	16.1	00.0	00.0	00.0	00.0	12.9	6.5	00.0	100.
2	00.0	3.2	6.5	6.5	6.5	9.7	3.2	16.1	16.1	9.7	6.5	00.0	3.2	6.5	00.0	6.5	00.0	100.
3	3.2	3.2	00.0	3.2	6.5	3.2	12.9	16.1	9.7	16.1	3.2	3.2	6.5	00.0	3.2	9.7	00.0	100.
4	3.2	3.2	00.0	00.0	3.2	6.5	9.7	16.1	16.1	9.7	6.5	3.2	00.0	00.0	6.5	16.1	00.0	100.
5	12.9	00.0	00.0	00.0	00.0	6.5	6.5	6.5	29.0	9.7	3.2	00.0	12.9	00.0	3.2	9.7	00.0	100.
6	9.7	9.7	00.0	00.0	3.2	3.2	9.7	9.7	19.4	9.7	3.2	3.2	3.2	3.2	00.0	12.9	00.0	100.
7	9.7	00.0	3.2	3.2	9.7	00.0	9.7	6.5	22.6	9.7	3.2	3.2	3.2	3.2	3.2	9.7	00.0	100.
8	9.7	00.0	3.2	6.5	00.0	6.5	9.7	9.7	9.7	22.6	3.2	3.2	3.2	3.2	00.0	9.7	00.0	100.
9	6.5	3.2	3.2	3.2	3.2	6.5	9.7	12.9	9.7	16.1	3.2	00.0	3.2	6.5	00.0	12.9	00.0	100.
10	9.7	3.2	6.5	3.2	3.2	3.2	6.5	12.9	12.9	12.9	3.2	6.5	00.0	6.5	00.0	9.7	00.0	100.
11	6.5	00.0	3.2	3.2	3.2	3.2	3.2	19.4	19.4	12.9	00.0	3.2	00.0	6.5	00.0	16.1	00.0	100.
12	9.7	00.0	3.2	00.0	3.2	3.2	3.2	12.9	25.8	12.9	3.2	3.2	00.0	6.5	3.2	9.7	00.0	100.
13	6.5	3.2	6.5	00.0	3.2	00.0	3.2	16.1	32.3	3.2	00.0	00.0	3.2	6.5	9.7	6.5	00.0	100.
14	9.7	3.2	3.2	3.2	3.2	3.2	3.2	12.9	19.4	12.9	3.2	3.2	00.0	6.5	3.2	9.7	00.0	100.
15	9.7	3.2	00.0	3.2	3.2	3.2	3.2	16.1	19.4	16.1	00.0	3.2	3.2	6.5	3.2	6.5	00.0	100.
16	9.7	3.2	3.2	00.0	3.2	00.0	3.2	12.9	22.6	12.9	3.2	00.0	00.0	9.7	3.2	12.9	00.0	100.
17	12.9	00.0	6.5	3.2	3.2	00.0	00.0	12.9	19.4	19.4	3.2	00.0	3.2	6.5	3.2	6.5	00.0	100.
18	16.1	00.0	3.2	3.2	00.0	3.2	3.2	9.7	25.8	9.7	00.0	3.2	9.7	3.2	3.2	6.5	00.0	100.
19	16.1	3.2	00.0	3.2	3.2	3.2	3.2	12.9	32.3	3.2	00.0	00.0	00.0	6.5	00.0	12.9	00.0	100.
20	9.7	6.5	00.0	00.0	3.2	3.2	6.5	19.4	19.4	9.7	00.0	3.2	00.0	3.2	00.0	16.1	00.0	100.
21	9.7	9.7	3.2	00.0	00.0	9.7	00.0	16.1	22.6	9.7	00.0	3.2	00.0	3.2	3.2	9.7	00.0	100.
22	12.9	12.9	3.2	3.2	3.2	00.0	3.2	19.4	22.6	3.2	3.2	00.0	6.5	3.2	00.0	3.2	00.0	100.
23	9.7	6.5	9.7	00.0	9.7	00.0	6.5	12.9	19.4	9.7	3.2	00.0	6.5	00.0	00.0	6.5	00.0	100.
24	6.5	3.2	6.5	6.5	6.5	6.5	3.2	6.5	29.0	9.7	00.0	00.0	6.5	3.2	00.0	6.5	00.0	100.
ALL	9.0	3.5	3.2	2.4	3.9	3.6	5.2	13.3	20.6	11.6	2.3	1.9	3.1	4.2	2.6	9.7	00.0	100.

NUMBER OF OBS = 744

B53

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUNE

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	23.3	3.3	00.0	00.0	3.3	00.0	3.3	23.3	33.3	3.3	00.0	00.0	3.3	00.0	3.3	00.0	00.0	100.
2	20.0	00.0	00.0	00.0	6.7	00.0	00.0	26.7	26.7	10.0	00.0	00.0	3.3	00.0	3.3	3.3	00.0	100.
3	10.0	00.0	00.0	00.0	3.3	3.3	00.0	20.0	23.3	10.0	6.7	3.3	00.0	3.3	3.3	13.3	00.0	100.
4	6.7	6.7	00.0	00.0	3.3	00.0	00.0	20.0	20.0	10.0	3.3	10.0	00.0	6.7	6.7	6.7	00.0	100.
5	6.7	6.7	00.0	00.0	00.0	3.3	3.3	20.0	20.0	00.0	16.7	00.0	3.3	3.3	6.7	10.0	00.0	100.
6	6.7	3.3	00.0	6.7	3.3	6.7	3.3	16.7	20.0	10.0	6.7	00.0	00.0	3.3	6.7	6.7	00.0	100.
7	3.3	13.3	3.3	3.3	00.0	00.0	13.3	10.0	20.0	6.7	10.0	00.0	00.0	6.7	6.7	3.3	00.0	100.
8	13.3	3.3	00.0	3.3	3.3	3.3	6.7	16.7	10.0	10.0	13.3	00.0	00.0	10.0	6.7	00.0	00.0	100.
9	13.3	00.0	00.0	3.3	00.0	3.3	6.7	10.0	16.7	13.3	10.0	6.7	00.0	6.7	3.3	6.7	00.0	100.
10	14.3	7.1	00.0	00.0	3.6	00.0	7.1	7.1	21.4	10.7	3.6	3.6	7.1	3.6	3.6	7.1	00.0	100.
11	13.8	6.9	3.4	00.0	6.9	00.0	6.9	13.8	17.2	6.9	3.4	3.4	6.9	3.4	00.0	6.9	00.0	100.
12	13.3	3.3	00.0	6.7	00.0	00.0	10.0	13.3	20.0	6.7	6.7	3.3	3.3	3.3	00.0	10.0	00.0	100.
13	13.3	6.7	6.7	00.0	00.0	00.0	6.7	13.3	23.3	10.0	00.0	3.3	3.3	6.7	00.0	6.7	00.0	100.
14	10.3	10.3	6.9	3.4	3.4	00.0	10.3	6.9	20.7	10.3	00.0	3.4	3.4	6.9	00.0	3.4	00.0	100.
15	13.3	10.0	3.3	3.3	00.0	00.0	10.0	3.3	30.0	6.7	00.0	00.0	6.7	6.7	00.0	6.7	00.0	100.
16	13.3	6.7	3.3	00.0	3.3	6.7	3.3	13.3	23.3	3.3	00.0	3.3	3.3	6.7	3.3	6.7	00.0	100.
17	13.3	6.7	10.0	3.3	3.3	00.0	6.7	13.3	20.0	3.3	00.0	00.0	3.3	6.7	3.3	6.7	00.0	100.
18	10.0	6.7	00.0	13.3	00.0	3.3	3.3	23.3	13.3	00.0	3.3	00.0	3.3	3.3	3.3	13.3	00.0	100.
19	16.7	10.0	00.0	3.3	3.3	6.7	6.7	20.0	10.0	3.3	3.3	00.0	3.3	3.3	00.0	10.0	00.0	100.
20	20.0	10.0	3.3	3.3	00.0	6.7	13.3	16.7	13.3	00.0	6.7	00.0	00.0	3.3	00.0	3.3	00.0	100.
21	16.7	6.7	6.7	3.3	3.3	6.7	16.7	13.3	16.7	00.0	3.3	00.0	00.0	00.0	3.3	3.3	00.0	100.
22	10.0	00.0	6.7	6.7	00.0	6.7	16.7	20.0	16.7	3.3	00.0	00.0	00.0	00.0	00.0	13.3	00.0	100.
23	13.3	3.3	00.0	10.0	3.3	00.0	13.3	26.7	20.0	00.0	3.3	00.0	00.0	00.0	00.0	6.7	00.0	100.
24	10.0	6.7	3.3	00.0	6.7	3.3	3.3	33.3	20.0	3.3	00.0	00.0	00.0	00.0	3.3	6.7	00.0	100.
ALL	12.7	5.7	2.4	3.1	2.5	2.5	7.1	16.8	19.8	5.9	4.2	1.7	2.2	3.9	2.8	6.7	00.0	100.

NUMBER OF OBS = 716

BS4

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APR-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	13.5	3.4	3.4	1.1	6.7	3.4	2.2	13.5	22.5	7.9	1.1	1.1	3.4	2.2	6.7	7.9	00.0	100.
2	11.2	1.1	5.6	3.4	5.6	5.6	1.1	14.6	18.0	9.0	5.6	00.0	5.6	2.2	2.2	9.0	00.0	100.
3	9.0	2.2	3.4	2.2	4.5	4.5	4.5	12.4	14.6	11.2	6.7	2.2	4.5	2.2	3.4	12.4	00.0	100.
4	7.9	5.6	3.4	2.2	3.4	3.4	3.4	12.4	15.7	9.0	6.7	4.5	1.1	5.6	4.5	11.2	00.0	100.
5	11.2	6.7	3.4	1.1	1.1	4.5	3.4	9.0	19.1	6.7	9.0	1.1	6.7	3.4	4.5	9.0	00.0	100.
6	7.9	10.1	2.2	3.4	4.5	3.4	5.6	9.0	15.7	10.1	6.7	1.1	2.2	3.4	4.5	10.1	00.0	100.
7	9.0	5.6	5.6	5.6	5.6	00.0	9.0	5.6	18.0	9.0	5.6	3.4	1.1	4.5	5.6	6.7	00.0	100.
8	11.2	2.2	3.4	7.9	2.2	4.5	7.9	10.1	10.1	14.6	5.6	1.1	2.2	5.6	3.4	7.9	00.0	100.
9	11.2	3.4	1.1	4.5	4.5	4.5	6.7	11.2	11.2	13.5	5.6	2.2	1.1	6.7	3.4	9.0	00.0	100.
10	12.6	4.6	3.4	3.4	3.4	2.3	4.6	9.2	16.1	13.8	3.4	3.4	2.3	4.6	5.7	6.9	00.0	100.
11	11.4	2.3	4.5	2.3	5.7	1.1	3.4	13.6	18.2	12.5	1.1	2.3	2.3	3.4	3.4	12.5	00.0	100.
12	13.5	1.1	3.4	3.4	2.2	2.2	4.5	11.2	21.3	11.2	4.5	2.2	1.1	3.4	4.5	10.1	00.0	100.
13	13.5	3.4	6.7	1.1	2.2	00.0	4.5	11.2	22.5	12.4	1.1	1.1	2.2	5.6	5.6	6.7	00.0	100.
14	12.5	5.7	4.5	4.5	2.3	2.3	4.5	6.8	18.2	14.8	3.4	2.3	1.1	5.7	3.4	8.0	00.0	100.
15	11.1	4.4	5.6	4.4	1.1	1.1	5.6	6.7	21.1	12.2	2.2	2.2	4.4	5.6	3.3	8.9	00.0	100.
16	11.1	5.6	3.3	2.2	2.2	4.4	3.3	8.9	20.0	8.9	2.2	3.3	2.2	6.7	5.6	10.0	00.0	100.
17	13.3	3.3	6.7	3.3	4.4	1.1	3.3	8.9	20.0	8.9	1.1	3.3	4.4	4.4	5.6	7.8	00.0	100.
18	13.3	4.4	1.1	5.6	2.2	4.4	3.3	13.3	18.9	4.4	2.2	2.2	6.7	3.3	4.4	10.0	00.0	100.
19	17.8	6.7	00.0	3.3	3.3	5.6	3.3	12.2	20.0	5.6	2.2	2.2	2.2	3.3	1.1	11.1	00.0	100.
20	16.7	5.6	2.2	3.3	2.2	5.6	6.7	15.6	14.4	5.6	4.4	1.1	2.2	3.3	3.3	7.8	00.0	100.
21	15.6	5.6	4.4	3.3	2.2	7.8	5.6	13.3	15.6	6.7	3.3	2.2	1.1	1.1	5.6	6.7	00.0	100.
22	12.2	6.7	3.3	4.4	3.3	3.3	6.7	16.7	16.7	5.6	3.3	00.0	3.3	3.3	2.2	8.9	00.0	100.
23	11.1	5.6	3.3	5.6	4.4	2.2	6.7	17.8	15.6	5.6	2.2	2.2	4.4	1.1	4.4	7.8	00.0	100.
24	8.9	5.6	3.3	2.2	5.6	7.8	2.2	15.6	21.1	5.6	00.0	2.2	3.3	3.3	3.3	10.0	00.0	100.
ALL	12.0	4.6	3.6	3.5	3.5	3.5	4.7	11.6	17.7	9.3	3.7	2.1	3.0	3.9	4.2	9.0	00.0	100.

NUMBER OF OBS = 2142

BSS

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	11.2	4.5	1.7	1.7	6.2	5.6	1.7	10.7	16.3	9.6	2.2	1.1	3.9	5.1	9.0	9.6	00.0	100.
2	10.1	2.2	4.5	2.8	5.1	5.6	2.8	11.8	12.9	8.4	6.2	.6	5.6	4.5	6.7	10.1	00.0	100.
3	9.0	2.2	3.4	1.7	4.5	5.1	5.6	11.8	10.7	7.9	6.7	2.2	5.6	5.1	6.7	11.8	00.0	100.
4	7.9	3.9	3.4	1.7	2.8	3.9	5.1	12.9	11.2	6.2	6.7	3.9	4.5	7.3	6.2	12.4	00.0	100.
5	11.8	3.9	3.4	1.1	1.7	5.6	2.8	12.4	12.9	5.6	7.3	2.2	5.1	6.7	6.7	10.7	00.0	100.
6	10.1	6.7	2.2	2.8	3.4	3.9	5.1	12.4	11.8	6.7	5.6	1.7	2.8	6.2	7.9	10.7	00.0	100.
7	10.1	3.4	4.5	3.4	4.5	.6	9.6	8.4	14.0	6.7	4.5	2.8	2.8	7.9	6.7	10.1	00.0	100.
8	10.1	2.8	3.9	4.5	2.8	3.9	7.9	9.0	11.8	9.6	3.9	1.7	2.8	7.9	6.7	10.7	00.0	100.
9	11.2	2.2	3.4	2.8	3.9	3.4	8.4	9.0	13.5	8.4	3.9	1.7	2.8	7.3	7.9	10.1	00.0	100.
10	10.2	3.4	3.4	3.4	2.3	2.3	6.8	10.2	13.6	9.1	4.0	2.3	3.4	5.1	9.7	10.8	00.0	100.
11	10.8	1.7	5.7	2.3	4.0	1.1	4.5	12.5	14.8	10.2	1.7	3.4	2.8	4.0	9.7	10.8	00.0	100.
12	10.7	1.1	3.4	3.4	4.0	2.3	4.0	10.7	15.8	9.6	4.5	4.5	2.8	3.4	10.2	9.6	00.0	100.
13	9.6	2.8	4.0	2.8	3.4	1.7	4.5	8.5	19.8	8.5	2.8	4.0	3.4	5.6	10.2	8.5	00.0	100.
14	9.6	4.0	4.5	2.8	3.4	3.4	5.1	5.6	16.4	10.2	4.5	4.5	2.8	7.3	8.5	7.3	00.0	100.
15	8.9	4.5	3.9	3.9	2.2	3.4	3.4	9.5	15.6	9.5	3.4	3.4	6.1	6.1	8.9	7.3	00.0	100.
16	9.5	5.0	2.8	2.8	3.9	3.4	4.5	9.5	14.5	8.4	3.4	3.4	5.6	5.6	7.8	10.1	00.0	100.
17	8.9	5.0	4.5	2.8	4.5	2.2	5.6	8.4	15.1	7.8	3.4	4.5	3.4	5.6	8.9	9.5	00.0	100.
18	10.6	6.1	1.1	3.9	3.4	3.4	5.6	10.1	13.4	6.7	5.6	2.8	5.6	5.6	7.3	8.9	00.0	100.
19	10.6	6.7	1.7	3.4	3.4	3.9	4.5	10.1	17.3	6.7	2.8	2.8	2.8	5.6	5.6	12.3	00.0	100.
20	11.2	5.1	2.8	3.9	3.4	3.9	5.1	14.0	12.9	6.7	2.8	2.8	3.9	3.4	7.9	10.1	00.0	100.
21	10.1	5.1	3.9	3.4	1.7	6.7	5.6	12.9	12.4	6.7	3.9	2.8	2.8	2.8	7.3	11.8	00.0	100.
22	9.0	5.1	3.9	2.8	5.1	2.8	5.6	12.9	14.6	6.7	3.4	1.7	3.9	5.1	5.6	11.8	00.0	100.
23	8.4	5.1	3.4	2.8	5.1	3.4	5.1	12.9	14.6	5.6	2.8	3.4	6.7	2.8	6.7	11.2	00.0	100.
24	8.4	5.6	2.8	1.1	4.5	7.3	2.2	12.9	15.7	7.9	1.7	2.8	2.8	6.2	6.7	11.2	00.0	100.
ALL	9.9	4.1	3.4	2.8	3.7	3.7	5.0	10.8	14.2	7.9	4.1	2.8	4.0	5.5	7.7	10.3	00.0	100.

NUMBER OF OBS = 4270

B56

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JULY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	6.5	3.2	6.5	6.5	9.7	6.5	6.5	19.4	12.9	00.0	3.2	3.2	3.2	3.2	00.0	00.0	100.
2	9.7	3.2	6.5	6.5	12.9	6.5	3.2	6.5	19.4	16.1	00.0	3.2	3.2	00.0	3.2	00.0	00.0	100.
3	9.7	00.0	6.5	9.7	6.5	9.7	3.2	6.5	16.1	12.9	6.5	3.2	3.2	3.2	00.0	3.2	00.0	100.
4	6.5	3.2	9.7	3.2	16.1	6.5	00.0	3.2	16.1	9.7	12.9	3.2	3.2	00.0	3.2	3.2	00.0	100.
5	9.7	6.5	6.5	3.2	6.5	6.5	6.5	9.7	16.1	6.5	9.7	6.5	00.0	00.0	6.5	00.0	00.0	100.
6	9.7	6.5	00.0	6.5	3.2	12.9	3.2	6.5	19.4	9.7	6.5	9.7	00.0	00.0	00.0	6.5	00.0	100.
7	9.7	6.5	3.2	00.0	00.0	6.5	12.9	6.5	9.7	16.1	12.9	6.5	00.0	00.0	9.7	00.0	00.0	100.
8	3.2	9.7	00.0	6.5	3.2	6.5	9.7	9.7	12.9	12.9	6.5	6.5	00.0	00.0	3.2	9.7	00.0	100.
9	9.7	3.2	3.2	6.5	00.0	9.7	12.9	9.7	6.5	9.7	9.7	3.2	3.2	9.7	3.2	00.0	00.0	100.
10	9.7	6.5	3.2	3.2	3.2	3.2	6.5	9.7	12.9	3.2	9.7	3.2	9.7	3.2	6.5	6.5	00.0	100.
11	6.5	3.2	3.2	3.2	00.0	9.7	6.5	6.5	22.6	6.5	6.5	00.0	3.2	3.2	9.7	9.7	00.0	100.
12	9.7	6.5	3.2	6.5	00.0	12.9	6.5	6.5	16.1	3.2	9.7	3.2	00.0	3.2	9.7	3.2	00.0	100.
13	6.5	3.2	12.9	00.0	6.5	3.2	12.9	9.7	9.7	3.2	9.7	3.2	00.0	9.7	3.2	6.5	00.0	100.
14	9.7	6.5	6.5	6.5	3.2	6.5	12.9	6.5	12.9	6.5	3.2	6.5	00.0	3.2	6.5	3.2	00.0	100.
15	3.2	9.7	9.7	9.7	3.2	3.2	12.9	3.2	16.1	6.5	6.5	3.2	3.2	00.0	6.5	3.2	00.0	100.
16	6.5	9.7	6.5	3.2	3.2	6.5	12.9	22.6	3.2	00.0	9.7	3.2	00.0	3.2	6.5	3.2	00.0	100.
17	6.5	16.1	6.5	3.2	3.2	6.5	9.7	16.1	6.5	00.0	3.2	3.2	3.2	00.0	9.7	6.5	00.0	100.
18	16.1	16.1	6.5	00.0	6.5	3.2	12.9	12.9	6.5	00.0	6.5	3.2	3.2	00.0	6.5	00.0	00.0	100.
19	6.5	16.1	3.2	6.5	00.0	3.2	22.6	9.7	3.2	3.2	3.2	3.2	00.0	6.5	3.2	9.7	00.0	100.
20	12.9	9.7	6.5	3.2	3.2	6.5	19.4	9.7	6.5	3.2	3.2	00.0	3.2	3.2	3.2	6.5	00.0	100.
21	16.1	3.2	9.7	3.2	6.5	9.7	9.7	16.1	12.9	00.0	6.5	3.2	00.0	3.2	00.0	00.0	00.0	100.
22	9.7	9.7	9.7	00.0	3.2	12.9	6.5	12.9	12.9	12.9	3.2	00.0	6.5	00.0	00.0	00.0	00.0	100.
23	6.5	9.7	6.5	9.7	3.2	9.7	6.5	9.7	12.9	12.9	3.2	00.0	3.2	6.5	00.0	00.0	00.0	100.
24	9.7	6.5	3.2	16.1	3.2	9.7	3.2	6.5	19.4	9.7	3.2	3.2	00.0	6.5	00.0	00.0	00.0	100.
ALL	8.9	7.4	5.6	5.1	4.3	7.5	9.1	9.3	12.9	7.4	6.3	3.5	2.2	2.8	4.3	3.4	00.0	100.

NUMBER OF OBS = 744

B57



NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

AUGUST

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	9.7	3.2	00.0	3.2	6.5	3.2	9.7	29.0	6.5	6.5	3.2	00.0	6.5	00.0	3.2	00.0	100.
2	16.1	3.2	3.2	00.0	6.5	9.7	00.0	12.9	29.0	6.5	3.2	3.2	3.2	3.2	00.0	00.0	00.0	100.
3	12.9	3.2	3.2	3.2	3.2	9.7	3.2	00.0	32.3	6.5	3.2	00.0	3.2	3.2	6.5	6.5	00.0	100.
4	3.2	9.7	6.5	00.0	00.0	3.2	6.5	12.9	19.4	9.7	00.0	3.2	3.2	6.5	3.2	12.9	00.0	100.
5	16.1	3.2	3.2	00.0	00.0	6.5	9.7	19.4	12.9	6.5	00.0	3.2	3.2	3.2	9.7	3.2	00.0	100.
6	16.1	6.5	00.0	00.0	3.2	3.2	12.9	19.4	12.9	3.2	6.5	00.0	00.0	6.5	3.2	6.5	00.0	100.
7	12.9	3.2	9.7	00.0	3.2	16.1	00.0	16.1	12.9	6.5	3.2	00.0	3.2	00.0	9.7	3.2	00.0	100.
8	16.1	6.5	3.2	00.0	3.2	6.5	6.5	19.4	16.1	6.5	00.0	00.0	00.0	00.0	9.7	6.5	00.0	100.
9	9.7	6.5	6.5	3.2	00.0	00.0	19.4	9.7	19.4	3.2	3.2	3.2	00.0	00.0	3.2	12.9	00.0	100.
10	9.7	6.5	3.2	6.5	00.0	00.0	16.1	16.1	9.7	12.9	00.0	3.2	00.0	00.0	00.0	16.1	00.0	100.
11	16.1	6.5	00.0	3.2	3.2	00.0	6.5	9.7	22.6	9.7	6.5	3.2	00.0	00.0	3.2	9.7	00.0	100.
12	9.7	6.5	6.5	3.2	3.2	00.0	6.5	12.9	22.6	3.2	6.5	3.2	00.0	00.0	3.2	12.9	00.0	100.
13	9.7	9.7	3.2	6.5	00.0	3.2	6.5	25.8	9.7	3.2	3.2	3.2	00.0	00.0	6.5	9.7	00.0	100.
14	3.2	6.5	3.2	12.9	00.0	00.0	9.7	19.4	16.1	3.2	00.0	6.5	00.0	3.2	3.2	12.9	00.0	100.
15	16.1	6.5	3.2	6.5	00.0	00.0	3.2	19.4	19.4	6.5	00.0	6.5	00.0	00.0	6.5	6.5	00.0	100.
16	12.9	9.7	3.2	6.5	00.0	3.2	3.2	22.6	19.4	3.2	00.0	00.0	3.2	3.2	00.0	9.7	00.0	100.
17	9.7	6.5	6.5	6.5	3.2	00.0	9.7	19.4	12.9	6.5	00.0	00.0	00.0	00.0	6.5	12.9	00.0	100.
18	9.7	6.5	3.2	3.2	3.2	3.2	6.5	12.9	22.6	3.2	3.2	00.0	00.0	3.2	3.2	16.1	00.0	100.
19	19.4	6.5	3.2	3.2	6.5	3.2	12.9	9.7	22.6	3.2	3.2	00.0	00.0	00.0	6.5	00.0	00.0	100.
20	16.1	3.2	9.7	3.2	3.2	6.5	9.7	16.1	9.7	9.7	00.0	00.0	00.0	00.0	6.5	6.5	00.0	100.
21	9.7	12.9	00.0	9.7	00.0	9.7	12.9	9.7	16.1	9.7	00.0	00.0	00.0	3.2	6.5	00.0	00.0	100.
22	6.5	12.9	3.2	3.2	3.2	3.2	12.9	12.9	19.4	6.5	00.0	00.0	00.0	3.2	6.5	6.5	00.0	100.
23	12.9	9.7	3.2	00.0	6.5	3.2	9.7	16.1	19.4	9.7	00.0	00.0	00.0	3.2	3.2	3.2	00.0	100.
24	9.7	6.5	00.0	3.2	3.2	3.2	12.9	9.7	22.6	12.9	3.2	00.0	00.0	3.2	6.5	3.2	00.0	100.
ALL	11.8	7.0	3.8	3.5	2.4	4.2	8.3	14.7	18.7	6.6	2.2	1.7	.8	2.2	4.7	7.5	00.0	100.

NUMBER OF OBS = 744

B58

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

SEPTEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	7.7	00.0	00.0	00.0	7.7	00.0	00.0	46.2	30.8	00.0	00.0	00.0	7.7	00.0	00.0	00.0	00.0	100.
2	7.7	00.0	00.0	00.0	7.7	00.0	00.0	38.5	38.5	00.0	00.0	00.0	00.0	7.7	00.0	00.0	00.0	100.
3	00.0	00.0	00.0	00.0	00.0	7.7	00.0	38.5	38.5	00.0	00.0	00.0	00.0	7.7	00.0	7.7	00.0	100.
4	00.0	00.0	00.0	00.0	00.0	7.7	00.0	30.8	46.2	00.0	00.0	00.0	00.0	7.7	00.0	7.7	00.0	100.
5	00.0	00.0	00.0	00.0	00.0	7.7	00.0	38.5	23.1	15.4	00.0	00.0	00.0	7.7	00.0	7.7	00.0	100.
6	7.7	00.0	00.0	00.0	00.0	7.7	00.0	30.8	38.5	7.7	00.0	00.0	00.0	00.0	7.7	00.0	00.0	100.
7	00.0	00.0	00.0	00.0	7.7	00.0	00.0	30.8	38.5	7.7	00.0	00.0	00.0	00.0	7.7	7.7	00.0	100.
8	7.7	00.0	00.0	00.0	7.7	00.0	00.0	23.1	46.2	00.0	7.7	00.0	00.0	00.0	7.7	00.0	00.0	100.
9	7.7	00.0	00.0	00.0	00.0	00.0	7.7	00.0	69.2	00.0	7.7	00.0	00.0	00.0	00.0	7.7	00.0	100.
10	00.0	8.3	00.0	00.0	00.0	00.0	8.3	00.0	58.3	16.7	00.0	00.0	00.0	00.0	00.0	8.3	00.0	100.
11	00.0	8.3	00.0	00.0	00.0	8.3	00.0	8.3	58.3	8.3	00.0	00.0	00.0	00.0	8.3	00.0	00.0	100.
12	00.0	8.3	8.3	00.0	00.0	00.0	00.0	8.3	50.0	16.7	00.0	00.0	00.0	00.0	8.3	00.0	00.0	100.
13	00.0	8.3	00.0	8.3	00.0	00.0	00.0	8.3	66.7	00.0	00.0	00.0	00.0	00.0	8.3	00.0	00.0	100.
14	00.0	8.3	00.0	00.0	8.3	00.0	00.0	16.7	58.3	00.0	00.0	00.0	00.0	00.0	8.3	00.0	00.0	100.
15	8.3	00.0	00.0	8.3	00.0	00.0	8.3	25.0	41.7	00.0	00.0	00.0	00.0	00.0	00.0	8.3	00.0	100.
16	00.0	8.3	00.0	8.3	00.0	00.0	8.3	41.7	16.7	00.0	8.3	00.0	00.0	00.0	00.0	8.3	00.0	100.
17	00.0	8.3	00.0	00.0	8.3	00.0	8.3	25.0	25.0	16.7	00.0	00.0	00.0	00.0	00.0	8.3	00.0	100.
18	00.0	00.0	8.3	00.0	8.3	00.0	8.3	50.0	16.7	00.0	00.0	00.0	00.0	00.0	00.0	8.3	00.0	100.
19	8.3	00.0	8.3	00.0	8.3	00.0	8.3	58.3	00.0	8.3	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
20	8.3	00.0	00.0	8.3	8.3	00.0	00.0	66.7	00.0	8.3	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
21	8.3	00.0	00.0	8.3	00.0	8.3	00.0	66.7	00.0	8.3	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
22	8.3	00.0	00.0	00.0	8.3	00.0	8.3	50.0	16.7	00.0	00.0	00.0	8.3	00.0	00.0	00.0	00.0	100.
23	8.3	00.0	00.0	00.0	8.3	00.0	8.3	58.3	8.3	00.0	00.0	00.0	00.0	8.3	00.0	00.0	00.0	100.
24	8.3	00.0	00.0	00.0	8.3	00.0	8.3	50.0	16.7	00.0	00.0	00.0	8.3	00.0	00.0	00.0	00.0	100.
ALL	4.0	2.4	1.0	1.7	4.0	2.0	3.4	33.7	33.7	4.7	1.0	00.0	1.0	1.7	2.0	3.7	00.0	100.

NUMBER OF OBS = 297

BS9

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUL-SEP

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.3	6.7	2.7	2.7	5.3	6.7	4.0	14.7	25.3	8.0	2.7	2.7	2.7	4.0	1.3	1.3	00.0	100.
2	12.0	2.7	4.0	2.7	9.3	6.7	1.3	14.7	26.7	9.3	1.3	2.7	2.7	2.7	1.3	00.0	00.0	100.
3	9.3	1.3	4.0	5.3	4.0	9.3	2.7	9.3	26.7	8.0	4.0	1.3	2.7	4.0	2.7	5.3	00.0	100.
4	4.0	5.3	6.7	1.3	6.7	5.3	2.7	12.0	22.7	8.0	5.3	2.7	2.7	4.0	2.7	8.0	00.0	100.
5	10.7	4.0	4.0	1.3	2.7	6.7	6.7	18.7	16.0	8.0	4.0	4.0	1.3	2.7	6.7	2.7	00.0	100.
6	12.0	5.3	00.0	2.7	2.7	8.0	6.7	16.0	20.0	6.7	5.3	4.0	00.0	2.7	2.7	5.3	00.0	100.
7	9.3	4.0	5.3	00.0	2.7	9.3	5.3	14.7	16.0	10.7	6.7	2.7	1.3	00.0	9.3	2.7	00.0	100.
8	9.3	6.7	1.3	2.7	4.0	5.3	6.7	16.0	20.0	8.0	4.0	2.7	00.0	00.0	6.7	6.7	00.0	100.
9	9.3	4.0	4.0	4.0	00.0	4.0	14.7	8.0	22.7	5.3	6.7	2.7	1.3	4.0	2.7	6.7	00.0	100.
10	8.1	6.8	2.7	4.1	1.4	1.4	10.8	10.8	18.9	9.5	4.1	2.7	4.1	1.4	2.7	10.8	00.0	100.
11	9.5	5.4	1.4	2.7	1.4	5.4	5.4	8.1	28.4	8.1	5.4	1.4	1.4	1.4	6.8	8.1	00.0	100.
12	8.1	6.8	5.4	4.1	1.4	5.4	5.4	9.5	24.3	5.4	6.8	2.7	00.0	1.4	6.8	6.8	00.0	100.
13	6.8	6.8	6.8	4.1	2.7	2.7	8.1	16.2	18.9	2.7	5.4	2.7	00.0	4.1	5.4	6.8	00.0	100.
14	5.4	6.8	4.1	8.1	2.7	2.7	9.5	13.5	21.6	4.1	1.4	5.4	00.0	2.7	4.1	8.1	00.0	100.
15	9.5	6.8	5.4	8.1	1.4	1.4	8.1	13.5	21.6	5.4	2.7	4.1	1.4	00.0	5.4	5.4	00.0	100.
16	8.1	9.5	4.1	5.4	1.4	4.1	8.1	25.7	12.2	1.4	5.4	1.4	1.4	2.7	2.7	6.8	00.0	100.
17	6.8	10.8	5.4	4.1	4.1	2.7	9.5	18.9	12.2	5.4	1.4	1.4	1.4	00.0	6.8	9.5	00.0	100.
18	10.8	9.5	5.4	1.4	5.4	2.7	9.5	18.9	14.9	1.4	4.1	1.4	1.4	1.4	4.1	8.1	00.0	100.
19	12.2	9.5	4.1	4.1	4.1	2.7	16.2	17.6	10.8	4.1	2.7	1.4	00.0	2.7	4.1	4.1	00.0	100.
20	13.5	5.4	6.8	4.1	4.1	5.4	12.2	21.6	6.8	6.8	1.4	00.0	1.4	1.4	4.1	5.4	00.0	100.
21	12.2	6.8	4.1	6.8	2.7	9.5	9.5	21.6	12.2	5.4	2.7	1.4	00.0	2.7	2.7	00.0	00.0	100.
22	8.1	9.5	5.4	1.4	4.1	6.8	9.5	18.9	16.2	8.1	1.4	00.0	4.1	1.4	2.7	2.7	00.0	100.
23	9.5	8.1	4.1	4.1	5.4	5.4	8.1	20.3	14.9	9.5	1.4	00.0	1.4	5.4	1.4	1.4	00.0	100.
24	9.5	5.4	1.4	8.1	4.1	5.4	8.1	14.9	20.3	9.5	2.7	1.4	1.4	4.1	2.7	1.4	00.0	100.
ALL	9.3	6.4	4.1	3.9	3.5	5.2	7.8	15.6	18.8	6.6	3.7	2.2	1.4	2.4	4.1	5.2	00.0	100.

NUMBER OF OBS = 1785

B60

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

OCTOBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	00.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	00.0	20.0	00.0	40.0	00.0	00.0	00.0	00.0	00.0	100.
2	00.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	20.0	00.0	00.0	40.0	00.0	00.0	00.0	00.0	00.0	100.
3	00.0	00.0	20.0	00.0	20.0	00.0	20.0	00.0	20.0	00.0	00.0	20.0	00.0	00.0	00.0	00.0	00.0	100.
4	00.0	00.0	00.0	20.0	00.0	20.0	20.0	00.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	00.0	100.
5	00.0	00.0	20.0	00.0	00.0	20.0	20.0	00.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
6	00.0	00.0	20.0	00.0	00.0	20.0	20.0	00.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
7	00.0	00.0	20.0	00.0	00.0	00.0	40.0	00.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
8	00.0	00.0	00.0	20.0	00.0	00.0	00.0	40.0	20.0	00.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
9	00.0	00.0	00.0	00.0	20.0	00.0	20.0	00.0	40.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	00.0	100.
10	00.0	00.0	00.0	00.0	20.0	00.0	00.0	20.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
11	00.0	00.0	00.0	20.0	00.0	00.0	20.0	00.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
12	00.0	00.0	00.0	00.0	00.0	40.0	00.0	00.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
13	00.0	00.0	00.0	00.0	00.0	00.0	40.0	00.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
14	00.0	00.0	00.0	00.0	00.0	00.0	40.0	00.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
15	00.0	00.0	00.0	00.0	00.0	20.0	20.0	00.0	20.0	20.0	00.0	00.0	00.0	20.0	00.0	00.0	00.0	100.
16	00.0	00.0	00.0	00.0	00.0	00.0	40.0	00.0	20.0	00.0	20.0	00.0	20.0	00.0	00.0	00.0	00.0	100.
17	16.7	00.0	00.0	00.0	00.0	16.7	16.7	00.0	16.7	00.0	00.0	00.0	33.3	00.0	00.0	00.0	00.0	100.
18	16.7	00.0	00.0	00.0	00.0	33.3	00.0	00.0	16.7	00.0	00.0	00.0	33.3	00.0	00.0	00.0	00.0	100.
19	16.7	00.0	00.0	00.0	00.0	33.3	00.0	00.0	16.7	00.0	00.0	16.7	16.7	00.0	00.0	00.0	00.0	100.
20	00.0	00.0	16.7	00.0	00.0	33.3	00.0	00.0	16.7	00.0	00.0	16.7	00.0	16.7	00.0	00.0	00.0	100.
21	00.0	00.0	00.0	16.7	00.0	16.7	16.7	00.0	16.7	00.0	16.7	00.0	16.7	00.0	00.0	00.0	00.0	100.
22	00.0	16.7	00.0	00.0	00.0	16.7	16.7	00.0	16.7	00.0	00.0	33.3	00.0	00.0	00.0	00.0	00.0	100.
23	16.7	00.0	00.0	00.0	00.0	16.7	16.7	00.0	16.7	00.0	16.7	16.7	00.0	00.0	00.0	00.0	00.0	100.
24	00.0	16.7	00.0	00.0	00.0	16.7	16.7	00.0	16.7	00.0	16.7	16.7	00.0	00.0	00.0	00.0	00.0	100.
ALL	3.1	3.1	3.9	3.1	2.3	13.3	17.2	2.3	18.0	6.3	2.3	8.6	7.8	8.6	00.0	00.0	00.0	100.

NUMBER OF OBS = 128

B61

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

NOVEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	16.7	00.0	3.3	6.7	3.3	6.7	6.7	10.0	13.3	6.7	00.0	3.3	6.7	3.3	6.7	6.7	00.0	100.
2	13.3	3.3	6.7	00.0	3.3	13.3	00.0	3.3	10.0	16.7	00.0	3.3	6.7	00.0	13.3	6.7	00.0	100.
3	13.3	3.3	6.7	00.0	00.0	13.3	3.3	3.3	13.3	6.7	10.0	00.0	3.3	6.7	6.7	10.0	00.0	100.
4	10.0	6.7	6.7	00.0	00.0	13.3	3.3	6.7	10.0	13.3	3.3	00.0	3.3	00.0	13.3	10.0	00.0	100.
5	6.7	10.0	00.0	3.3	00.0	16.7	3.3	6.7	13.3	6.7	3.3	00.0	3.3	6.7	3.3	16.7	00.0	100.
6	6.7	10.0	6.7	3.3	00.0	13.3	00.0	6.7	16.7	10.0	00.0	00.0	3.3	3.3	6.7	13.3	00.0	100.
7	13.3	3.3	10.0	3.3	6.7	6.7	00.0	6.7	20.0	6.7	00.0	00.0	3.3	6.7	3.3	10.0	00.0	100.
8	16.7	3.3	6.7	3.3	6.7	10.0	00.0	6.7	16.7	6.7	3.3	00.0	3.3	00.0	10.0	6.7	00.0	100.
9	13.3	6.7	10.0	3.3	3.3	6.7	3.3	3.3	16.7	10.0	3.3	00.0	3.3	00.0	6.7	10.0	00.0	100.
10	13.3	3.3	6.7	6.7	00.0	10.0	6.7	00.0	23.3	6.7	00.0	6.7	00.0	00.0	3.3	13.3	00.0	100.
11	13.3	3.3	3.3	3.3	00.0	13.3	6.7	00.0	20.0	6.7	6.7	3.3	00.0	00.0	6.7	13.3	00.0	100.
12	13.3	6.7	3.3	3.3	3.3	10.0	6.7	3.3	16.7	10.0	3.3	3.3	3.3	00.0	3.3	10.0	00.0	100.
13	10.0	6.7	00.0	6.7	6.7	6.7	3.3	3.3	16.7	6.7	10.0	3.3	00.0	3.3	3.3	13.3	00.0	100.
14	13.3	3.3	00.0	6.7	6.7	6.7	00.0	6.7	13.3	10.0	6.7	3.3	3.3	3.3	3.3	13.3	00.0	100.
15	16.7	6.7	00.0	6.7	3.3	6.7	00.0	6.7	10.0	13.3	6.7	3.3	3.3	3.3	3.3	10.0	00.0	100.
16	10.0	16.7	00.0	6.7	3.3	3.3	00.0	10.0	6.7	13.3	3.3	3.3	10.0	00.0	6.7	6.7	00.0	100.
17	13.3	10.0	6.7	10.0	00.0	00.0	6.7	6.7	10.0	6.7	6.7	10.0	3.3	00.0	6.7	3.3	00.0	100.
18	10.0	16.7	3.3	10.0	6.7	00.0	3.3	6.7	6.7	10.0	3.3	6.7	3.3	3.3	6.7	3.3	00.0	100.
19	13.3	13.3	3.3	13.3	3.3	3.3	3.3	3.3	13.3	6.7	3.3	3.3	6.7	00.0	6.7	3.3	00.0	100.
20	10.0	10.0	10.0	6.7	6.7	6.7	6.7	00.0	10.0	6.7	3.3	6.7	6.7	00.0	3.3	6.7	00.0	100.
21	10.0	10.0	10.0	6.7	00.0	3.3	13.3	3.3	6.7	10.0	6.7	3.3	3.3	3.3	3.3	6.7	00.0	100.
22	16.7	3.3	3.3	6.7	3.3	6.7	6.7	10.0	10.0	00.0	10.0	6.7	00.0	3.3	10.0	3.3	00.0	100.
23	13.3	6.7	3.3	10.0	3.3	3.3	00.0	16.7	6.7	3.3	6.7	6.7	3.3	6.7	6.7	3.3	00.0	100.
24	13.3	6.7	00.0	6.7	6.7	3.3	00.0	13.3	10.0	6.7	00.0	10.0	00.0	3.3	20.0	00.0	00.0	100.
ALL	12.5	7.1	4.6	5.6	3.2	7.6	3.5	6.0	12.9	8.3	4.2	3.6	3.5	2.4	6.8	8.3	00.0	100.

NUMBER OF OBS = 720

B62

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

DECEMBER

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.7	3.2	6.5	00.0	00.0	6.5	00.0	9.7	9.7	3.2	6.5	12.9	6.5	6.5	6.5	12.9	00.0	100.
2	9.7	6.5	3.2	00.0	00.0	6.5	00.0	6.5	9.7	3.2	6.5	16.1	9.7	00.0	6.5	16.1	00.0	100.
3	12.9	3.2	3.2	00.0	00.0	00.0	6.5	6.5	6.5	6.5	9.7	12.9	6.5	6.5	12.9	6.5	00.0	100.
4	12.9	6.5	3.2	00.0	00.0	3.2	3.2	00.0	12.9	3.2	9.7	6.5	12.9	6.5	19.4	00.0	00.0	100.
5	9.7	6.5	00.0	00.0	3.2	3.2	3.2	3.2	9.7	9.7	6.5	00.0	6.5	9.7	22.6	6.5	00.0	100.
6	9.7	3.2	00.0	00.0	3.2	6.5	3.2	3.2	12.9	3.2	9.7	3.2	3.2	3.2	32.3	3.2	00.0	100.
7	3.2	00.0	3.2	00.0	00.0	9.7	3.2	3.2	12.9	9.7	3.2	6.5	3.2	3.2	25.8	12.9	00.0	100.
8	6.5	00.0	00.0	3.2	3.2	6.5	3.2	3.2	9.7	9.7	9.7	6.5	00.0	9.7	16.1	12.9	00.0	100.
9	3.2	00.0	00.0	3.2	00.0	9.7	6.5	00.0	9.7	22.6	00.0	3.2	00.0	12.9	9.7	19.4	00.0	100.
10	3.2	3.2	00.0	3.2	00.0	3.2	9.7	3.2	12.9	12.9	6.5	3.2	00.0	9.7	9.7	19.4	00.0	100.
11	6.5	3.2	00.0	3.2	00.0	3.2	9.7	3.2	3.2	25.8	3.2	3.2	6.5	00.0	16.1	12.9	00.0	100.
12	6.5	00.0	3.2	00.0	3.2	3.2	12.9	00.0	6.5	12.9	16.1	6.5	3.2	00.0	16.1	9.7	00.0	100.
13	6.5	00.0	00.0	00.0	3.2	6.5	6.5	6.5	6.5	6.5	22.6	3.2	6.5	00.0	19.4	6.5	00.0	100.
14	6.5	00.0	00.0	00.0	00.0	6.5	6.5	6.5	6.5	9.7	9.7	9.7	12.9	00.0	19.4	6.5	00.0	100.
15	6.5	00.0	00.0	00.0	00.0	3.2	6.5	6.5	12.9	3.2	3.2	9.7	16.1	6.5	22.6	3.2	00.0	100.
16	3.2	3.2	00.0	00.0	00.0	6.5	6.5	3.2	12.9	3.2	3.2	9.7	12.9	9.7	19.4	6.5	00.0	100.
17	3.2	3.2	00.0	00.0	00.0	6.5	6.5	9.7	6.5	3.2	6.5	9.7	9.7	6.5	16.1	12.9	00.0	100.
18	3.2	3.2	00.0	00.0	00.0	9.7	6.5	9.7	9.7	3.2	6.5	9.7	3.2	6.5	16.1	12.9	00.0	100.
19	00.0	3.2	6.5	00.0	3.2	3.2	6.5	9.7	9.7	6.5	6.5	6.5	00.0	00.0	12.9	25.8	00.0	100.
20	9.7	9.7	00.0	00.0	3.2	6.5	3.2	12.9	6.5	6.5	6.5	3.2	6.5	00.0	9.7	16.1	00.0	100.
21	12.9	6.5	00.0	00.0	00.0	6.5	6.5	6.5	12.9	3.2	6.5	6.5	6.5	3.2	9.7	12.9	00.0	100.
22	16.1	3.2	3.2	00.0	00.0	6.5	6.5	9.7	9.7	3.2	6.5	6.5	6.5	00.0	16.1	6.5	00.0	100.
23	12.9	6.5	3.2	00.0	00.0	3.2	9.7	6.5	9.7	9.7	00.0	9.7	3.2	3.2	16.1	6.5	00.0	100.
24	9.7	9.7	3.2	00.0	00.0	6.5	3.2	9.7	6.5	6.5	6.5	9.7	3.2	3.2	16.1	6.5	00.0	100.
ALL	7.7	3.5	1.6	.5	.9	5.5	5.6	5.8	9.4	7.8	7.1	7.3	6.0	4.4	16.1	10.6	00.0	100.

NUMBER OF OBS = 744

B63

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

OCT-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.1	3.0	4.5	3.0	1.5	6.1	4.5	9.1	10.6	6.1	3.0	10.6	6.1	4.5	6.1	9.1	00.0	100.
2	10.6	6.1	4.5	00.0	1.5	9.1	1.5	4.5	10.6	9.1	3.0	12.1	7.6	00.0	9.1	10.6	00.0	100.
3	12.1	3.0	6.1	00.0	1.5	6.1	6.1	4.5	10.6	6.1	9.1	7.6	4.5	6.1	9.1	7.6	00.0	100.
4	10.6	6.1	4.5	1.5	00.0	9.1	4.5	3.0	12.1	7.6	6.1	3.0	9.1	3.0	15.2	4.5	00.0	100.
5	7.6	7.6	1.5	1.5	1.5	10.6	4.5	4.5	12.1	7.6	4.5	00.0	4.5	9.1	12.1	10.6	00.0	100.
6	7.6	6.1	4.5	1.5	1.5	10.6	3.0	4.5	15.2	6.1	4.5	1.5	3.0	4.5	18.2	7.6	00.0	100.
7	7.6	1.5	7.6	1.5	3.0	7.6	4.5	4.5	16.7	7.6	1.5	3.0	3.0	6.1	13.6	10.6	00.0	100.
8	10.6	1.5	3.0	4.5	4.5	7.6	1.5	7.6	13.6	7.6	6.1	3.0	1.5	6.1	12.1	9.1	00.0	100.
9	7.6	3.0	4.5	3.0	3.0	7.6	6.1	1.5	15.2	15.2	1.5	1.5	3.0	6.1	7.6	13.6	00.0	100.
10	7.6	3.0	3.0	4.5	1.5	6.1	7.6	3.0	18.2	10.6	3.0	4.5	00.0	6.1	6.1	15.2	00.0	100.
11	9.1	3.0	1.5	4.5	00.0	7.6	9.1	1.5	12.1	16.7	4.5	3.0	3.0	1.5	10.6	12.1	00.0	100.
12	9.1	3.0	3.0	1.5	3.0	9.1	9.1	1.5	12.1	12.1	9.1	4.5	3.0	1.5	9.1	9.1	00.0	100.
13	7.6	3.0	00.0	3.0	4.5	6.1	7.6	4.5	12.1	7.6	15.2	3.0	3.0	3.0	10.6	9.1	00.0	100.
14	9.1	1.5	00.0	3.0	3.0	6.1	6.1	6.1	10.6	10.6	7.6	6.1	7.6	3.0	10.6	9.1	00.0	100.
15	10.6	3.0	00.0	3.0	1.5	6.1	4.5	6.1	12.1	9.1	4.5	6.1	9.1	6.1	12.1	6.1	00.0	100.
16	6.1	9.1	00.0	3.0	1.5	4.5	6.1	6.1	10.6	7.6	4.5	6.1	12.1	4.5	12.1	6.1	00.0	100.
17	9.0	6.0	3.0	4.5	00.0	4.5	7.5	7.5	9.0	4.5	6.0	9.0	9.0	3.0	10.4	7.5	00.0	100.
18	7.5	9.0	1.5	4.5	3.0	7.5	4.5	7.5	9.0	6.0	4.5	7.5	6.0	4.5	10.4	7.5	00.0	100.
19	7.5	7.5	4.5	6.0	3.0	6.0	4.5	6.0	11.9	6.0	4.5	6.0	4.5	00.0	9.0	13.4	00.0	100.
20	9.0	9.0	6.0	3.0	4.5	9.0	4.5	6.0	9.0	6.0	4.5	6.0	6.0	1.5	6.0	10.4	00.0	100.
21	10.4	7.5	4.5	4.5	00.0	6.0	10.4	4.5	10.4	6.0	7.5	4.5	6.0	3.0	6.0	9.0	00.0	100.
22	14.9	4.5	3.0	3.0	1.5	7.5	7.5	9.0	10.4	1.5	7.5	9.0	3.0	1.5	11.9	4.5	00.0	100.
23	13.4	6.0	3.0	4.5	1.5	4.5	6.0	10.4	9.0	6.0	4.5	9.0	3.0	4.5	10.4	4.5	00.0	100.
24	10.4	9.0	1.5	3.0	3.0	6.0	3.0	10.4	7.5	7.5	3.0	10.4	3.0	3.0	16.4	3.0	00.0	100.
ALL	9.5	5.1	3.1	3.0	2.1	7.1	5.6	5.6	11.7	7.9	5.4	5.7	5.0	3.8	10.6	8.7	00.0	100.

NUMBER OF OBS = 1592

B64

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUL-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.6	5.0	3.5	2.8	3.5	6.4	4.3	12.1	18.4	7.1	2.8	6.4	4.3	4.3	3.5	5.0	00.0	100.
2	11.3	4.3	4.3	1.4	5.7	7.8	1.4	9.9	19.1	9.2	2.1	7.1	5.0	1.4	5.0	5.0	00.0	100.
3	10.6	2.1	5.0	2.8	2.8	7.8	4.3	7.1	19.1	7.1	6.4	4.3	3.5	5.0	5.7	6.4	00.0	100.
4	7.1	5.7	5.7	1.4	3.5	7.1	3.5	7.8	17.7	7.8	5.7	2.8	5.7	3.5	8.5	6.4	00.0	100.
5	9.2	5.7	2.8	1.4	2.1	8.5	5.7	12.1	14.2	7.8	4.3	2.1	2.8	5.7	9.2	6.4	00.0	100.
6	9.9	5.7	2.1	2.1	2.1	9.2	5.0	10.6	17.7	6.4	5.0	2.8	1.4	3.5	9.9	6.4	00.0	100.
7	8.5	2.8	6.4	.7	2.8	8.5	5.0	9.9	16.3	9.2	4.3	2.8	2.1	2.8	11.3	6.4	00.0	100.
8	9.9	4.3	2.1	3.5	4.3	6.4	4.3	12.1	17.0	7.8	5.0	2.8	.7	2.8	9.2	7.8	00.0	100.
9	8.5	3.5	4.3	3.5	1.4	5.7	10.6	5.0	19.1	9.9	4.3	2.1	2.1	5.0	5.0	9.9	00.0	100.
10	7.9	5.0	2.9	4.3	1.4	3.6	9.3	7.1	18.6	10.0	3.6	3.6	2.1	3.6	4.3	12.9	00.0	100.
11	9.3	4.3	1.4	3.6	.7	6.4	7.1	5.0	20.7	12.1	5.0	2.1	2.1	1.4	8.6	10.0	00.0	100.
12	8.6	5.0	4.3	2.9	2.1	7.1	7.1	5.7	18.6	8.6	7.9	3.6	1.4	1.4	7.9	7.9	00.0	100.
13	7.1	5.0	3.6	3.6	3.6	4.3	7.9	10.7	15.7	5.0	10.0	2.9	1.4	3.6	7.9	7.9	00.0	100.
14	7.1	4.3	2.1	5.7	2.9	4.3	7.9	10.0	16.4	7.1	4.3	5.7	3.6	2.9	7.1	8.6	00.0	100.
15	10.0	5.0	2.9	5.7	1.4	3.6	6.4	10.0	17.1	7.1	3.6	5.0	5.0	2.9	8.6	5.7	00.0	100.
16	7.1	9.3	2.1	4.3	1.4	4.3	7.1	16.4	11.4	4.3	5.0	3.6	6.4	3.6	7.1	6.4	00.0	100.
17	7.8	8.5	4.3	4.3	2.1	3.5	8.5	13.5	10.6	5.0	3.5	5.0	5.0	1.4	8.5	8.5	00.0	100.
18	9.2	9.2	3.5	2.8	4.3	5.0	7.1	13.5	12.1	3.5	4.3	4.3	3.5	2.8	7.1	7.8	00.0	100.
19	9.9	8.5	4.3	5.0	3.5	4.3	10.6	12.1	11.3	5.0	3.5	3.5	2.1	1.4	6.4	8.5	00.0	100.
20	11.3	7.1	6.4	3.5	4.3	7.1	8.5	14.2	7.8	6.4	2.8	2.8	3.5	1.4	5.0	7.8	00.0	100.
21	11.3	7.1	4.3	5.7	1.4	7.8	9.9	13.5	11.3	5.7	5.0	2.8	2.8	2.8	4.3	4.3	00.0	100.
22	11.3	7.1	4.3	2.1	2.8	7.1	8.5	14.2	13.5	5.0	4.3	4.3	3.5	1.4	7.1	3.5	00.0	100.
23	11.3	7.1	3.5	4.3	3.5	5.0	7.1	15.6	12.1	7.8	2.8	4.3	2.1	5.0	5.7	2.8	00.0	100.
24	9.9	7.1	1.4	5.7	3.5	5.7	5.7	12.8	14.2	8.5	2.8	5.7	2.1	3.5	9.2	2.1	00.0	100.
ALL	9.4	5.8	3.6	3.5	2.8	6.1	6.8	10.9	15.4	7.2	4.5	3.8	3.1	3.1	7.2	6.8	00.0	100.

NUMBER OF OBS = 3377

B65



NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2004

PROGRAM: WINPER  
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	11.0	4.7	2.5	2.2	5.0	6.0	2.8	11.3	17.2	8.5	2.5	3.4	4.1	4.7	6.6	7.5	00.0	100.
2	10.7	3.1	4.4	2.2	5.3	6.6	2.2	11.0	15.7	8.8	4.4	3.4	5.3	3.1	6.0	7.8	00.0	100.
3	9.7	2.2	4.1	2.2	3.8	6.3	5.0	9.7	14.4	7.5	6.6	3.1	4.7	5.0	6.3	9.4	00.0	100.
4	7.5	4.7	4.4	1.6	3.1	5.3	4.4	10.7	14.1	6.9	6.3	3.4	5.0	5.6	7.2	9.7	00.0	100.
5	10.7	4.7	3.1	1.3	1.9	6.9	4.1	12.2	13.5	6.6	6.0	2.2	4.1	6.3	7.8	8.8	00.0	100.
6	10.0	6.3	2.2	2.5	2.8	6.3	5.0	11.6	14.4	6.6	5.3	2.2	2.2	5.0	8.8	8.8	00.0	100.
7	9.4	3.1	5.3	2.2	3.8	4.1	7.5	9.1	15.0	7.8	4.4	2.8	2.5	5.6	8.8	8.5	00.0	100.
8	10.0	3.4	3.1	4.1	3.4	5.0	6.3	10.3	14.1	8.8	4.4	2.2	1.9	5.6	7.8	9.4	00.0	100.
9	10.0	2.8	3.8	3.1	2.8	4.4	9.4	7.2	16.0	9.1	4.1	1.9	2.5	6.3	6.6	10.0	00.0	100.
10	9.2	4.1	3.2	3.8	1.9	2.8	7.9	8.9	15.8	9.5	3.8	2.8	2.8	4.4	7.3	11.7	00.0	100.
11	10.1	2.8	3.8	2.8	2.5	3.5	5.7	9.2	17.4	11.1	3.2	2.8	2.5	2.8	9.2	10.4	00.0	100.
12	9.8	2.8	3.8	3.2	3.2	4.4	5.4	8.5	17.0	9.1	6.0	4.1	2.2	2.5	9.1	8.8	00.0	100.
13	8.5	3.8	3.8	3.2	3.5	2.8	6.0	9.5	18.0	6.9	6.0	3.5	2.5	4.7	9.1	8.2	00.0	100.
14	8.5	4.1	3.5	4.1	3.2	3.8	6.3	7.6	16.4	8.8	4.4	5.0	3.2	5.4	7.9	7.9	00.0	100.
15	9.4	4.7	3.4	4.7	1.9	3.4	4.7	9.7	16.3	8.5	3.4	4.1	5.6	4.7	8.8	6.6	00.0	100.
16	8.5	6.9	2.5	3.4	2.8	3.8	5.6	12.5	13.2	6.6	4.1	3.4	6.0	4.7	7.5	8.5	00.0	100.
17	8.4	6.6	4.4	3.4	3.4	2.8	6.9	10.6	13.1	6.6	3.4	4.7	4.1	3.8	8.7	9.1	00.0	100.
18	10.0	7.5	2.2	3.4	3.8	4.1	6.3	11.6	12.8	5.3	5.0	3.4	4.7	4.4	7.2	8.4	00.0	100.
19	10.3	7.5	2.8	4.1	3.4	4.1	7.2	10.9	14.7	5.9	3.1	3.1	2.5	3.8	5.9	10.6	00.0	100.
20	11.3	6.0	4.4	3.8	3.8	5.3	6.6	14.1	10.7	6.6	2.8	2.8	3.8	2.5	6.6	9.1	00.0	100.
21	10.7	6.0	4.1	4.4	1.6	7.2	7.5	13.2	11.9	6.3	4.4	2.8	2.8	2.8	6.0	8.5	00.0	100.
22	10.0	6.0	4.1	2.5	4.1	4.7	6.9	13.5	14.1	6.0	3.8	2.8	3.8	3.4	6.3	8.2	00.0	100.
23	9.7	6.0	3.4	3.4	4.4	4.1	6.0	14.1	13.5	6.6	2.8	3.8	4.7	3.8	6.3	7.5	00.0	100.
24	9.1	6.3	2.2	3.1	4.1	6.6	3.8	12.9	15.0	8.2	2.2	4.1	2.5	5.0	7.8	7.2	00.0	100.
ALL	9.7	4.8	3.5	3.1	3.3	4.8	5.8	10.8	14.8	7.6	4.3	3.3	3.6	4.4	7.5	8.8	00.0	100.

NUMBER OF OBS = 7647

## Precipitation

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	1	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	4	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	1	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	16	.00 .01	.00 .04	.00 .01	.00 .03	.00 .00	.00 .01	.00 .02	.00 .02	.05 .01	.04 .01	.01 .00	.00 .00	.26
4	1	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B68

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	1	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	25	.00 .02	.00 .03	.00 .01	.00 .02	.00 .01	.00 .00	.00 .02	.00 .01	.00 .01	.00 .00	.00 .00	.01 .00	.14
4	1	26	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	1	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	1	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B69

MONTH OF JANUARY

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 23  
 TOTAL DAYS WITH PRECIPITATION - 4  
 TOTAL AMOUNT OF PRECIPITATION - .42 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES  
 MAXIMUM DAILY PRECIPITATION - .26 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 9 - .05 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 9 - .15 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 9 - .24 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 9 - .26 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 9 - .26 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 503  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 11  
 TOTAL DAYS WITH PRECIPITATION - 3  
 TOTAL AMOUNT OF PRECIPITATION - .16 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .03 INCHES  
 MAXIMUM DAILY PRECIPITATION - .14 INCHES

MONTH OF JANUARY

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	23	47	66	84	102
.02	10	31	44	56	68
.03	5	29	42	54	66
.04	3	28	40	52	64
.05	1	25	39	51	63
.07	0	21	33	45	57
.10	0	8	26	38	50
.15	0	1	12	19	31
.20	0	0	4	10	16
.25	0	0	0	6	12
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B71

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	2	1	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.00 .00	.00 .00	.00 .00	.04
4	2	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	5	.00 .01	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.01 .00	.04
4	2	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B72

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	2	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	2	29	.00 .00	.00 .00	.00 .11	.00 .12	.00 .06	.00 .02	.01 .00	.02 .00	.00 .01	.06 .02	.00 .00	.00 .00	.43

B73



## MONTH OF FEBRUARY

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 696  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 16  
TOTAL DAYS WITH PRECIPITATION - 3  
TOTAL AMOUNT OF PRECIPITATION - .51 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .12 INCHES  
MAXIMUM DAILY PRECIPITATION - .43 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 16 - .12 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 15 - .31 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 7 - .40 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 7 - .43 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 1 - .43 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 392  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 7  
TOTAL DAYS WITH PRECIPITATION - 2  
TOTAL AMOUNT OF PRECIPITATION - .08 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .02 INCHES  
MAXIMUM DAILY PRECIPITATION - .04 INCHES

MONTH OF FEBRUARY

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	16	39	47	53	59
.02	8	30	39	45	51
.03	4	28	37	43	49
.04	4	17	30	37	43
.05	4	14	15	15	15
.07	2	12	15	15	15
.10	2	8	10	10	10
.15	0	7	10	10	10
.20	0	6	10	10	10
.25	0	4	9	9	9
.30	0	3	9	9	9
.35	0	0	5	8	8
.40	0	0	1	7	7
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B75

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	3	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	3	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	3	4	.00 .06	.00 .08	.00 .11	.00 .02	.00 .03	.00 .01	.00 .00	.00 .02	.00 .00	.00 .02	.00 .04	.05 .06	.50
4	3	5	.14 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.14
4	3	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	13	.00 .00	.00 .00	.00 .00	.00 .03	.00 .05	.00 .02	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.11
4	3	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	17	.00 .00	.00 .43	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.43

B76

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	3	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	9.99 .00	.00 .00	.00
4	3	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	25	.00 .00	.00 .00	.00 .00	.00 .04	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04
4	3	26	.00 .00	.00 .00	.06 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.09
4	3	27	.00 .28	.00 .13	.00 .01	.01 .00	.01 .02	.07 .01	.00 .01	.00 .20	.08 .10	.21 .03	.15 .00	.05 .00	1.37
4	3	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	29	.00 .00	.00 .00	.00 .00	.00 .02	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02
4	3	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	3	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B77

MONTH OF MARCH

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
NUMBER OF MISSING HOURS - 1  
TOTAL HOURS OF PRECIPITATION - 39  
TOTAL DAYS WITH PRECIPITATION - 10  
TOTAL AMOUNT OF PRECIPITATION - 2.72 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .43 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.37 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 14 - .43 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 9 - .90 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 10 - 1.17 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 5 - 1.36 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 4 - 1.37 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 50  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF MARCH

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	39	89	138	179	215
.02	30	75	116	152	188
.03	24	68	103	133	163
.04	20	64	99	129	159
.05	18	58	88	118	148
.07	12	56	87	117	147
.10	9	43	71	101	131
.15	5	35	57	75	93
.20	4	31	55	73	92
.25	2	29	53	71	89
.30	1	24	48	66	84
.35	1	18	42	60	78
.40	1	14	32	50	68
.45	0	8	18	30	42
.50	0	5	16	29	41
.60	0	4	12	23	35
.70	0	3	12	18	24
.80	0	2	11	17	23
.90	0	1	9	15	21
1.00	0	0	4	13	19
1.10	0	0	2	8	14
1.20	0	0	0	8	14
1.30	0	0	0	3	9
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B79

JAN-MAR INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2184  
 NUMBER OF MISSING HOURS - 1  
 TOTAL HOURS OF PRECIPITATION - 78  
 TOTAL DAYS WITH PRECIPITATION - 17  
 TOTAL AMOUNT OF PRECIPITATION - 3.65 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .43 INCHES  
 MAXIMUM DAILY PRECIPITATION - 1.37 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 14 - .43 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 27 HOUR 9 - .90 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 27 HOUR 10 - 1.17 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 27 HOUR 5 - 1.36 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 27 HOUR 4 - 1.37 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 945  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 18  
 TOTAL DAYS WITH PRECIPITATION - 5  
 TOTAL AMOUNT OF PRECIPITATION - .24 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .03 INCHES  
 MAXIMUM DAILY PRECIPITATION - .14 INCHES

JAN-MAR INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	78	178	266	343	415
.02	48	139	211	277	343
.03	33	127	194	254	314
.04	27	109	175	237	297
.05	23	97	147	195	243
.07	14	89	139	187	235
.10	11	59	111	159	207
.15	5	43	82	113	149
.20	4	37	72	102	133
.25	2	33	64	94	124
.30	1	27	59	83	107
.35	1	18	47	72	100
.40	1	14	33	60	84
.45	0	8	18	30	42
.50	0	5	16	29	41
.60	0	4	12	23	35
.70	0	3	12	18	24
.80	0	2	11	17	23
.90	0	1	9	15	21
1.00	0	0	4	13	19
1.10	0	0	2	8	14
1.20	0	0	0	8	14
1.30	0	0	0	3	9
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0



NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	4	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	9.99 .00	.00 .00	.00
4	4	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	4	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

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NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	4	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.01
4	4	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.01 .00	.00 .00	.03
4	4	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	4	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	24	.00 .03	.00 .00	.00 .02	.00 .00	.00 .19	.00 .00	.02 .01	.01 .00	.01 .00	.04 .00	.14 .00	.13 .00	.60
4	4	25	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	4	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	4	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.01 .00	.00 .00	.01 .00	.03 .00	.01 .00	.01 .00	.08

MONTH OF APRIL

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720  
 NUMBER OF MISSING HOURS - 1  
 TOTAL HOURS OF PRECIPITATION - 22  
 TOTAL DAYS WITH PRECIPITATION - 7  
 TOTAL AMOUNT OF PRECIPITATION - .75 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .19 INCHES  
 MAXIMUM DAILY PRECIPITATION - .60 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 17 - .19 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 12 - .37 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 7 - .59 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 7 - .60 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 7 - .61 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 5  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 0  
 TOTAL DAYS WITH PRECIPITATION - 0  
 TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
 MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF APRIL

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	22	67	102	132	162
.02	9	31	51	64	76
.03	6	24	43	57	69
.04	4	20	32	41	47
.05	3	19	31	40	46
.07	3	14	28	38	44
.10	3	12	18	24	30
.15	1	12	18	24	30
.20	0	12	18	24	30
.25	0	6	13	19	25
.30	0	6	12	18	24
.35	0	5	12	18	24
.40	0	0	8	14	20
.45	0	0	6	12	18
.50	0	0	6	12	18
.60	0	0	0	6	12
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	5	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	2	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02
4	5	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	9	.53 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.56
4	5	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.07 .00	.05 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.12
4	5	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	12	.00 .00	.00 .01	.00 .05	.00 .03	.00 .00	.00 .01	.00 .00	.05 .00	.00 .00	.00 .00	.00 .01	.00 .05	.21
4	5	13	.66 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .01	.05 .00	.00 .00	.00 .00	.74
4	5	14	.00 .00	.02 .00	.06 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.09
4	5	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .10	.00 .07	.00 .00	.00 .02	.00 .29	.00 .01	.00 .00	.52

B86

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	5	18	.11 .00	.07 .00	.24 .00	.07 .00	.10 .00	.20 .00	.07 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.86
4	5	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .40	.41
4	5	23	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03
4	5	24	.00 .00	.00 .31	.00 .24	.00 .00	.00 .00	.00 .02	.00 .12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.69
4	5	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	27	.00 .00	.00 .19	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.20
4	5	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	5	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 1.29	.00 .41	.00 .02	.00 .00	1.72
4	5	30	.92 .00	.05 .00	.17 .00	.06 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .02	.00 .01	.00 .00	1.23
4	5	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B87

MONTH OF MAY

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 52  
TOTAL DAYS WITH PRECIPITATION - 14  
TOTAL AMOUNT OF PRECIPITATION - 7.40 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - 1.29 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.72 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 21 - 1.29 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 21 - 2.69 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 21 - 2.92 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 21 - 2.92 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 21 - 2.92 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 1  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF MAY

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	52	143	216	282	336
.02	39	118	186	250	304
.03	34	109	175	233	282
.04	30	100	160	213	261
.05	30	99	160	213	261
.07	22	82	145	203	253
.10	17	72	128	181	242
.15	13	60	105	151	197
.20	11	59	101	144	186
.25	8	50	86	122	159
.30	7	48	84	120	157
.35	6	47	83	119	155
.40	6	44	81	117	153
.45	4	36	68	98	128
.50	4	35	68	98	128
.60	3	21	49	73	97
.70	2	18	40	58	76
.80	2	10	28	48	69
.90	2	10	23	35	47
1.00	1	10	22	34	46
1.10	1	10	20	33	45
1.20	1	10	16	29	41
1.30	0	6	12	24	36
1.40	0	6	12	18	24
1.50	0	6	12	18	24
1.60	0	5	12	18	24
1.70	0	5	11	17	23
1.80	0	2	8	14	20
1.90	0	2	8	14	20
2.00	0	2	8	14	20

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN



NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	6	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04 .00	.03 .00	.00 .00	.02 .00	.00 .00	.09
4	6	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	10	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.03
4	6	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .09	.00 .71	.00 .13	.00 .06	.00 .02	.00 .00	1.01
4	6	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	14	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.03
4	6	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.72 .00	.00 .00	.72
4	6	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B90

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	6	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	6	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B91

MONTH OF JUNE

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 13  
TOTAL DAYS WITH PRECIPITATION - 5  
TOTAL AMOUNT OF PRECIPITATION - 1.88 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .72 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.01 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 11 - .72 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 19 - 1.01 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 19 - 1.01 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 19 - 1.01 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 19 - 1.01 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 0  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF JUNE

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	13	44	75	105	135
.02	11	37	67	97	127
.03	7	27	56	86	116
.04	6	22	40	58	76
.05	5	21	39	57	75
.07	4	20	38	56	74
.10	3	13	25	37	49
.15	2	13	25	37	49
.20	2	13	25	37	49
.25	2	12	24	36	48
.30	2	12	24	36	48
.35	2	12	24	36	48
.40	2	12	24	36	48
.45	2	12	24	36	48
.50	2	12	24	36	48
.60	2	12	24	36	48
.70	2	12	24	36	48
.80	0	6	12	18	24
.90	0	5	11	17	23
1.00	0	2	8	14	20
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

APR-JUN INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2184  
 NUMBER OF MISSING HOURS - 1  
 TOTAL HOURS OF PRECIPITATION - 87  
 TOTAL DAYS WITH PRECIPITATION - 26  
 TOTAL AMOUNT OF PRECIPITATION - 10.03 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - 1.29 INCHES  
 MAXIMUM DAILY PRECIPITATION - 1.72 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 1.29 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.69 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 6  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 0  
 TOTAL DAYS WITH PRECIPITATION - 0  
 TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
 MAXIMUM DAILY PRECIPITATION - .00 INCHES

APR-JUN INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	87	254	397	529	649
.02	59	186	304	416	518
.03	47	160	274	380	477
.04	40	142	232	315	393
.05	38	139	230	313	391
.07	29	116	211	299	379
.10	23	97	171	242	321
.15	16	85	148	212	276
.20	13	84	144	205	265
.25	10	68	123	177	232
.30	9	66	120	174	229
.35	8	64	119	173	227
.40	8	56	113	167	221
.45	6	48	98	146	194
.50	6	47	98	146	194
.60	5	33	73	115	157
.70	4	30	64	94	124
.80	2	16	40	66	93
.90	2	15	34	52	70
1.00	1	12	30	48	66
1.10	1	10	20	33	45
1.20	1	10	16	29	41
1.30	0	6	12	24	36
1.40	0	6	12	18	24
1.50	0	6	12	18	24
1.60	0	5	12	18	24
1.70	0	5	11	17	23
1.80	0	2	8	14	20
1.90	0	2	8	14	20
2.00	0	2	8	14	20

B95

## JAN-JUN INDEX

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 4368  
NUMBER OF MISSING HOURS - 2  
TOTAL HOURS OF PRECIPITATION - 165  
TOTAL DAYS WITH PRECIPITATION - 43  
TOTAL AMOUNT OF PRECIPITATION - 13.68 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - 1.29 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.72 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 1.29 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.69 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 951  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 18  
TOTAL DAYS WITH PRECIPITATION - 5  
TOTAL AMOUNT OF PRECIPITATION - .24 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .03 INCHES  
MAXIMUM DAILY PRECIPITATION - .14 INCHES

JAN-JUN INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	165	432	663	872	1064
.02	107	325	515	693	861
.03	80	287	468	634	791
.04	67	251	407	552	690
.05	61	236	377	508	634
.07	43	205	350	486	614
.10	34	156	282	401	528
.15	21	128	230	325	425
.20	17	121	216	307	398
.25	12	101	187	271	356
.30	10	93	179	257	336
.35	9	82	166	245	327
.40	9	70	146	227	305
.45	6	56	116	176	236
.50	6	52	114	175	235
.60	5	37	85	138	192
.70	4	33	76	112	148
.80	2	18	51	83	116
.90	2	16	43	67	91
1.00	1	12	34	61	85
1.10	1	10	22	41	59
1.20	1	10	16	37	55
1.30	0	6	12	27	45
1.40	0	6	12	18	24
1.50	0	6	12	18	24
1.60	0	5	12	18	24
1.70	0	5	11	17	23
1.80	0	2	8	14	20
1.90	0	2	8	14	20
2.00	0	2	8	14	20

B97



NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	7	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	2	.00 .00	.00 .00	.00 .14	.00 .06	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.21
4	7	3	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02
4	7	4	.26 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.26
4	7	5	.00 .00	.11 .00	.16 .00	.10 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.39
4	7	6	.00 .00	.00 .00	.00 .00	.01 .00	.03 .00	.02 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.01 .00	.08
4	7	7	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	7	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	7	9	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.02
4	7	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	11	.00 .00	.00 .22	.00 .30	.00 .14	.00 .12	.00 .08	.00 .05	.00 .04	.00 .02	.00 .01	.00 .01	.00 .01	1.00
4	7	12	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.02
4	7	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02
4	7	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	16	.00 .01	.00 .00	.22 .00	.05 .00	.03 .00	.02 .00	.01 .00	.01 .00	.01 .00	.00 .00	.01 .00	.00 .00	.37
4	7	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B98

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	7	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	19	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.03
4	7	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.49 .00	.12 .00	.01 .00	.00 .00	.00 .00	.00 .00	.62
4	7	22	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.02 .00	.05 .00	.01 .00	.02 .00	.00 .00	.00 .00	.00 .00	.11
4	7	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .04	.04
4	7	24	.01 .01	.00 .02	.28 .01	.25 .00	.03 .00	.08 .00	.10 .00	.07 .00	.06 .00	.04 .00	.03 .00	.03 .00	1.02
4	7	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .04	.00 .07	.00 .11	.00 .13	.00 .14	.00 .07	.00 .00	.57
4	7	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.16 .00	.13 .00	.10 .00	.07 .00	.03 .00	.00 .00	.49
4	7	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	7	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B99

MONTH OF JULY

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 81  
TOTAL DAYS WITH PRECIPITATION - 19  
TOTAL AMOUNT OF PRECIPITATION - 5.29 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .49 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.02 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 21 HOUR 7 - .49 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 14 - .91 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 14 - 1.01 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 23 HOUR 24 - 1.06 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 17 - 1.06 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 0  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF JULY

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	81	201	299	381	455
.02	49	127	219	301	379
.03	42	113	182	254	322
.04	36	104	169	229	288
.05	32	98	161	222	281
.07	27	89	154	215	274
.10	21	81	139	193	247
.15	9	67	120	168	217
.20	7	65	118	166	215
.25	5	53	101	143	185
.30	2	43	85	121	157
.35	1	34	79	115	151
.40	1	26	60	84	108
.45	1	26	60	84	108
.50	0	20	48	72	97
.60	0	14	36	60	84
.70	0	6	19	40	58
.80	0	3	15	34	53
.90	0	1	13	30	48
1.00	0	0	3	20	38
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B101

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	8	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .09	.00 .06	.00 .01	.00 .00	.00 .01	.00 .00	.00 .00	.17
4	8	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	8	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B102

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	8	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	19	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	8	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.01 .00	.02
4	8	24	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	8	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04 .00	.00 .00	.00 .00	.38 .00	.41 .00	.00 .00	.83
4	8	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .57	.00 .00	.00 .00	.00 .00	.00 .00	.57
4	8	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	8	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	8	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B103

MONTH OF AUGUST

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 14  
TOTAL DAYS WITH PRECIPITATION - 8  
TOTAL AMOUNT OF PRECIPITATION - 1.63 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .57 INCHES  
MAXIMUM DAILY PRECIPITATION - .83 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 20 - .57 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 7 - .83 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 7 - .83 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 7 - .83 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 13 - .84 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 0  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF AUGUST

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	14	62	110	149	179
.02	6	24	46	73	103
.03	6	23	42	60	78
.04	6	23	41	59	77
.05	5	20	38	56	77
.07	4	20	38	56	74
.10	3	18	36	54	72
.15	3	18	36	54	72
.20	3	13	25	37	49
.25	3	13	25	37	49
.30	3	13	25	37	49
.35	3	13	25	37	49
.40	2	13	25	37	49
.45	1	11	23	35	47
.50	1	11	23	35	47
.60	0	5	11	17	23
.70	0	5	11	17	23
.80	0	2	8	14	20
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B105



NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	9	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	5	.00 .00	.00 .00	.00 .02	.00 .42	.00 .00	.00 .00	.00 .12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.56
4	9	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	15	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.00 .00	.15 .00	.05 .00	.00 .00	.00 .00	.00 .00	.00 .00	.23
4	9	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B106

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	9	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.08 .00	.01 .00	.00 .00	.00 .00	.00 .00	.09
4	9	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	27	.00 .00	.00 .00	.00 .00	.00 .16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.16
4	9	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	9	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B107

MONTH OF SEPTEMBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 10  
 TOTAL DAYS WITH PRECIPITATION - 4  
 TOTAL AMOUNT OF PRECIPITATION - 1.04 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .42 INCHES  
 MAXIMUM DAILY PRECIPITATION - .56 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 16 - .42 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 15 - .56 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 15 - .56 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 15 - .56 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 15 - .56 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 0  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 0  
 TOTAL DAYS WITH PRECIPITATION - 0  
 TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
 MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF SEPTEMBER

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	10	33	57	81	105
.02	8	31	55	79	103
.03	6	30	54	78	102
.04	6	28	52	76	100
.05	6	28	52	76	100
.07	5	27	51	75	99
.10	4	21	39	57	75
.15	3	18	36	54	72
.20	1	11	23	35	47
.25	1	6	12	18	24
.30	1	6	12	18	24
.35	1	6	12	18	24
.40	1	6	12	18	24
.45	0	3	9	15	21
.50	0	3	9	15	21
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B109

## JUL-SEP INDEX

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2208  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 105  
TOTAL DAYS WITH PRECIPITATION - 31  
TOTAL AMOUNT OF PRECIPITATION - 7.96 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .57 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.02 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 26 HOUR 20 - .57 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 11 HOUR 14 - .91 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 11 HOUR 14 - 1.01 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 23 HOUR 24 - 1.06 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 28 HOUR 17 - 1.06 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 0  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

JUL-SEP INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	105	296	466	611	739
.02	63	182	320	453	585
.03	54	166	278	392	502
.04	48	155	262	364	465
.05	43	146	251	354	458
.07	36	136	243	346	447
.10	28	120	214	304	394
.15	15	103	192	276	361
.20	11	89	166	238	311
.25	9	72	138	198	258
.30	6	62	122	176	230
.35	5	53	116	170	224
.40	4	45	97	139	181
.45	2	40	92	134	176
.50	1	34	80	122	165
.60	0	19	47	77	107
.70	0	11	30	57	81
.80	0	5	23	48	73
.90	0	1	13	30	48
1.00	0	0	3	20	38
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

B111

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	10	1	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	2	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	3	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	4	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	5	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	6	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	7	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	8	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	9	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	10	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	11	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	12	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	13	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	14	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	15	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	16	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	17	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00

B112

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	10	18	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	19	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	20	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	21	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	22	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	23	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	24	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	25	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	.00
4	10	26	9.99 9.99	9.99 9.99	9.99 9.99	9.99 9.99	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	.00
4	10	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	10	28	.02 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03
4	10	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	10	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	10	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B113



MONTH OF OCTOBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
NUMBER OF MISSING HOURS - 616  
TOTAL HOURS OF PRECIPITATION - 2  
TOTAL DAYS WITH PRECIPITATION - 1  
TOTAL AMOUNT OF PRECIPITATION - .03 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .02 INCHES  
MAXIMUM DAILY PRECIPITATION - .03 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 1 - .02 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 1 - .03 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 1 - .03 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 1 - .03 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 1 - .03 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 2  
NUMBER OF MISSING HOURS - 2  
TOTAL HOURS OF PRECIPITATION - 0  
TOTAL DAYS WITH PRECIPITATION - 0  
TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
MAXIMUM DAILY PRECIPITATION - .00 INCHES

MONTH OF OCTOBER

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	2	7	13	19	25
.02	1	6	12	18	24
.03	0	5	11	17	23
.04	0	0	0	0	0
.05	0	0	0	0	0
.07	0	0	0	0	0
.10	0	0	0	0	0
.15	0	0	0	0	0
.20	0	0	0	0	0
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B115

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	11	1	.00 .00	.00 .00	.00 .00	.02 .00	.01 .00	.07 .00	.02 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01 .00	.14
4	11	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .00	.00 .01	.04
4	11	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	15	.00 .00	.06 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.08
4	11	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B116

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	11	18	.00 .01	.00 .00	.00 .00	.00 .02	.00 .02	.00 .02	.00 .05	.01 .03	.00 .05	.00 .00	.00 .00	.00 .00	.21
4	11	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.02
4	11	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .01	.02
4	11	27	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02
4	11	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	11	29	.00 .00	.01 .00	.01 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.04
4	11	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

BI17

MONTH OF NOVEMBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 28  
TOTAL DAYS WITH PRECIPITATION - 8  
TOTAL AMOUNT OF PRECIPITATION - .57 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .07 INCHES  
MAXIMUM DAILY PRECIPITATION - .21 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 1 HOUR 6 - .07 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 16 - .19 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 13 - .20 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 8 - .21 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 13 - .22 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 90  
NUMBER OF MISSING HOURS - 0  
TOTAL HOURS OF PRECIPITATION - 2  
TOTAL DAYS WITH PRECIPITATION - 1  
TOTAL AMOUNT OF PRECIPITATION - .02 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES  
MAXIMUM DAILY PRECIPITATION - .02 INCHES

MONTH OF NOVEMBER

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	28	76	112	142	172
.02	12	57	95	126	156
.03	6	37	68	98	128
.04	4	29	59	89	119
.05	4	22	34	46	58
.07	1	19	31	44	56
.10	0	12	18	25	31
.15	0	3	10	17	23
.20	0	0	4	11	19
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	12	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	5	.00 .01	.00 .05	.00 .07	.00 .03	.00 .03	.00 .03	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.22
4	12	6	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
4	12	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	10	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B120

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

YR	MON	DAY	1AM 1PM	2AM 2PM	3AM 3PM	4AM 4PM	5AM 5PM	6AM 6PM	7AM 7PM	8AM 8PM	9AM 9PM	10AM 10PM	11AM 11PM	12N 12MDNT	TOTAL
4	12	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
4	12	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B121



NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2004

RAIN VERSION PC-1.0

MONTH OF DECEMBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 7  
 TOTAL DAYS WITH PRECIPITATION - 2  
 TOTAL AMOUNT OF PRECIPITATION - .23 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .07 INCHES  
 MAXIMUM DAILY PRECIPITATION - .22 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 15 - .07 INCHES  
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 13 - .22 INCHES  
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 14 - .22 INCHES  
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 13 - .23 INCHES  
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 13 - .23 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 307  
 NUMBER OF MISSING HOURS - 0  
 TOTAL HOURS OF PRECIPITATION - 0  
 TOTAL DAYS WITH PRECIPITATION - 0  
 TOTAL AMOUNT OF PRECIPITATION - .00 INCHES  
 MAXIMUM 1-HOUR PRECIPITATION - .00 INCHES  
 MAXIMUM DAILY PRECIPITATION - .00 INCHES

B122

MONTH OF DECEMBER

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	7	17	24	30	36
.02	5	10	16	22	28
.03	5	10	16	22	28
.04	2	9	16	22	28
.05	2	9	15	21	27
.07	1	7	14	20	26
.10	0	6	13	19	25
.15	0	5	11	17	23
.20	0	2	8	14	20
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

ENTRIES INDICATE NUMBER OF DURATION PERIODS WITH RAINFALL GREATER THAN OR EQUAL TO AMOUNT SHOWN

B123

## OCT-DEC INDEX

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2208  
NUMBER OF MISSING HOURS - 616  
TOTAL HOURS OF PRECIPITATION - 37  
TOTAL DAYS WITH PRECIPITATION - 11  
TOTAL AMOUNT OF PRECIPITATION - .83 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .07 INCHES  
MAXIMUM DAILY PRECIPITATION - .22 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 12 DAY 5 HOUR 15 - .07 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 12 DAY 5 HOUR 13 - .22 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 12 DAY 5 HOUR 14 - .22 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 12 DAY 5 HOUR 13 - .23 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 12 DAY 5 HOUR 13 - .23 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 399  
NUMBER OF MISSING HOURS - 2  
TOTAL HOURS OF PRECIPITATION - 2  
TOTAL DAYS WITH PRECIPITATION - 1  
TOTAL AMOUNT OF PRECIPITATION - .02 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES  
MAXIMUM DAILY PRECIPITATION - .02 INCHES

OCT-DEC INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	37	102	157	205	253
.02	18	75	131	180	228
.03	11	53	102	150	198
.04	6	38	81	123	165
.05	6	31	55	79	103
.07	2	26	51	76	100
.10	0	18	37	56	74
.15	0	8	21	34	46
.20	0	2	12	25	39
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

B125

## JUL-DEC INDEX

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 4416  
NUMBER OF MISSING HOURS - 616  
TOTAL HOURS OF PRECIPITATION - 142  
TOTAL DAYS WITH PRECIPITATION - 42  
TOTAL AMOUNT OF PRECIPITATION - 8.79 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .57 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.02 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 26 HOUR 20 - .57 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 11 HOUR 14 - .91 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 11 HOUR 14 - 1.01 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 23 HOUR 24 - 1.06 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 7 DAY 28 HOUR 17 - 1.06 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 399  
NUMBER OF MISSING HOURS - 2  
TOTAL HOURS OF PRECIPITATION - 2  
TOTAL DAYS WITH PRECIPITATION - 1  
TOTAL AMOUNT OF PRECIPITATION - .02 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES  
MAXIMUM DAILY PRECIPITATION - .02 INCHES

JUL-DEC INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	142	398	623	816	992
.02	81	257	451	633	813
.03	65	219	380	542	700
.04	54	193	343	487	630
.05	49	177	306	433	561
.07	38	162	294	422	547
.10	28	138	251	360	468
.15	15	111	213	310	407
.20	11	91	178	263	350
.25	9	72	138	198	258
.30	6	62	122	176	230
.35	5	53	116	170	224
.40	4	45	97	139	181
.45	2	40	92	134	176
.50	1	34	80	122	165
.60	0	19	47	77	107
.70	0	11	30	57	81
.80	0	5	23	48	73
.90	0	1	13	30	48
1.00	0	0	3	20	38
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

B127

## Annual INDEX

## FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 8784  
NUMBER OF MISSING HOURS - 618  
TOTAL HOURS OF PRECIPITATION - 307  
TOTAL DAYS WITH PRECIPITATION - 85  
TOTAL AMOUNT OF PRECIPITATION - 22.47 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - 1.29 INCHES  
MAXIMUM DAILY PRECIPITATION - 1.72 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 1.29 INCHES  
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.69 INCHES  
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES  
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 29 HOUR 21 - 2.92 INCHES

## FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 1350  
NUMBER OF MISSING HOURS - 2  
TOTAL HOURS OF PRECIPITATION - 20  
TOTAL DAYS WITH PRECIPITATION - 6  
TOTAL AMOUNT OF PRECIPITATION - .26 INCHES  
MAXIMUM 1-HOUR PRECIPITATION - .03 INCHES  
MAXIMUM DAILY PRECIPITATION - .14 INCHES

Annual INDEX

PRECIPITATION INTENSITY - DURATION  
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	307	830	1286	1688	2056
.02	188	582	966	1326	1674
.03	145	506	848	1176	1491
.04	121	444	750	1039	1320
.05	110	413	683	941	1195
.07	81	367	644	908	1161
.10	62	294	533	761	996
.15	36	239	443	635	832
.20	28	212	394	570	748
.25	21	173	325	469	614
.30	16	155	301	433	566
.35	14	135	282	415	551
.40	13	115	243	366	486
.45	8	96	208	310	412
.50	7	86	194	297	400
.60	5	56	132	215	299
.70	4	44	106	169	229
.80	2	23	74	131	189
.90	2	17	56	97	139
1.00	1	12	37	81	123
1.10	1	10	22	41	59
1.20	1	10	16	37	55
1.30	0	6	12	27	45
1.40	0	6	12	18	24
1.50	0	6	12	18	24
1.60	0	5	12	18	24
1.70	0	5	11	17	23
1.80	0	2	8	14	20
1.90	0	2	8	14	20
2.00	0	2	8	14	20

B129



## JOINT FREQUENCY DISTRIBUTION TABLES

The tables presented in this section are results obtained from processing of the hourly meteorological data collected at the Cooper Nuclear Station. The joint frequency distribution (JFD) tables represent the frequency of occurrence, in number of observations, that a particular wind speed, wind direction, and stability category occurred simultaneously. On a quarterly and semiannual basis, the JFDs were produced for wind speed and wind direction by atmospheric stability corresponding to the seven Pasquill stability classes, and for wind speed and wind direction for all stability categories combined. Atmospheric stability was classified per Regulatory Guide 1.23, using the 100-meter to 10-meter temperature difference ( $\Delta T$ ) for the 100-meter JFDs and the 60-meter to 10-meter  $\Delta T$  for the 10-meter JFDs. During periods when  $\Delta T$  data were not available the equivalent stabilities were based on modified sigma theta (standard deviation) of wind directions.

**JFDs of 10-Meter Wind vs. Delta T**

January-March 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	3
7.51-12.50	9	0	1	2	0	1	0	3	3	1	0	0	0	0	0	5	25
12.51-18.50	2	0	0	0	0	0	0	8	7	2	0	0	0	0	0	9	28
18.51-24.00	0	0	0	0	0	0	0	0	2	1	0	0	0	0	3	5	11
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	11	0	1	2	0	1	1	12	13	4	0	0	0	0	4	19	68

STABILITY CLASS B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
3.51- 7.50	2	0	0	3	2	0	2	0	1	0	0	0	0	2	1	1	14
7.51-12.50	6	1	0	0	1	0	0	4	4	0	0	0	0	0	0	3	19
12.51-18.50	2	0	0	0	0	0	0	2	1	4	0	0	0	4	2	3	18
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	4
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
TOTAL	10	1	0	3	3	0	2	7	8	4	0	0	0	6	9	7	60

B132

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	1	1	0	3	0	1	0	0	0	0	0	0	6
3.51- 7.50	2	0	0	1	1	3	3	3	2	0	0	0	2	0	1	1	19
7.51-12.50	5	1	0	0	5	4	5	4	6	2	0	0	0	2	2	3	39
12.51-18.50	3	0	0	0	0	1	0	5	2	1	1	1	0	3	2	2	21
18.51-24.00	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	1	4
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	4
TOTAL	10	1	0	1	7	9	8	16	14	4	1	1	2	5	7	7	93

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	3	7	2	0	0	0	2	4	2	5	1	0	0	0	4	1	31
3.51- 7.50	43	23	27	27	15	6	24	13	9	1	8	10	7	6	7	11	237
7.51-12.50	42	21	5	4	36	18	11	13	23	16	11	8	12	26	43	26	315
12.51-18.50	3	0	0	0	1	1	2	7	17	6	7	10	15	14	60	41	184
18.51-24.00	0	0	0	0	0	0	0	0	5	3	0	2	4	6	31	7	58
>24.00	0	0	0	0	0	0	0	0	1	0	1	3	1	0	2	1	9
TOTAL	91	51	34	31	52	25	39	37	57	31	28	33	39	52	147	87	834

B133

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	6	9	3	2	1	0	1	10	6	6	1	4	4	3	3	7	66
3.51- 7.50	30	15	7	8	6	8	38	23	28	13	7	8	14	9	17	17	248
7.51-12.50	29	3	1	0	10	8	29	24	32	18	13	9	17	25	18	35	271
12.51-18.50	3	0	0	0	0	0	5	12	12	5	1	8	4	7	18	12	87
18.51-24.00	0	0	0	0	0	0	1	7	2	1	0	0	0	1	9	1	22
>24.00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL	68	27	11	10	17	16	74	77	80	43	22	29	39	45	65	72	695

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	6	4	3	2	0	1	5	15	22	13	7	4	3	3	1	6	95
3.51- 7.50	5	1	3	1	0	1	10	24	24	8	6	4	3	2	5	5	102
7.51-12.50	8	1	2	0	1	0	1	3	10	4	2	11	10	6	1	2	62
12.51-18.50	2	0	0	0	0	2	0	1	3	1	0	2	1	1	0	1	14
18.51-24.00	0	0	0	0	0	0	0	3	0	1	0	0	0	0	1	0	5
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	21	6	8	3	1	4	16	46	59	27	15	21	17	12	8	14	279

B134

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	5	3	3	1	3	6	10	18	12	5	5	1	1	3	3	7	86
3.51- 7.50	3	3	3	0	0	1	4	4	3	7	1	0	1	0	0	0	30
7.51-12.50	4	4	3	0	0	0	0	4	2	1	0	1	0	0	1	2	22
12.51-18.50	0	0	0	0	0	0	0	3	0	1	0	0	0	1	2	0	7
18.51-24.00	0	0	0	0	0	0	0	3	0	0	1	0	0	2	0	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	10	9	1	3	7	14	32	17	14	7	2	2	6	6	9	151

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	20	23	11	5	5	8	18	51	43	30	14	9	8	9	11	21	286
3.51- 7.50	85	42	40	40	24	19	82	68	68	29	22	22	27	19	31	35	653
7.51-12.50	103	31	12	6	53	31	46	55	80	42	26	29	39	59	65	76	753
12.51-18.50	15	0	0	0	1	4	7	38	42	20	9	21	20	30	84	68	359
18.51-24.00	0	0	0	0	0	0	1	14	12	6	1	2	4	9	47	14	110
>24.00	0	0	0	0	0	0	0	1	3	0	1	3	1	0	8	1	18
TOTAL	223	96	63	51	83	62	154	227	248	127	73	86	99	126	246	215	2180

B135

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2184

TOTAL NUMBER OF VALID OBSERVATIONS: 2180

TOTAL NUMBER OF MISSING OBSERVATIONS: 4

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 9.2 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 35

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 35

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
3.12	2.75	4.27	38.26	31.88	12.80	6.93

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	11	0	1	2	0	1	1	12	13	4	0	0	0	0	4	19	0
B	10	1	0	3	3	0	2	7	8	4	0	0	0	6	9	7	0
C	10	1	0	1	7	9	8	16	14	4	1	1	2	5	7	7	0
D	91	51	34	31	52	25	39	37	57	31	28	33	39	52	147	87	0
E	68	27	11	10	17	16	74	77	80	43	22	29	39	45	65	72	0
F	21	6	8	3	1	4	16	46	59	27	15	21	17	12	8	14	1
G	12	10	9	1	3	7	14	32	17	14	7	2	2	6	6	9	0
TOTAL	223	96	63	51	83	62	154	227	248	127	73	86	99	126	246	215	1

B136

**JFDs of 10-Meter Wind vs. Delta T**

April-June 2004



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	6	4	0	2	3	3	6	5	2	2	1	0	0	0	0	4	38
7.51-12.50	21	1	4	0	0	1	10	25	24	11	4	0	1	1	3	18	124
12.51-18.50	1	5	1	0	0	0	2	15	50	19	2	0	0	0	1	15	111
18.51-24.00	0	0	0	0	0	0	1	5	28	7	0	0	0	0	2	1	44
>24.00	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	7
TOTAL	28	10	5	2	3	6	19	50	104	46	7	0	1	1	6	38	326

STABILITY CLASS B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	12	6	6	2	5	6	4	8	5	6	2	2	2	3	4	8	81
7.51-12.50	7	1	2	2	2	0	4	7	9	8	3	2	4	4	2	8	65
12.51-18.50	0	1	0	0	2	0	0	2	9	6	2	0	0	4	9	4	39
18.51-24.00	0	0	0	0	0	0	0	0	4	2	0	0	0	0	3	0	9
>24.00	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	3
TOTAL	20	8	8	4	9	6	9	17	28	24	7	4	6	11	18	20	199

B138

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	4
3.51- 7.50	12	5	5	4	4	5	6	8	4	4	2	3	2	1	0	5	70
7.51-12.50	2	1	0	4	2	1	3	4	7	6	1	4	3	3	4	4	49
12.51-18.50	0	0	0	0	0	2	0	3	4	2	1	2	3	7	1	3	28
18.51-24.00	0	0	0	0	0	0	0	1	0	1	0	1	0	7	0	0	10
>24.00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL	14	6	6	8	6	9	9	16	15	14	4	11	8	18	5	13	162

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	8	6	4	2	3	0	2	4	5	3	3	2	0	2	0	2	46
3.51- 7.50	31	21	30	27	23	14	16	29	11	10	2	4	2	4	4	14	242
7.51-12.50	33	8	4	8	10	8	7	27	52	10	6	2	9	4	13	34	235
12.51-18.50	3	0	0	0	2	0	2	21	34	8	0	1	4	11	8	10	104
18.51-24.00	0	0	0	0	0	0	1	0	10	9	0	0	2	3	2	3	30
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL	75	35	38	37	38	22	28	81	114	40	11	9	17	24	27	63	659

B139

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	18	2	1	3	1	2	6	8	11	8	5	1	7	3	7	14	97
3.51- 7.50	27	13	12	9	4	5	20	23	36	17	5	4	2	11	10	29	227
7.51-12.50	11	1	1	1	3	2	12	9	36	12	6	10	7	7	5	17	140
12.51-18.50	2	0	0	0	1	0	0	1	1	4	2	4	4	3	1	3	26
18.51-24.00	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	1	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	58	16	14	13	9	9	38	41	84	43	18	19	20	26	24	64	496

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	14	3	1	0	0	0	1	7	8	9	3	9	4	7	11	19	96
3.51- 7.50	6	4	1	1	0	1	1	6	12	4	0	1	1	2	4	14	58
7.51-12.50	7	3	0	1	2	3	2	0	2	0	1	2	5	1	2	2	33
12.51-18.50	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	2
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	27	10	2	2	2	4	5	13	22	13	4	12	11	11	17	35	190

B140

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	4
1.01- 3.50	12	2	1	1	1	0	3	13	21	15	5	3	1	12	12	21	123
3.51- 7.50	1	2	1	0	1	0	0	0	1	1	1	0	0	0	0	0	8
7.51-12.50	3	0	0	1	0	2	2	0	0	0	0	0	0	0	1	1	10
12.51-18.50	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	16	4	2	2	2	2	6	13	22	16	6	3	1	12	13	22	146

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	4
1.01- 3.50	53	13	8	6	5	5	13	32	45	35	16	16	12	24	30	57	370
3.51- 7.50	95	55	55	45	40	34	53	79	71	44	13	14	9	21	22	74	724
7.51-12.50	84	15	11	17	19	17	40	72	130	47	21	20	29	20	30	84	656
12.51-18.50	6	6	1	0	5	2	6	42	98	39	7	7	12	25	20	35	311
18.51-24.00	0	0	0	0	0	0	2	6	42	21	0	1	2	13	8	5	100
>24.00	0	0	0	0	0	0	0	0	3	10	0	0	0	0	0	0	13
TOTAL	238	89	75	68	69	58	114	231	389	196	57	58	64	103	110	255	2178

B141

PROGRAM: JPD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2184

TOTAL NUMBER OF VALID OBSERVATIONS: 2178

TOTAL NUMBER OF MISSING OBSERVATIONS: 6

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.7 %

MEAN WIND SPEED FOR THIS PERIOD: 8.5 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 38

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 38

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
14.97	9.14	7.44	30.26	22.77	8.72	6.70

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	28	10	5	2	3	6	19	50	104	46	7	0	1	1	6	38	0
B	20	8	8	4	9	6	9	17	28	24	7	4	6	11	18	20	0
C	14	6	6	8	6	9	9	16	15	14	4	11	8	18	5	13	0
D	75	35	38	37	38	22	28	81	114	40	11	9	17	24	27	63	0
E	58	16	14	13	9	9	38	41	84	43	18	19	20	26	24	64	0
F	27	10	2	2	2	4	5	13	22	13	4	12	11	11	17	35	0
G	16	4	2	2	2	2	6	13	22	16	6	3	1	12	13	22	4
TOTAL	238	89	75	68	69	58	114	231	389	196	57	58	64	103	110	255	4

B142

**JFDs of 10-Meter Wind vs. Delta T**

January-June 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	6	4	0	2	3	3	7	6	3	2	1	0	0	0	0	4	41
7.51-12.50	30	1	5	2	0	2	10	28	27	12	4	0	1	1	3	23	149
12.51-18.50	3	5	1	0	0	0	2	23	57	21	2	0	0	0	1	24	139
18.51-24.00	0	0	0	0	0	0	1	5	30	8	0	0	0	0	5	6	55
>24.00	0	0	0	0	0	0	0	0	0	7	0	0	0	0	1	0	8
TOTAL	39	10	6	4	3	7	20	62	117	50	7	0	1	1	10	57	394

STABILITY CLASS B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	4
3.51- 7.50	14	6	6	5	7	6	6	8	6	6	2	2	2	5	5	9	95
7.51-12.50	13	2	2	2	3	0	4	11	13	8	3	2	4	4	2	11	84
12.51-18.50	2	1	0	0	2	0	0	4	10	10	2	0	0	8	11	7	57
18.51-24.00	0	0	0	0	0	0	0	0	5	2	0	0	0	0	6	0	13
>24.00	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0	6
TOTAL	30	9	8	7	12	6	11	24	36	28	7	4	6	17	27	27	259

B144

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	1	0	1	2	0	3	0	1	0	1	0	0	0	1	10
3.51- 7.50	14	5	5	5	5	8	9	11	6	4	2	3	4	1	1	6	89
7.51-12.50	7	2	0	4	7	5	8	8	13	8	1	4	3	5	6	7	88
12.51-18.50	3	0	0	0	0	3	0	8	6	3	2	3	3	10	3	5	49
18.51-24.00	0	0	0	0	0	0	0	2	2	1	0	1	0	7	0	1	14
>24.00	0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	0	5
TOTAL	24	7	6	9	13	18	17	32	29	18	5	12	10	23	12	20	255

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	11	13	6	2	3	0	4	8	7	8	4	2	0	2	4	3	77
3.51- 7.50	74	44	57	54	38	20	40	42	20	11	10	14	9	10	11	25	479
7.51-12.50	75	29	9	12	46	26	18	40	75	26	17	10	21	30	56	60	550
12.51-18.50	6	0	0	0	3	1	4	28	51	14	7	11	19	25	68	51	288
18.51-24.00	0	0	0	0	0	0	1	0	15	12	0	2	6	9	33	10	88
>24.00	0	0	0	0	0	0	0	0	3	0	1	3	1	0	2	1	11
TOTAL	166	86	72	68	90	47	67	118	171	71	39	42	56	76	174	150	1493

BI45



PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	24	11	4	5	2	2	7	18	17	14	6	5	11	6	10	21	163
3.51- 7.50	57	28	19	17	10	13	58	46	64	30	12	12	16	20	27	46	475
7.51-12.50	40	4	2	1	13	10	41	33	68	30	19	19	24	32	23	52	411
12.51-18.50	5	0	0	0	1	0	5	13	13	9	3	12	8	10	19	15	113
18.51-24.00	0	0	0	0	0	0	1	7	2	3	0	0	0	3	10	2	28
>24.00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
TOTAL	126	43	25	23	26	25	112	118	164	86	40	48	59	71	89	136	1191

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	20	7	4	2	0	1	6	22	30	22	10	13	7	10	12	25	191
3.51- 7.50	11	5	4	2	0	2	11	30	36	12	6	5	4	4	9	19	160
7.51-12.50	15	4	2	1	3	3	3	3	12	4	3	13	15	7	3	4	95
12.51-18.50	2	0	0	0	0	2	1	1	3	1	0	2	2	1	0	1	16
18.51-24.00	0	0	0	0	0	0	0	3	0	1	0	0	0	1	1	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	48	16	10	5	3	8	21	59	81	40	19	33	28	23	25	49	469

B146

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	4
1.01- 3.50	17	5	4	2	4	6	13	31	33	20	10	4	2	15	15	28	209
3.51- 7.50	4	5	4	0	1	1	4	4	4	8	2	0	1	0	0	0	38
7.51-12.50	7	4	3	1	0	2	2	4	2	1	0	1	0	0	2	3	32
12.51-18.50	0	0	0	0	0	0	1	3	0	1	0	0	0	1	2	0	8
18.51-24.00	0	0	0	0	0	0	0	3	0	0	1	0	0	2	0	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	28	14	11	3	5	9	20	45	39	30	13	5	3	18	19	31	297

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	5
1.01- 3.50	73	36	19	11	10	13	31	83	88	65	30	25	20	33	41	78	656
3.51- 7.50	180	97	95	85	64	53	135	147	139	73	35	36	36	40	53	109	1377
7.51-12.50	187	46	23	23	72	48	86	127	210	89	47	49	68	79	95	160	1409
12.51-18.50	21	6	1	0	6	6	13	80	140	59	16	28	32	55	104	103	670
18.51-24.00	0	0	0	0	0	0	3	20	54	27	1	3	6	22	55	19	210
>24.00	0	0	0	0	0	0	0	1	6	10	1	3	1	0	8	1	31
TOTAL	461	185	138	119	152	120	268	458	637	323	130	144	163	229	356	470	4358

B147

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 4368

TOTAL NUMBER OF VALID OBSERVATIONS: 4358

TOTAL NUMBER OF MISSING OBSERVATIONS: 10

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 8.8 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 73

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 73

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
9.04	5.94	5.85	34.26	27.33	10.76	6.82

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	39	10	6	4	3	7	20	62	117	50	7	0	1	1	10	57	0
B	30	9	8	7	12	6	11	24	36	28	7	4	6	17	27	27	0
C	24	7	6	9	13	18	17	32	29	18	5	12	10	23	12	20	0
D	166	86	72	68	90	47	67	118	171	71	39	42	56	76	174	150	0
E	126	43	25	23	26	25	112	118	164	86	40	48	59	71	89	136	0
F	48	16	10	5	3	8	21	59	81	40	19	33	28	23	25	49	1
G	28	14	11	3	5	9	20	45	39	30	13	5	3	18	19	31	4
TOTAL	461	185	138	119	152	120	268	458	637	323	130	144	163	229	356	470	5

B148

**Stability Classes by Hour of Day**

**10-Meter Wind vs. Delta T**

January-June 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	1	1	E	E	E	E	E	E	E	F	F	E	D	D	D	D	D	E	E	F	F	F	F	G	G	
4	1	2	G	G	G	F	F	G	G	G	G	F	D	D	D	D	D	E	E	E	E	F	E	E	D	
4	1	3	D	D	D	D	D	D	D	D	C	D	D	C	C	D	D	D	D	D	D	D	D	D	D	
4	1	4	D	E	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	1	5	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	
4	1	6	F	F	F	E	F	E	E	E	E	D	D	D	D	D	D	D	E	F	F	G	G	G	G	
4	1	7	G	G	G	G	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	
4	1	8	E	D	D	D	E	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	
4	1	9	E	E	E	D	D	D	E	E	D	D	D	D	D	D	D	D	E	F	F	F	F	G	F	
4	1	10	F	F	F	F	F	G	G	G	F	E	D	D	D	D	D	D	E	F	F	E	E	E	F	
4	1	11	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	E	F	F	F	F	F	F	
4	1	12	F	E	E	E	E	E	E	E	F	E	D	C	D	D	D	D	F	G	G	G	G	G	G	
4	1	13	F	G	F	E	E	E	E	F	F	E	D	D	D	D	D	C	D	E	F	F	F	F	F	
4	1	14	F	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	
4	1	15	E	E	E	E	E	F	E	E	E	D	C	C	C	C	D	D	E	F	F	F	F	F	F	
4	1	16	G	G	F	F	F	F	F	G	G	F	F	F	F	F	G	G	G	G	G	G	G	G	-	
4	1	17	G	G	G	G	G	G	G	F	F	F	F	E	F	F	F	F	E	E	E	E	E	E	E	
4	1	18	E	E	D	D	D	D	D	D	B	A	A	A	B	B	D	D	D	D	D	D	D	D	D	
4	1	19	D	D	D	D	D	D	D	D	D	D	B	B	B	D	C	C	D	D	E	E	E	E	D	
4	1	20	D	D	D	D	D	D	D	D	D	D	C	B	C	C	D	D	D	D	D	D	D	D	D	
4	1	21	E	E	F	F	F	F	F	E	E	D	D	D	D	D	D	D	E	E	F	D	D	D	D	
4	1	22	D	D	D	D	D	D	D	D	C	C	B	B	B	C	C	D	D	E	E	F	E	E	E	
4	1	23	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E	
4	1	24	E	E	D	D	D	D	A	G	A	A	B	C	C	C	C	D	D	D	D	D	D	D	D	
4	1	25	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D	D	E	E	E	E	E	E	
4	1	26	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	D	
4	1	27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	F	
4	1	28	F	F	F	G	E	E	D	E	D	D	C	C	C	B	B	B	C	D	D	D	D	E	E	
4	1	29	D	D	D	D	D	D	D	D	D	C	C	B	A	B	A	B	D	D	E	E	D	D	D	
4	1	30	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	D	
4	1	31	D	D	D	D	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	D	E	E	E	
4	2	1	E	E	E	D	D	D	D	D	E	D	D	D	D	D	D	E	E	E	E	E	E	E	E	
4	2	2	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	2	3	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	C	D	E	E	E	E	E	E	
4	2	4	E	E	E	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	E	
4	2	5	D	D	D	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	E	E	E	E	E	
4	2	6	E	E	E	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	
4	2	7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	G	G	G	
4	2	8	F	F	F	F	F	F	F	F	F	D	D	C	D	D	D	D	E	E	D	D	D	D	E	
4	2	9	E	E	E	E	E	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	F	F	F	
4	2	10	E	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	
4	2	11	E	E	E	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	
4	2	12	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	
4	2	13	F	F	F	G	F	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	F	E	
4	2	14	E	E	F	G	G	G	G	G	F	E	C	B	A	A	A	B	C	D	D	D	D	D	D	

B150

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	2	15	D	D	D	D	D	E	E	D	D	D	D	D	E	D	D	C	D	D	F	F	G	G	G	G
4	2	16	G	G	G	F	F	F	E	E	F	E	D	C	C	C	C	D	D	D	E	F	F	F	F	G
4	2	17	G	G	G	G	G	G	G	G	G	F	D	E	E	D	D	C	E	E	F	F	F	G	G	G
4	2	18	F	F	F	F	F	F	F	F	E	E	E	E	E	E	E	E	E	E	F	G	G	G	G	G
4	2	19	G	F	F	F	E	E	E	E	E	D	E	D	E	E	E	E	E	F	F	E	E	E	E	E
4	2	20	E	E	E	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	2	21	E	E	E	E	F	F	E	F	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E	F
4	2	22	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	E	E	E	E
4	2	23	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	2	24	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	2	25	D	D	D	D	D	D	D	D	D	D	D	C	B	B	B	B	D	D	E	E	F	F	E	E
4	2	26	E	E	E	F	G	G	G	G	E	D	C	C	C	C	B	A	C	D	E	E	E	E	E	E
4	2	27	E	E	E	E	E	E	E	E	D	D	C	C	A	B	A	C	D	E	E	F	F	F	F	F
4	2	28	F	F	F	F	F	F	E	E	D	C	C	B	D	C	C	D	D	D	E	E	E	E	E	E
4	2	29	E	E	E	E	E	D	E	E	E	E	E	D	D	D	E	F	F	F	E	E	E	E	E	E
4	3	1	E	E	E	E	E	E	D	E	F	F	G	G	D	D	D	D	D	D	D	D	D	D	D	D
4	3	2	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D
4	3	3	D	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F
4	3	4	F	F	F	F	E	E	E	E	F	F	F	F	F	G	G	G	G	G	G	G	G	G	G	G
4	3	5	G	G	G	G	G	G	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E
4	3	6	E	E	E	E	E	E	F	E	D	D	D	D	D	C	D	D	D	E	E	D	D	D	D	D
4	3	7	E	E	E	E	E	E	E	D	D	C	B	B	B	C	D	D	D	E	E	F	G	G	G	G
4	3	8	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	3	9	E	E	E	E	E	E	E	D	D	B	A	B	B	B	B	C	C	D	E	F	F	F	F	F
4	3	10	E	E	E	E	E	E	E	D	D	C	A	A	B	D	D	D	D	D	D	D	E	E	E	F
4	3	11	F	E	E	E	E	E	E	D	D	B	A	A	A	B	A	B	B	D	E	E	E	E	F	G
4	3	12	G	G	G	G	G	G	G	F	D	C	B	B	A	B	A	A	B	D	E	E	E	E	E	D
4	3	13	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	E	F	F	F	G	F	F	F	F
4	3	14	E	E	E	E	E	E	E	E	D	D	B	C	B	B	B	C	D	D	E	F	F	F	E	E
4	3	15	E	E	D	E	E	D	E	E	E	E	E	E	E	F	F	G	G	G	F	F	F	F	F	E
4	3	16	E	E	E	E	E	E	E	E	D	D	C	D	D	E	E	E	E	E	E	F	E	F	F	F
4	3	17	F	F	F	F	E	F	F	F	F	E	E	D	D	D	C	A	C	D	E	F	F	E	F	F
4	3	18	F	E	E	E	E	F	E	D	D	C	-	A	A	A	A	A	C	D	E	E	E	E	E	E
4	3	19	E	E	E	E	E	E	E	D	D	B	A	A	A	A	A	B	C	D	E	E	E	E	E	F
4	3	20	F	F	E	E	E	D	E	D	C	A	A	A	A	A	A	A	C	D	D	E	E	E	E	E
4	3	21	D	D	E	E	E	D	D	D	A	A	A	A	A	A	A	B	C	D	D	E	D	D	D	D
4	3	22	D	D	D	D	D	D	D	D	B	A	A	A	A	A	A	A	A	D	E	E	E	E	E	E
4	3	23	E	E	E	E	E	E	E	E	D	C	A	A	A	C	C	D	D	D	E	E	E	E	D	D
4	3	24	D	E	E	E	E	E	E	D	B	B	A	A	B	C	D	D	D	E	E	E	E	E	E	E
4	3	25	E	E	F	G	G	G	G	G	G	F	E	E	D	D	D	E	F	E	E	E	E	E	E	E
4	3	26	E	E	F	G	F	F	F	F	E	E	E	D	C	D	B	C	D	D	E	E	E	E	E	E
4	3	27	E	E	E	E	E	F	E	E	E	G	G	G	G	G	G	F	E	F	E	E	F	G	F	E
4	3	28	E	E	E	E	E	E	E	D	D	D	D	C	B	C	D	D	D	D	E	F	E	F	F	G
4	3	29	F	F	F	E	E	E	E	E	D	D	D	C	D	C	C	D	D	D	E	E	F	F	F	F
4	3	30	F	E	E	E	E	E	E	D	D	B	A	D	D	D	D	C	C	D	E	E	E	G	D	-

B151

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR MN DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 3 31	D	D	E	E	E	E	D	D	D	C	B	B	B	A	A	A	A	G	G	D	D	E	D	-
4 4 1	G	E	G	G	E	G	G	A	B	A	A	A	A	A	A	A	A	E	D	D	E	D	D	F
4 4 2	F	E	E	D	D	D	D	B	B	A	A	A	A	A	A	B	B	C	E	F	F	G	G	G
4 4 3	G	G	G	G	G	F	E	D	C	A	A	A	A	A	A	A	C	D	E	E	F	F	F	F
4 4 4	F	F	F	F	F	F	F	D	C	C	B	A	B	B	B	B	C	D	E	G	G	G	G	G
4 4 5	G	G	G	G	G	G	E	D	C	A	A	A	A	A	A	C	C	D	D	D	D	E	E	E
4 4 6	E	E	F	E	E	E	E	D	D	C	B	B	A	B	C	C	D	D	D	F	F	G	F	F
4 4 7	G	F	F	E	E	E	E	E	D	D	D	D	C	B	A	C	C	D	D	E	F	D	D	D
4 4 8	D	E	E	E	E	E	E	D	A	A	A	A	A	A	A	B	C	D	E	E	E	F	E	E
4 4 9	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	E	E
4 4 10	E	E	D	D	D	D	D	B	A	A	A	A	A	A	A	A	C	D	E	E	E	E	F	F
4 4 11	F	F	F	F	G	G	G	E	C	B	B	B	B	B	A	C	D	D	D	E	E	D	E	F
4 4 12	E	D	E	E	E	E	D	D	C	C	D	B	D	C	C	D	D	D	E	E	E	E	E	E
4 4 13	E	E	E	F	F	E	E	D	C	B	A	B	A	A	B	C	C	D	F	G	G	G	G	G
4 4 14	F	F	F	F	F	F	F	D	C	A	A	A	A	A	A	A	C	D	E	D	D	D	D	D
4 4 15	D	E	E	D	D	D	D	D	D	A	B	A	A	A	A	B	C	E	F	G	G	G	G	G
4 4 16	E	F	G	F	G	G	F	E	B	B	A	A	A	A	A	A	B	D	E	E	E	E	E	E
4 4 17	E	E	E	F	G	F	E	D	D	B	A	A	A	A	A	A	B	D	D	D	D	D	D	D
4 4 18	D	D	D	D	D	D	D	D	B	B	A	B	D	D	D	D	D	D	D	D	D	D	D	E
4 4 19	E	E	E	E	D	D	D	D	C	B	A	B	A	B	B	C	C	D	D	D	D	D	D	D
4 4 20	D	D	D	D	D	E	E	F	F	D	B	A	A	B	A	B	D	D	D	E	E	D	D	D
4 4 21	D	D	E	E	E	E	E	D	C	B	A	A	B	C	C	D	D	D	E	E	D	D	D	D
4 4 22	D	D	D	D	D	D	D	D	D	C	B	B	B	C	D	D	D	D	E	E	D	E	E	E
4 4 23	D	D	D	D	D	D	D	D	B	A	A	A	C	B	B	D	D	D	E	E	E	E	E	E
4 4 24	E	E	D	D	D	D	E	E	E	F	F	F	F	G	G	G	F	F	E	E	E	E	E	E
4 4 25	E	E	E	E	E	E	E	D	D	C	B	B	C	C	B	D	D	D	F	G	G	G	G	G
4 4 26	G	F	E	F	F	E	E	D	D	C	B	B	A	A	B	B	D	D	E	G	G	F	F	F
4 4 27	G	G	G	G	G	G	G	D	C	B	A	A	A	A	A	A	B	D	E	E	E	E	E	E
4 4 28	E	E	E	E	E	E	D	D	C	B	A	A	A	A	A	A	C	D	E	E	D	D	D	D
4 4 29	D	E	E	E	F	E	C	B	B	A	B	C	D	D	D	D	D	D	D	D	D	D	D	D
4 4 30	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E	E	E	D	D	E	E	E	E
4 5 1	E	E	E	E	E	E	D	D	B	B	A	A	A	A	B	B	B	D	D	E	F	E	F	F
4 5 2	G	F	E	E	E	E	E	C	B	B	A	D	C	D	A	A	B	D	D	E	E	E	F	G
4 5 3	G	G	G	G	G	G	E	C	A	A	A	A	A	A	A	A	B	D	E	E	E	E	E	E
4 5 4	E	E	F	E	E	E	E	D	C	C	A	A	A	B	B	C	C	D	E	E	F	G	G	G
4 5 5	G	G	G	F	G	G	E	D	B	A	A	A	A	A	A	A	B	D	E	E	E	E	E	E
4 5 6	E	D	E	E	D	E	D	C	B	B	A	A	A	A	A	A	B	D	D	D	D	D	D	E
4 5 7	E	E	F	F	F	E	D	D	B	B	A	A	B	B	A	A	C	D	D	D	D	D	D	E
4 5 8	E	E	E	E	E	E	E	C	B	A	A	A	A	A	A	A	A	D	D	D	D	D	D	D
4 5 9	F	F	E	E	E	E	E	D	D	D	B	B	A	A	A	B	C	C	D	D	E	E	E	E
4 5 10	E	E	D	E	E	E	E	E	D	C	B	C	B	B	B	C	D	D	D	D	D	E	E	E
4 5 11	E	E	E	E	E	E	E	D	C	A	A	A	A	A	A	A	B	D	D	D	D	D	D	D
4 5 12	D	D	D	D	D	D	D	E	D	D	D	D	E	F	F	F	F	F	F	F	F	E	E	E
4 5 13	G	F	E	E	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	D	D
4 5 14	D	E	E	E	E	D	D	D	B	A	A	A	A	A	A	A	C	D	E	F	G	F	G	G

B152

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4	5	15	G	G	G	G	G	F	F	E	C	A	A	A	A	A	A	A	C	D	E	F	F	F	E		
4	5	16	F	F	E	E	E	E	D	B	A	A	A	A	A	A	A	A	B	D	D	E	E	D	E		
4	5	17	D	D	D	D	D	D	D	C	B	A	A	B	A	A	B	D	E	E	E	E	E	F	E		
4	5	18	F	F	G	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E		
4	5	19	E	E	E	E	E	E	D	B	A	A	B	A	D	D	D	D	D	D	D	E	E	E	E		
4	5	20	E	E	E	F	F	E	E	D	C	D	D	C	B	D	D	D	D	D	F	G	F	E	E		
4	5	21	E	E	E	E	E	E	D	D	D	D	B	A	A	A	A	B	C	D	D	D	D	D	D		
4	5	22	D	E	E	E	E	E	D	D	D	A	C	A	B	A	A	A	C	D	D	D	D	D	F		
4	5	23	E	E	E	E	E	D	D	C	C	C	B	B	B	B	C	D	E	E	E	E	D	E			
4	5	24	D	E	D	D	D	D	D	D	C	D	C	A	D	F	E	E	D	E	D	D	D	D	D		
4	5	25	D	D	E	E	E	D	D	D	C	B	A	A	A	A	A	B	C	D	E	F	F	F	F		
4	5	26	F	F	F	E	E	D	D	C	B	A	A	A	A	A	A	A	B	B	D	D	D	D	E		
4	5	27	E	E	E	F	F	F	E	E	D	C	C	B	A	D	D	D	D	D	E	G	G	G	G		
4	5	28	G	G	F	G	G	F	D	C	B	A	A	A	A	A	A	B	D	D	D	D	D	D	D		
4	5	29	E	D	E	E	E	E	D	C	B	A	A	A	A	A	A	C	D	D	D	F	G	F	E		
4	5	30	F	G	G	G	F	F	E	E	E	D	D	C	B	C	C	D	D	D	E	E	E	E	E		
4	5	31	E	E	E	E	E	E	D	D	C	C	C	C	D	C	C	D	D	D	D	E	E	F	F	F	
4	6	1	F	F	F	F	E	E	D	D	C	C	C	C	C	D	D	D	D	D	E	E	F	F	F		
4	6	2	F	E	E	F	E	E	D	D	B	B	A	B	A	A	B	B	B	C	D	E	F	F	F	F	
4	6	3	F	F	G	F	E	E	D	D	B	B	C	A	B	C	D	B	C	C	C	F	G	G	G	G	
4	6	4	G	G	F	F	F	F	E	D	B	B	A	A	A	A	A	A	A	C	E	E	F	F	F	F	
4	6	5	F	E	E	E	E	E	D	E	-	D	D	-	A	B	C	C	D	D	D	D	E	E	E	E	
4	6	6	E	E	E	E	E	E	E	E	E	D	D	B	A	A	B	C	C	D	D	E	E	E	E	E	
4	6	7	E	E	E	E	E	E	D	D	B	A	A	A	A	A	A	A	B	D	D	D	D	D	D	D	
4	6	8	D	D	D	D	D	D	C	A	B	A	A	A	A	A	A	B	C	D	D	E	D	D	D	D	
4	6	9	E	E	E	D	D	D	D	D	D	D	B	A	A	A	A	A	B	D	D	D	D	D	D	D	
4	6	10	D	D	D	D	D	D	D	D	D	D	D	B	A	A	A	A	A	C	D	D	D	D	D	D	
4	6	11	D	D	D	D	D	D	C	A	-	-	A	A	A	A	C	D	D	E	E	G	F	F	E		
4	6	12	E	E	F	F	E	E	D	C	B	A	A	A	B	A	D	D	D	E	F	F	F	E	D		
4	6	13	E	E	E	D	E	E	D	D	B	C	B	B	B	B	C	D	D	D	E	E	E	E	E		
4	6	14	E	E	E	E	E	E	E	D	C	B	A	A	B	D	E	D	D	D	E	E	D	D	D	D	
4	6	15	D	D	D	D	D	D	D	D	D	D	B	B	A	A	A	A	C	D	D	D	D	D	D	D	
4	6	16	D	E	E	E	E	D	D	D	D	D	D	C	B	C	D	D	B	C	D	D	D	D	D	D	
4	6	17	D	D	D	D	D	D	D	D	A	B	A	A	B	C	B	C	C	D	E	F	F	E	F		
4	6	18	E	E	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	6	19	E	E	E	D	D	D	D	D	C	B	C	B	B	C	B	B	C	C	D	D	E	E	E	E	
4	6	20	E	E	D	D	D	D	D	D	D	C	A	B	A	B	B	C	B	C	D	D	D	D	D	D	
4	6	21	E	D	D	F	E	E	E	D	D	C	A	A	B	B	D	D	D	D	D	E	E	E	E	E	
4	6	22	F	F	F	G	G	G	F	D	D	C	C	C	B	B	B	B	C	D	E	F	G	G	F	F	
4	6	23	F	F	E	E	E	E	D	D	C	C	C	B	B	B	B	B	D	D	E	F	G	G	G	F	
4	6	24	F	F	F	F	E	D	D	D	C	A	A	A	A	A	A	C	D	D	D	D	D	E	F	F	
4	6	25	E	F	E	F	F	F	E	D	B	B	B	A	B	B	B	B	B	C	D	F	G	G	G	G	
4	6	26	G	G	G	G	G	G	F	D	D	D	B	C	A	B	C	B	C	E	E	D	E	E	E	E	E
4	6	27	E	E	E	E	E	E	E	D	D	C	C	C	B	A	B	D	C	C	C	D	E	E	E	F	
4	6	28	E	D	D	D	D	E	D	C	B	A	A	A	A	A	B	B	D	D	D	F	G	G	G	-	

B153



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

		HOURLY STABILITIES																								
		HOURS																								
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	6	29	G	G	G	G	G	G	F	D	C	C	C	A	A	B	A	B	A	A	B	E	F	G	F	F
4	6	30	G	G	G	G	G	F	-	D	C	B	A	A	A	A	A	A	A	A	B	E	F	G	F	E

B154

**JFDs of 10-Meter Wind vs. Delta T**

July-September 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	1	0	0	1	2	3	3	2	2	2	1	2	0	0	19
3.51- 7.50	4	1	0	2	4	4	10	15	10	1	2	1	0	0	0	0	54
7.51-12.50	1	0	0	2	0	0	36	35	46	8	0	0	0	2	2	7	139
12.51-18.50	0	0	0	0	0	0	0	20	16	0	0	0	0	0	0	0	36
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5	1	1	4	4	5	48	73	75	11	4	3	1	4	2	7	248

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	3
3.51- 7.50	8	6	15	4	0	6	9	20	5	2	3	0	1	0	4	1	84
7.51-12.50	1	0	0	1	0	4	6	6	15	2	2	0	0	2	8	14	61
12.51-18.50	0	0	0	0	0	0	1	3	1	0	0	0	0	0	4	2	11
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	10	7	15	5	0	10	16	29	21	4	5	1	1	2	16	17	159

B156

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	3	1	0	0	0	0	1	2	1	0	0	1	0	0	0	9
3.51- 7.50	11	10	5	11	5	4	11	9	7	11	4	2	3	2	0	2	97
7.51-12.50	0	1	0	0	5	2	3	13	10	5	6	1	2	5	5	7	65
12.51-18.50	0	0	0	0	0	0	1	2	2	0	3	0	0	2	4	3	17
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	14	6	11	10	6	15	25	21	17	13	3	6	9	9	12	188

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	6	5	4	1	0	3	0	5	7	7	2	2	1	1	4	7	55
3.51- 7.50	58	28	15	25	19	21	32	31	14	19	9	9	3	6	7	22	318
7.51-12.50	11	2	3	0	4	8	27	40	21	5	7	6	3	3	5	25	170
12.51-18.50	0	0	0	0	0	0	9	30	25	1	1	0	1	0	1	1	69
18.51-24.00	0	0	0	0	0	0	0	4	8	0	0	0	0	0	0	0	12
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	75	35	22	26	23	32	68	110	75	32	19	17	8	10	17	55	624

B157

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	21	6	5	4	5	2	8	19	32	16	9	8	7	6	9	28	185
3.51- 7.50	29	5	3	9	4	6	22	73	82	25	7	3	4	4	13	33	322
7.51-12.50	0	0	4	1	0	3	34	33	20	1	8	1	6	2	3	3	119
12.51-18.50	0	0	0	0	0	0	2	17	3	0	1	0	1	1	1	0	26
18.51-24.00	0	0	0	0	0	0	0	2	2	0	0	1	0	0	0	0	5
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	50	11	12	14	9	11	66	144	139	42	25	13	18	13	26	64	657

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	7	4	3	0	3	2	3	12	24	13	9	12	11	22	24	30	179
3.51- 7.50	3	0	3	0	0	0	0	4	10	2	1	1	0	2	0	2	28
7.51-12.50	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	2
12.51-18.50	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	10	4	6	0	3	2	3	16	34	15	12	13	11	24	24	33	211

B158

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JPD:10M WIND VS 10M DELTA T - JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	2	0	2	1	0	0	1	13	15	10	10	11	7	7	6	13	98
3.51- 7.50	0	0	0	1	1	2	0	2	1	2	0	0	1	2	2	1	15
7.51-12.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	0	2	2	1	2	1	15	16	12	10	11	8	9	8	14	114

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	2
1.01- 3.50	37	19	16	6	8	8	14	53	83	49	32	36	28	38	43	78	548
3.51- 7.50	113	50	41	52	33	43	84	154	129	62	26	16	12	16	26	61	918
7.51-12.50	13	3	7	4	9	17	106	127	112	21	24	8	11	14	23	57	556
12.51-18.50	0	0	0	0	0	0	13	72	47	1	6	0	2	3	10	6	160
18.51-24.00	0	0	0	0	0	0	0	6	10	0	0	1	0	0	0	0	17
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	163	72	64	62	50	68	217	412	381	133	88	61	53	71	102	202	2201

B159

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2208

TOTAL NUMBER OF VALID OBSERVATIONS: 2201

TOTAL NUMBER OF MISSING OBSERVATIONS: 7

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.7 %

MEAN WIND SPEED FOR THIS PERIOD: 6.5 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 416

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 416

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
11.27	7.22	8.54	28.35	29.85	9.59	5.18

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	5	1	1	4	4	5	48	73	75	11	4	3	1	4	2	7	0
B	10	7	15	5	0	10	16	29	21	4	5	1	1	2	16	17	0
C	11	14	6	11	10	6	15	25	21	17	13	3	6	9	9	12	0
D	75	35	22	26	23	32	68	110	75	32	19	17	8	10	17	55	0
E	50	11	12	14	9	11	66	144	139	42	25	13	18	13	26	64	0
F	10	4	6	0	3	2	3	16	34	15	12	13	11	24	24	33	1
G	2	0	2	2	1	2	1	15	16	12	10	11	8	9	8	14	1
TOTAL	163	72	64	62	50	68	217	412	381	133	88	61	53	71	102	202	2

B160

**JFDs of 10-Meter Wind vs. Delta T**

October-December 2004



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	1	0	1	0	1	3	3	0	0	0	0	0	0	0	9
3.51- 7.50	0	0	0	6	10	2	3	1	1	2	2	0	0	0	0	1	28
7.51-12.50	4	4	0	3	0	0	0	1	0	2	1	0	1	0	0	2	18
12.51-18.50	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	6	11
18.51-24.00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	4	1	9	11	2	4	5	6	7	3	0	1	0	0	10	69

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	3
3.51- 7.50	0	0	2	10	3	2	3	1	2	1	0	0	0	2	0	0	26
7.51-12.50	9	5	0	5	0	2	3	3	5	1	1	0	0	1	1	3	39
12.51-18.50	0	0	0	0	0	0	0	0	3	4	1	0	0	2	4	4	18
18.51-24.00	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	4	9
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	9	5	2	16	4	4	6	4	10	11	2	0	0	6	5	11	95

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	2	1	1	5	3	3	4	2	3	2	4	1	0	0	0	0	31
7.51-12.50	4	6	1	3	1	8	6	6	9	2	3	2	1	3	4	6	65
12.51-18.50	1	0	0	0	0	0	1	1	5	1	1	2	1	5	4	2	24
18.51-24.00	0	0	0	0	0	0	0	0	0	3	5	0	0	1	0	2	11
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7	7	2	9	4	11	12	9	17	8	13	5	2	9	8	10	133

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	5	4	1	2	3	3	2	4	6	3	1	4	2	4	1	1	46
3.51- 7.50	31	17	14	20	33	27	27	25	30	23	9	11	16	15	15	14	327
7.51-12.50	56	24	8	11	14	36	54	29	41	19	14	16	17	11	28	29	407
12.51-18.50	9	0	0	0	0	0	6	10	21	12	11	6	8	4	33	31	151
18.51-24.00	0	0	0	0	0	0	0	0	4	2	2	2	1	4	21	26	62
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	5	3	1	4	14
TOTAL	101	45	23	33	50	66	89	68	102	59	38	39	49	41	99	105	1007

B163

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	7	8	9	2	4	6	4	12	6	7	1	4	7	11	6	6	100
3.51- 7.50	26	8	9	12	11	8	21	22	32	12	5	6	4	14	10	18	218
7.51-12.50	1	0	0	0	0	1	15	13	51	14	22	13	13	18	28	16	205
12.51-18.50	0	0	0	0	0	0	0	5	8	4	4	6	1	5	7	8	48
18.51-24.00	0	0	0	0	0	0	0	0	10	2	0	0	0	0	2	1	15
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
TOTAL	34	16	18	14	15	15	40	52	108	39	32	29	25	48	53	50	588

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	8	5	2	5	1	1	5	7	13	4	5	5	3	6	6	10	86
3.51- 7.50	3	2	0	7	2	0	4	11	10	4	5	2	2	5	4	3	64
7.51-12.50	0	0	0	0	0	0	0	0	1	1	6	4	5	3	0	0	20
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	7	2	12	3	1	9	18	24	9	16	13	10	14	10	13	173

B164

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	10	3	3	3	4	3	8	14	22	12	8	9	7	3	4	6	119
3.51- 7.50	0	0	1	6	2	1	3	1	5	0	1	1	0	1	0	1	23
7.51-12.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	10	3	4	9	6	4	11	15	27	12	9	10	7	4	4	7	142

STABILITY CLASS    ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	30	20	16	14	14	13	21	40	50	27	15	22	19	24	17	23	365
3.51- 7.50	62	28	27	66	64	43	65	63	83	44	26	21	22	37	29	37	717
7.51-12.50	74	39	9	22	15	47	78	52	107	39	47	35	37	36	61	56	754
12.51-18.50	12	0	0	0	0	0	7	16	39	22	17	16	10	16	48	51	254
18.51-24.00	0	0	0	0	0	0	0	0	14	13	7	2	1	6	23	34	100
>24.00	0	0	0	0	0	0	0	0	1	0	1	0	5	3	1	5	16
TOTAL	178	87	52	102	93	103	171	171	294	145	113	96	94	122	179	206	2207

B165

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2208

TOTAL NUMBER OF VALID OBSERVATIONS: 2207

TOTAL NUMBER OF MISSING OBSERVATIONS: 1

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 8.4 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 615

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 615

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
3.13	4.30	6.03	45.63	26.64	7.84	6.43

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	6	4	1	9	11	2	4	5	6	7	3	0	1	0	0	10	0
B	9	5	2	16	4	4	6	4	10	11	2	0	0	6	5	11	0
C	7	7	2	9	4	11	12	9	17	8	13	5	2	9	8	10	0
D	101	45	23	33	50	66	89	68	102	59	38	39	49	41	99	105	0
E	34	16	18	14	15	15	40	52	108	39	32	29	25	48	53	50	0
F	11	7	2	12	3	1	9	18	24	9	16	13	10	14	10	13	1
G	10	3	4	9	6	4	11	15	27	12	9	10	7	4	4	7	0
TOTAL	178	87	52	102	93	103	171	171	294	145	113	96	94	122	179	206	1

**JFDs of 10-Meter Wind vs. Delta T**

July-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	2	0	1	1	3	6	6	2	2	2	1	2	0	0	28
3.51- 7.50	4	1	0	8	14	6	13	16	11	3	4	1	0	0	0	1	82
7.51-12.50	5	4	0	5	0	0	36	36	46	10	1	0	1	2	2	9	157
12.51-18.50	2	0	0	0	0	0	0	20	18	1	0	0	0	0	0	6	47
18.51-24.00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	5	2	13	15	7	52	78	81	18	7	3	2	4	2	17	317

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	1	0	1	1	0	0	0	0	1	0	1	0	0	0	0	6
3.51- 7.50	8	6	17	14	3	8	12	21	7	3	3	0	1	2	4	1	110
7.51-12.50	10	5	0	6	0	6	9	9	20	3	3	0	0	3	9	17	100
12.51-18.50	0	0	0	0	0	0	1	3	4	4	1	0	0	2	8	6	29
18.51-24.00	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	4	9
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	19	12	17	21	4	14	22	33	31	15	7	1	1	8	21	28	254

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	3	1	1	0	0	1	1	2	1	0	0	1	0	0	0	11
3.51- 7.50	13	11	6	16	8	7	15	11	10	13	8	3	3	2	0	2	128
7.51-12.50	4	7	1	3	6	10	9	19	19	7	9	3	3	8	9	13	130
12.51-18.50	1	0	0	0	0	0	2	3	7	1	4	2	1	7	8	5	41
18.51-24.00	0	0	0	0	0	0	0	0	0	3	5	0	0	1	0	2	11
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	18	21	8	20	14	17	27	34	38	25	26	8	8	18	17	22	321

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	11	9	5	3	3	6	2	9	13	10	3	6	3	5	5	8	101
3.51- 7.50	89	45	29	45	52	48	59	56	44	42	18	20	19	21	22	36	645
7.51-12.50	67	26	11	11	18	44	81	69	62	24	21	22	20	14	33	54	577
12.51-18.50	9	0	0	0	0	0	15	40	46	13	12	6	9	4	34	32	220
18.51-24.00	0	0	0	0	0	0	0	4	12	2	2	2	1	4	21	26	74
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	5	3	1	4	14
TOTAL	176	80	45	59	73	98	157	178	177	91	57	56	57	51	116	160	1631

B169



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	28	14	14	6	9	8	12	31	38	23	10	12	14	17	15	34	285
3.51- 7.50	55	13	12	21	15	14	43	95	114	37	12	9	8	18	23	51	540
7.51-12.50	1	0	4	1	0	4	49	46	71	15	30	14	19	20	31	19	324
12.51-18.50	0	0	0	0	0	0	2	22	11	4	5	6	2	6	8	8	74
18.51-24.00	0	0	0	0	0	0	0	2	12	2	0	1	0	0	2	1	20
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
TOTAL	84	27	30	28	24	26	106	196	247	81	57	42	43	61	79	114	1245

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	2
1.01- 3.50	15	9	5	5	4	3	8	19	37	17	14	17	14	28	30	40	265
3.51- 7.50	6	2	3	7	2	0	4	15	20	6	6	3	2	7	4	5	92
7.51-12.50	0	0	0	0	0	0	0	0	1	1	7	4	5	3	0	1	22
12.51-18.50	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	21	11	8	12	6	3	12	34	58	24	28	26	21	38	34	46	384

B170

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS    G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	1
1.01- 3.50	12	3	5	4	4	3	9	27	37	22	18	20	14	10	10	19	217
3.51- 7.50	0	0	1	7	3	3	3	3	6	2	1	1	1	3	2	2	38
7.51-12.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	12	3	6	11	7	6	12	30	43	24	19	21	15	13	12	21	256

STABILITY CLASS    ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	3
1.01- 3.50	67	39	32	20	22	21	35	93	133	76	47	58	47	62	60	101	913
3.51- 7.50	175	78	68	118	97	86	149	217	212	106	52	37	34	53	55	98	1635
7.51-12.50	87	42	16	26	24	64	184	179	219	60	71	43	48	50	84	113	1310
12.51-18.50	12	0	0	0	0	0	20	88	86	23	23	16	12	19	58	57	414
18.51-24.00	0	0	0	0	0	0	0	6	24	13	7	3	1	6	23	34	117
>24.00	0	0	0	0	0	0	0	0	1	0	1	0	5	3	1	5	16
TOTAL	341	159	116	164	143	171	388	583	675	278	201	157	147	193	281	408	4408

B171

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 4416

TOTAL NUMBER OF VALID OBSERVATIONS: 4408

TOTAL NUMBER OF MISSING OBSERVATIONS: 8

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 7.4 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 1031

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 1031

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
7.19	5.76	7.28	37.00	28.24	8.71	5.81

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	11	5	2	13	15	7	52	78	81	18	7	3	2	4	2	17	0
B	19	12	17	21	4	14	22	33	31	15	7	1	1	8	21	28	0
C	18	21	8	20	14	17	27	34	38	25	26	8	8	18	17	22	0
D	176	80	45	59	73	98	157	178	177	91	57	56	57	51	116	160	0
E	84	27	30	28	24	26	106	196	247	81	57	42	43	61	79	114	0
F	21	11	8	12	6	3	12	34	58	24	28	26	21	38	34	46	2
G	12	3	6	11	7	6	12	30	43	24	19	21	15	13	12	21	1
TOTAL	341	159	116	164	143	171	388	583	675	278	201	157	147	193	281	408	3

B172

**Stability Classes by Hour of Day**

**10-Meter Wind vs. Delta T**

July-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR MN DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 7 1	E	E	E	E	D	D	D	D	D	C	B	A	A	A	A	C	C	C	D	E	E	E	E	E
4 7 2	E	D	D	E	D	D	D	D	D	D	C	C	C	D	D	D	D	D	E	E	E	E	E	E
4 7 3	E	E	E	E	E	E	E	D	D	C	C	B	B	A	B	C	C	D	D	E	G	G	G	G
4 7 4	E	E	E	E	E	E	D	D	C	B	B	B	B	B	C	C	C	D	D	E	F	F	F	F
4 7 5	E	E	E	F	F	E	E	D	D	D	D	D	D	C	B	C	C	D	D	F	G	G	G	G
4 7 6	F	E	E	E	E	E	E	D	D	C	C	B	C	B	B	B	C	C	D	E	G	G	G	F
4 7 7	F	E	E	E	F	F	E	D	D	C	C	C	D	D	D	D	D	E	D	D	D	D	D	D
4 7 8	D	D	D	D	D	D	D	D	D	C	B	B	C	C	C	C	C	D	D	D	D	D	D	D
4 7 9	E	E	E	E	D	E	E	E	D	C	C	B	C	C	D	D	D	D	F	F	E	F	E	E
4 7 10	F	E	F	F	E	F	E	D	C	C	C	B	A	A	A	A	C	D	D	E	E	E	E	E
4 7 11	E	E	E	E	E	E	D	D	D	C	B	D	D	E	G	E	D	E	D	C	D	E	E	D
4 7 12	E	E	F	E	E	E	D	C	B	B	C	B	A	A	A	A	A	D	E	F	F	F	E	E
4 7 13	F	E	F	F	G	G	E	D	D	D	C	B	B	C	A	D	E	E	E	E	E	F	E	E
4 7 14	E	E	E	E	F	E	E	D	D	D	C	B	B	C	C	D	C	D	E	E	E	F	F	F
4 7 15	F	F	E	E	E	E	E	E	C	A	A	A	D	D	A	A	A	A	D	E	D	D	D	D
4 7 16	D	D	D	D	D	D	D	D	D	B	A	A	A	B	C	C	D	D	D	E	E	E	E	E
4 7 17	E	E	E	E	E	E	D	D	D	C	B	A	B	B	B	C	D	D	E	E	F	F	F	F
4 7 18	F	F	F	E	F	F	F	E	D	A	A	A	B	A	A	A	A	A	D	E	E	E	E	E
4 7 19	E	E	E	E	D	E	D	D	C	C	C	B	B	C	C	C	D	D	D	E	F	F	F	E
4 7 20	E	E	E	F	E	E	E	E	E	D	B	B	A	B	A	A	A	C	D	E	E	E	E	E
4 7 21	E	E	E	E	E	E	F	F	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	E
4 7 22	F	F	F	F	E	D	F	E	D	D	D	D	D	D	D	C	C	D	E	E	F	E	E	D
4 7 23	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 7 24	D	D	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4 7 25	E	E	E	E	E	E	D	D	D	C	B	B	B	C	B	C	D	D	E	F	G	G	G	G
4 7 26	G	F	G	G	G	F	E	D	C	B	B	C	B	A	B	B	B	C	F	F	G	G	G	G
4 7 27	G	F	F	F	F	F	F	D	B	A	A	A	A	A	A	A	A	D	E	F	F	E	E	E
4 7 28	E	E	E	E	E	E	D	C	A	C	B	A	A	B	B	B	E	D	E	E	E	E	E	E
4 7 29	D	D	D	E	D	D	E	E	D	D	D	A	B	C	B	B	C	B	D	E	E	E	E	E
4 7 30	E	E	E	E	E	E	D	D	D	D	C	D	C	C	C	C	D	D	E	F	G	G	G	F
4 7 31	G	F	F	F	F	F	F	D	C	C	B	B	A	A	A	A	A	C	D	E	E	E	E	E
4 8 1	E	E	E	E	E	E	D	D	B	A	A	A	A	A	A	A	C	B	D	D	D	D	E	E
4 8 2	E	E	E	E	E	E	E	D	D	C	B	A	B	A	A	A	A	C	D	E	E	E	E	F
4 8 3	E	E	F	F	E	E	E	B	B	B	A	A	A	A	A	A	B	D	E	E	E	E	D	D
4 8 4	D	D	D	D	D	D	D	D	D	D	C	D	B	D	D	D	D	D	E	E	E	E	E	E
4 8 5	E	E	E	E	E	E	D	D	C	C	B	C	B	B	B	C	C	D	D	E	E	E	E	D
4 8 6	D	D	D	D	D	D	D	B	A	A	A	A	A	A	A	B	B	A	D	D	E	E	E	F
4 8 7	E	E	E	F	E	E	E	D	D	A	A	A	A	A	A	A	B	E	F	F	F	E	E	E
4 8 8	E	E	D	E	E	E	D	E	D	D	B	A	A	A	B	E	E	E	F	F	F	F	E	E
4 8 9	F	E	E	E	E	E	E	D	D	D	C	B	B	B	B	C	D	D	E	F	G	G	G	F
4 8 10	E	E	E	E	E	E	E	D	C	B	A	B	A	B	B	D	D	E	D	E	D	E	D	E
4 8 11	E	E	E	E	E	E	D	D	D	B	B	C	C	C	D	D	D	D	D	E	G	G	G	G
4 8 12	G	G	F	F	F	E	E	D	D	C	B	A	C	C	C	D	D	D	D	E	E	E	E	E
4 8 13	F	F	F	F	E	E	E	D	D	C	B	C	C	D	D	D	D	D	E	E	F	F	G	G

B174

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR MN DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 8 14	F	F	F	F	G	G	G	E	D	C	B	A	B	A	B	C	D	D	F	G	G	F	F	F
4 8 15	F	F	F	F	F	E	E	D	C	A	C	D	D	B	A	B	B	B	D	F	F	F	F	E
4 8 16	E	E	E	E	E	E	E	D	D	D	A	A	A	A	B	C	D	D	E	E	E	E	E	E
4 8 17	E	E	E	E	F	F	F	E	D	B	A	A	A	A	B	C	D	D	E	E	E	E	F	F
4 8 18	E	F	F	E	E	E	E	C	C	C	C	B	D	D	D	D	D	E	E	E	E	D	D	E
4 8 19	E	E	D	D	D	D	D	D	D	B	B	D	D	D	D	D	D	E	F	E	E	E	E	E
4 8 20	E	E	E	E	E	E	E	E	D	C	C	B	B	C	B	C	D	D	E	G	G	G	F	E
4 8 21	F	F	F	F	F	F	F	E	D	B	C	B	A	A	A	A	A	B	D	D	E	E	E	E
4 8 22	E	E	E	E	E	E	E	D	C	B	A	A	A	A	A	B	C	D	E	F	F	E	E	E
4 8 23	E	E	E	E	E	D	D	C	C	D	D	E	D	C	A	A	B	C	D	D	D	D	D	D
4 8 24	D	D	E	E	E	E	E	E	E	D	C	B	C	C	C	D	C	D	D	E	E	D	E	D
4 8 25	D	D	D	D	D	D	D	D	D	D	E	D	D	A	A	B	C	D	F	G	G	G	F	F
4 8 26	F	F	F	F	F	E	D	D	D	C	A	A	A	A	A	C	D	E	F	E	E	E	E	D
4 8 27	D	D	D	D	D	D	C	C	D	D	C	D	A	C	D	D	D	E	D	D	E	D	D	D
4 8 28	D	D	D	D	D	D	D	C	B	B	B	B	B	B	C	D	D	E	E	E	F	F	F	F
4 8 29	F	F	F	F	F	F	F	E	E	E	D	A	A	A	A	A	A	C	E	F	F	F	F	F
4 8 30	F	E	E	E	E	F	E	D	C	B	C	B	C	C	B	C	D	D	E	G	F	F	F	F
4 8 31	G	F	F	E	E	E	E	D	C	B	A	A	B	A	B	C	D	E	E	E	E	E	E	E
4 9 1	E	E	E	E	E	F	E	D	C	C	C	A	B	C	B	D	D	D	E	E	E	E	E	F
4 9 2	E	E	E	E	E	E	E	D	C	A	A	A	A	A	A	A	A	C	E	E	E	E	E	E
4 9 3	E	E	E	E	E	E	E	D	B	A	A	A	A	A	A	A	B	D	E	E	E	E	E	E
4 9 4	E	E	E	D	E	E	E	D	C	A	A	A	A	A	A	A	B	D	E	E	E	E	E	D
4 9 5	E	E	E	E	D	D	D	D	D	A	A	A	A	B	D	E	D	D	E	E	E	E	E	E
4 9 6	E	E	E	E	E	E	E	D	C	C	B	A	A	B	B	D	D	E	F	G	G	G	G	G
4 9 7	G	G	G	G	G	G	F	E	D	B	B	B	A	B	B	C	D	D	E	G	G	F	F	F
4 9 8	F	F	F	F	F	F	E	D	A	B	C	B	C	B	C	D	D	E	F	F	F	F	F	F
4 9 9	E	F	F	F	F	F	E	D	C	A	A	A	A	A	A	A	A	D	E	E	E	E	E	E
4 9 10	E	E	E	E	E	E	E	D	B	A	A	A	A	A	A	A	C	D	E	E	F	E	E	E
4 9 11	E	E	E	E	E	F	F	D	D	C	A	A	A	B	A	A	B	D	E	F	F	G	G	G
4 9 12	F	F	F	F	F	F	E	D	C	A	A	A	A	A	A	A	B	D	E	E	E	E	E	D
4 9 13	D	D	D	E	E	E	D	D	B	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 9 14	D	D	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4 9 15	E	E	E	E	D	D	D	A	C	D	C	D	C	C	C	C	C	D	D	D	E	E	E	E
4 9 16	G	D	G	G	G	D	G	A	A	A	C	B	A	A	B	B	D	D	D	D	D	G	G	G
4 9 17	F	G	G	G	G	F	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D
4 9 18	D	D	D	D	D	E	D	D	E	E	D	D	D	D	D	D	C	D	D	E	E	E	E	E
4 9 19	D	D	E	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4 9 20	E	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D
4 9 21	D	E	D	D	D	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	E	E	E	E
4 9 22	E	E	E	D	D	D	D	E	D	D	D	D	D	D	C	C	D	D	D	E	E	E	E	E
4 9 23	E	F	G	E	D	D	D	E	C	C	D	D	D	C	C	C	C	D	D	D	D	E	F	E
4 9 24	D	D	E	E	E	G	E	A	A	A	A	A	A	A	A	A	A	D	D	D	D	E	D	D
4 9 25	D	D	G	G	D	G	G	A	A	A	B	A	A	A	A	B	B	D	D	E	D	G	F	G
4 9 26	G	G	G	G	G	G	A	C	A	A	C	B	A	A	A	A	A	G	G	D	G	G	G	G
4 9 27	G	G	G	G	F	E	G	A	A	-	-	-	-	-	-	-	A	F	F	D	E	E	E	E

B175

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

YR MN DY	HOURLY STABILITIES																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4 9 28	D	E	D	D	D	D	D	D	E	D	B	A	A	A	A	A	A	E	F	E	E	D	E	G	
4 9 29	G	D	G	G	G	E	F	A	A	A	A	B	A	B	B	A	B	D	D	E	E	E	E	D	
4 9 30	E	E	D	E	D	E	E	E	E	E	D	D	D	D	D	D	D	E	D	E	E	E	E	E	
4 10 1	E	E	D	D	D	E	E	E	E	E	D	D	D	D	D	D	E	D	D	E	E	E	E	E	
4 10 2	E	F	D	G	E	E	G	D	C	A	A	B	A	B	A	A	D	E	D	E	F	F	F	E	
4 10 3	F	E	E	E	F	F	E	E	E	E	D	D	D	C	C	C	D	D	E	E	D	E	E	E	
4 10 4	D	E	E	E	E	D	D	C	C	A	B	B	A	A	A	A	G	G	G	E	E	D	E	G	
4 10 5	G	G	G	G	G	E	G	A	A	D	C	D	C	C	C	C	D	D	D	E	E	D	E	G	
4 10 6	G	D	E	E	E	G	F	C	A	B	C	D	C	D	C	D	D	D	D	E	E	E	E	E	
4 10 7	E	D	D	D	E	E	E	C	B	D	D	D	D	D	E	E	E	E	E	E	D	E	E	E	
4 10 8	E	E	E	E	E	D	E	D	B	B	B	A	A	A	C	C	D	D	E	E	E	E	E	E	
4 10 9	E	D	D	G	G	G	G	A	A	D	A	A	B	C	B	A	D	D	D	E	G	G	D	E	
4 10 10	E	D	E	D	E	F	D	D	B	A	C	C	D	C	C	C	D	D	D	D	D	E	E	G	
4 10 11	D	F	F	G	F	F	G	A	A	A	C	C	C	C	B	A	A	E	G	G	F	E	F	G	F
4 10 12	E	E	E	G	D	E	D	B	D	D	D	D	B	B	A	A	D	E	E	E	E	E	E	F	
4 10 13	E	G	G	F	G	G	G	A	E	D	D	E	E	E	D	D	D	D	E	E	E	E	E	E	
4 10 14	E	E	E	E	E	E	E	E	E	D	D	C	C	C	C	B	D	D	D	D	D	F	E	E	D
4 10 15	E	E	E	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4 10 16	E	E	E	E	E	E	D	E	E	E	D	D	C	C	C	C	D	E	D	E	G	G	G	G	
4 10 17	F	G	F	G	G	G	G	A	A	C	D	D	D	C	D	D	D	D	E	E	E	D	D	E	
4 10 18	D	E	E	E	G	E	B	B	B	B	B	B	B	B	B	B	E	E	F	G	G	G	F	G	
4 10 19	F	F	F	F	F	G	A	D	E	D	B	B	A	A	B	A	F	F	F	E	D	E	D	D	
4 10 20	D	D	E	D	F	F	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	
4 10 21	D	D	D	D	D	D	D	E	E	D	D	D	E	D	D	D	D	D	D	D	E	D	D	D	
4 10 22	D	D	D	D	D	D	D	D	E	D	E	E	E	E	E	E	E	E	E	E	E	E	E	E	
4 10 23	E	E	E	D	D	D	C	D	D	D	D	C	C	C	C	C	D	D	D	E	F	G	F	G	
4 10 24	D	G	G	G	F	G	G	A	A	A	A	B	D	D	D	D	D	D	E	E	E	D	D	D	
4 10 25	E	E	E	E	D	E	E	E	E	B	B	B	B	A	A	B	D	D	D	D	D	E	F	G	
4 10 26	G	G	F	D	D	G	G	A	B	A	B	C	B	D	B	-	D	D	D	D	D	D	D	D	
4 10 27	D	D	D	D	D	D	D	D	D	B	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4 10 28	D	D	D	D	D	D	E	D	D	D	C	C	D	C	D	D	E	E	D	E	E	E	E	E	
4 10 29	E	E	E	E	E	E	D	D	D	C	B	B	C	D	D	D	D	D	E	E	E	D	D	D	
4 10 30	D	D	D	D	D	D	D	D	D	C	B	C	B	B	D	D	E	F	G	G	G	F	E	E	
4 10 31	G	G	G	G	G	G	G	G	F	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	
4 11 1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4 11 2	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	E	E	F	F	F	G	G	G	
4 11 3	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	
4 11 4	D	D	E	E	E	E	E	D	C	B	A	A	B	C	D	D	E	E	F	F	F	F	G	G	
4 11 5	G	G	G	G	F	F	F	E	D	C	B	C	C	C	D	D	E	E	F	F	F	E	E	E	
4 11 6	E	F	F	G	G	G	F	G	E	D	C	C	C	C	D	D	D	E	F	F	F	E	F	F	
4 11 7	F	G	G	G	G	G	F	E	D	C	B	A	B	A	B	C	D	E	E	E	E	E	D	E	
4 11 8	E	E	E	E	E	E	E	D	D	B	B	B	B	C	D	D	E	F	E	E	E	F	F	F	
4 11 9	F	F	E	F	E	E	E	D	D	C	A	A	B	D	D	D	D	D	D	D	E	E	E	E	
4 11 10	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	
4 11 11	D	D	D	D	D	D	D	D	D	B	A	A	A	A	A	C	D	E	E	E	E	E	E	E	

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PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR MN DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 11 12	E	E	E	E	E	E	E	E	D	D	C	C	C	D	C	D	E	E	E	F	F	E	E	E
4 11 13	E	F	E	E	F	G	F	G	E	D	C	C	C	D	D	D	D	E	E	E	E	E	E	E
4 11 14	E	E	E	E	E	D	D	D	D	D	C	C	C	C	C	D	D	D	D	D	D	D	E	E
4 11 15	D	D	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D
4 11 16	D	D	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
4 11 17	D	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	F
4 11 18	F	F	F	F	F	E	D	D	D	D	A	C	D	D	D	D	D	D	D	D	D	D	D	D
4 11 19	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 20	D	D	D	D	D	E	E	E	D	C	B	B	C	D	D	D	D	D	D	D	D	D	E	E
4 11 21	E	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D
4 11 22	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 23	D	D	D	D	E	F	E	D	D	C	B	B	C	B	C	D	D	D	D	D	D	D	D	D
4 11 24	D	D	D	D	D	D	E	D	D	C	A	A	A	A	B	D	D	E	F	F	G	G	G	G
4 11 25	G	F	F	E	E	F	E	E	E	D	C	B	B	C	C	D	D	F	F	E	E	E	D	E
4 11 26	E	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	E	E	E	D
4 11 27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 11 28	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 29	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4 12 1	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	F	F	G	G	G	G	F
4 12 2	G	G	G	G	F	E	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	F	F
4 12 3	F	F	F	E	F	F	F	F	E	D	D	D	D	D	D	D	D	E	F	E	E	F	E	E
4 12 4	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	G	G	G	G	G	G	G
4 12 5	F	F	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 6	E	E	E	E	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	E	E	E	E	E
4 12 8	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	D	E	E	E	E	E	E	F	E
4 12 9	F	F	F	F	F	F	E	F	E	E	D	D	D	D	D	D	D	E	F	F	E	D	D	D
4 12 10	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 11	D	D	D	D	D	D	D	D	D	D	B	C	C	C	C	D	D	E	E	D	E	E	E	E
4 12 12	E	E	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	E
4 12 13	E	D	D	D	D	D	D	D	D	D	B	B	A	B	C	D	D	D	E	D	E	E	E	E
4 12 14	E	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	E	F	E	E	E	E	E
4 12 15	E	E	E	E	E	E	E	E	E	D	C	B	B	C	D	D	D	E	F	E	E	E	E	E
4 12 16	E	E	E	E	E	E	E	E	E	D	C	B	B	C	C	D	D	E	F	F	G	G	G	G
4 12 17	G	G	G	G	F	E	E	D	D	D	D	D	C	C	D	D	E	E	F	G	F	E	F	F
4 12 18	E	E	E	E	E	E	E	E	E	D	D	B	D	D	D	D	D	D	D	D	D	D	D	D
4 12 19	D	D	D	D	D	D	D	D	D	B	C	C	C	C	B	B	C	D	D	D	D	D	D	D
4 12 20	D	D	D	D	D	D	D	D	D	C	B	B	C	C	D	D	D	D	E	E	E	E	F	F
4 12 21	F	E	E	E	E	D	D	D	D	D	C	B	B	B	C	D	D	D	D	D	D	D	D	D
4 12 22	D	D	D	D	D	D	D	D	D	C	C	B	A	B	B	C	D	E	E	E	E	E	E	E
4 12 23	D	D	D	D	E	D	D	D	C	A	A	A	B	B	C	D	D	E	E	E	F	F	F	F
4 12 24	F	F	F	F	F	F	E	E	D	B	A	A	A	B	D	D	D	D	D	D	D	D	D	D
4 12 25	D	D	E	E	D	D	E	D	D	C	A	A	C	D	D	D	D	E	E	F	E	F	F	E
4 12 26	E	F	F	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	D	D	D	D	D	E

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PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

YR MN DY	HOURLY STABILITIES																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 12 27	D	D	D	D	D	D	D	D	D	D	D	B	B	B	D	D	E	E	E	F	G	E	E	E
4 12 28	E	E	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	F	G	E	F	F	G	G
4 12 29	G	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	E	E	E	D	D	E	D	D
4 12 30	D	D	D	D	D	D	E	E	D	D	D	C	D	C	D	D	E	E	F	F	F	F	F	F
4 12 31	F	F	F	G	G	F	F	F	E	D	C	C	B	B	C	D	D	E	E	F	E	E	D	D

**JFDs of 10-Meter Wind vs. Delta T**

January-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	2	0	1	3	3	6	6	2	2	2	1	2	0	0	30
3.51- 7.50	10	5	0	10	17	9	20	22	14	5	5	1	0	0	0	5	123
7.51-12.50	35	5	5	7	0	2	46	64	73	22	5	0	2	3	5	32	306
12.51-18.50	5	5	1	0	0	0	2	43	75	22	2	0	0	0	1	30	186
18.51-24.00	0	0	0	0	0	0	1	5	30	10	0	0	0	0	5	7	58
>24.00	0	0	0	0	0	0	0	0	0	7	0	0	0	0	1	0	8
TOTAL	50	15	8	17	18	14	72	140	198	68	14	3	3	5	12	74	711

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	1	0	1	1	0	1	1	1	1	0	1	0	0	0	0	10
3.51- 7.50	22	12	23	19	10	14	18	29	13	9	5	2	3	7	9	10	205
7.51-12.50	23	7	2	8	3	6	13	20	33	11	6	2	4	7	11	28	184
12.51-18.50	2	1	0	0	2	0	1	7	14	14	3	0	0	10	19	13	86
18.51-24.00	0	0	0	0	0	0	0	0	5	6	0	0	0	1	6	4	22
>24.00	0	0	0	0	0	0	0	0	1	2	0	0	0	0	3	0	6
TOTAL	49	21	25	28	16	20	33	57	67	43	14	5	7	25	48	55	513

B180

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* ANNUAL \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	3	2	1	1	2	1	4	2	2	0	1	1	0	0	1	21
3.51- 7.50	27	16	11	21	13	15	24	22	16	17	10	6	7	3	1	8	217
7.51-12.50	11	9	1	7	13	15	17	27	32	15	10	7	6	13	15	20	218
12.51-18.50	4	0	0	0	0	3	2	11	13	4	6	5	4	17	11	10	90
18.51-24.00	0	0	0	0	0	0	0	2	2	4	5	1	0	8	0	3	25
>24.00	0	0	0	0	0	0	0	0	2	1	0	0	0	0	2	0	5
TOTAL	42	28	14	29	27	35	44	66	67	43	31	20	18	41	29	42	576

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	22	22	11	5	6	6	6	17	20	18	7	8	3	7	9	11	178
3.51- 7.50	163	89	86	99	90	68	99	98	64	53	28	34	28	31	33	61	1124
7.51-12.50	142	55	20	23	64	70	99	109	137	50	38	32	41	44	89	114	1127
12.51-18.50	15	0	0	0	3	1	19	68	97	27	19	17	28	29	102	83	508
18.51-24.00	0	0	0	0	0	0	1	4	27	14	2	4	7	13	54	36	162
>24.00	0	0	0	0	0	0	0	0	3	0	2	3	6	3	3	5	25
TOTAL	342	166	117	127	163	145	224	296	348	162	96	98	113	127	290	310	3124

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	52	25	18	11	11	10	19	49	55	37	16	17	25	23	25	55	448
3.51- 7.50	112	41	31	38	25	27	101	141	178	67	24	21	24	38	50	97	1015
7.51-12.50	41	4	6	2	13	14	90	79	139	45	49	33	43	52	54	71	735
12.51-18.50	5	0	0	0	1	0	7	35	24	13	8	18	10	16	27	23	187
18.51-24.00	0	0	0	0	0	0	1	9	14	5	0	1	0	3	12	3	48
>24.00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	3
TOTAL	210	70	55	51	50	51	218	314	411	167	97	90	102	132	168	250	2436

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	3
1.01- 3.50	35	16	9	7	4	4	14	41	67	39	24	30	21	38	42	65	456
3.51- 7.50	17	7	7	9	2	2	15	45	56	18	12	8	6	11	13	24	252
7.51-12.50	15	4	2	1	3	3	3	3	13	5	10	17	20	10	3	5	117
12.51-18.50	2	0	0	0	0	2	1	1	3	1	1	4	2	1	0	1	19
18.51-24.00	0	0	0	0	0	0	0	3	0	1	0	0	0	1	1	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	69	27	18	17	9	11	33	93	139	64	47	59	49	61	59	95	853

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	5
1.01- 3.50	29	8	9	6	8	9	22	58	70	42	28	24	16	25	25	47	426
3.51- 7.50	4	5	5	7	4	4	7	7	10	10	3	1	2	3	2	2	76
7.51-12.50	7	4	3	1	0	2	2	4	2	1	0	1	0	0	2	3	32
12.51-18.50	0	0	0	0	0	0	1	3	0	1	0	0	0	1	2	0	8
18.51-24.00	0	0	0	0	0	0	0	3	0	0	1	0	0	2	0	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	40	17	17	14	12	15	32	75	82	54	32	26	18	31	31	52	553

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	8
1.01- 3.50	140	75	51	31	32	34	66	176	221	141	77	83	67	95	101	179	1569
3.51- 7.50	355	175	163	203	161	139	284	364	351	179	87	73	70	93	108	207	3012
7.51-12.50	274	88	39	49	96	112	270	306	429	149	118	92	116	129	179	273	2719
12.51-18.50	33	6	1	0	6	6	33	168	226	82	39	44	44	74	162	160	1084
18.51-24.00	0	0	0	0	0	0	3	26	78	40	8	6	7	28	78	53	327
>24.00	0	0	0	0	0	0	0	1	7	10	2	3	6	3	9	6	47
TOTAL	802	344	254	283	295	291	656	1041	1312	601	331	301	310	422	637	878	8766

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS  
 WIND MEASURED AT: 10.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 8784

TOTAL NUMBER OF VALID OBSERVATIONS: 8766

TOTAL NUMBER OF MISSING OBSERVATIONS: 18

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 8.1 MPH

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 1104

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 1104

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
8.11	5.85	6.57	35.64	27.79	9.73	6.31

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	50	15	8	17	18	14	72	140	198	68	14	3	3	5	12	74	0
B	49	21	25	28	16	20	33	57	67	43	14	5	7	25	48	55	0
C	42	28	14	29	27	35	44	66	67	43	31	20	18	41	29	42	0
D	342	166	117	127	163	145	224	296	348	162	96	98	113	127	290	310	0
E	210	70	55	51	50	51	218	314	411	167	97	90	102	132	168	250	0
F	69	27	18	17	9	11	33	93	139	64	47	59	49	61	59	95	3
G	40	17	17	14	12	15	32	75	82	54	32	26	18	31	31	52	5
TOTAL	802	344	254	283	295	291	656	1041	1312	601	331	301	310	422	637	878	8

B184

**JFDs of 100-Meter Wind vs. Delta T**

January-March 2004



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
3.51- 7.50	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2
7.51-12.50	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	2
12.51-18.50	1	0	0	0	0	1	0	3	1	1	0	0	0	0	0	5	12
18.51-24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2	4
TOTAL	1	0	0	0	0	1	2	4	6	1	1	0	0	0	0	9	25

STABILITY CLASS B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2
7.51-12.50	0	0	0	2	0	1	0	1	3	0	0	0	0	0	0	0	7
12.51-18.50	1	0	0	0	0	0	0	2	4	1	0	0	0	0	0	3	11
18.51-24.00	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	1	5
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	2	6
TOTAL	1	0	0	2	1	1	0	5	10	2	0	0	0	0	3	6	31

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	0	3
3.51- 7.50	1	1	1	0	1	2	2	1	1	0	0	0	1	0	0	0	11
7.51-12.50	3	0	0	1	2	1	3	4	6	0	0	0	0	1	0	1	22
12.51-18.50	11	0	0	0	2	0	3	2	1	2	1	0	0	0	0	3	25
18.51-24.00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	6	10
>24.00	0	0	0	0	0	0	0	3	2	0	0	1	0	0	5	1	12
TOTAL	15	1	1	1	5	5	8	11	10	2	1	2	1	1	8	11	83

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	1	1	1	1	0	2	1	2	1	1	0	1	2	1	16
3.51- 7.50	7	9	12	8	2	4	8	2	5	2	5	6	5	2	3	8	88
7.51-12.50	21	14	18	15	20	14	10	15	15	15	11	8	13	16	10	8	223
12.51-18.50	35	22	8	2	23	18	11	8	19	12	9	7	13	25	60	40	312
18.51-24.00	19	4	0	0	4	9	3	10	25	3	6	5	9	12	57	36	202
>24.00	8	0	0	0	0	0	1	5	18	2	1	6	4	6	36	17	104
TOTAL	90	50	39	26	50	46	33	42	83	36	33	33	44	62	168	110	945

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	1	0	0	0	0	0	2	0	0	1	0	0	0	0	5
3.51- 7.50	0	0	3	3	2	2	4	1	2	2	1	0	0	3	1	1	25
7.51-12.50	9	7	11	4	14	6	18	16	10	23	7	5	7	7	2	21	167
12.51-18.50	23	7	2	1	6	13	8	26	27	28	16	9	13	15	25	48	267
18.51-24.00	9	0	0	0	0	3	12	22	22	8	9	2	9	24	14	12	146
>24.00	8	0	0	0	0	0	4	24	10	1	2	5	2	8	12	9	85
TOTAL	49	15	17	8	22	24	46	89	73	62	35	22	31	57	54	91	695

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	3
3.51- 7.50	2	1	2	1	3	1	4	6	0	8	1	2	2	2	1	4	40
7.51-12.50	1	5	2	3	2	3	10	9	8	14	5	2	1	1	6	2	74
12.51-18.50	1	3	3	2	2	1	5	20	22	10	8	5	5	4	0	4	95
18.51-24.00	7	0	0	0	0	0	2	12	7	0	4	2	13	10	4	2	63
>24.00	1	0	0	0	0	0	3	4	2	0	0	2	6	7	0	0	25
TOTAL	12	9	7	6	7	5	24	51	39	32	18	14	27	24	11	14	300

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
3.51- 7.50	3	0	0	0	0	2	0	3	2	2	1	0	0	3	2	3	21
7.51-12.50	3	1	0	1	0	1	0	6	3	2	2	2	3	5	1	2	32
12.51-18.50	2	3	3	0	0	0	2	4	9	0	1	4	2	5	0	4	39
18.51-24.00	1	0	1	0	0	0	0	0	1	0	2	2	0	0	1	0	8
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	10	4	4	1	0	3	2	13	15	4	6	8	5	13	5	9	102

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	2	2	1	1	3	0	2	3	2	2	4	0	1	2	3	29
3.51- 7.50	13	11	18	12	9	11	19	15	10	14	8	8	8	10	7	16	189
7.51-12.50	37	27	31	26	38	26	42	51	46	54	25	17	24	30	19	34	527
12.51-18.50	74	35	16	5	33	33	29	65	83	54	35	25	33	49	85	107	761
18.51-24.00	36	4	1	0	4	12	17	46	59	12	21	11	31	46	79	59	438
>24.00	17	0	0	0	0	0	8	36	35	3	3	14	12	21	57	31	237
TOTAL	178	79	68	44	85	85	115	215	236	139	94	79	108	157	249	250	2181

B189

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 3/31/ 4

\*\*\* JAN-MAR 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2184

TOTAL NUMBER OF VALID OBSERVATIONS: 2181

TOTAL NUMBER OF MISSING OBSERVATIONS: 3

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.9 %

MEAN WIND SPEED FOR THIS PERIOD: 15.6 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 53

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 35

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 35

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 53

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

	A	B	C	D	E	F	G
	1.15	1.42	3.81	43.33	31.87	13.76	4.68

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	1	0	0	0	0	1	2	4	6	1	1	0	0	0	0	9	0
B	1	0	0	2	1	1	0	5	10	2	0	0	0	0	3	6	0
C	15	1	1	1	5	5	8	11	10	2	1	2	1	1	8	11	0
D	90	50	39	26	50	46	33	42	83	36	33	33	44	62	168	110	0
E	49	15	17	8	22	24	46	89	73	62	35	22	31	57	54	91	0
F	12	9	7	6	7	5	24	51	39	32	18	14	27	24	11	14	0
G	10	4	4	1	0	3	2	13	15	4	6	8	5	13	5	9	0
TOTAL	178	79	68	44	85	85	115	215	236	139	94	79	108	157	249	250	0

B190

**JFDs of 100-Meter Wind vs. Delta T**

April-June 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	5
3.51- 7.50	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
7.51-12.50	0	0	0	1	3	3	4	1	1	1	0	0	0	0	0	0	14
12.51-18.50	3	0	0	0	0	1	0	4	3	2	0	0	0	0	0	0	13
18.51-24.00	1	1	0	0	0	0	0	2	13	2	0	0	0	0	0	4	23
>24.00	0	0	0	0	0	0	0	0	20	5	0	0	0	0	0	2	27
TOTAL	4	1	0	1	3	6	4	7	38	12	2	0	0	0	0	6	84

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	1	1	1	0	1	0	0	2	0	0	0	0	6
7.51-12.50	5	1	0	1	0	0	5	4	4	4	1	0	0	0	0	0	25
12.51-18.50	6	0	1	0	0	0	0	6	8	12	0	0	0	0	0	5	38
18.51-24.00	1	1	2	0	0	0	0	5	6	1	0	0	0	0	0	5	21
>24.00	0	0	0	0	0	0	1	3	8	3	0	0	0	0	0	0	15
TOTAL	12	2	3	1	1	1	7	18	27	20	1	2	0	0	0	10	105

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS    C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
3.51- 7.50	2	2	1	0	0	0	1	2	2	2	4	2	0	0	0	0	18
7.51-12.50	13	2	0	1	0	0	4	12	5	8	2	0	1	3	2	10	63
12.51-18.50	1	0	3	1	0	0	1	9	16	9	3	1	0	1	6	10	61
18.51-24.00	1	4	0	0	1	0	0	2	10	4	1	0	0	1	3	4	31
>24.00	0	0	0	0	0	0	0	2	7	2	0	0	0	0	3	0	14
TOTAL	17	8	4	2	1	0	6	27	40	25	10	3	2	5	14	24	188

STABILITY CLASS    D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	3	1	1	0	0	2	1	1	0	1	2	0	0	0	1	0	13
3.51- 7.50	24	15	13	9	10	13	12	14	11	14	5	5	4	5	2	9	165
7.51-12.50	27	12	20	18	22	13	8	28	20	14	7	5	10	11	7	14	236
12.51-18.50	40	16	10	14	17	13	6	23	46	18	8	10	8	12	12	43	296
18.51-24.00	24	3	1	2	2	5	0	17	44	19	4	3	4	16	12	15	171
>24.00	4	2	0	0	0	1	1	14	31	13	0	1	6	12	2	6	93
TOTAL	122	49	45	43	51	47	28	97	152	79	26	24	32	56	36	87	974



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	0	0	2	1	0	0	0	0	1	1	1	0	0	0	1	9
3.51- 7.50	5	6	3	7	2	9	6	1	4	5	4	0	1	2	1	3	59
7.51-12.50	24	24	10	6	2	3	10	21	19	19	14	4	1	2	6	12	177
12.51-18.50	29	5	7	8	7	7	23	26	33	23	8	4	9	8	15	18	230
18.51-24.00	6	1	1	1	5	2	6	2	26	3	2	4	3	2	3	3	70
>24.00	3	0	0	0	1	0	1	3	0	1	0	0	2	4	1	1	17
TOTAL	69	36	21	24	18	21	46	53	82	52	29	13	16	18	26	38	562

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	4
3.51- 7.50	0	5	3	2	2	4	1	5	2	2	2	0	1	0	2	6	37
7.51-12.50	11	3	2	3	2	0	4	11	12	4	7	0	3	1	2	5	70
12.51-18.50	8	2	0	2	1	0	1	11	8	5	1	0	1	0	6	11	57
18.51-24.00	0	0	0	0	0	0	0	1	2	0	1	0	5	2	1	0	12
>24.00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
TOTAL	21	10	5	8	5	4	7	28	24	11	11	0	10	3	12	22	181

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY CLASS    G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	0	0	0	1	0	1	1	0	0	2	1	0	0	1	8
3.51- 7.50	0	1	1	0	1	2	5	6	3	4	4	1	0	1	0	0	29
7.51-12.50	3	1	0	0	0	0	1	8	6	5	0	0	1	1	1	4	31
12.51-18.50	0	0	0	0	0	0	0	0	7	0	1	2	2	1	0	2	15
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	3
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	3	1	0	1	3	6	15	17	9	5	6	5	4	1	7	86

STABILITY CLASS    ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	7	2	1	3	1	3	1	2	2	4	5	3	2	0	2	2	40
3.51- 7.50	31	29	21	18	16	31	26	28	23	27	19	10	6	8	5	18	316
7.51-12.50	83	43	32	30	29	19	36	85	67	55	31	9	16	18	18	45	616
12.51-18.50	87	23	21	25	25	21	31	79	121	69	21	17	20	22	39	89	710
18.51-24.00	33	10	4	3	8	7	6	29	101	29	8	8	13	22	19	31	331
>24.00	7	2	0	0	1	1	4	22	66	24	0	1	8	16	6	9	167
TOTAL	248	109	79	79	80	82	104	245	380	208	84	48	65	86	89	194	2180

B195

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 4/ 1/ 4 - 6/30/ 4

\*\*\* APR-JUN 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2184

TOTAL NUMBER OF VALID OBSERVATIONS: 2180

TOTAL NUMBER OF MISSING OBSERVATIONS: 4

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 14.1 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 38

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 38

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 38

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 38

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

	A	B	C	D	E	F	G
	3.85	4.82	8.62	44.68	25.78	8.30	3.94

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	4	1	0	1	3	6	4	7	38	12	2	0	0	0	0	6	0
B	12	2	3	1	1	1	7	18	27	20	1	2	0	0	0	10	0
C	17	8	4	2	1	0	6	27	40	25	10	3	2	5	14	24	0
D	122	49	45	43	51	47	28	97	152	79	26	24	32	56	36	87	0
E	69	36	21	24	18	21	46	53	82	52	29	13	16	18	26	38	0
F	21	10	5	8	5	4	7	28	24	11	11	0	10	3	12	22	0
G	3	3	1	0	1	3	6	15	17	9	5	6	5	4	1	7	0
TOTAL	248	109	79	79	80	82	104	245	380	208	84	48	65	86	89	194	0

B196

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**JFDs of 100-Meter Wind vs. Delta T**

January-June 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	1	2	3	0	0	0	0	0	6
3.51- 7.50	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	4
7.51-12.50	0	0	0	1	3	3	5	1	2	1	0	0	0	0	0	0	16
12.51-18.50	4	0	0	0	0	2	0	7	4	3	0	0	0	0	0	5	25
18.51-24.00	1	1	0	0	0	0	0	2	15	2	0	0	0	0	0	6	27
>24.00	0	0	0	0	0	0	0	0	22	5	0	0	0	0	0	4	31
TOTAL	5	1	0	1	3	7	6	11	44	13	3	0	0	0	0	15	109

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	2	1	1	1	1	0	0	2	0	0	0	0	8
7.51-12.50	5	1	0	3	0	1	5	5	7	4	1	0	0	0	0	0	32
12.51-18.50	7	0	1	0	0	0	0	8	12	13	0	0	0	0	0	8	49
18.51-24.00	1	1	2	0	0	0	0	6	8	2	0	0	0	0	0	6	26
>24.00	0	0	0	0	0	0	1	3	9	3	0	0	0	0	3	2	21
TOTAL	13	2	3	3	2	2	7	23	37	22	1	2	0	0	3	16	136

B198

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	2	0	0	0	0	0	1	1	0	0	0	4
3.51- 7.50	3	3	2	0	1	2	3	3	3	2	4	2	1	0	0	0	29
7.51-12.50	16	2	0	2	2	1	7	16	11	8	2	0	1	4	2	11	85
12.51-18.50	12	0	3	1	2	0	4	11	17	11	4	1	0	1	6	13	86
18.51-24.00	1	4	0	0	1	0	0	3	10	4	1	0	0	1	6	10	41
>24.00	0	0	0	0	0	0	0	5	9	2	0	1	0	0	8	1	26
TOTAL	32	9	5	3	6	5	14	38	50	27	11	5	3	6	22	35	271

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	3	2	2	1	1	3	1	3	1	3	3	1	0	1	3	1	29
3.51- 7.50	31	24	25	17	12	17	20	16	16	16	10	11	9	7	5	17	253
7.51-12.50	48	26	38	33	42	27	18	43	35	29	18	13	23	27	17	22	459
12.51-18.50	75	38	18	16	40	31	17	31	65	30	17	17	21	37	72	83	608
18.51-24.00	43	7	1	2	6	14	3	27	69	22	10	8	13	28	69	51	373
>24.00	12	2	0	0	0	1	2	19	49	15	1	7	10	18	38	23	197
TOTAL	212	99	84	69	101	93	61	139	235	115	59	57	76	118	204	197	1919

B199

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	1	1	2	1	0	0	0	2	1	1	2	0	0	0	1	14
3.51- 7.50	5	6	6	10	4	11	10	2	6	7	5	0	1	5	2	4	84
7.51-12.50	33	31	21	10	16	9	28	37	29	42	21	9	8	9	8	33	344
12.51-18.50	52	12	9	9	13	20	31	52	60	51	24	13	22	23	40	66	497
18.51-24.00	15	1	1	1	5	5	18	24	48	11	11	6	12	26	17	15	216
>24.00	11	0	0	0	1	0	5	27	10	2	2	5	4	12	13	10	102
TOTAL	118	51	38	32	40	45	92	142	155	114	64	35	47	75	80	129	1257

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	0	0	1	0	0	0	0	0	0	0	1	0	0	1	2	7
3.51- 7.50	2	6	5	3	5	5	5	11	2	10	3	2	3	2	3	10	77
7.51-12.50	12	8	4	6	4	3	14	20	20	18	12	2	4	2	8	7	144
12.51-18.50	9	5	3	4	3	1	6	31	30	15	9	5	6	4	6	15	152
18.51-24.00	7	0	0	0	0	0	2	13	9	0	5	2	18	12	5	2	75
>24.00	1	0	0	0	0	0	4	4	2	0	0	2	6	7	0	0	26
TOTAL	33	19	12	14	12	9	31	79	63	43	29	14	37	27	23	36	481

B200

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY CLASS    G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	1	0	0	0	1	0	1	1	0	0	2	1	0	0	1	9
3.51- 7.50	3	1	1	0	1	4	5	9	5	6	5	1	0	4	2	3	50
7.51-12.50	6	2	0	1	0	1	1	14	9	7	2	2	4	6	2	6	63
12.51-18.50	2	3	3	0	0	0	2	4	16	0	2	6	4	6	0	6	54
18.51-24.00	1	0	1	0	0	0	0	0	1	0	2	3	1	1	1	0	11
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL	13	7	5	1	1	6	8	28	32	13	11	14	10	17	6	16	188

STABILITY CLASS    ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	8	4	3	4	2	6	1	4	5	6	7	7	2	1	4	5	69
3.51- 7.50	44	40	39	30	25	42	45	43	33	41	27	18	14	18	12	34	505
7.51-12.50	120	70	63	56	67	45	78	136	113	109	56	26	40	48	37	79	1143
12.51-18.50	161	58	37	30	58	54	60	144	204	123	56	42	53	71	124	196	1471
18.51-24.00	69	14	5	3	12	19	23	75	160	41	29	19	44	68	98	90	769
>24.00	24	2	0	0	1	1	12	58	101	27	3	15	20	37	63	40	404
TOTAL	426	188	147	123	165	167	219	460	616	347	178	127	173	243	338	444	4361

B201



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

\*\*\* JAN-JUN 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 4368

TOTAL NUMBER OF VALID OBSERVATIONS: 4361

TOTAL NUMBER OF MISSING OBSERVATIONS: 7

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 14.9 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 91

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 73

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 73

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 91

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
2.50	3.12	6.21	44.00	28.82	11.03	4.31

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	5	1	0	1	3	7	6	11	44	13	3	0	0	0	0	15	0
B	13	2	3	3	2	2	7	23	37	22	1	2	0	0	3	16	0
C	32	9	5	3	6	5	14	38	50	27	11	5	3	6	22	35	0
D	212	99	84	69	101	93	61	139	235	115	59	57	76	118	204	197	0
E	118	51	38	32	40	45	92	142	155	114	64	35	47	75	80	129	0
F	33	19	12	14	12	9	31	79	63	43	29	14	37	27	23	36	0
G	13	7	5	1	1	6	8	28	32	13	11	14	10	17	6	16	0
TOTAL	426	188	147	123	165	167	219	460	616	347	178	127	173	243	338	444	0

B202

**Stability Classes by Hour of Day**

**100-Meter Wind vs. Delta T**

January-June 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

			HOURLY STABILITIES																							
			HOURS																							
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	1	1	E	E	E	E	E	F	E	F	E	D	D	D	D	D	D	E	E	F	F	F	F	G	G	
4	1	2	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	E	E	E	E	F	E	E	D	
4	1	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	1	4	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	1	5	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	
4	1	6	F	F	F	F	F	F	F	E	E	E	D	D	D	D	D	E	E	F	E	G	G	G	G	
4	1	7	G	G	F	F	F	E	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	
4	1	8	E	D	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	
4	1	9	E	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	
4	1	10	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	E	F	F	E	E	E	E	E	
4	1	11	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	E	F	F	F	F	F	F	
4	1	12	F	E	E	E	E	E	E	E	E	D	C	D	D	D	D	D	F	G	G	G	G	G	G	
4	1	13	F	F	F	E	E	E	F	F	E	D	D	D	D	D	D	D	E	E	F	F	F	F	F	
4	1	14	F	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	R	
4	1	15	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	F	E	E	F	F	F	F	
4	1	16	F	F	F	F	F	F	F	G	F	E	E	E	F	F	G	G	G	G	G	G	G	G	G	
4	1	17	G	G	G	G	G	G	G	F	F	F	F	F	F	F	F	F	F	E	E	E	E	E	E	
4	1	18	E	E	E	D	D	D	D	D	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D	
4	1	19	D	D	D	D	D	D	D	D	D	D	B	C	C	D	D	D	D	D	E	E	E	E	E	
4	1	20	E	E	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	
4	1	21	E	E	F	F	F	F	F	E	E	E	D	D	D	D	D	D	E	E	E	E	D	D	D	
4	1	22	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
4	1	23	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	F	F	F	F	E	E	
4	1	24	E	E	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	
4	1	25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	1	26	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	1	27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	F	F	
4	1	28	F	F	F	G	E	E	E	D	D	D	D	D	C	C	D	D	D	D	D	D	E	E	E	
4	1	29	D	D	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	
4	1	30	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	
4	1	31	D	D	D	D	D	D	D	D	D	D	C	C	C	B	C	D	D	D	D	D	E	E	E	
4	2	1	E	E	E	D	D	D	D	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	
4	2	2	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	2	3	E	E	E	E	E	E	E	F	E	D	D	D	C	D	D	D	E	E	E	F	F	E	E	
4	2	4	E	E	E	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	E	D	
4	2	5	D	D	D	E	E	E	E	E	E	E	E	E	E	D	D	D	E	E	E	E	E	E	E	
4	2	6	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	2	7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	G	G	
4	2	8	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	E	E	D	D	D	D	E	
4	2	9	E	E	E	E	E	F	F	F	E	E	D	D	D	D	D	D	E	E	E	F	F	F	E	
4	2	10	E	E	E	E	E	F	E	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E	
4	2	11	E	E	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D	
4	2	12	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	
4	2	13	F	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	2	14	E	E	F	F	F	F	G	G	F	E	D	C	C	C	C	D	D	D	D	D	D	D	D	

B204

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	2	15	D	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G
4	2	16	G	G	G	F	F	F	F	F	F	E	D	D	C	C	C	D	D	D	E	E	F	F	F	G
4	2	17	G	G	G	G	G	G	G	G	F	D	E	E	D	D	D	D	E	E	F	F	F	F	G	F
4	2	18	F	F	F	F	E	F	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	G	G	G
4	2	19	G	G	F	F	F	F	F	F	F	E	E	D	D	D	D	E	E	E	F	F	E	E	E	E
4	2	20	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	2	21	E	E	E	E	F	F	E	F	E	D	D	D	D	D	D	D	D	E	F	F	F	E	F	F
4	2	22	E	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4	2	23	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	2	24	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	2	25	D	D	D	D	D	D	D	D	D	D	C	B	B	C	C	C	D	D	E	E	F	F	E	E
4	2	26	E	E	E	F	F	F	F	F	E	D	D	C	C	C	C	C	D	D	E	E	F	F	F	F
4	2	27	F	F	E	E	E	E	E	E	D	D	C	C	C	C	C	D	D	E	E	F	F	F	F	F
4	2	28	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	2	29	E	E	E	E	E	E	E	E	F	F	F	D	D	D	E	F	F	F	E	E	E	E	E	E
4	3	1	E	E	E	E	E	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D
4	3	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D
4	3	3	E	E	E	E	F	F	F	E	E	E	F	F	F	F	F	F	F	F	G	G	G	F	G	G
4	3	4	G	G	F	F	F	F	F	F	F	F	G	G	G	G	F	F	F	F	G	G	G	G	G	G
4	3	5	G	G	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
4	3	6	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D
4	3	7	E	E	E	E	E	E	E	D	D	D	D	C	C	C	D	D	D	D	E	E	F	G	G	G
4	3	8	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	3	9	E	D	E	E	E	E	E	D	D	C	C	C	C	C	C	D	D	D	E	F	F	F	F	F
4	3	10	E	E	E	E	E	E	E	D	D	D	C	B	B	C	D	D	D	D	D	D	E	E	F	F
4	3	11	F	F	E	E	E	E	E	D	D	C	B	B	B	C	C	C	D	D	E	E	E	E	F	F
4	3	12	F	F	G	G	G	G	F	F	D	C	B	B	B	C	B	B	D	D	E	E	E	E	E	D
4	3	13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4	3	14	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E	E
4	3	15	E	E	E	E	E	D	E	E	E	E	E	E	E	F	F	F	F	F	E	E	E	E	E	E
4	3	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	F	F
4	3	17	F	F	F	F	E	F	F	F	F	E	D	D	C	C	C	B	C	D	E	E	F	E	E	E
4	3	18	E	E	E	E	E	E	E	D	D	D	-	A	A	A	B	B	D	D	E	E	E	E	E	E
4	3	19	E	E	E	E	E	E	E	D	D	C	B	A	B	A	B	C	D	D	E	E	E	E	E	E
4	3	20	E	E	E	E	E	D	D	D	D	C	B	A	A	A	B	C	D	D	D	D	D	D	D	D
4	3	21	D	D	E	E	D	D	D	D	C	B	A	A	A	A	B	C	D	D	D	E	D	D	E	D
4	3	22	D	D	D	D	D	D	D	D	C	B	A	A	A	B	A	A	D	D	D	E	E	E	E	E
4	3	23	E	E	E	E	E	E	E	E	D	D	C	A	B	D	D	D	D	D	E	E	E	E	D	D
4	3	24	E	E	E	E	E	E	E	D	D	D	C	B	C	D	D	D	D	D	D	E	E	D	D	E
4	3	25	E	E	F	F	F	F	F	F	G	F	E	D	D	D	D	E	E	E	E	E	E	E	E	E
4	3	26	E	E	E	F	F	E	E	E	E	E	E	D	C	D	C	D	D	D	E	E	E	E	E	E
4	3	27	E	E	E	E	E	E	E	E	E	F	F	F	F	F	F	E	E	E	E	E	E	F	E	D
4	3	28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	F
4	3	29	F	F	F	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E
4	3	30	E	E	E	E	E	E	E	D	D	C	B	D	D	D	C	C	D	E	E	E	A	D	-	-

B205

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

HOURLY STABILITIES  
 HOURS

YR MN DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 3 31	C	D	E	E	C	E	D	D	D	C	B	B	B	A	A	A	A	A	A	D	D	C	D	-
4 4 1	A	C	A	A	C	A	A	A	B	A	A	A	A	A	A	A	A	B	D	D	C	D	D	B
4 4 2	B	E	E	D	D	D	D	B	B	A	A	A	A	A	C	C	D	D	E	F	F	F	F	G
4 4 3	G	G	G	G	F	F	E	D	D	B	A	A	A	B	B	C	D	D	E	E	E	E	F	F
4 4 4	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G	G
4 4 5	G	G	G	G	G	G	F	E	D	D	C	B	C	B	C	D	D	D	D	D	E	E	E	E
4 4 6	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E
4 4 7	F	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	E	E	E	D	D	D
4 4 8	D	D	D	E	E	E	E	D	C	B	A	B	C	C	D	D	D	E	E	F	F	F	E	E
4 4 9	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 4 10	E	E	D	D	D	D	D	D	C	B	A	A	A	B	A	C	D	D	E	E	E	E	E	E
4 4 11	F	F	E	F	F	F	F	E	D	D	D	C	C	C	C	D	D	D	D	E	E	D	E	E
4 4 12	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 4 13	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	D	E	F	G	G	G
4 4 14	G	G	F	F	F	F	F	E	D	C	B	A	A	A	A	B	C	D	D	E	E	D	D	D
4 4 15	D	E	E	E	D	D	D	D	D	D	C	D	C	B	B	C	D	D	E	F	F	G	G	F
4 4 16	E	F	F	F	F	G	F	E	D	D	C	B	A	B	A	B	C	D	D	E	E	E	E	E
4 4 17	E	E	E	F	F	F	E	D	D	C	B	A	A	A	B	C	D	D	D	D	D	D	D	D
4 4 18	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	E
4 4 19	E	E	E	E	D	D	D	D	D	D	B	C	C	D	D	D	D	D	E	E	D	D	D	D
4 4 20	D	D	D	D	D	E	E	E	E	D	C	C	C	C	C	C	D	D	D	E	E	D	D	D
4 4 21	D	D	E	E	E	E	E	D	D	C	C	B	C	D	D	D	D	D	E	E	E	E	D	D
4 4 22	D	D	D	D	D	D	D	D	D	D	C	D	C	D	D	D	D	D	E	E	E	E	E	E
4 4 23	D	D	D	D	D	D	D	D	D	D	C	B	C	D	D	D	D	D	D	E	E	E	E	E
4 4 24	E	E	D	D	D	D	E	D	E	E	E	E	E	E	E	E	E	E	E	E	D	D	D	D
4 4 25	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	F	G	G	G	G
4 4 26	G	F	F	G	F	E	E	D	D	D	C	C	C	C	C	D	D	D	D	E	F	F	F	F
4 4 27	F	G	G	G	G	G	E	D	D	C	A	B	B	B	C	C	D	D	E	E	E	E	E	E
4 4 28	E	E	E	E	E	E	D	D	D	D	B	A	A	A	A	B	D	D	D	E	E	D	D	D
4 4 29	D	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D
4 4 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
4 5 1	E	E	E	E	E	E	D	D	D	D	C	B	B	C	C	C	D	D	D	E	E	E	E	F
4 5 2	F	F	F	F	E	E	E	D	D	C	C	D	D	D	B	C	D	D	D	E	E	E	F	F
4 5 3	G	G	G	G	G	G	E	D	B	B	A	A	A	A	B	C	D	D	E	E	E	E	E	E
4 5 4	E	E	E	E	E	E	E	E	D	D	B	B	C	D	D	D	D	D	E	E	F	F	G	G
4 5 5	F	G	F	F	F	F	F	D	D	B	A	A	A	A	A	A	C	D	D	E	E	E	E	E
4 5 6	E	D	E	E	D	E	D	D	D	D	C	B	B	B	C	C	D	D	D	D	D	D	D	E
4 5 7	E	E	E	F	F	E	D	D	D	D	C	B	D	D	A	A	C	D	D	D	D	D	D	E
4 5 8	E	E	E	E	E	E	D	C	C	B	A	A	A	A	B	C	D	D	D	D	D	D	D	D
4 5 9	E	E	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	D	E	E	E	E	E
4 5 10	E	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
4 5 11	D	E	E	E	E	E	E	D	D	B	B	A	A	A	B	C	B	D	D	D	D	D	D	D
4 5 12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	D	D	E
4 5 13	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 5 14	D	D	E	D	D	D	D	D	C	B	B	A	B	B	B	C	C	D	D	E	F	F	F	F

B206

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

			HOURLY STABILITIES																							
			HOURS																							
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	5	15	G	G	G	G	G	G	G	F	E	D	C	C	C	B	C	C	C	D	D	E	E	F	F	F
4	5	16	F	F	E	E	E	E	E	D	D	B	B	A	A	A	A	C	C	D	D	D	E	E	D	E
4	5	17	D	D	D	D	D	D	D	D	D	D	C	C	D	C	C	D	D	E	E	E	E	E	E	E
4	5	18	E	E	F	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D
4	5	19	D	D	D	E	E	E	E	D	D	C	B	C	D	C	D	D	D	D	D	D	E	E	E	E
4	5	20	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E
4	5	21	E	E	E	E	E	E	D	D	D	D	B	B	B	C	D	D	D	D	D	D	D	D	D	D
4	5	22	D	E	E	E	E	E	D	D	D	C	D	C	C	C	B	C	D	D	D	D	D	D	D	E
4	5	23	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	D	D	D	E	E	E	D
4	5	24	D	E	D	E	D	D	D	D	D	D	D	B	D	E	E	E	E	E	D	D	D	D	D	D
4	5	25	D	D	E	E	E	D	D	D	D	C	B	C	C	C	C	D	D	D	E	E	E	F	F	
4	5	26	F	F	E	E	E	E	D	D	D	C	B	A	B	A	B	B	C	D	D	D	D	D	E	E
4	5	27	E	E	F	F	F	E	E	E	D	D	C	C	D	D	D	D	D	D	E	F	F	G	G	
4	5	28	G	F	F	F	F	F	F	E	D	D	C	A	A	B	B	C	D	D	D	D	D	D	D	E
4	5	29	E	D	E	E	E	E	D	D	C	C	B	B	C	B	B	C	D	D	D	D	E	F	E	E
4	5	30	E	F	F	F	E	E	E	E	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E
4	5	31	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
4	6	1	F	F	G	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F
4	6	2	E	E	E	F	E	E	D	D	D	C	C	C	B	C	D	D	D	D	D	D	E	E	E	F
4	6	3	F	F	F	F	F	E	E	D	D	D	C	D	D	D	D	D	D	D	E	F	F	F	F	F
4	6	4	G	G	G	F	F	F	E	D	D	D	C	B	B	B	B	C	C	D	D	E	E	F	F	F
4	6	5	F	E	E	E	E	E	E	D	-	D	D	-	C	D	D	D	D	D	D	D	D	E	E	E
4	6	6	E	E	E	E	F	F	F	E	E	D	D	C	C	C	D	D	D	D	E	E	E	E	E	E
4	6	7	E	E	E	E	E	E	D	D	D	B	A	A	A	A	A	B	C	D	D	D	D	D	D	D
4	6	8	D	D	D	D	E	D	D	D	C	C	B	A	B	A	A	B	D	D	D	D	E	D	D	D
4	6	9	E	E	E	D	D	D	D	D	D	D	C	B	C	C	C	C	D	D	D	D	D	D	D	D
4	6	10	D	D	D	E	E	E	D	D	D	D	D	C	C	B	C	C	D	D	D	D	D	D	D	D
4	6	11	D	D	D	D	D	D	D	C	-	-	B	B	B	D	D	D	D	E	E	F	F	F	E	E
4	6	12	E	E	F	F	F	E	E	D	D	B	A	A	B	D	C	D	D	D	E	E	E	E	E	D
4	6	13	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	E	E	E	E	E	E	E
4	6	14	E	E	E	E	E	E	E	D	D	D	C	C	D	D	E	E	D	D	E	E	E	E	E	E
4	6	15	D	D	D	D	D	D	E	E	E	D	C	C	B	B	C	C	D	D	D	E	E	E	E	E
4	6	16	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	6	17	D	D	D	D	D	D	D	D	C	D	C	C	D	D	D	D	D	D	D	E	E	E	E	E
4	6	18	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
4	6	19	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
4	6	20	E	E	D	D	D	D	D	D	D	D	C	D	C	C	C	D	D	D	D	D	D	D	D	E
4	6	21	E	E	E	E	E	F	E	D	D	D	C	C	C	D	D	D	D	D	D	D	E	E	E	E
4	6	22	E	F	F	F	F	F	E	D	D	D	D	C	D	D	D	D	D	D	E	F	F	G	F	F
4	6	23	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G
4	6	24	F	F	F	F	E	E	D	D	D	C	B	A	B	B	C	C	D	D	D	D	D	D	E	E
4	6	25	E	F	E	E	F	F	E	D	D	C	C	C	C	C	C	D	D	D	D	E	F	G	G	G
4	6	26	G	G	G	G	G	F	E	D	D	D	B	C	D	C	D	E	E	D	E	E	E	E	E	E
4	6	27	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	E
4	6	28	E	D	D	D	D	E	D	D	D	C	B	C	C	D	D	D	D	D	F	F	G	G	G	G

B207

PROGRAM: JFD      VERSION: PC-1.2  
NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2004  
SITE IDENTIFIER: PPD  
DATA PERIOD EXAMINED: 1/ 1/ 4 - 6/30/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

		HOURLY STABILITIES																								
		HOURS																								
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4	6	29	G	G	G	G	G	G	G	E	D	D	D	B	B	C	C	D	C	C	D	E	F	F	F	F
4	6	30	G	G	G	G	G	G	F	D	D	D	D	B	A	A	B	B	C	C	D	E	F	F	F	E

B208

**JFDs of 100-Meter Wind vs. Delta T**

July-September 2004



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	5	6	4	5	7	2	2	0	0	31
3.51- 7.50	0	0	0	1	0	4	2	2	3	4	3	2	3	2	2	0	28
7.51-12.50	0	0	0	1	4	3	6	3	3	0	0	0	0	1	1	0	22
12.51-18.50	0	0	0	2	1	0	1	3	4	0	2	1	1	1	0	0	16
18.51-24.00	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	5
>24.00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
TOTAL	0	0	0	4	5	7	9	18	18	8	10	10	6	6	3	0	104

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3
3.51- 7.50	0	0	0	0	0	0	2	1	2	1	0	1	0	0	0	0	7
7.51-12.50	0	0	1	0	0	1	13	9	8	3	2	0	0	0	0	1	38
12.51-18.50	0	0	0	0	0	3	4	11	22	2	0	0	1	1	0	1	45
18.51-24.00	0	0	0	0	0	0	0	2	8	0	0	0	0	0	0	0	10
>24.00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
TOTAL	0	0	1	0	0	4	19	25	40	7	2	1	1	2	0	2	104

B210

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	0	0	0	0	0	2	1	0	0	0	0	0	0	0	4
3.51- 7.50	1	2	2	0	1	2	0	4	1	1	0	1	1	0	1	0	17
7.51-12.50	2	1	1	0	0	0	13	16	13	4	3	0	0	1	0	3	57
12.51-18.50	0	0	0	0	0	2	4	4	17	1	2	0	0	2	3	5	40
18.51-24.00	0	0	0	0	0	0	1	5	4	0	2	1	1	5	1	0	20
>24.00	0	0	0	0	0	0	1	2	1	0	2	0	0	0	0	0	6
TOTAL	3	4	3	0	1	4	19	33	37	6	9	2	2	8	5	8	144

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	5	3	2	1	0	0	1	1	2	3	1	0	1	1	1	2	24
3.51- 7.50	20	26	14	20	8	9	16	21	21	16	12	11	5	5	4	7	215
7.51-12.50	25	27	15	7	12	18	26	23	28	20	14	7	2	4	12	16	256
12.51-18.50	31	9	3	3	8	16	22	30	26	4	4	4	2	5	18	25	210
18.51-24.00	2	0	0	0	0	2	9	27	15	0	2	1	0	0	3	5	66
>24.00	0	0	0	0	0	0	4	28	33	0	1	0	1	0	1	0	68
TOTAL	83	65	34	31	28	45	78	130	125	43	34	23	11	15	39	55	839

B211

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JPD:100M WIND VS 10M DELTA T JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	3	0	1	1	4	2	3	0	0	0	0	0	0	1	2	18
3.51- 7.50	3	6	3	8	6	4	7	7	7	12	1	3	3	3	3	5	81
7.51-12.50	24	20	18	9	5	15	7	17	35	33	13	0	2	4	13	6	221
12.51-18.50	32	9	6	4	7	11	13	58	92	12	6	4	0	7	7	8	276
18.51-24.00	2	0	1	2	0	1	3	26	25	2	1	2	4	1	2	0	72
>24.00	0	0	0	0	0	1	30	36	5	0	4	2	3	3	0	0	84
TOTAL	62	38	28	24	19	36	62	147	164	59	25	11	12	18	26	21	752

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	2	2	2	3	1	4	0	0	2	1	0	2	1	0	21
3.51- 7.50	5	6	3	7	6	8	4	2	4	6	3	1	0	0	1	3	59
7.51-12.50	5	1	2	3	6	7	8	26	18	6	3	3	5	2	1	2	98
12.51-18.50	0	0	0	0	0	3	5	14	8	1	1	3	2	2	3	0	42
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	2	0	1	0	0	4
>24.00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
TOTAL	10	8	7	12	14	21	18	46	31	13	11	10	7	7	6	5	226

B212

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	2	1	1	0	0	0	0	0	1	0	0	0	0	0	0	5
3.51- 7.50	4	1	0	0	1	0	0	0	0	0	1	0	0	1	0	3	11
7.51-12.50	3	0	0	0	0	0	1	3	1	1	2	2	0	1	0	0	14
12.51-18.50	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	2
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7	3	1	1	1	0	1	4	1	2	3	2	0	2	1	3	32

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	6	10	5	5	3	7	4	17	9	8	8	8	3	6	3	4	106
3.51- 7.50	33	41	22	36	22	27	31	37	38	40	20	19	12	11	11	18	418
7.51-12.50	59	49	37	20	27	44	74	97	106	67	37	12	9	13	27	28	706
12.51-18.50	63	18	9	9	16	35	49	121	169	20	15	12	6	18	32	39	631
18.51-24.00	4	0	1	2	0	3	13	63	55	2	5	6	5	7	6	5	177
>24.00	0	0	0	0	0	1	35	68	39	1	9	2	4	3	1	0	163
TOTAL	165	118	74	72	68	117	206	403	416	138	94	59	39	58	80	94	2201

B213

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 9/30/ 4

\*\*\* JUL-SEP 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2208

TOTAL NUMBER OF VALID OBSERVATIONS: 2201

TOTAL NUMBER OF MISSING OBSERVATIONS: 7

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.7 %

MEAN WIND SPEED FOR THIS PERIOD: 12.9 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 416

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 416

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 416

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 416

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
4.73	4.73	6.54	38.12	34.17	10.27	1.45

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	0	0	0	4	5	7	9	18	18	8	10	10	6	6	3	0	0
B	0	0	1	0	0	4	19	25	40	7	2	1	1	2	0	2	0
C	3	4	3	0	1	4	19	33	37	6	9	2	2	8	5	8	0
D	83	65	34	31	28	45	78	130	125	43	34	23	11	15	39	55	0
E	62	38	28	24	19	36	62	147	164	59	25	11	12	18	26	21	0
F	10	8	7	12	14	21	18	46	31	13	11	10	7	7	6	5	0
G	7	3	1	1	1	0	1	4	1	2	3	2	0	2	1	3	0
TOTAL	165	118	74	72	68	117	206	403	416	138	94	59	39	58	80	94	0

B214

**JFDs of 100-Meter Wind vs. Delta T**

October-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	2	0	8	2	4	4	1	2	0	0	23
3.51- 7.50	0	0	3	6	6	2	2	9	4	3	2	2	1	0	1	1	42
7.51-12.50	0	0	1	8	9	2	5	1	2	1	2	0	0	1	0	1	33
12.51-18.50	0	0	0	4	1	0	0	1	0	3	1	0	1	0	1	0	12
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	0	0	4	18	16	4	9	11	14	9	9	6	4	3	2	4	113

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	2
3.51- 7.50	0	0	1	10	3	0	7	0	1	2	2	0	0	1	0	0	27
7.51-12.50	0	0	3	11	2	2	3	0	0	0	0	0	1	4	0	1	27
12.51-18.50	0	0	2	5	3	2	2	2	0	3	1	0	1	1	0	0	22
18.51-24.00	1	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	3
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL	1	0	6	27	8	4	12	2	3	5	3	0	2	8	0	1	82

B216

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
3.51- 7.50	0	0	0	3	1	3	4	1	0	1	1	1	1	2	3	0	21
7.51-12.50	2	0	0	7	4	5	2	1	2	3	0	0	0	3	1	0	30
12.51-18.50	7	1	0	1	2	4	2	2	0	1	1	2	0	3	0	4	30
18.51-24.00	3	0	0	0	0	0	1	3	5	2	1	0	2	1	4	7	29
>24.00	0	0	0	0	0	0	0	1	0	0	0	0	0	4	1	4	10
TOTAL	12	1	0	11	7	13	9	8	7	8	3	3	3	13	9	15	122

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	1	0	0	2	3	0	0	2	0	2	0	10
3.51- 7.50	2	5	8	10	5	7	6	5	10	12	9	6	9	12	6	6	118
7.51-12.50	21	11	8	18	23	28	20	19	38	28	18	9	10	5	15	13	284
12.51-18.50	41	14	7	8	9	39	36	23	26	21	10	15	15	7	39	34	344
18.51-24.00	35	12	0	0	0	5	15	14	23	10	10	2	0	5	35	17	183
>24.00	14	0	0	0	0	0	3	5	16	1	7	9	8	9	35	34	141
TOTAL	113	42	23	36	37	80	80	66	115	75	54	41	44	38	132	104	1080

B217



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	0	0	0	0	2	1	0	2	0	0	0	0	0	0	6
3.51- 7.50	1	1	3	3	2	3	2	0	3	7	1	2	1	0	1	1	31
7.51-12.50	5	14	8	5	7	11	5	19	15	18	5	7	4	7	5	10	145
12.51-18.50	6	12	6	5	3	18	11	15	27	11	10	10	5	5	14	12	170
18.51-24.00	2	1	0	0	1	1	6	3	35	0	6	13	4	7	14	5	98
>24.00	0	0	0	0	0	1	9	14	31	4	5	6	10	11	21	20	132
TOTAL	14	29	17	13	13	34	35	52	111	42	27	38	24	30	55	48	582

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	3
3.51- 7.50	0	1	2	2	0	1	5	2	0	3	0	2	1	1	1	1	22
7.51-12.50	5	2	2	2	1	10	0	3	2	5	6	4	2	1	8	5	58
12.51-18.50	1	1	0	1	0	0	2	4	4	2	1	2	7	3	4	2	34
18.51-24.00	0	0	0	0	0	0	1	1	0	0	5	6	4	0	1	1	19
>24.00	0	0	0	0	0	0	0	0	1	0	2	4	4	5	1	0	17
TOTAL	6	4	4	5	2	11	8	10	7	10	14	18	18	11	16	9	153

B218

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY CLASS    G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	1	0	1	2	0	0	0	0	0	1	0	0	1	0	6
3.51- 7.50	2	6	4	1	1	3	3	1	1	1	0	1	1	0	1	3	29
7.51-12.50	2	0	1	2	0	4	2	0	0	2	0	1	4	2	0	0	20
12.51-18.50	0	0	0	0	0	0	0	0	0	0	2	2	4	1	4	2	15
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
TOTAL	4	6	6	3	2	9	5	1	1	3	3	5	10	4	6	5	73

STABILITY CLASS    ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	1	1	2	4	4	1	11	8	4	5	3	3	4	0	52
3.51- 7.50	5	13	21	35	18	19	29	18	19	29	15	14	14	16	13	12	290
7.51-12.50	35	27	23	53	46	62	37	43	59	57	31	21	21	23	29	30	597
12.51-18.50	55	28	15	24	18	63	53	47	57	41	26	31	33	20	62	54	627
18.51-24.00	41	13	0	0	1	6	23	21	63	12	22	21	12	15	54	31	335
>24.00	14	0	0	0	0	1	12	20	49	5	15	19	22	30	58	59	304
TOTAL	150	82	60	113	85	155	158	150	258	152	113	111	105	107	220	186	2205

B219

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 10/ 1/ 4 - 12/31/ 4

\*\*\* OCT-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 2208

TOTAL NUMBER OF VALID OBSERVATIONS: 2205

TOTAL NUMBER OF MISSING OBSERVATIONS: 3

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.9 %

MEAN WIND SPEED FOR THIS PERIOD: 15.6 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 613

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 613

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 613

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 613

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
5.12	3.72	5.53	48.98	26.39	6.94	3.31

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	0	0	4	18	16	4	9	11	14	9	9	6	4	3	2	4	0
B	1	0	6	27	8	4	12	2	3	5	3	0	2	8	0	1	0
C	12	1	0	11	7	13	9	8	7	8	3	3	3	13	9	15	0
D	113	42	23	36	37	80	80	66	115	75	54	41	44	38	132	104	0
E	14	29	17	13	13	34	35	52	111	42	27	38	24	30	55	48	0
F	6	4	4	5	2	11	8	10	7	10	14	18	18	11	16	9	0
G	4	6	6	3	2	9	5	1	1	3	3	5	10	4	6	5	0
TOTAL	150	82	60	113	85	155	158	150	258	152	113	111	105	107	220	186	0

B220

**JFDs of 100-Meter Wind vs. Delta T**

July-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	2	5	14	6	9	11	3	4	0	0	54
3.51- 7.50	0	0	3	7	6	6	4	11	7	7	5	4	4	2	3	1	70
7.51-12.50	0	0	1	9	13	5	11	4	5	1	2	0	0	2	1	1	55
12.51-18.50	0	0	0	6	2	0	1	4	4	3	3	1	2	1	1	0	28
18.51-24.00	0	0	0	0	0	0	0	3	2	0	0	0	1	0	0	1	7
>24.00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	3
TOTAL	0	0	4	22	21	11	18	29	32	17	19	16	10	9	5	4	217

STABILITY CLASS B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	1	0	0	0	2	1	0	0	0	0	1	0	0	5
3.51- 7.50	0	0	1	10	3	0	9	1	3	3	2	1	0	1	0	0	34
7.51-12.50	0	0	4	11	2	3	16	9	8	3	2	0	1	4	0	2	65
12.51-18.50	0	0	2	5	3	5	6	13	22	5	1	0	2	2	0	1	67
18.51-24.00	1	0	0	0	0	0	0	2	8	0	0	0	0	2	0	0	13
>24.00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
TOTAL	1	0	7	27	8	8	31	27	43	12	5	1	3	10	0	3	186

B222

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS    C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	0	0	0	1	0	2	1	1	0	0	0	0	0	0	6
3.51- 7.50	1	2	2	3	2	5	4	5	1	2	1	2	2	2	4	0	38
7.51-12.50	4	1	1	7	4	5	15	17	15	7	3	0	0	4	1	3	87
12.51-18.50	7	1	0	1	2	6	6	6	17	2	3	2	0	5	3	9	70
18.51-24.00	3	0	0	0	0	0	2	8	9	2	3	1	3	6	5	7	49
>24.00	0	0	0	0	0	0	1	3	1	0	2	0	0	4	1	4	16
TOTAL	15	5	3	11	8	17	28	41	44	14	12	5	5	21	14	23	266

STABILITY CLASS    D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	5	3	2	1	0	1	1	1	4	6	1	0	3	1	3	2	34
3.51- 7.50	22	31	22	30	13	16	22	26	31	28	21	17	14	17	10	13	333
7.51-12.50	46	38	23	25	35	46	46	42	66	48	32	16	12	9	27	29	540
12.51-18.50	72	23	10	11	17	55	58	53	52	25	14	19	17	12	57	59	554
18.51-24.00	37	12	0	0	0	7	24	41	38	10	12	3	0	5	38	22	249
>24.00	14	0	0	0	0	0	7	33	49	1	8	9	9	9	36	34	209
TOTAL	196	107	57	67	65	125	158	196	240	118	88	64	55	53	171	159	1919

B223

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	4	0	1	1	4	4	4	0	2	0	0	0	0	1	2	24
3.51- 7.50	4	7	6	11	8	7	9	7	10	19	2	5	4	3	4	6	112
7.51-12.50	29	34	26	14	12	26	12	36	50	51	18	7	6	11	18	16	366
12.51-18.50	38	21	12	9	10	29	24	73	119	23	16	14	5	12	21	20	446
18.51-24.00	4	1	1	2	1	2	9	29	60	2	7	15	8	8	16	5	170
>24.00	0	0	0	0	0	2	39	50	36	4	9	8	13	14	21	20	216
TOTAL	76	67	45	37	32	70	97	199	275	101	52	49	36	48	81	69	1334

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	2	2	3	3	1	4	0	0	2	1	0	3	2	0	24
3.51- 7.50	5	7	5	9	6	9	9	4	4	9	3	3	1	1	2	4	81
7.51-12.50	10	3	4	5	7	17	8	29	20	11	9	7	7	3	9	7	156
12.51-18.50	1	1	0	1	0	3	7	18	12	3	2	5	9	5	7	2	76
18.51-24.00	0	0	0	0	0	0	1	1	1	0	5	8	4	1	1	1	23
>24.00	0	0	0	0	0	0	0	0	1	0	4	4	4	5	1	0	19
TOTAL	16	12	11	17	16	32	26	56	38	23	25	28	25	18	22	14	379

B224

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	2	2	1	1	2	0	0	0	1	0	1	0	0	1	0	11
3.51- 7.50	6	7	4	1	2	3	3	1	1	1	1	1	1	1	1	6	40
7.51-12.50	5	0	1	2	0	4	3	3	1	3	2	3	4	3	0	0	34
12.51-18.50	0	0	0	0	0	0	0	1	0	0	2	2	4	1	5	2	17
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	2
TOTAL	11	9	7	4	3	9	6	5	2	5	6	7	10	6	7	8	105

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	6	11	6	6	5	11	8	18	20	16	12	13	6	9	7	4	158
3.51- 7.50	38	54	43	71	40	46	60	55	57	69	35	33	26	27	24	30	708
7.51-12.50	94	76	60	73	73	106	111	140	165	124	68	33	30	36	56	58	1303
12.51-18.50	118	46	24	33	34	98	102	168	226	61	41	43	39	38	94	93	1258
18.51-24.00	45	13	1	2	1	9	36	84	118	14	27	27	17	22	60	36	512
>24.00	14	0	0	0	0	2	47	88	88	6	24	21	26	33	59	59	467
TOTAL	315	200	134	185	153	272	364	553	674	290	207	170	144	165	300	280	4406

B225



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

\*\*\* JUL-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 4416

TOTAL NUMBER OF VALID OBSERVATIONS: 4406

TOTAL NUMBER OF MISSING OBSERVATIONS: 10

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 14.2 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 1029

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 1029

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 1029

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 1029

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

	A	B	C	D	E	F	G
	4.93	4.22	6.04	43.55	30.28	8.60	2.38

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	0	0	4	22	21	11	18	29	32	17	19	16	10	9	5	4	0
B	1	0	7	27	8	8	31	27	43	12	5	1	3	10	0	3	0
C	15	5	3	11	8	17	28	41	44	14	12	5	5	21	14	23	0
D	196	107	57	67	65	125	158	196	240	118	88	64	55	53	171	159	0
E	76	67	45	37	32	70	97	199	275	101	52	49	36	48	81	69	0
F	16	12	11	17	16	32	26	56	38	23	25	28	25	18	22	14	0
G	11	9	7	4	3	9	6	5	2	5	6	7	10	6	7	8	0
TOTAL	315	200	134	185	153	272	364	553	674	290	207	170	144	165	300	280	0

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**Stability Classes by Hour of Day**

**100-Meter Wind vs. Delta T**

July-December 2004

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

			HOURLY STABILITIES																								
			HOURS																								
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4	7	1	E	E	E	E	E	E	E	E	D	D	D	C	B	B	B	C	D	D	D	D	E	E	E	E	
4	7	2	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E	
4	7	3	E	E	E	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	E	F	F	F	F	
4	7	4	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	
4	7	5	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	
4	7	6	F	E	E	E	E	E	D	D	D	D	D	D	D	C	D	D	D	D	E	F	F	F	F		
4	7	7	F	F	F	E	F	E	E	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	E	D	
4	7	8	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D
4	7	9	E	E	E	E	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	F	E
4	7	10	F	F	F	E	F	F	E	D	D	D	D	D	B	B	B	C	C	D	D	E	E	E	E	E	E
4	7	11	E	E	E	E	E	E	D	D	D	D	D	D	D	E	G	F	E	E	D	D	D	E	E	E	E
4	7	12	K	K	F	F	F	F	E	D	D	D	D	D	B	B	B	C	C	D	D	E	F	F	E	E	E
4	7	13	F	E	E	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4	7	14	E	E	K	K	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	E	E	E	F	F	F
4	7	15	F	F	F	E	E	E	E	E	D	C	C	B	D	D	C	B	C	C	D	D	E	E	E	E	E
4	7	16	E	D	E	E	D	E	D	D	D	D	D	C	C	D	D	D	D	D	D	E	E	E	E	E	E
4	7	17	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E
4	7	18	F	F	F	E	F	F	F	E	D	D	D	C	B	C	C	B	C	C	D	D	E	E	E	E	E
4	7	19	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	E	E	E	E	F	F	E
4	7	20	E	E	E	F	E	F	F	F	E	E	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E
4	7	21	E	E	E	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E
4	7	22	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4	7	23	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D
4	7	24	D	D	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4	7	25	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	E	E	F	F	F	F
4	7	26	G	F	G	G	G	G	G	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G
4	7	27	G	F	F	F	F	F	F	E	D	C	C	B	B	B	B	B	B	B	D	D	E	E	E	E	E
4	7	28	K	K	K	K	E	E	E	D	C	D	D	A	B	D	D	D	D	D	E	E	E	E	E	E	E
4	7	29	E	D	D	E	D	D	E	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	E	E
4	7	30	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
4	7	31	F	F	F	F	F	F	F	D	D	D	D	C	C	B	C	D	D	D	D	D	E	E	E	E	E
4	8	1	E	E	E	E	E	E	E	D	D	C	C	A	A	A	B	D	D	D	D	D	D	D	E	E	E
4	8	2	E	D	E	E	E	E	E	D	D	D	D	C	C	B	C	D	D	D	D	E	E	E	E	E	F
4	8	3	E	E	E	F	E	E	E	D	D	D	B	A	A	B	C	D	D	E	E	E	E	E	D	D	D
4	8	4	D	D	D	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4	8	5	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
4	8	6	E	E	E	D	D	D	D	D	D	C	C	B	B	B	C	D	D	D	D	D	E	E	E	E	E
4	8	7	E	E	E	E	E	E	E	D	D	C	C	B	B	C	B	B	C	B	D	E	F	F	E	E	E
4	8	8	E	E	E	E	E	E	E	E	D	D	C	B	B	B	B	D	E	E	E	F	F	F	F	E	E
4	8	9	E	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	F	E
4	8	10	K	K	E	E	E	E	E	D	D	C	C	C	C	D	D	D	D	D	E	D	E	D	K	D	E
4	8	11	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G
4	8	12	G	G	G	F	F	E	E	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	E	E
4	8	13	E	F	E	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F

B228

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

			HOURLY STABILITIES																								
			HOURS																								
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4	8	14	F	F	F	F	F	F	F	E	D	D	D	C	C	D	D	D	D	D	E	F	F	F	F	F	
4	8	15	F	F	F	F	F	F	F	E	D	C	D	D	D	D	B	D	D	D	D	F	F	F	F	E	
4	8	16	E	E	E	E	E	E	E	D	D	D	C	B	B	C	D	D	D	D	E	E	E	E	E	E	
4	8	17	E	E	E	F	F	F	E	D	D	C	B	C	C	D	D	D	D	D	E	E	E	F	F	F	
4	8	18	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	E	
4	8	19	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	8	20	E	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	E	F	G	G	F	F	
4	8	21	F	F	F	F	F	F	F	E	D	D	D	B	B	C	C	C	C	D	D	D	E	E	E	E	
4	8	22	E	E	E	E	E	E	D	D	D	C	B	B	B	B	C	D	D	E	E	E	F	E	E	E	
4	8	23	E	E	E	E	E	E	D	D	D	D	E	D	D	C	C	D	D	D	D	D	D	D	D	E	
4	8	24	D	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	8	25	E	E	E	D	E	D	E	E	D	D	E	D	C	B	D	D	D	D	E	F	G	F	F	E	
4	8	26	F	F	F	F	F	F	E	D	D	D	D	B	B	B	B	C	D	E	E	E	F	E	E	E	
4	8	27	E	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	D	E	E	D	D	D	
4	8	28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	
4	8	29	F	F	F	F	F	F	F	F	E	D	D	B	C	C	B	B	C	D	E	E	F	E	E	E	
4	8	30	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	D	E	F	F	F	F	F	
4	8	31	F	F	F	F	F	F	F	E	D	D	D	B	C	D	C	D	D	D	E	E	E	E	E	E	
4	9	1	E	E	E	E	E	F	E	E	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E	
4	9	2	E	E	E	E	E	E	F	E	D	D	C	A	C	B	B	B	D	D	E	E	E	E	F	E	
4	9	3	E	E	E	E	E	E	E	D	D	D	C	B	C	C	B	C	D	D	E	E	E	E	E	E	
4	9	4	E	E	E	E	E	E	E	D	D	C	C	B	B	C	B	C	D	D	E	E	E	E	E	E	
4	9	5	E	E	E	E	E	E	D	D	D	B	B	A	C	D	D	E	D	D	E	E	E	E	E	E	
4	9	6	E	E	E	E	E	E	E	D	D	D	D	C	C	C	D	D	D	D	E	E	F	G	G	G	
4	9	7	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
4	9	8	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
4	9	9	F	F	F	F	F	F	F	E	D	C	C	B	B	B	A	B	D	D	E	E	E	E	E	E	
4	9	10	E	E	E	E	E	E	E	D	D	D	B	B	B	B	A	B	D	D	E	E	E	E	E	E	
4	9	11	E	E	E	E	E	F	F	E	D	D	B	C	D	C	B	D	D	D	E	F	F	F	G	F	
4	9	12	F	F	F	F	F	F	E	D	D	C	C	B	A	B	A	B	D	D	E	E	E	E	E	D	
4	9	13	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	9	14	D	D	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
4	9	15	E	E	E	E	B	D	C	A	C	D	C	D	C	C	C	C	C	C	D	D	E	E	E	E	
4	9	16	A	D	A	A	A	D	A	A	A	A	A	C	B	A	A	B	B	C	D	D	D	A	A	A	
4	9	17	B	A	A	A	A	B	D	E	E	D	D	D	D	D	D	D	D	D	C	D	E	D	D	D	
4	9	18	D	D	D	D	D	E	D	D	E	E	D	D	D	D	D	D	C	D	D	E	E	E	E	E	
4	9	19	D	D	E	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
4	9	20	E	D	D	C	C	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	
4	9	21	D	E	D	E	D	D	D	D	D	D	D	D	C	C	C	C	D	D	E	E	E	E	E	E	
4	9	22	E	E	E	D	D	D	E	D	D	D	D	D	D	C	C	D	D	D	E	E	E	E	E	E	
4	9	23	E	B	A	A	D	D	D	E	C	C	D	D	D	C	C	C	C	D	D	D	D	E	F	E	
4	9	24	C	D	E	E	E	A	C	A	A	A	A	A	A	A	A	A	A	A	C	D	D	B	D	D	
4	9	25	D	D	A	A	D	A	A	A	A	A	A	A	A	A	A	A	B	B	D	D	E	D	A	B	A
4	9	26	A	A	A	A	A	A	A	A	C	A	A	C	B	A	A	A	A	A	A	D	A	A	A	A	A
4	9	27	A	A	A	A	B	C	A	A	A	-	-	-	-	-	-	-	A	B	B	B	E	E	E	E	

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PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

			HOURLY STABILITIES																								
			HOURS																								
YR	MN	DY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
4	9	28	D	B	C	C	B	B	C	D	E	D	B	A	A	A	A	A	A	A	B	C	C	D	C	A	
4	9	29	A	D	A	A	A	C	B	A	A	A	B	A	B	B	A	B	C	D	E	E	E	E	E	D	
4	9	30	C	C	C	E	D	E	E	E	E	E	D	D	D	D	D	D	D	E	D	E	E	E	E	E	
4	10	1	E	E	D	D	E	E	E	E	E	D	D	D	D	D	D	-	D	D	E	E	E	E	E	E	
4	10	2	C	B	D	A	C	C	A	D	C	A	A	A	B	A	B	A	A	B	C	D	E	F	F	E	
4	10	3	F	E	E	E	F	F	E	E	E	E	D	D	D	C	C	C	C	C	E	E	D	C	B	E	
4	10	4	B	E	E	E	E	D	C	C	C	A	B	B	A	A	A	A	A	A	A	C	C	D	C	A	
4	10	5	A	A	A	A	A	C	A	A	A	D	D	D	C	C	C	C	C	D	D	E	E	D	C	A	
4	10	6	A	D	E	E	C	A	B	C	A	B	C	D	C	D	C	D	D	D	D	E	E	E	E	E	
4	10	7	E	D	D	D	C	C	C	C	B	D	D	D	D	D	E	E	E	E	E	E	D	E	E	E	
4	10	8	E	E	E	E	E	D	C	D	B	B	B	A	A	A	C	C	D	D	E	E	E	E	E	E	
4	10	9	E	D	D	A	A	A	A	A	D	A	A	B	C	B	A	B	C	C	E	A	A	D	E	E	
4	10	10	E	D	C	D	C	B	D	D	B	A	C	C	C	C	C	B	D	D	D	D	C	C	A		
4	10	11	D	B	B	A	B	B	A	A	A	A	C	C	C	B	A	A	B	A	A	A	B	B	A	B	
4	10	12	C	C	C	A	D	E	D	B	D	D	D	D	B	B	A	A	C	E	E	E	E	E	E	B	
4	10	13	C	A	A	B	A	A	A	A	E	D	D	E	E	E	D	D	D	E	E	E	E	E	E	E	
4	10	14	E	E	E	E	E	E	E	E	E	E	D	D	C	C	C	B	B	C	D	D	F	E	A	D	
4	10	15	C	B	B	B	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
4	10	16	E	E	E	E	E	E	D	E	E	E	D	D	C	C	C	C	B	C	D	C	A	A	A	A	
4	10	17	B	A	B	A	A	A	A	A	C	D	D	D	C	D	D	D	D	E	E	E	D	D	E	E	
4	10	18	D	C	C	C	A	A	C	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	B	A	
4	10	19	B	B	B	B	A	A	A	D	E	D	B	A	A	B	A	A	B	B	C	C	E	D	D	D	
4	10	20	D	D	E	D	B	B	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	
4	10	21	D	D	D	D	D	D	D	E	E	D	D	D	E	D	D	D	D	D	D	D	E	D	D	D	
4	10	22	D	D	D	D	D	C	D	D	E	D	D	E	E	E	E	E	E	E	E	E	E	-	E	E	
4	10	23	E	E	E	D	D	D	C	D	D	D	D	D	E	C	C	C	D	D	D	E	B	A	B	A	
4	10	24	D	A	A	A	B	A	A	A	A	A	B	D	D	D	D	D	D	E	E	E	E	C	A	A	
4	10	25	E	E	E	E	D	E	E	E	E	B	B	B	B	A	A	B	C	D	D	D	D	C	B	A	
4	10	26	A	A	A	D	D	A	A	A	B	A	B	C	B	D	B	-	D	D	D	E	D	D	D	D	
4	10	27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	10	28	D	D	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	E	E	D	E	E	E	E	
4	10	29	E	E	E	D	E	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	
4	10	30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	E	
4	10	31	G	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4	11	1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
4	11	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F	F	
4	11	3	G	G	G	G	G	G	F	F	F	F	E	D	D	D	D	D	D	D	E	E	D	D	D	D	
4	11	4	E	E	E	E	F	F	E	E	D	D	C	C	C	D	D	D	E	E	E	F	F	G	G	G	
4	11	5	G	G	G	G	F	F	F	F	E	D	D	D	D	D	D	D	D	E	F	F	F	F	F	E	
4	11	6	F	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	E	E	F	F	G	F	F	G	
4	11	7	F	G	G	F	G	G	F	E	D	D	C	C	C	C	D	D	D	E	E	E	E	E	E	E	
4	11	8	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F	
4	11	9	F	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	E	E	E	E	E	E	
4	11	10	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	D	D	D	D	D	D	
4	11	11	D	D	D	D	D	D	D	D	D	C	C	B	C	C	C	D	D	E	E	E	E	E	E	E	

B230

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

YR MN DY	HOURLY STABILITIES																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 11 12	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	F	F	E	E	E
4 11 13	E	F	E	E	F	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4 11 14	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
4 11 15	D	D	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D	D
4 11 16	D	D	D	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	D	D	D	D
4 11 17	D	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	E	F	F	F
4 11 18	F	F	F	F	F	E	E	D	E	D	C	C	D	D	D	D	D	D	D	D	D	D	D	D
4 11 19	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 20	D	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
4 11 21	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D
4 11 22	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 23	D	D	D	D	E	E	E	D	D	D	C	C	D	C	D	D	D	D	D	D	D	D	D	D
4 11 24	D	D	D	D	D	D	D	D	D	C	C	C	D	D	D	D	E	E	F	F	G	G	G	G
4 11 25	G	G	F	F	F	F	E	E	E	E	D	D	D	D	D	D	E	F	E	E	E	E	E	E
4 11 26	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D
4 11 27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 11 28	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 29	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 11 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4 12 1	E	E	E	E	E	E	E	F	E	D	D	D	D	D	D	D	D	E	F	F	G	F	F	F
4 12 2	F	F	G	F	F	F	G	F	F	D	D	D	D	D	D	D	E	E	E	E	E	F	F	E
4 12 3	E	E	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	F	F	F	F	F	E
4 12 4	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	F	G	G	G	G	G	G
4 12 5	F	G	G	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E
4 12 6	E	E	E	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
4 12 8	E	E	E	E	E	F	E	E	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	E
4 12 9	F	G	F	F	G	F	F	F	E	E	E	D	D	D	D	D	D	E	F	F	E	D	D	D
4 12 10	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 11	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	E	E	D	E	E	E	E	E
4 12 12	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	E	E
4 12 13	E	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	E	D	D	E	E	E	E
4 12 14	E	E	E	E	E	F	F	F	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
4 12 15	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
4 12 16	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	G	G	G
4 12 17	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E	F	F
4 12 18	F	E	E	E	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 19	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 20	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
4 12 21	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
4 12 22	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	E	E	E	E	E	E	D
4 12 23	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	E	E	E	E	F	F	F
4 12 24	F	F	F	F	F	F	E	E	D	D	C	C	C	D	D	D	D	D	D	D	D	D	D	D
4 12 25	D	D	E	E	D	D	D	E	E	D	D	D	D	D	D	D	D	E	E	E	E	F	E	E
4 12 26	E	F	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E

B231

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 7/ 1/ 4 - 12/31/ 4

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS

YR MN DY	HOURLY STABILITIES																							
	HOURS																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
4 12 27	E	D	D	D	D	D	D	E	E	E	D	D	D	D	D	D	E	E	F	F	F	E	E	E
4 12 28	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	F	F	E	F	F	G	F
4 12 29	G	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	E	E	E	D	D	E	D	D
4 12 30	D	D	E	D	D	D	E	E	D	D	D	D	D	D	D	D	E	E	F	G	F	F	F	F
4 12 31	F	F	F	F	G	F	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	D

**JFDs of 100-Meter Wind vs. Delta T**

January-December 2004



PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS    A

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	0	2	5	15	8	12	11	3	4	0	0	60
3.51- 7.50	0	0	3	7	6	8	5	12	7	7	5	4	4	2	3	1	74
7.51-12.50	0	0	1	10	16	8	16	5	7	2	2	0	0	2	1	1	71
12.51-18.50	4	0	0	6	2	2	1	11	8	6	3	1	2	1	1	5	53
18.51-24.00	1	1	0	0	0	0	0	5	17	2	0	0	1	0	0	7	34
>24.00	0	0	0	0	0	0	0	2	22	5	0	0	0	0	0	5	34
TOTAL	5	1	4	23	24	18	24	40	76	30	22	16	10	9	5	19	326

STABILITY CLASS    B

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	1	0	0	0	2	1	0	0	0	0	1	0	0	5
3.51- 7.50	0	0	1	10	5	1	10	2	4	3	2	3	0	1	0	0	42
7.51-12.50	5	1	4	14	2	4	21	14	15	7	3	0	1	4	0	2	97
12.51-18.50	7	0	3	5	3	5	6	21	34	18	1	0	2	2	0	9	116
18.51-24.00	2	1	2	0	0	0	0	8	16	2	0	0	0	2	0	6	39
>24.00	0	0	0	0	0	0	1	3	10	4	0	0	0	0	3	2	23
TOTAL	14	2	10	30	10	10	38	50	80	34	6	3	3	10	3	19	322

B234

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS    C

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	0	0	0	3	0	2	1	1	0	1	1	0	0	0	10
3.51- 7.50	4	5	4	3	3	7	7	8	4	4	5	4	3	2	4	0	67
7.51-12.50	20	3	1	9	6	6	22	33	26	15	5	0	1	8	3	14	172
12.51-18.50	19	1	3	2	4	6	10	17	34	13	7	3	0	6	9	22	156
18.51-24.00	4	4	0	0	1	0	2	11	19	6	4	1	3	7	11	17	90
>24.00	0	0	0	0	0	0	1	8	10	2	2	1	0	4	9	5	42
TOTAL	47	14	8	14	14	22	42	79	94	41	23	10	8	27	36	58	537

STABILITY CLASS    D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	8	5	4	2	1	4	2	4	5	9	4	1	3	2	6	3	63
3.51- 7.50	53	55	47	47	25	33	42	42	47	44	31	28	23	24	15	30	586
7.51-12.50	94	64	61	58	77	73	64	85	101	77	50	29	35	36	44	51	999
12.51-18.50	147	61	28	27	57	86	75	84	117	55	31	36	38	49	129	142	1162
18.51-24.00	80	19	1	2	6	21	27	68	107	32	22	11	13	33	107	73	622
>24.00	26	2	0	0	0	1	9	52	98	16	9	16	19	27	74	57	406
TOTAL	408	206	141	136	166	218	219	335	475	233	147	121	131	171	375	356	3838

B235

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS    E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	3	5	1	3	2	4	4	4	2	3	1	2	0	0	1	3	38
3.51- 7.50	9	13	12	21	12	18	19	9	16	26	7	5	5	8	6	10	196
7.51-12.50	62	65	47	24	28	35	40	73	79	93	39	16	14	20	26	49	710
12.51-18.50	90	33	21	18	23	49	55	125	179	74	40	27	27	35	61	86	943
18.51-24.00	19	2	2	3	6	7	27	53	108	13	18	21	20	34	33	20	386
>24.00	11	0	0	0	1	2	44	77	46	6	11	13	17	26	34	30	318
TOTAL	194	118	83	69	72	115	189	341	430	215	116	84	83	123	161	198	2591

STABILITY CLASS    F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	1	2	3	3	3	1	4	0	0	2	2	0	3	3	2	31
3.51- 7.50	7	13	10	12	11	14	14	15	6	19	6	5	4	3	5	14	158
7.51-12.50	22	11	8	11	11	20	22	49	40	29	21	9	11	5	17	14	300
12.51-18.50	10	6	3	5	3	4	13	49	42	18	11	10	15	9	13	17	228
18.51-24.00	7	0	0	0	0	0	3	14	10	0	10	10	22	13	6	3	98
>24.00	1	0	0	0	0	0	4	4	3	0	4	6	10	12	1	0	45
TOTAL	49	31	23	31	28	41	57	135	101	66	54	42	62	45	45	50	860

B236

PROGRAM: JFD VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2004  
 SITE IDENTIFIER: PPD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	3	2	1	1	3	0	1	1	1	0	3	1	0	1	1	20
3.51- 7.50	9	8	5	1	3	7	8	10	6	7	6	2	1	5	3	9	90
7.51-12.50	11	2	1	3	0	5	4	17	10	10	4	5	8	9	2	6	97
12.51-18.50	2	3	3	0	0	0	2	5	16	0	4	8	8	7	5	8	71
18.51-24.00	1	0	1	0	0	0	0	0	1	0	2	3	2	1	1	0	12
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	3
TOTAL	24	16	12	5	4	15	14	33	34	18	17	21	20	23	13	24	293

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	14	15	9	10	7	17	9	22	25	22	19	20	8	10	11	9	227
3.51- 7.50	82	94	82	101	65	88	105	98	90	110	62	51	40	45	36	64	1213
7.51-12.50	214	146	123	129	140	151	189	276	278	233	124	59	70	84	93	137	2446
12.51-18.50	279	104	61	63	92	152	162	312	430	184	97	85	92	109	218	289	2729
18.51-24.00	114	27	6	5	13	28	59	159	278	55	56	46	61	90	158	126	1281
>24.00	38	2	0	0	1	3	59	146	189	33	27	36	46	70	122	99	871
TOTAL	741	388	281	308	318	439	583	1013	1290	637	385	297	317	408	638	724	8767

B237

PROGRAM: JFD      VERSION: PC-1.2  
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2004  
 SITE IDENTIFIER: PFD  
 DATA PERIOD EXAMINED: 1/ 1/ 4 - 12/31/ 4

\*\*\* JAN-DEC 2004 \*\*\*

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS  
 WIND MEASURED AT: 100.0 METERS  
 WIND THRESHOLD AT: 1.00 MPH

TOTAL NUMBER OF OBSERVATIONS: 8784

TOTAL NUMBER OF VALID OBSERVATIONS: 8767

TOTAL NUMBER OF MISSING OBSERVATIONS: 17

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 14.5 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 1120

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 1102

NUMBER OF OBSERVATIONS WITH BACKUP STABILITY: 1102

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 1120

PERCENTAGE OCCURENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
3.72	3.67	6.13	43.78	29.55	9.81	3.34

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	5	1	4	23	24	18	24	40	76	30	22	16	10	9	5	19	0
B	14	2	10	30	10	10	38	50	80	34	6	3	3	10	3	19	0
C	47	14	8	14	14	22	42	79	94	41	23	10	8	27	36	58	0
D	408	206	141	136	166	218	219	335	475	233	147	121	131	171	375	356	0
E	194	118	83	69	72	115	189	341	430	215	116	84	83	123	161	198	0
F	49	31	23	31	28	41	57	135	101	66	54	42	62	45	45	50	0
G	24	16	12	5	4	15	14	33	34	18	17	21	20	23	13	24	0
TOTAL	741	388	281	308	318	439	583	1013	1290	637	385	297	317	408	638	724	0

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## **ATMOSPHERIC DIFFUSION ESTIMATES**

The tables of atmospheric diffusion estimates in this section were generated using the computer code XOQDOQ. Data are given for 22 distances and 16 compass points (directions from site) centered on the Cooper Nuclear Station. Tables are presented for the ground-level (vent) and elevated (stack) release options separately, and for the following time periods in 2004: January-March, April-June, July-September, October-December, July-December, and January-December.

**Atmospheric Diffusion Estimates**

**Ground Level Releases**

January-March 2004

VENTS GROUND LEVEL RELEASES - JAN-MAR 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE							
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.218E-05	1.411E-05	7.551E-06	3.782E-06	1.516E-06	8.198E-07	5.190E-07	3.619E-07	2.693E-07	2.100E-07	1.694E-07							
SSW	2.593E-05	8.781E-06	4.693E-06	2.347E-06	9.420E-07	5.096E-07	3.228E-07	2.252E-07	1.676E-07	1.307E-07	1.055E-07							
SW	1.816E-05	5.933E-06	3.130E-06	1.564E-06	6.359E-07	3.470E-07	2.212E-07	1.551E-07	1.160E-07	9.075E-08	7.349E-08							
WSW	1.075E-05	3.678E-06	1.975E-06	9.875E-07	3.898E-07	2.085E-07	1.308E-07	9.059E-08	6.701E-08	5.196E-08	4.173E-08							
W	1.312E-05	4.461E-06	2.331E-06	1.147E-06	4.532E-07	2.427E-07	1.526E-07	1.058E-07	7.836E-08	6.084E-08	4.894E-08							
WNW	1.516E-05	4.793E-06	2.450E-06	1.206E-06	4.958E-07	2.729E-07	1.753E-07	1.236E-07	9.292E-08	7.305E-08	5.940E-08							
NW	3.965E-05	1.286E-05	6.803E-06	3.403E-06	1.392E-06	7.631E-07	4.883E-07	3.435E-07	2.575E-07	2.019E-07	1.639E-07							
NNW	6.725E-05	2.096E-05	1.103E-05	5.544E-06	2.295E-06	1.269E-06	8.166E-07	5.772E-07	4.344E-07	3.418E-07	2.782E-07							
N	6.386E-05	1.999E-05	1.074E-05	5.456E-06	2.248E-06	1.238E-06	7.948E-07	5.605E-07	4.209E-07	3.306E-07	2.686E-07							
NNE	3.634E-05	1.150E-05	6.166E-06	3.124E-06	1.285E-06	7.066E-07	4.531E-07	3.193E-07	2.396E-07	1.881E-07	1.528E-07							
NE	2.104E-05	6.623E-06	3.529E-06	1.785E-06	7.369E-07	4.063E-07	2.610E-07	1.841E-07	1.383E-07	1.087E-07	8.834E-08							
ENE	1.623E-05	5.373E-06	2.955E-06	1.506E-06	6.084E-07	3.305E-07	2.099E-07	1.467E-07	1.094E-07	8.541E-08	6.901E-08							
E	1.719E-05	5.805E-06	3.184E-06	1.615E-06	6.485E-07	3.509E-07	2.223E-07	1.551E-07	1.154E-07	8.996E-08	7.260E-08							
ESE	1.958E-05	6.537E-06	3.515E-06	1.766E-06	7.106E-07	3.853E-07	2.444E-07	1.708E-07	1.273E-07	9.931E-08	8.023E-08							
SE	2.726E-05	9.455E-06	5.070E-06	2.528E-06	9.994E-07	5.350E-07	3.361E-07	2.329E-07	1.723E-07	1.337E-07	1.075E-07							
SSE	3.549E-05	1.172E-05	6.262E-06	3.139E-06	1.270E-06	6.910E-07	4.396E-07	3.078E-07	2.298E-07	1.796E-07	1.453E-07							

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE												
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	
S	1.405E-07	7.266E-08	4.732E-08	2.733E-08	1.860E-08	1.383E-08	1.087E-08	8.876E-09	7.452E-09	6.390E-09	5.571E-09												
SSW	8.742E-08	4.519E-08	2.941E-08	1.697E-08	1.154E-08	8.569E-09	6.730E-09	5.492E-09	4.608E-09	3.950E-09	3.442E-09												
SW	6.110E-08	3.194E-08	2.095E-08	1.223E-08	8.375E-09	6.259E-09	4.941E-09	4.049E-09	3.410E-09	2.933E-09	2.563E-09												
WSW	3.446E-08	1.755E-08	1.131E-08	6.430E-09	4.326E-09	3.189E-09	2.489E-09	2.020E-09	1.687E-09	1.440E-09	1.251E-09												
W	4.045E-08	2.071E-08	1.340E-08	7.678E-09	5.209E-09	3.865E-09	3.033E-09	2.474E-09	2.076E-09	1.779E-09	1.550E-09												
WNW	4.957E-08	2.630E-08	1.744E-08	1.035E-08	7.187E-09	5.429E-09	4.322E-09	3.568E-09	3.024E-09	2.614E-09	2.296E-09												
NW	1.365E-07	7.188E-08	4.740E-08	2.786E-08	1.919E-08	1.440E-08	1.140E-08	9.369E-09	7.908E-09	6.813E-09	5.965E-09												
NNW	2.323E-07	1.236E-07	8.202E-08	4.865E-08	3.373E-08	2.544E-08	2.022E-08	1.667E-08	1.411E-08	1.218E-08	1.069E-08												
N	2.241E-07	1.185E-07	7.834E-08	4.619E-08	3.187E-08	2.394E-08	1.897E-08	1.560E-08	1.317E-08	1.135E-08	9.942E-09												
NNE	1.274E-07	6.723E-08	4.439E-08	2.613E-08	1.801E-08	1.352E-08	1.071E-08	8.798E-09	7.426E-09	6.398E-09	5.601E-09												
NE	7.368E-08	3.898E-08	2.577E-08	1.520E-08	1.049E-08	7.877E-09	6.243E-09	5.133E-09	4.335E-09	3.737E-09	3.273E-09												
ENE	5.727E-08	2.970E-08	1.937E-08	1.120E-08	7.619E-09	5.662E-09	4.447E-09	3.629E-09	3.044E-09	2.609E-09	2.273E-09												
E	6.018E-08	3.108E-08	2.021E-08	1.164E-08	7.906E-09	5.865E-09	4.601E-09	3.751E-09	3.144E-09	2.692E-09	2.343E-09												
ESE	6.658E-08	3.457E-08	2.257E-08	1.308E-08	8.921E-09	6.643E-09	5.227E-09	4.272E-09	3.590E-09	3.080E-09	2.687E-09												
SE	8.875E-08	4.524E-08	2.915E-08	1.659E-08	1.117E-08	8.237E-09	6.431E-09	5.222E-09	4.363E-09	3.725E-09	3.236E-09												
SSE	1.208E-07	6.298E-08	4.125E-08	2.402E-08	1.643E-08	1.227E-08	9.673E-09	7.920E-09	6.665E-09	5.727E-09	5.002E-09												

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.334E-06	1.710E-06	5.364E-07	2.732E-07	1.707E-07	7.647E-08	2.789E-08	1.392E-08	8.903E-09	6.401E-09
SSW	4.558E-06	1.062E-06	3.336E-07	1.700E-07	1.062E-07	4.756E-08	1.732E-08	8.624E-09	5.509E-09	3.957E-09
SW	3.057E-06	7.138E-07	2.283E-07	1.176E-07	7.402E-08	3.354E-08	1.245E-08	6.296E-09	4.061E-09	2.938E-09
WSW	1.915E-06	4.420E-07	1.354E-07	6.801E-08	4.207E-08	1.853E-08	6.579E-09	3.212E-09	2.027E-09	1.443E-09
W	2.278E-06	5.138E-07	1.579E-07	7.953E-08	4.932E-08	2.185E-08	7.851E-09	3.891E-09	2.482E-09	1.782E-09
WNW	2.418E-06	5.546E-07	1.807E-07	9.413E-08	5.980E-08	2.753E-08	1.052E-08	5.455E-09	3.576E-09	2.618E-09
NW	6.639E-06	1.559E-06	5.036E-07	2.609E-07	1.650E-07	7.536E-08	2.835E-08	1.448E-08	9.394E-09	6.824E-09
NNW	1.080E-05	2.561E-06	8.414E-07	4.399E-07	2.801E-07	1.293E-07	4.944E-08	2.556E-08	1.671E-08	1.220E-08
N	1.045E-05	2.512E-06	8.193E-07	4.264E-07	2.705E-07	1.241E-07	4.697E-08	2.407E-08	1.564E-08	1.137E-08
NNE	5.999E-06	1.436E-06	4.672E-07	2.428E-07	1.538E-07	7.044E-08	2.658E-08	1.359E-08	8.821E-09	6.407E-09
NE	3.442E-06	8.229E-07	2.690E-07	1.401E-07	8.894E-08	4.082E-08	1.545E-08	7.919E-09	5.146E-09	3.742E-09
ENE	2.848E-06	6.844E-07	2.168E-07	1.109E-07	6.952E-08	3.124E-08	1.142E-08	5.698E-09	3.640E-09	2.613E-09
E	3.069E-06	7.310E-07	2.297E-07	1.170E-07	7.314E-08	3.272E-08	1.189E-08	5.904E-09	3.762E-09	2.696E-09
ESE	3.409E-06	8.005E-07	2.525E-07	1.290E-07	8.083E-08	3.635E-08	1.334E-08	6.684E-09	4.285E-09	3.086E-09
SE	4.915E-06	1.133E-06	3.478E-07	1.749E-07	1.083E-07	4.776E-08	1.697E-08	8.297E-09	5.240E-09	3.733E-09
SSE	6.087E-06	1.428E-06	4.539E-07	2.330E-07	1.464E-07	6.616E-08	2.448E-08	1.234E-08	7.943E-09	5.737E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.215E-05	1.409E-05	7.533E-06	3.770E-06	1.509E-06	8.143E-07	5.147E-07	3.583E-07	2.662E-07	2.071E-07	1.668E-07
SSW	2.590E-05	8.763E-06	4.678E-06	2.337E-06	9.362E-07	5.055E-07	3.195E-07	2.224E-07	1.652E-07	1.285E-07	1.035E-07
SW	1.814E-05	5.921E-06	3.121E-06	1.558E-06	6.322E-07	3.443E-07	2.191E-07	1.533E-07	1.144E-07	8.934E-08	7.220E-08
WSW	1.074E-05	3.672E-06	1.970E-06	9.841E-07	3.878E-07	2.070E-07	1.296E-07	8.959E-08	6.614E-08	5.119E-08	4.103E-08
W	1.311E-05	4.454E-06	2.326E-06	1.144E-06	4.513E-07	2.413E-07	1.514E-07	1.048E-07	7.752E-08	6.009E-08	4.825E-08
WNW	1.515E-05	4.784E-06	2.443E-06	1.201E-06	4.930E-07	2.708E-07	1.735E-07	1.222E-07	9.162E-08	7.187E-08	5.832E-08
NW	3.961E-05	1.284E-05	6.785E-06	3.391E-06	1.384E-06	7.575E-07	4.838E-07	3.397E-07	2.541E-07	1.989E-07	1.611E-07
NNW	6.718E-05	2.091E-05	1.100E-05	5.520E-06	2.280E-06	1.258E-06	8.078E-07	5.697E-07	4.278E-07	3.359E-07	2.727E-07
N	6.379E-05	1.995E-05	1.071E-05	5.434E-06	2.234E-06	1.228E-06	7.864E-07	5.533E-07	4.146E-07	3.250E-07	2.635E-07
NNE	3.630E-05	1.147E-05	6.146E-06	3.110E-06	1.276E-06	7.004E-07	4.482E-07	3.151E-07	2.359E-07	1.848E-07	1.498E-07
NE	2.101E-05	6.609E-06	3.518E-06	1.778E-06	7.322E-07	4.028E-07	2.581E-07	1.817E-07	1.362E-07	1.068E-07	8.660E-08
ENE	1.621E-05	5.364E-06	2.947E-06	1.501E-06	6.054E-07	3.282E-07	2.081E-07	1.452E-07	1.081E-07	8.424E-08	6.795E-08
E	1.717E-05	5.796E-06	3.177E-06	1.610E-06	6.455E-07	3.488E-07	2.205E-07	1.536E-07	1.141E-07	8.883E-08	7.157E-08
ESE	1.957E-05	6.527E-06	3.507E-06	1.760E-06	7.073E-07	3.828E-07	2.425E-07	1.691E-07	1.258E-07	9.803E-08	7.906E-08
SE	2.724E-05	9.443E-06	5.061E-06	2.522E-06	9.956E-07	5.322E-07	3.339E-07	2.310E-07	1.708E-07	1.323E-07	1.062E-07
SSE	3.546E-05	1.170E-05	6.245E-06	3.128E-06	1.263E-06	6.860E-07	4.356E-07	3.044E-07	2.268E-07	1.770E-07	1.429E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.381E-07	7.080E-08	4.570E-08	2.593E-08	1.733E-08	1.266E-08	9.774E-09	7.841E-09	6.467E-09	5.449E-09	4.668E-09
SSW	8.562E-08	4.380E-08	2.821E-08	1.594E-08	1.061E-08	7.716E-09	5.935E-09	4.744E-09	3.900E-09	3.274E-09	2.796E-09
SW	5.991E-08	3.100E-08	2.013E-08	1.151E-08	7.730E-09	5.662E-09	4.381E-09	3.519E-09	2.906E-09	2.450E-09	2.100E-09
WSW	3.382E-08	1.706E-08	1.088E-08	6.061E-09	3.997E-09	2.886E-09	2.207E-09	1.755E-09	1.437E-09	1.201E-09	1.022E-09
W	3.982E-08	2.021E-08	1.296E-08	7.295E-09	4.859E-09	3.539E-09	2.726E-09	2.182E-09	1.796E-09	1.511E-09	1.292E-09
WNW	4.856E-08	2.549E-08	1.672E-08	9.700E-09	6.589E-09	4.867E-09	3.790E-09	3.059E-09	2.535E-09	2.143E-09	1.840E-09
NW	1.340E-07	6.985E-08	4.561E-08	2.628E-08	1.774E-08	1.305E-08	1.013E-08	8.158E-09	6.750E-09	5.700E-09	4.892E-09
NNW	2.273E-07	1.195E-07	7.847E-08	4.552E-08	3.086E-08	2.276E-08	1.770E-08	1.427E-08	1.182E-08	9.986E-09	8.572E-09
N	2.193E-07	1.147E-07	7.500E-08	4.325E-08	2.920E-08	2.146E-08	1.664E-08	1.339E-08	1.107E-08	9.337E-09	8.004E-09
NNE	1.246E-07	6.504E-08	4.247E-08	2.445E-08	1.649E-08	1.211E-08	9.389E-09	7.552E-09	6.241E-09	5.264E-09	4.513E-09
NE	7.207E-08	3.769E-08	2.464E-08	1.420E-08	9.577E-09	7.033E-09	5.449E-09	4.380E-09	3.617E-09	3.048E-09	2.610E-09
ENE	5.628E-08	2.893E-08	1.870E-08	1.062E-08	7.100E-09	5.184E-09	4.001E-09	3.209E-09	2.646E-09	2.229E-09	1.909E-09
E	5.923E-08	3.034E-08	1.957E-08	1.109E-08	7.408E-09	5.407E-09	4.173E-09	3.347E-09	2.761E-09	2.326E-09	1.993E-09
ESE	6.550E-08	3.372E-08	2.182E-08	1.243E-08	8.325E-09	6.091E-09	4.709E-09	3.782E-09	3.122E-09	2.633E-09	2.257E-09
SE	8.756E-08	4.432E-08	2.835E-08	1.590E-08	1.055E-08	7.667E-09	5.899E-09	4.719E-09	3.885E-09	3.269E-09	2.798E-09
SSE	1.185E-07	6.120E-08	3.968E-08	2.265E-08	1.519E-08	1.111E-08	8.587E-09	6.891E-09	5.684E-09	4.787E-09	4.099E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.317E-06	1.703E-06	5.320E-07	2.700E-07	1.681E-07	7.459E-08	2.650E-08	1.275E-08	7.870E-09	5.462E-09
SSW	4.545E-06	1.056E-06	3.302E-07	1.676E-07	1.043E-07	4.616E-08	1.629E-08	7.774E-09	4.763E-09	3.283E-09
SW	3.049E-06	7.100E-07	2.262E-07	1.160E-07	7.273E-08	3.260E-08	1.175E-08	5.701E-09	3.532E-09	2.455E-09
WSW	1.910E-06	4.399E-07	1.342E-07	6.714E-08	4.137E-08	1.803E-08	6.214E-09	2.911E-09	1.763E-09	1.205E-09
W	2.273E-06	5.118E-07	1.567E-07	7.868E-08	4.863E-08	2.134E-08	7.471E-09	3.566E-09	2.191E-09	1.514E-09
WNW	2.411E-06	5.517E-07	1.789E-07	9.283E-08	5.872E-08	2.672E-08	9.876E-09	4.895E-09	3.068E-09	2.147E-09
NW	6.623E-06	1.552E-06	4.992E-07	2.576E-07	1.623E-07	7.332E-08	2.678E-08	1.313E-08	8.185E-09	5.712E-09
NNW	1.077E-05	2.546E-06	8.325E-07	4.333E-07	2.746E-07	1.252E-07	4.633E-08	2.290E-08	1.432E-08	1.001E-08
N	1.042E-05	2.498E-06	8.109E-07	4.201E-07	2.653E-07	1.203E-07	4.406E-08	2.160E-08	1.344E-08	9.356E-09
NNE	5.981E-06	1.428E-06	4.622E-07	2.391E-07	1.508E-07	6.824E-08	2.492E-08	1.219E-08	7.578E-09	5.275E-09
NE	3.432E-06	8.181E-07	2.661E-07	1.380E-07	8.720E-08	3.953E-08	1.447E-08	7.078E-09	4.395E-09	3.054E-09
ENE	2.842E-06	6.813E-07	2.150E-07	1.096E-07	6.845E-08	3.046E-08	1.085E-08	5.222E-09	3.221E-09	2.234E-09
E	3.063E-06	7.279E-07	2.280E-07	1.158E-07	7.211E-08	3.197E-08	1.134E-08	5.447E-09	3.360E-09	2.331E-09
ESE	3.402E-06	7.971E-07	2.506E-07	1.276E-07	7.966E-08	3.549E-08	1.269E-08	6.134E-09	3.795E-09	2.639E-09
SE	4.906E-06	1.129E-06	3.456E-07	1.733E-07	1.070E-07	4.683E-08	1.629E-08	7.729E-09	4.739E-09	3.277E-09
SSE	6.072E-06	1.421E-06	4.499E-07	2.300E-07	1.440E-07	6.437E-08	2.312E-08	1.119E-08	6.916E-09	4.798E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500		
S	3.991E-05	1.288E-05	6.725E-06	3.308E-06	1.286E-06	6.775E-07	4.194E-07	2.867E-07	2.095E-07	1.606E-07	1.275E-07	1.286E-06	6.775E-07	4.194E-07	2.867E-07	2.095E-07	1.606E-07	1.275E-07		
SSW	2.453E-05	8.014E-06	4.178E-06	2.052E-06	7.986E-07	4.210E-07	2.607E-07	1.782E-07	1.302E-07	9.983E-08	7.931E-08	7.986E-07	4.210E-07	2.607E-07	1.782E-07	1.302E-07	9.983E-08	7.931E-08		
SW	1.718E-05	5.415E-06	2.787E-06	1.368E-06	5.391E-07	2.867E-07	1.787E-07	1.228E-07	9.014E-08	6.936E-08	5.529E-08	5.391E-07	2.867E-07	1.787E-07	1.228E-07	9.014E-08	6.936E-08	5.529E-08		
WSW	1.018E-05	3.357E-06	1.759E-06	8.636E-07	3.306E-07	1.723E-07	1.057E-07	7.173E-08	5.209E-08	3.972E-08	3.140E-08	3.306E-07	1.723E-07	1.057E-07	7.173E-08	5.209E-08	3.972E-08	3.140E-08		
W	1.242E-05	4.072E-06	2.076E-06	1.003E-06	3.844E-07	2.006E-07	1.233E-07	8.381E-08	6.096E-08	4.654E-08	3.685E-08	3.844E-07	2.006E-07	1.233E-07	8.381E-08	6.096E-08	4.654E-08	3.685E-08		
WNW	1.435E-05	4.374E-06	2.181E-06	1.055E-06	4.204E-07	2.255E-07	1.416E-07	9.788E-08	7.222E-08	5.582E-08	4.468E-08	4.204E-07	2.255E-07	1.416E-07	9.788E-08	7.222E-08	5.582E-08	4.468E-08		
NW	3.751E-05	1.174E-05	6.058E-06	2.976E-06	1.180E-06	6.306E-07	3.945E-07	2.720E-07	2.002E-07	1.544E-07	1.233E-07	6.306E-07	3.945E-07	2.720E-07	2.002E-07	1.544E-07	1.233E-07	1.233E-07		
NNW	6.363E-05	1.913E-05	9.823E-06	4.847E-06	1.946E-06	1.048E-06	6.595E-07	4.568E-07	3.375E-07	2.611E-07	2.092E-07	1.946E-06	1.048E-06	6.595E-07	4.568E-07	3.375E-07	2.611E-07	2.092E-07		
N	6.042E-05	1.825E-05	9.565E-06	4.771E-06	1.906E-06	1.023E-06	6.419E-07	4.436E-07	3.270E-07	2.526E-07	2.020E-07	1.906E-06	1.023E-06	6.419E-07	4.436E-07	3.270E-07	2.526E-07	2.020E-07		
NNE	3.438E-05	1.049E-05	5.490E-06	2.731E-06	1.089E-06	5.836E-07	3.659E-07	2.526E-07	1.862E-07	1.437E-07	1.149E-07	1.089E-06	5.836E-07	3.659E-07	2.526E-07	1.862E-07	1.437E-07	1.149E-07		
NE	1.990E-05	6.045E-06	3.142E-06	1.561E-06	6.247E-07	3.356E-07	2.107E-07	1.457E-07	1.075E-07	8.302E-08	6.641E-08	6.247E-07	3.356E-07	2.107E-07	1.457E-07	1.075E-07	8.302E-08	6.641E-08		
ENE	1.535E-05	4.904E-06	2.631E-06	1.317E-06	5.160E-07	2.731E-07	1.696E-07	1.162E-07	8.508E-08	6.531E-08	5.195E-08	5.160E-07	2.731E-07	1.696E-07	1.162E-07	8.508E-08	6.531E-08	5.195E-08		
E	1.626E-05	5.299E-06	2.836E-06	1.412E-06	5.500E-07	2.901E-07	1.797E-07	1.228E-07	8.977E-08	6.881E-08	5.467E-08	5.500E-07	2.901E-07	1.797E-07	1.228E-07	8.977E-08	6.881E-08	5.467E-08		
ESE	1.853E-05	5.967E-06	3.130E-06	1.544E-06	6.027E-07	3.184E-07	1.975E-07	1.353E-07	9.898E-08	7.596E-08	6.041E-08	6.027E-07	3.184E-07	1.975E-07	1.353E-07	9.898E-08	7.596E-08	6.041E-08		
SE	2.579E-05	8.631E-06	4.516E-06	2.211E-06	8.478E-07	4.423E-07	2.717E-07	1.846E-07	1.341E-07	1.023E-07	8.097E-08	8.478E-07	4.423E-07	2.717E-07	1.846E-07	1.341E-07	1.023E-07	8.097E-08		
SSE	3.358E-05	1.070E-05	5.576E-06	2.745E-06	1.077E-06	5.710E-07	3.552E-07	2.437E-07	1.786E-07	1.373E-07	1.094E-07	5.710E-07	3.552E-07	2.437E-07	1.786E-07	1.373E-07	1.094E-07	1.094E-07		

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000		
S	1.042E-07	5.085E-08	3.148E-08	1.674E-08	1.065E-08	7.461E-09	5.561E-09	4.324E-09	3.469E-09	2.849E-09	2.385E-09	1.065E-08	7.461E-09	5.561E-09	4.324E-09	3.469E-09	2.849E-09	2.385E-09		
SSW	6.478E-08	3.158E-08	1.953E-08	1.037E-08	6.578E-09	4.601E-09	3.424E-09	2.659E-09	2.130E-09	1.747E-09	1.461E-09	6.578E-09	4.601E-09	3.424E-09	2.659E-09	2.130E-09	1.747E-09	1.461E-09		
SW	4.529E-08	2.233E-08	1.392E-08	7.473E-09	4.781E-09	3.366E-09	2.518E-09	1.964E-09	1.579E-09	1.300E-09	1.090E-09	4.781E-09	3.366E-09	2.518E-09	1.964E-09	1.579E-09	1.300E-09	1.090E-09		
WSW	2.555E-08	1.227E-08	7.513E-09	3.931E-09	2.470E-09	1.715E-09	1.268E-09	9.795E-10	7.811E-10	6.382E-10	5.316E-10	3.931E-09	2.470E-09	1.715E-09	1.268E-09	9.795E-10	7.811E-10	6.382E-10		
W	3.002E-08	1.450E-08	8.915E-09	4.706E-09	2.982E-09	2.085E-09	1.552E-09	1.205E-09	9.656E-10	7.925E-10	6.628E-10	4.706E-09	2.982E-09	2.085E-09	1.552E-09	1.205E-09	9.656E-10	7.925E-10		
WNW	3.674E-08	1.838E-08	1.158E-08	6.316E-09	4.095E-09	2.912E-09	2.196E-09	1.724E-09	1.394E-09	1.153E-09	9.711E-10	6.316E-09	4.095E-09	2.912E-09	2.196E-09	1.724E-09	1.394E-09	1.153E-09		
NW	1.012E-07	5.027E-08	3.150E-08	1.704E-08	1.096E-08	7.747E-09	5.814E-09	4.546E-09	3.664E-09	3.022E-09	2.539E-09	1.096E-08	7.747E-09	5.814E-09	4.546E-09	3.664E-09	3.022E-09	2.539E-09		
NNW	1.721E-07	8.629E-08	5.442E-08	2.969E-08	1.921E-08	1.364E-08	1.027E-08	8.049E-09	6.502E-09	5.372E-09	4.519E-09	2.969E-08	1.921E-08	1.364E-08	1.027E-08	8.049E-09	6.502E-09	5.372E-09		
N	1.660E-07	8.276E-08	5.198E-08	2.819E-08	1.815E-08	1.284E-08	9.637E-09	7.537E-09	6.074E-09	5.009E-09	4.206E-09	2.819E-08	1.815E-08	1.284E-08	9.637E-09	7.537E-09	6.074E-09	5.009E-09		
NNE	9.434E-08	4.695E-08	2.945E-08	1.594E-08	1.026E-08	7.248E-09	5.437E-09	4.250E-09	3.424E-09	2.823E-09	2.370E-09	1.594E-08	1.026E-08	7.248E-09	5.437E-09	4.250E-09	3.424E-09	2.823E-09		
NE	5.458E-08	2.722E-08	1.710E-08	9.270E-09	5.967E-09	4.219E-09	3.166E-09	2.476E-09	1.995E-09	1.645E-09	1.381E-09	9.270E-09	5.967E-09	4.219E-09	3.166E-09	2.476E-09	1.995E-09	1.645E-09		
ENE	4.248E-08	2.078E-08	1.288E-08	6.859E-09	4.360E-09	3.054E-09	2.275E-09	1.768E-09	1.417E-09	1.163E-09	9.732E-10	6.859E-09	4.360E-09	3.054E-09	2.275E-09	1.768E-09	1.417E-09	1.163E-09		
E	4.466E-08	2.176E-08	1.346E-08	7.141E-09	4.532E-09	3.171E-09	2.359E-09	1.832E-09	1.468E-09	1.205E-09	1.007E-09	7.141E-09	4.532E-09	3.171E-09	2.359E-09	1.832E-09	1.468E-09	1.205E-09		
ESE	4.940E-08	2.420E-08	1.502E-08	8.016E-09	5.108E-09	3.585E-09	2.675E-09	2.082E-09	1.672E-09	1.374E-09	1.151E-09	5.108E-09	3.585E-09	2.675E-09	2.082E-09	1.672E-09	1.374E-09	1.151E-09		
SE	6.590E-08	3.171E-08	1.943E-08	1.019E-08	6.418E-09	4.465E-09	3.309E-09	2.561E-09	2.046E-09	1.675E-09	1.398E-09	6.418E-09	4.465E-09	3.309E-09	2.561E-09	2.046E-09	1.675E-09	1.398E-09		
SSE	8.953E-08	4.404E-08	2.741E-08	1.469E-08	9.382E-09	6.598E-09	4.930E-09	3.842E-09	3.087E-09	2.539E-09	2.128E-09	9.382E-09	6.598E-09	4.930E-09	3.842E-09	3.087E-09	2.539E-09	2.128E-09		

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.574E-06	1.465E-06	4.351E-07	2.129E-07	1.287E-07	5.410E-08	1.731E-08	7.550E-09	4.352E-09	2.861E-09
SSW	4.085E-06	9.093E-07	2.705E-07	1.324E-07	8.001E-08	3.360E-08	1.072E-08	4.657E-09	2.676E-09	1.755E-09
SW	2.740E-06	6.111E-07	1.852E-07	9.156E-08	5.575E-08	2.369E-08	7.709E-09	3.404E-09	1.976E-09	1.305E-09
WSW	1.716E-06	3.787E-07	1.099E-07	5.299E-08	3.170E-08	1.311E-08	4.078E-09	1.738E-09	9.864E-10	6.411E-10
W	2.043E-06	4.402E-07	1.281E-07	6.200E-08	3.719E-08	1.547E-08	4.875E-09	2.111E-09	1.213E-09	7.958E-10
WNW	2.168E-06	4.747E-07	1.465E-07	7.330E-08	4.504E-08	1.943E-08	6.498E-09	2.941E-09	1.733E-09	1.157E-09
NW	5.951E-06	1.335E-06	4.084E-07	2.032E-07	1.243E-07	5.324E-08	1.755E-08	7.830E-09	4.572E-09	3.033E-09
NNW	9.679E-06	2.191E-06	6.820E-07	3.425E-07	2.108E-07	9.120E-08	3.052E-08	1.377E-08	8.093E-09	5.391E-09
N	9.364E-06	2.150E-06	6.642E-07	3.320E-07	2.037E-07	8.758E-08	2.901E-08	1.297E-08	7.579E-09	5.027E-09
NNE	5.376E-06	1.229E-06	3.787E-07	1.890E-07	1.158E-07	4.970E-08	1.642E-08	7.326E-09	4.275E-09	2.833E-09
NE	3.084E-06	7.042E-07	2.180E-07	1.091E-07	6.695E-08	2.880E-08	9.541E-09	4.264E-09	2.490E-09	1.651E-09
ENE	2.552E-06	5.861E-07	1.759E-07	8.644E-08	5.240E-08	2.209E-08	7.087E-09	3.091E-09	1.779E-09	1.168E-09
E	2.751E-06	6.261E-07	1.864E-07	9.123E-08	5.515E-08	2.316E-08	7.385E-09	3.209E-09	1.844E-09	1.210E-09
ESE	3.056E-06	6.856E-07	2.049E-07	1.006E-07	6.094E-08	2.572E-08	8.279E-09	3.627E-09	2.095E-09	1.380E-09
SE	4.406E-06	9.706E-07	2.823E-07	1.364E-07	8.172E-08	3.385E-08	1.057E-08	4.523E-09	2.578E-09	1.682E-09
SSE	5.456E-06	1.223E-06	3.681E-07	1.815E-07	1.103E-07	4.676E-08	1.516E-08	6.673E-09	3.865E-09	2.549E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.370E-07	8.014E-08	4.115E-08	1.956E-08	7.027E-09	3.485E-09	2.052E-09	1.344E-09	9.454E-10	7.006E-10	5.399E-10
SSW	1.020E-07	3.450E-08	1.772E-08	8.422E-09	3.025E-09	1.500E-09	8.834E-10	5.785E-10	4.070E-10	3.016E-10	2.325E-10
SW	6.696E-08	2.264E-08	1.163E-08	5.528E-09	1.986E-09	9.847E-10	5.798E-10	3.796E-10	2.671E-10	1.980E-10	1.526E-10
WSW	5.420E-08	1.833E-08	9.411E-09	4.474E-09	1.607E-09	7.970E-10	4.693E-10	3.073E-10	2.162E-10	1.602E-10	1.235E-10
W	8.818E-08	2.982E-08	1.531E-08	7.279E-09	2.615E-09	1.297E-09	7.635E-10	4.999E-10	3.518E-10	2.607E-10	2.009E-10
WNW	6.588E-08	2.228E-08	1.144E-08	5.438E-09	1.953E-09	9.687E-10	5.704E-10	3.735E-10	2.628E-10	1.948E-10	1.501E-10
NW	1.637E-07	5.534E-08	2.842E-08	1.351E-08	4.853E-09	2.407E-09	1.417E-09	9.279E-10	6.529E-10	4.838E-10	3.729E-10
NNW	2.413E-07	8.161E-08	4.190E-08	1.992E-08	7.156E-09	3.549E-09	2.089E-09	1.368E-09	9.627E-10	7.135E-10	5.498E-10
N	2.637E-07	8.918E-08	4.579E-08	2.177E-08	7.819E-09	3.878E-09	2.283E-09	1.495E-09	1.052E-09	7.796E-10	6.008E-10
NNE	1.351E-07	4.568E-08	2.345E-08	1.115E-08	4.005E-09	1.986E-09	1.169E-09	7.657E-10	5.388E-10	3.993E-10	3.077E-10
NE	7.763E-08	2.625E-08	1.348E-08	6.408E-09	2.302E-09	1.142E-09	6.722E-10	4.401E-10	3.097E-10	2.295E-10	1.769E-10
ENE	9.141E-08	3.091E-08	1.587E-08	7.545E-09	2.710E-09	1.344E-09	7.914E-10	5.182E-10	3.647E-10	2.702E-10	2.083E-10
E	1.052E-07	3.558E-08	1.827E-08	8.685E-09	3.120E-09	1.547E-09	9.109E-10	5.965E-10	4.197E-10	3.110E-10	2.397E-10
ESE	1.339E-07	4.528E-08	2.325E-08	1.105E-08	3.970E-09	1.969E-09	1.159E-09	7.591E-10	5.341E-10	3.958E-10	3.050E-10
SE	2.614E-07	8.838E-08	4.538E-08	2.157E-08	7.749E-09	3.843E-09	2.263E-09	1.482E-09	1.043E-09	7.727E-10	5.954E-10
SSE	2.285E-07	7.726E-08	3.967E-08	1.886E-08	6.775E-09	3.360E-09	1.978E-09	1.295E-09	9.114E-10	6.755E-10	5.205E-10

DIRECTION FROM SITE	DISTANCES IN MILES											
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00	
S	4.289E-10	1.905E-10	1.154E-10	5.834E-11	3.531E-11	2.367E-11	1.696E-11	1.274E-11	9.904E-12	7.911E-12	6.458E-12	
SSW	1.847E-10	8.204E-11	4.970E-11	2.512E-11	1.520E-11	1.019E-11	7.304E-12	5.484E-12	4.264E-12	3.406E-12	2.780E-12	
SW	1.212E-10	5.384E-11	3.261E-11	1.648E-11	9.978E-12	6.690E-12	4.794E-12	3.599E-12	2.799E-12	2.236E-12	1.825E-12	
WSW	9.810E-11	4.358E-11	2.640E-11	1.334E-11	8.076E-12	5.415E-12	3.880E-12	2.914E-12	2.265E-12	1.810E-12	1.477E-12	
W	1.596E-10	7.090E-11	4.295E-11	2.171E-11	1.314E-11	8.809E-12	6.312E-12	4.740E-12	3.685E-12	2.944E-12	2.403E-12	
WNW	1.192E-10	5.297E-11	3.209E-11	1.622E-11	9.816E-12	6.581E-12	4.716E-12	3.541E-12	2.753E-12	2.199E-12	1.795E-12	
NW	2.962E-10	1.316E-10	7.971E-11	4.029E-11	2.439E-11	1.635E-11	1.172E-11	8.797E-12	6.840E-12	5.464E-12	4.460E-12	
NNW	4.368E-10	1.940E-10	1.175E-10	5.941E-11	3.596E-11	2.411E-11	1.728E-11	1.297E-11	1.009E-11	8.057E-12	6.576E-12	
N	4.773E-10	2.120E-10	1.284E-10	6.492E-11	3.929E-11	2.635E-11	1.888E-11	1.418E-11	1.102E-11	8.804E-12	7.186E-12	
NNE	2.445E-10	1.086E-10	6.578E-11	3.325E-11	2.012E-11	1.349E-11	9.669E-12	7.260E-12	5.645E-12	4.509E-12	3.681E-12	
NE	1.405E-10	6.242E-11	3.781E-11	1.911E-11	1.157E-11	7.755E-12	5.557E-12	4.173E-12	3.245E-12	2.592E-12	2.115E-12	
ENE	1.654E-10	7.350E-11	4.452E-11	2.250E-11	1.362E-11	9.132E-12	6.543E-12	4.913E-12	3.820E-12	3.052E-12	2.491E-12	
E	1.904E-10	8.459E-11	5.124E-11	2.590E-11	1.568E-11	1.051E-11	7.531E-12	5.655E-12	4.397E-12	3.512E-12	2.867E-12	
ESE	2.423E-10	1.077E-10	6.521E-11	3.296E-11	1.995E-11	1.338E-11	9.585E-12	7.197E-12	5.596E-12	4.470E-12	3.649E-12	
SE	4.730E-10	2.101E-10	1.273E-10	6.434E-11	3.894E-11	2.611E-11	1.871E-11	1.405E-11	1.092E-11	8.725E-12	7.122E-12	
SSE	4.135E-10	1.837E-10	1.113E-10	5.625E-11	3.404E-11	2.283E-11	1.636E-11	1.228E-11	9.549E-12	7.628E-12	6.226E-12	

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.022E-08	8.238E-09	2.151E-09	9.659E-10	5.464E-10	2.101E-10	6.079E-11	2.409E-11	1.287E-11	7.963E-12
SSW	1.732E-08	3.547E-09	9.259E-10	4.159E-10	2.353E-10	9.047E-11	2.617E-11	1.037E-11	5.539E-12	3.429E-12
SW	1.136E-08	2.328E-09	6.077E-10	2.729E-10	1.544E-10	5.938E-11	1.718E-11	6.808E-12	3.636E-12	2.250E-12
WSW	9.199E-09	1.884E-09	4.919E-10	2.209E-10	1.250E-10	4.806E-11	1.390E-11	5.511E-12	2.943E-12	1.821E-12
W	1.496E-08	3.065E-09	8.002E-10	3.594E-10	2.033E-10	7.819E-11	2.262E-11	8.965E-12	4.787E-12	2.963E-12
WNW	1.118E-08	2.290E-09	5.978E-10	2.685E-10	1.519E-10	5.841E-11	1.690E-11	6.698E-12	3.577E-12	2.214E-12
NW	2.778E-08	5.689E-09	1.485E-09	6.671E-10	3.774E-10	1.451E-10	4.198E-11	1.664E-11	8.885E-12	5.500E-12
NNW	4.096E-08	8.389E-09	2.190E-09	9.836E-10	5.564E-10	2.140E-10	6.190E-11	2.454E-11	1.310E-11	8.110E-12
N	4.476E-08	9.167E-09	2.393E-09	1.075E-09	6.081E-10	2.338E-10	6.765E-11	2.681E-11	1.432E-11	8.862E-12
NNE	2.292E-08	4.695E-09	1.226E-09	5.505E-10	3.114E-10	1.198E-10	3.465E-11	1.373E-11	7.333E-12	4.539E-12
NE	1.318E-08	2.699E-09	7.045E-10	3.164E-10	1.790E-10	6.884E-11	1.991E-11	7.893E-12	4.215E-12	2.609E-12
ENE	1.551E-08	3.178E-09	8.295E-10	3.726E-10	2.108E-10	8.105E-11	2.345E-11	9.293E-12	4.963E-12	3.072E-12
E	1.786E-08	3.657E-09	9.548E-10	4.288E-10	2.426E-10	9.329E-11	2.699E-11	1.070E-11	5.712E-12	3.535E-12
ESE	2.272E-08	4.654E-09	1.215E-09	5.457E-10	3.087E-10	1.187E-10	3.435E-11	1.361E-11	7.269E-12	4.499E-12
SE	4.436E-08	9.085E-09	2.372E-09	1.065E-09	6.026E-10	2.317E-10	6.704E-11	2.657E-11	1.419E-11	8.783E-12
SSE	3.878E-08	7.942E-09	2.073E-09	9.312E-10	5.268E-10	2.026E-10	5.861E-11	2.323E-11	1.240E-11	7.678E-12

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED		DEPLETED
A	Site Boundary S	.80	6.5E-06	6.5E-06	5.8E-06 3.5E-08
A	Site Boundary SSW	.82	3.7E-06	3.7E-06	3.3E-06 1.4E-08
A	Site Boundary SW	.97	1.7E-06	1.7E-06	1.5E-06 5.9E-09
A	Site Boundary WSW	.93	1.2E-06	1.2E-06	1.0E-06 5.5E-09
A	Site Boundary W	.91	1.4E-06	1.4E-06	1.3E-06 9.2E-09
A	Site Boundary WNW	.94	1.4E-06	1.4E-06	1.2E-06 6.4E-09
A	Site Boundary NW	.81	5.6E-06	5.6E-06	5.0E-06 2.3E-08
A	Site Boundary NNW	.69	1.3E-05	1.3E-05	1.1E-05 4.9E-08
A	Site Boundary N	.67	1.3E-05	1.3E-05	1.1E-05 5.5E-08
A	Site Boundary NNE	.60	8.6E-06	8.6E-06	7.8E-06 3.4E-08
A	Site Boundary NE	.62	4.7E-06	4.6E-06	4.2E-06 1.8E-08
A	Site Boundary ENE	.59	4.2E-06	4.2E-06	3.8E-06 2.4E-08
A	Site Boundary E	.53	5.4E-06	5.4E-06	4.9E-06 3.3E-08
A	Site Boundary ESE	.54	5.8E-06	5.8E-06	5.3E-06 4.0E-08
A	Site Boundary SE	.65	6.3E-06	6.3E-06	5.7E-06 5.8E-08
A	Site Boundary SSE	.81	5.2E-06	5.2E-06	4.6E-06 3.2E-08
A	Nearest Res SW	1.30	8.7E-07	8.6E-07	7.4E-07 2.8E-09
A	Nearest Res WSW	1.30	5.4E-07	5.4E-07	4.6E-07 2.3E-09
A	Nearest Res W	1.00	1.1E-06	1.1E-06	1.0E-06 7.3E-09
A	Nearest Res WNW	1.70	3.8E-07	3.8E-07	3.2E-07 1.4E-09
A	Nearest Res NW	.90	4.4E-06	4.4E-06	3.9E-06 1.8E-08
A	Nearest Res NNW	1.90	1.4E-06	1.4E-06	1.2E-06 4.0E-09
A	Nearest Res N	3.00	5.6E-07	5.5E-07	4.4E-07 1.5E-09
A	Nearest Res ENE	1.70	4.6E-07	4.6E-07	3.9E-07 2.0E-09
A	Nearest Res E	2.00	3.5E-07	3.5E-07	2.9E-07 1.5E-09
A	Nearest Res ESE	2.30	2.9E-07	2.9E-07	2.4E-07 1.4E-09
A	Nearest Cow NNW	3.50	4.3E-07	4.3E-07	3.4E-07 9.6E-10
A	Nearest Garde SW	1.30	8.7E-07	8.6E-07	7.4E-07 2.8E-09
A	Nearest Garde WSW	1.90	2.3E-07	2.3E-07	1.9E-07 9.0E-10
A	Nearest Garde WNW	2.40	1.9E-07	1.9E-07	1.5E-07 6.3E-10
A	Nearest Garde NW	2.90	3.7E-07	3.6E-07	2.9E-07 1.0E-09
A	Nearest Garde NNW	1.90	1.4E-06	1.4E-06	1.2E-06 4.0E-09
A	Nearest Garde ENE	2.80	1.7E-07	1.7E-07	1.3E-07 6.1E-10
A	Nearest Garde E	2.00	3.5E-07	3.5E-07	2.9E-07 1.5E-09
A	Nearest Garde ESE	2.30	2.9E-07	2.9E-07	2.4E-07 1.4E-09
A	Nearest Garde SE	1.20	1.7E-06	1.6E-06	1.4E-06 1.4E-08

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**Atmospheric Diffusion Estimates**

**Ground Level Releases**

April-June 2004

VENTS GROUND LEVEL RELEASES - APR-JUN 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.235E-05	2.005E-05	1.059E-05	5.297E-06	2.150E-06	1.173E-06	7.475E-07	5.243E-07	3.921E-07	3.069E-07	2.486E-07
SSW	1.942E-05	6.379E-06	3.379E-06	1.685E-06	6.721E-07	3.622E-07	2.287E-07	1.592E-07	1.183E-07	9.211E-08	7.426E-08
SW	1.422E-05	4.859E-06	2.566E-06	1.267E-06	4.936E-07	2.616E-07	1.631E-07	1.124E-07	8.279E-08	6.397E-08	5.123E-08
WSW	1.236E-05	4.291E-06	2.278E-06	1.126E-06	4.393E-07	2.330E-07	1.454E-07	1.002E-07	7.381E-08	5.704E-08	4.569E-08
W	1.104E-05	3.757E-06	1.962E-06	9.633E-07	3.745E-07	1.982E-07	1.235E-07	8.500E-08	6.257E-08	4.832E-08	3.868E-08
WNW	8.385E-06	2.778E-06	1.459E-06	7.183E-07	2.776E-07	1.465E-07	9.105E-08	6.259E-08	4.602E-08	3.551E-08	2.841E-08
NW	2.090E-05	6.941E-06	3.670E-06	1.821E-06	7.267E-07	3.921E-07	2.480E-07	1.728E-07	1.286E-07	1.002E-07	8.086E-08
NNW	4.819E-05	1.530E-05	7.942E-06	3.938E-06	1.605E-06	8.779E-07	5.610E-07	3.943E-07	2.953E-07	2.315E-07	1.878E-07
N	7.133E-05	2.253E-05	1.169E-05	5.802E-06	2.383E-06	1.311E-06	8.410E-07	5.929E-07	4.453E-07	3.499E-07	2.843E-07
NNE	4.599E-05	1.424E-05	7.342E-06	3.644E-06	1.508E-06	8.341E-07	5.373E-07	3.801E-07	2.862E-07	2.254E-07	1.835E-07
NE	1.707E-05	5.406E-06	2.807E-06	1.394E-06	5.735E-07	3.158E-07	2.028E-07	1.431E-07	1.075E-07	8.451E-08	6.871E-08
ENE	1.734E-05	5.391E-06	2.880E-06	1.457E-06	5.962E-07	3.269E-07	2.092E-07	1.472E-07	1.103E-07	8.655E-08	7.023E-08
E	1.294E-05	4.255E-06	2.318E-06	1.174E-06	4.713E-07	2.552E-07	1.618E-07	1.130E-07	8.415E-08	6.565E-08	5.302E-08
ESE	3.168E-05	9.733E-06	4.996E-06	2.480E-06	1.035E-06	5.751E-07	3.719E-07	2.638E-07	1.991E-07	1.571E-07	1.281E-07
SE	3.666E-05	1.125E-05	5.852E-06	2.929E-06	1.222E-06	6.789E-07	4.388E-07	3.111E-07	2.348E-07	1.852E-07	1.510E-07
SSE	7.361E-05	2.290E-05	1.198E-05	5.999E-06	2.482E-06	1.371E-06	8.826E-07	6.238E-07	4.694E-07	3.694E-07	3.007E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.069E-07	1.085E-07	7.138E-08	4.182E-08	2.876E-08	2.155E-08	1.705E-08	1.400E-08	1.181E-08	1.017E-08	8.896E-09
SSW	6.152E-08	3.178E-08	2.068E-08	1.194E-08	8.130E-09	6.049E-09	4.757E-09	3.887E-09	3.265E-09	2.802E-09	2.444E-09
SW	4.220E-08	2.134E-08	1.367E-08	7.736E-09	5.201E-09	3.831E-09	2.989E-09	2.426E-09	2.027E-09	1.730E-09	1.503E-09
WSW	3.763E-08	1.898E-08	1.215E-08	6.856E-09	4.600E-09	3.383E-09	2.636E-09	2.136E-09	1.782E-09	1.520E-09	1.319E-09
W	3.186E-08	1.610E-08	1.031E-08	5.836E-09	3.923E-09	2.891E-09	2.256E-09	1.832E-09	1.531E-09	1.307E-09	1.136E-09
WNW	2.339E-08	1.182E-08	7.574E-09	4.296E-09	2.903E-09	2.147E-09	1.681E-09	1.369E-09	1.146E-09	9.806E-10	8.534E-10
NW	6.707E-08	3.479E-08	2.270E-08	1.317E-08	9.000E-09	6.714E-09	5.292E-09	4.332E-09	3.644E-09	3.131E-09	2.734E-09
NNW	1.564E-07	8.245E-08	5.442E-08	3.205E-08	2.212E-08	1.663E-08	1.319E-08	1.085E-08	9.173E-09	7.912E-09	6.935E-09
N	2.372E-07	1.257E-07	8.330E-08	4.929E-08	3.411E-08	2.570E-08	2.041E-08	1.682E-08	1.423E-08	1.228E-08	1.077E-08
NNE	1.534E-07	8.191E-08	5.453E-08	3.248E-08	2.259E-08	1.708E-08	1.360E-08	1.123E-08	9.522E-09	8.235E-09	7.234E-09
NE	5.735E-08	3.045E-08	2.020E-08	1.197E-08	8.293E-09	6.252E-09	4.970E-09	4.096E-09	3.467E-09	2.994E-09	2.627E-09
ENE	5.852E-08	3.086E-08	2.036E-08	1.199E-08	8.283E-09	6.227E-09	4.938E-09	4.062E-09	3.432E-09	2.959E-09	2.593E-09
E	4.400E-08	2.285E-08	1.492E-08	8.651E-09	5.907E-09	4.402E-09	3.466E-09	2.834E-09	2.382E-09	2.044E-09	1.783E-09
ESE	1.073E-07	5.754E-08	3.843E-08	2.299E-08	1.603E-08	1.215E-08	9.693E-09	8.015E-09	6.803E-09	5.889E-09	5.178E-09
SE	1.264E-07	6.770E-08	4.517E-08	2.697E-08	1.877E-08	1.420E-08	1.131E-08	9.345E-09	7.923E-09	6.852E-09	6.020E-09
SSE	2.511E-07	1.337E-07	8.880E-08	5.272E-08	3.656E-08	2.758E-08	2.193E-08	1.809E-08	1.531E-08	1.323E-08	1.161E-08

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	1.034E-05	2.415E-06	7.716E-07	3.974E-07	2.504E-07	1.139E-07	4.258E-08	2.167E-08	1.404E-08	1.018E-08	
SSW	3.293E-06	7.595E-07	2.365E-07	1.200E-07	7.483E-08	3.345E-08	1.219E-08	6.087E-09	3.899E-09	2.807E-09	
SW	2.498E-06	5.623E-07	1.691E-07	8.408E-08	5.166E-08	2.257E-08	7.928E-09	3.860E-09	2.435E-09	1.734E-09	
WSW	2.213E-06	5.003E-07	1.507E-07	7.496E-08	4.607E-08	2.009E-08	7.029E-09	3.408E-09	2.144E-09	1.523E-09	
W	1.917E-06	4.270E-07	1.280E-07	6.355E-08	3.901E-08	1.703E-08	5.981E-09	2.912E-09	1.838E-09	1.310E-09	
WNW	1.423E-06	3.173E-07	9.445E-08	4.675E-08	2.866E-08	1.250E-08	4.405E-09	2.162E-09	1.373E-09	9.825E-10	
NW	3.575E-06	8.211E-07	2.563E-07	1.304E-07	8.148E-08	3.659E-08	1.343E-08	6.755E-09	4.344E-09	3.136E-09	
NNW	7.798E-06	1.800E-06	5.788E-07	2.993E-07	1.892E-07	8.644E-08	3.261E-08	1.672E-08	1.088E-08	7.924E-09	
N	1.148E-05	2.666E-06	8.671E-07	4.511E-07	2.863E-07	1.317E-07	5.010E-08	2.583E-08	1.686E-08	1.230E-08	
NNE	7.232E-06	1.683E-06	5.536E-07	2.899E-07	1.848E-07	8.563E-08	3.299E-08	1.716E-08	1.126E-08	8.246E-09	
NE	2.757E-06	6.414E-07	2.090E-07	1.089E-07	6.918E-08	3.187E-08	1.216E-08	6.283E-09	4.106E-09	2.998E-09	
ENE	2.806E-06	6.678E-07	2.158E-07	1.118E-07	7.073E-08	3.234E-08	1.220E-08	6.260E-09	4.073E-09	2.964E-09	
E	2.240E-06	5.313E-07	1.672E-07	8.533E-08	5.342E-08	2.403E-08	8.825E-09	4.429E-09	2.842E-09	2.047E-09	
ESE	4.930E-06	1.152E-06	3.828E-07	2.016E-07	1.290E-07	6.009E-08	2.333E-08	1.220E-08	8.033E-09	5.896E-09	
SE	5.753E-06	1.360E-06	4.518E-07	2.377E-07	1.520E-07	7.072E-08	2.737E-08	1.426E-08	9.366E-09	6.861E-09	
SSE	1.175E-05	2.770E-06	9.094E-07	4.754E-07	3.027E-07	1.398E-07	5.356E-08	2.772E-08	1.813E-08	1.324E-08	

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VENTS GROUND LEVEL RELEASES - APR-JUN 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.227E-05	2.000E-05	1.056E-05	5.272E-06	2.134E-06	1.161E-06	7.382E-07	5.164E-07	3.852E-07	3.007E-07	2.430E-07
SSW	1.940E-05	6.366E-06	3.369E-06	1.679E-06	6.681E-07	3.592E-07	2.264E-07	1.573E-07	1.166E-07	9.060E-08	7.288E-08
SW	1.421E-05	4.850E-06	2.559E-06	1.263E-06	4.909E-07	2.598E-07	1.617E-07	1.112E-07	8.174E-08	6.304E-08	5.039E-08
WSW	1.235E-05	4.284E-06	2.272E-06	1.122E-06	4.370E-07	2.314E-07	1.441E-07	9.913E-08	7.290E-08	5.623E-08	4.495E-08
W	1.103E-05	3.751E-06	1.958E-06	9.602E-07	3.726E-07	1.969E-07	1.224E-07	8.413E-08	6.182E-08	4.765E-08	3.807E-08
WNW	8.379E-06	2.775E-06	1.457E-06	7.164E-07	2.766E-07	1.457E-07	9.046E-08	6.210E-08	4.560E-08	3.514E-08	2.808E-08
NW	2.088E-05	6.927E-06	3.659E-06	1.814E-06	7.224E-07	3.889E-07	2.455E-07	1.707E-07	1.267E-07	9.856E-08	7.937E-08
NNW	4.813E-05	1.527E-05	7.913E-06	3.919E-06	1.593E-06	8.690E-07	5.538E-07	3.882E-07	2.900E-07	2.267E-07	1.834E-07
N	7.123E-05	2.247E-05	1.164E-05	5.774E-06	2.366E-06	1.298E-06	8.304E-07	5.839E-07	4.373E-07	3.427E-07	2.777E-07
NNE	4.592E-05	1.420E-05	7.312E-06	3.625E-06	1.496E-06	8.247E-07	5.297E-07	3.735E-07	2.804E-07	2.202E-07	1.788E-07
NE	1.705E-05	5.391E-06	2.796E-06	1.387E-06	5.687E-07	3.122E-07	1.999E-07	1.406E-07	1.053E-07	8.256E-08	6.692E-08
ENE	1.732E-05	5.378E-06	2.869E-06	1.450E-06	5.917E-07	3.236E-07	2.065E-07	1.449E-07	1.083E-07	8.474E-08	6.858E-08
E	1.292E-05	4.246E-06	2.311E-06	1.169E-06	4.683E-07	2.530E-07	1.600E-07	1.115E-07	8.285E-08	6.449E-08	5.197E-08
ESE	3.163E-05	9.704E-06	4.974E-06	2.466E-06	1.026E-06	5.683E-07	3.663E-07	2.590E-07	1.949E-07	1.533E-07	1.246E-07
SE	3.660E-05	1.122E-05	5.827E-06	2.912E-06	1.211E-06	6.710E-07	4.324E-07	3.056E-07	2.299E-07	1.808E-07	1.470E-07
SSE	7.351E-05	2.284E-05	1.193E-05	5.967E-06	2.462E-06	1.356E-06	8.706E-07	6.135E-07	4.604E-07	3.613E-07	2.931E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.016E-07	1.044E-07	6.775E-08	3.866E-08	2.589E-08	1.891E-08	1.458E-08	1.166E-08	9.594E-09	8.056E-09	6.877E-09
SSW	6.026E-08	3.079E-08	1.982E-08	1.120E-08	7.468E-09	5.440E-09	4.190E-09	3.353E-09	2.760E-09	2.320E-09	1.983E-09
SW	4.143E-08	2.075E-08	1.317E-08	7.308E-09	4.820E-09	3.483E-09	2.667E-09	2.124E-09	1.741E-09	1.459E-09	1.243E-09
WSW	3.695E-08	1.847E-08	1.171E-08	6.481E-09	4.266E-09	3.078E-09	2.354E-09	1.872E-09	1.533E-09	1.284E-09	1.094E-09
W	3.130E-08	1.567E-08	9.948E-09	5.524E-09	3.645E-09	2.637E-09	2.020E-09	1.611E-09	1.322E-09	1.109E-09	9.465E-10
WNW	2.309E-08	1.159E-08	7.380E-09	4.132E-09	2.756E-09	2.013E-09	1.556E-09	1.250E-09	1.034E-09	8.735E-10	7.507E-10
NW	6.568E-08	3.370E-08	2.176E-08	1.235E-08	8.262E-09	6.034E-09	4.657E-09	3.734E-09	3.077E-09	2.591E-09	2.217E-09
NNW	1.523E-07	7.917E-08	5.152E-08	2.950E-08	1.981E-08	1.449E-08	1.118E-08	8.960E-09	7.375E-09	6.197E-09	5.292E-09
N	2.311E-07	1.208E-07	7.893E-08	4.544E-08	3.061E-08	2.245E-08	1.736E-08	1.394E-08	1.149E-08	9.672E-09	8.274E-09
NNE	1.490E-07	7.834E-08	5.137E-08	2.970E-08	2.005E-08	1.472E-08	1.139E-08	9.144E-09	7.537E-09	6.340E-09	5.419E-09
NE	5.569E-08	2.913E-08	1.903E-08	1.095E-08	7.367E-09	5.395E-09	4.167E-09	3.339E-09	2.748E-09	2.309E-09	1.971E-09
ENE	5.698E-08	2.964E-08	1.929E-08	1.106E-08	7.431E-09	5.439E-09	4.200E-09	3.364E-09	2.769E-09	2.326E-09	1.986E-09
E	4.302E-08	2.209E-08	1.426E-08	8.078E-09	5.390E-09	3.927E-09	3.022E-09	2.416E-09	1.986E-09	1.667E-09	1.423E-09
ESE	1.040E-07	5.490E-08	3.609E-08	2.092E-08	1.415E-08	1.039E-08	8.047E-09	6.459E-09	5.323E-09	4.476E-09	3.824E-09
SE	1.226E-07	6.468E-08	4.249E-08	2.461E-08	1.662E-08	1.220E-08	9.437E-09	7.571E-09	6.237E-09	5.242E-09	4.477E-09
SSE	2.442E-07	1.281E-07	8.386E-08	4.837E-08	3.260E-08	2.391E-08	1.849E-08	1.483E-08	1.222E-08	1.027E-08	8.775E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.031E-05	2.399E-06	7.622E-07	3.905E-07	2.448E-07	1.097E-07	3.945E-08	1.904E-08	1.171E-08	8.075E-09
SSW	3.284E-06	7.554E-07	2.342E-07	1.183E-07	7.345E-08	3.246E-08	1.146E-08	5.481E-09	3.366E-09	2.326E-09
SW	2.492E-06	5.597E-07	1.676E-07	8.303E-08	5.082E-08	2.198E-08	7.505E-09	3.513E-09	2.133E-09	1.462E-09
WSW	2.208E-06	4.979E-07	1.494E-07	7.404E-08	4.533E-08	1.957E-08	6.658E-09	3.105E-09	1.881E-09	1.287E-09
W	1.913E-06	4.251E-07	1.270E-07	6.280E-08	3.840E-08	1.660E-08	5.672E-09	2.659E-09	1.618E-09	1.112E-09
WNW	1.421E-06	3.161E-07	9.385E-08	4.633E-08	2.832E-08	1.227E-08	4.242E-09	2.028E-09	1.255E-09	8.756E-10
NW	3.565E-06	8.168E-07	2.538E-07	1.286E-07	7.999E-08	3.550E-08	1.262E-08	6.077E-09	3.747E-09	2.597E-09
NNW	7.772E-06	1.788E-06	5.716E-07	2.939E-07	1.847E-07	8.314E-08	3.009E-08	1.459E-08	8.992E-09	6.211E-09
N	1.144E-05	2.648E-06	8.564E-07	4.431E-07	2.797E-07	1.267E-07	4.629E-08	2.259E-08	1.399E-08	9.694E-09
NNE	7.204E-06	1.671E-06	5.459E-07	2.841E-07	1.800E-07	8.205E-08	3.023E-08	1.481E-08	9.174E-09	6.354E-09
NE	2.746E-06	6.365E-07	2.061E-07	1.067E-07	6.740E-08	3.054E-08	1.115E-08	5.429E-09	3.350E-09	2.314E-09
ENE	2.796E-06	6.632E-07	2.131E-07	1.098E-07	6.907E-07	3.112E-08	1.128E-08	5.474E-09	3.376E-09	2.331E-09
E	2.233E-06	5.282E-07	1.654E-07	8.403E-08	5.236E-08	2.326E-08	8.256E-09	3.955E-09	2.426E-09	1.671E-09
ESE	4.911E-06	1.142E-06	3.772E-07	1.974E-07	1.255E-07	5.745E-08	2.128E-08	1.046E-08	6.480E-09	4.486E-09
SE	5.730E-06	1.349E-06	4.453E-07	2.328E-07	1.480E-07	6.769E-08	2.503E-08	1.227E-08	7.596E-09	5.254E-09
SSE	1.171E-05	2.749E-06	8.973E-07	4.664E-07	2.952E-07	1.342E-07	4.925E-08	2.406E-08	1.488E-08	1.029E-08

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VENTS GROUND LEVEL RELEASES - APR-JUN 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	5.899E-05	1.830E-05	9.432E-06	4.631E-06	1.822E-06	9.682E-07	6.034E-07	4.147E-07	3.044E-07	2.342E-07	1.868E-07
SSW	1.838E-05	5.822E-06	3.009E-06	1.473E-06	5.698E-07	2.992E-07	1.848E-07	1.260E-07	9.194E-08	7.038E-08	5.585E-08
SW	1.345E-05	4.435E-06	2.285E-06	1.108E-06	4.185E-07	2.162E-07	1.318E-07	8.900E-08	6.437E-08	4.891E-08	3.855E-08
WSW	1.169E-05	3.917E-06	2.028E-06	9.848E-07	3.725E-07	1.926E-07	1.175E-07	7.934E-08	5.739E-08	4.361E-08	3.438E-08
W	1.045E-05	3.429E-06	1.748E-06	8.425E-07	3.176E-07	1.638E-07	9.979E-08	6.732E-08	4.866E-08	3.695E-08	2.911E-08
WNW	7.934E-06	2.536E-06	1.300E-06	6.283E-07	2.355E-07	1.211E-07	7.362E-08	4.960E-08	3.582E-08	2.718E-08	2.141E-08
NW	1.978E-05	6.335E-06	3.268E-06	1.592E-06	6.161E-07	3.239E-07	2.003E-07	1.368E-07	9.991E-08	7.656E-08	6.082E-08
NNW	4.559E-05	1.396E-05	7.070E-06	3.443E-06	1.360E-06	7.249E-07	4.528E-07	3.118E-07	2.293E-07	1.767E-07	1.410E-07
N	6.748E-05	2.056E-05	1.040E-05	5.072E-06	2.020E-06	1.082E-06	6.788E-07	4.689E-07	3.457E-07	2.670E-07	2.135E-07
NNE	4.351E-05	1.299E-05	6.535E-06	3.185E-06	1.278E-06	6.885E-07	4.335E-07	3.004E-07	2.220E-07	1.719E-07	1.377E-07
NE	1.615E-05	4.933E-06	2.499E-06	1.219E-06	4.859E-07	2.606E-07	1.636E-07	1.131E-07	8.340E-08	6.444E-08	5.156E-08
ENE	1.641E-05	4.920E-06	2.564E-06	1.274E-06	5.052E-07	2.699E-07	1.688E-07	1.164E-07	8.564E-08	6.604E-08	5.274E-08
E	1.224E-05	3.883E-06	2.064E-06	1.026E-06	3.996E-07	2.108E-07	1.306E-07	8.939E-08	6.537E-08	5.014E-08	3.986E-08
ESE	2.997E-05	8.881E-06	4.446E-06	2.167E-06	8.766E-07	4.746E-07	2.999E-07	2.084E-07	1.544E-07	1.198E-07	9.612E-08
SE	3.468E-05	1.027E-05	5.209E-06	2.559E-06	1.035E-06	5.603E-07	3.540E-07	2.459E-07	1.821E-07	1.412E-07	1.133E-07
SSE	6.964E-05	2.090E-05	1.067E-05	5.243E-06	2.103E-06	1.132E-06	7.122E-07	4.932E-07	3.643E-07	2.818E-07	2.257E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.531E-07	7.566E-08	4.724E-08	2.542E-08	1.629E-08	1.148E-08	8.589E-09	6.698E-09	5.385E-09	4.430E-09	3.713E-09
SSW	4.559E-08	2.220E-08	1.372E-08	7.289E-09	4.633E-09	3.246E-09	2.418E-09	1.880E-09	1.507E-09	1.237E-09	1.035E-09
SW	3.130E-08	1.492E-08	9.088E-09	4.733E-09	2.971E-09	2.062E-09	1.525E-09	1.178E-09	9.399E-10	7.683E-10	6.403E-10
WSW	2.790E-08	1.328E-08	8.076E-09	4.195E-09	2.628E-09	1.821E-09	1.345E-09	1.038E-09	8.268E-10	6.752E-10	5.621E-10
W	2.363E-08	1.126E-08	6.859E-09	3.572E-09	2.243E-09	1.557E-09	1.152E-09	8.904E-10	7.106E-10	5.812E-10	4.846E-10
WNW	1.737E-08	8.285E-09	5.051E-09	2.642E-09	1.671E-09	1.167E-09	8.674E-10	6.734E-10	5.396E-10	4.430E-10	3.707E-10
NW	4.970E-08	2.430E-08	1.507E-08	8.039E-09	5.127E-09	3.601E-09	2.688E-09	2.093E-09	1.680E-09	1.381E-09	1.157E-09
NNW	1.157E-07	5.746E-08	3.599E-08	1.946E-08	1.251E-08	8.838E-09	6.626E-09	5.177E-09	4.168E-09	3.433E-09	2.880E-09
N	1.755E-07	8.763E-08	5.510E-08	2.993E-08	1.930E-08	1.366E-08	1.026E-08	8.028E-09	6.471E-09	5.336E-09	4.480E-09
NNE	1.134E-07	5.701E-08	3.601E-08	1.968E-08	1.274E-08	9.047E-09	6.809E-09	5.336E-09	4.306E-09	3.555E-09	2.988E-09
NE	4.239E-08	2.120E-08	1.334E-08	7.253E-09	4.680E-09	3.314E-09	2.489E-09	1.947E-09	1.569E-09	1.294E-09	1.086E-09
ENE	4.329E-08	2.150E-08	1.347E-08	7.285E-09	4.688E-09	3.313E-09	2.485E-09	1.941E-09	1.563E-09	1.287E-09	1.080E-09
E	3.259E-08	1.595E-08	9.894E-09	5.275E-09	3.360E-09	2.357E-09	1.757E-09	1.366E-09	1.095E-09	8.993E-10	7.521E-10
ESE	7.925E-08	4.002E-08	2.535E-08	1.391E-08	9.028E-09	6.421E-09	4.839E-09	3.795E-09	3.066E-09	2.532E-09	2.129E-09
SE	9.338E-08	4.711E-08	2.982E-08	1.633E-08	1.058E-08	7.515E-09	5.657E-09	4.433E-09	3.578E-09	2.954E-09	2.482E-09
SSE	1.857E-07	9.310E-08	5.869E-08	3.198E-08	2.065E-08	1.464E-08	1.100E-08	8.610E-09	6.943E-09	5.726E-09	4.809E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	9.268E-06	2.067E-06	6.252E-07	3.092E-07	1.884E-07	8.023E-08	2.621E-08	1.161E-08	6.738E-09	4.447E-09
SSW	2.952E-06	6.504E-07	1.918E-07	9.347E-08	5.635E-08	2.363E-08	7.539E-09	3.285E-09	1.891E-09	1.242E-09
SW	2.240E-06	4.818E-07	1.372E-07	6.552E-08	3.893E-08	1.597E-08	4.918E-09	2.090E-09	1.187E-09	7.717E-10
WSW	1.984E-06	4.286E-07	1.222E-07	5.841E-08	3.472E-08	1.422E-08	4.361E-09	1.846E-09	1.045E-09	6.783E-10
W	1.719E-06	3.659E-07	1.039E-07	4.953E-08	2.940E-08	1.205E-08	3.712E-09	1.578E-09	8.967E-10	5.838E-10
WNW	1.276E-06	2.720E-07	7.668E-08	3.647E-08	2.162E-08	8.867E-09	2.746E-09	1.181E-09	6.779E-10	4.449E-10
NW	3.205E-06	7.032E-07	2.079E-07	1.016E-07	6.136E-08	2.584E-08	8.307E-09	3.643E-09	2.106E-09	1.387E-09
NNW	6.990E-06	1.541E-06	4.689E-07	2.328E-07	1.422E-07	6.087E-08	2.004E-08	8.933E-09	5.206E-09	3.446E-09
N	1.029E-05	2.281E-06	7.025E-07	3.509E-07	2.153E-07	9.271E-08	3.080E-08	1.381E-08	8.073E-09	5.355E-09
NNE	6.482E-06	1.440E-06	4.483E-07	2.253E-07	1.388E-07	6.021E-08	2.023E-08	9.137E-09	5.364E-09	3.567E-09
NE	2.471E-06	5.486E-07	1.693E-07	8.466E-08	5.198E-08	2.241E-08	7.462E-09	3.348E-09	1.958E-09	1.298E-09
ENE	2.514E-06	5.714E-07	1.748E-07	8.696E-08	5.318E-08	2.278E-08	7.506E-09	3.349E-09	1.952E-09	1.292E-09
E	2.007E-06	4.549E-07	1.355E-07	6.643E-08	4.021E-08	1.696E-08	5.451E-09	2.385E-09	1.375E-09	9.029E-10
ESE	4.419E-06	9.848E-07	3.099E-07	1.566E-07	9.687E-08	4.222E-08	1.428E-08	6.483E-09	3.815E-09	2.541E-09
SE	5.155E-06	1.163E-06	3.658E-07	1.847E-07	1.142E-07	4.971E-08	1.677E-08	7.589E-09	4.457E-09	2.964E-09
SSE	1.053E-05	2.369E-06	7.365E-07	3.697E-07	2.275E-07	9.838E-08	3.288E-08	1.479E-08	8.658E-09	5.747E-09

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VENTS GROUND LEVEL RELEASES - APR-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS *****											
DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.535E-07	8.572E-08	4.401E-08	2.092E-08	7.516E-09	3.727E-09	2.195E-09	1.437E-09	1.011E-09	7.494E-10	5.775E-10
SSW	9.471E-08	3.203E-08	1.644E-08	7.818E-09	2.808E-09	1.393E-09	8.200E-10	5.369E-10	3.778E-10	2.800E-10	2.158E-10
SW	7.979E-08	2.698E-08	1.385E-08	6.586E-09	2.366E-09	1.173E-09	6.908E-10	4.523E-10	3.183E-10	2.359E-10	1.818E-10
WSW	7.234E-08	2.446E-08	1.256E-08	5.972E-09	2.145E-09	1.064E-09	6.264E-10	4.101E-10	2.886E-10	2.139E-10	1.648E-10
W	7.341E-08	2.482E-08	1.275E-08	6.059E-09	2.177E-09	1.079E-09	6.356E-10	4.162E-10	2.928E-10	2.170E-10	1.672E-10
WNW	6.168E-08	2.086E-08	1.071E-08	5.091E-09	1.829E-09	9.069E-10	5.340E-10	3.497E-10	2.460E-10	1.823E-10	1.405E-10
NW	1.213E-07	4.103E-08	2.107E-08	1.001E-08	3.597E-09	1.784E-09	1.050E-09	6.878E-10	4.840E-10	3.587E-10	2.764E-10
NNW	2.461E-07	8.322E-08	4.273E-08	2.031E-08	7.297E-09	3.619E-09	2.131E-09	1.395E-09	9.817E-10	7.275E-10	5.606E-10
N	4.144E-07	1.401E-07	7.195E-08	3.420E-08	1.229E-08	6.093E-09	3.588E-09	2.349E-09	1.653E-09	1.225E-09	9.440E-10
NNE	2.089E-07	7.065E-08	3.628E-08	1.725E-08	6.195E-09	3.072E-09	1.809E-09	1.185E-09	8.335E-10	6.177E-10	4.760E-10
NE	6.079E-08	2.056E-08	1.055E-08	5.017E-09	1.802E-09	8.938E-10	5.263E-10	3.446E-10	2.425E-10	1.797E-10	1.385E-10
ENE	6.178E-08	2.089E-08	1.073E-08	5.100E-09	1.832E-09	9.084E-10	5.349E-10	3.502E-10	2.464E-10	1.826E-10	1.407E-10
E	6.809E-08	2.303E-08	1.182E-08	5.620E-09	2.019E-09	1.001E-09	5.895E-10	3.860E-10	2.716E-10	2.013E-10	1.551E-10
ESE	1.099E-07	3.718E-08	1.909E-08	9.075E-09	3.260E-09	1.617E-09	9.519E-10	6.233E-10	4.386E-10	3.250E-10	2.505E-10
SE	1.174E-07	3.970E-08	2.038E-08	9.690E-09	3.481E-09	1.726E-09	1.016E-09	6.655E-10	4.683E-10	3.470E-10	2.674E-10
SSE	2.719E-07	9.194E-08	4.721E-08	2.244E-08	8.061E-09	3.998E-09	2.354E-09	1.541E-09	1.085E-09	8.038E-10	6.194E-10

DIRECTION FROM SITE	DISTANCES IN MILES											
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00	
S	4.588E-10	2.038E-10	1.235E-10	6.240E-11	3.777E-11	2.532E-11	1.815E-11	1.363E-11	1.059E-11	8.463E-12	6.908E-12	
SSW	1.714E-10	7.615E-11	4.613E-11	2.332E-11	1.411E-11	9.461E-12	6.780E-12	5.091E-12	3.958E-12	3.162E-12	2.581E-12	
SW	1.444E-10	6.415E-11	3.886E-11	1.964E-11	1.189E-11	7.971E-12	5.711E-12	4.289E-12	3.335E-12	2.664E-12	2.174E-12	
WSW	1.309E-10	5.817E-11	3.523E-11	1.781E-11	1.078E-11	7.227E-12	5.179E-12	3.889E-12	3.023E-12	2.415E-12	1.971E-12	
W	1.329E-10	5.902E-11	3.575E-11	1.807E-11	1.094E-11	7.333E-12	5.255E-12	3.946E-12	3.068E-12	2.451E-12	2.000E-12	
WNW	1.116E-10	4.959E-11	3.004E-11	1.518E-11	9.189E-12	6.161E-12	4.415E-12	3.315E-12	2.578E-12	2.059E-12	1.681E-12	
NW	2.196E-10	9.755E-11	5.909E-11	2.987E-11	1.808E-11	1.212E-11	8.685E-12	6.522E-12	5.071E-12	4.050E-12	3.306E-12	
NNW	4.454E-10	1.979E-10	1.199E-10	6.058E-11	3.667E-11	2.458E-11	1.762E-11	1.323E-11	1.028E-11	8.215E-12	6.706E-12	
N	7.500E-10	3.332E-10	2.018E-10	1.020E-10	6.174E-11	4.140E-11	2.966E-11	2.227E-11	1.732E-11	1.383E-11	1.129E-11	
NNE	3.782E-10	1.680E-10	1.018E-10	5.144E-11	3.113E-11	2.087E-11	1.496E-11	1.123E-11	8.732E-12	6.975E-12	5.693E-12	
NE	1.100E-10	4.887E-11	2.960E-11	1.496E-11	9.057E-12	6.072E-12	4.351E-12	3.267E-12	2.540E-12	2.029E-12	1.656E-12	
ENE	1.118E-10	4.967E-11	3.009E-11	1.521E-11	9.205E-12	6.172E-12	4.422E-12	3.321E-12	2.582E-12	2.062E-12	1.683E-12	
E	1.232E-10	5.475E-11	3.316E-11	1.676E-11	1.015E-11	6.802E-12	4.874E-12	3.660E-12	2.846E-12	2.273E-12	1.855E-12	
ESE	1.990E-10	8.840E-11	5.355E-11	2.706E-11	1.638E-11	1.098E-11	7.870E-12	5.910E-12	4.595E-12	3.670E-12	2.996E-12	
SE	2.125E-10	9.438E-11	5.717E-11	2.890E-11	1.749E-11	1.173E-11	8.403E-12	6.310E-12	4.906E-12	3.919E-12	3.199E-12	
SSE	4.921E-10	2.186E-10	1.324E-10	6.693E-11	4.051E-11	2.716E-11	1.946E-11	1.461E-11	1.136E-11	9.077E-12	7.409E-12	

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS *****											
DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	4.302E-08	8.812E-09	2.300E-09	1.033E-09	5.845E-10	2.248E-10	6.502E-11	2.577E-11	1.376E-11	8.518E-12	
SSW	1.607E-08	3.292E-09	8.595E-10	3.860E-10	2.184E-10	8.398E-11	2.429E-11	9.629E-12	5.142E-12	3.183E-12	
SW	1.354E-08	2.774E-09	7.241E-10	3.252E-10	1.840E-10	7.075E-11	2.047E-11	8.112E-12	4.332E-12	2.681E-12	
WSW	1.228E-08	2.515E-09	6.565E-10	2.949E-10	1.668E-10	6.415E-11	1.856E-11	7.355E-12	3.928E-12	2.431E-12	
W	1.246E-08	2.552E-09	6.662E-10	2.992E-10	1.693E-10	6.509E-11	1.883E-11	7.463E-12	3.985E-12	2.467E-12	
WNW	1.047E-08	2.144E-09	5.597E-10	2.514E-10	1.422E-10	5.469E-11	1.582E-11	6.270E-12	3.348E-12	2.073E-12	
NW	2.059E-08	4.218E-09	1.101E-09	4.945E-10	2.797E-10	1.076E-10	3.112E-11	1.233E-11	6.587E-12	4.077E-12	
NNW	4.176E-08	8.554E-09	2.233E-09	1.003E-09	5.674E-10	2.182E-10	6.312E-11	2.502E-11	1.336E-11	8.269E-12	
N	7.032E-08	1.440E-08	3.760E-09	1.689E-09	9.554E-10	3.674E-10	1.063E-10	4.213E-11	2.250E-11	1.392E-11	
NNE	3.546E-08	7.263E-09	1.896E-09	8.516E-10	4.817E-10	1.853E-10	5.360E-11	2.124E-11	1.134E-11	7.021E-12	
NE	1.032E-08	2.113E-09	5.516E-10	2.477E-10	1.402E-10	5.390E-11	1.559E-11	6.180E-12	3.300E-12	2.043E-12	
ENE	1.048E-08	2.148E-09	5.606E-10	2.518E-10	1.424E-10	5.478E-11	1.585E-11	6.281E-12	3.354E-12	2.076E-12	
E	1.156E-08	2.367E-09	6.179E-10	2.775E-10	1.570E-10	6.037E-11	1.747E-11	6.922E-12	3.697E-12	2.288E-12	
ESE	1.866E-08	3.822E-09	9.977E-10	4.481E-10	2.535E-10	9.748E-11	2.820E-11	1.118E-11	5.969E-12	3.694E-12	
SE	1.992E-08	4.081E-09	1.065E-09	4.784E-10	2.707E-10	1.041E-10	3.011E-11	1.193E-11	6.373E-12	3.945E-12	
SSE	4.614E-08	9.451E-09	2.467E-09	1.108E-09	6.269E-10	2.411E-10	6.974E-11	2.764E-11	1.476E-11	9.136E-12	

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VENTS GROUND LEVEL RELEASES - APR-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

			UNDEPLETED		UNDEPLETED		DEPLETED	
A	Site Boundary	S	.80	9.1E-06	9.1E-06	8.1E-06	3.7E-08	
A	Site Boundary	SSW	.82	2.7E-06	2.7E-06	2.4E-06	1.3E-08	
A	Site Boundary	SW	.97	1.3E-06	1.3E-06	1.2E-06	7.0E-09	
A	Site Boundary	WSW	.93	1.4E-06	1.4E-06	1.2E-06	7.3E-09	
A	Site Boundary	W	.91	1.2E-06	1.2E-06	1.1E-06	7.7E-09	
A	Site Boundary	WNW	.94	8.4E-07	8.4E-07	7.4E-07	6.0E-09	
A	Site Boundary	NW	.81	3.0E-06	3.0E-06	2.7E-06	1.7E-08	
A	Site Boundary	NNW	.69	9.1E-06	9.1E-06	8.2E-06	5.0E-08	
A	Site Boundary	N	.67	1.4E-05	1.4E-05	1.2E-05	8.6E-08	
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	9.5E-06	5.3E-08	
A	Site Boundary	NE	.62	3.8E-06	3.7E-06	3.4E-06	1.4E-08	
A	Site Boundary	ENE	.59	4.2E-06	4.2E-06	3.8E-06	1.6E-08	
A	Site Boundary	E	.53	3.9E-06	3.9E-06	3.6E-06	2.1E-08	
A	Site Boundary	ESE	.54	8.6E-06	8.6E-06	7.8E-06	3.3E-08	
A	Site Boundary	SE	.65	7.3E-06	7.3E-06	6.6E-06	2.6E-08	
A	Site Boundary	SSE	.81	9.9E-06	9.9E-06	8.8E-06	3.9E-08	
A	Nearest Res	SW	1.30	6.8E-07	6.8E-07	5.9E-07	3.4E-09	
A	Nearest Res	WSW	1.30	6.1E-07	6.1E-07	5.2E-07	3.1E-09	
A	Nearest Res	W	1.00	9.6E-07	9.6E-07	8.4E-07	6.1E-09	
A	Nearest Res	WNW	1.70	2.1E-07	2.1E-07	1.8E-07	1.3E-09	
A	Nearest Res	NW	.90	2.4E-06	2.3E-06	2.1E-06	1.3E-08	
A	Nearest Res	NNW	1.90	9.8E-07	9.7E-07	8.1E-07	4.1E-09	
A	Nearest Res	N	3.00	5.9E-07	5.8E-07	4.7E-07	2.3E-09	
A	Nearest Res	ENE	1.70	4.6E-07	4.5E-07	3.8E-07	1.3E-09	
A	Nearest Res	E	2.00	2.6E-07	2.5E-07	2.1E-07	1.0E-09	
A	Nearest Res	ESE	2.30	4.4E-07	4.3E-07	3.6E-07	1.2E-09	
A	Nearest Cow	NNW	3.50	3.0E-07	2.9E-07	2.3E-07	9.8E-10	
A	Nearest Garde	SW	1.30	6.8E-07	6.8E-07	5.9E-07	3.4E-09	
A	Nearest Garde	WSW	1.90	2.6E-07	2.6E-07	2.2E-07	1.2E-09	
A	Nearest Garde	WNW	2.40	9.9E-08	9.9E-08	8.1E-08	5.9E-10	
A	Nearest Garde	NW	2.90	1.8E-07	1.8E-07	1.5E-07	7.4E-10	
A	Nearest Garde	NNW	1.90	9.8E-07	9.7E-07	8.1E-07	4.1E-09	
A	Nearest Garde	ENE	2.80	1.7E-07	1.7E-07	1.3E-07	4.1E-10	
A	Nearest Garde	E	2.00	2.6E-07	2.5E-07	2.1E-07	1.0E-09	
A	Nearest Garde	ESE	2.30	4.4E-07	4.3E-07	3.6E-07	1.2E-09	
A	Nearest Garde	SE	1.20	2.0E-06	2.0E-06	1.7E-06	6.1E-09	

**Atmospheric Diffusion Estimates**

**Ground Level Releases**

January-June 2004

VENTS GROUND LEVEL RELEASES - JAN-JUN 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500		
S	5.216E-05	1.705E-05	9.060E-06	4.534E-06	1.830E-06	9.945E-07	6.321E-07	4.423E-07	3.301E-07	2.579E-07	2.086E-07	1.830E-06	9.945E-07	6.321E-07	4.423E-07	3.301E-07	2.579E-07	2.086E-07		
SSW	2.275E-05	7.602E-06	4.046E-06	2.021E-06	8.092E-07	4.372E-07	2.766E-07	1.928E-07	1.434E-07	1.118E-07	9.016E-08	8.092E-07	4.372E-07	2.766E-07	1.928E-07	1.434E-07	1.118E-07	9.016E-08		
SW	1.629E-05	5.425E-06	2.861E-06	1.422E-06	5.676E-07	3.060E-07	1.933E-07	1.346E-07	1.000E-07	7.787E-08	6.278E-08	5.676E-07	3.060E-07	1.933E-07	1.346E-07	1.000E-07	7.787E-08	6.278E-08		
WSW	1.155E-05	3.984E-06	2.126E-06	1.056E-06	4.144E-07	2.206E-07	1.380E-07	9.535E-08	7.038E-08	5.448E-08	4.369E-08	4.144E-07	2.206E-07	1.380E-07	9.535E-08	7.038E-08	5.448E-08	4.369E-08		
W	1.220E-05	4.144E-06	2.163E-06	1.063E-06	4.174E-07	2.225E-07	1.394E-07	9.638E-08	7.122E-08	5.518E-08	4.430E-08	4.174E-07	2.225E-07	1.394E-07	9.638E-08	7.122E-08	5.518E-08	4.430E-08		
WNW	1.208E-05	3.874E-06	1.996E-06	9.823E-07	3.957E-07	2.149E-07	1.366E-07	9.559E-08	7.137E-08	5.580E-08	4.516E-08	3.957E-07	2.149E-07	1.366E-07	9.559E-08	7.137E-08	5.580E-08	4.516E-08		
NW	3.066E-05	1.001E-05	5.288E-06	2.637E-06	1.070E-06	5.839E-07	3.723E-07	2.612E-07	1.954E-07	1.530E-07	1.239E-07	1.070E-06	5.839E-07	3.723E-07	2.612E-07	1.954E-07	1.530E-07	1.239E-07		
NNW	5.812E-05	1.824E-05	9.540E-06	4.766E-06	1.961E-06	1.080E-06	6.932E-07	4.889E-07	3.673E-07	2.886E-07	2.346E-07	1.961E-06	1.080E-06	6.932E-07	4.889E-07	3.673E-07	2.886E-07	2.346E-07		
N	6.732E-05	2.118E-05	1.117E-05	5.609E-06	2.307E-06	1.270E-06	8.147E-07	5.744E-07	4.313E-07	3.389E-07	2.753E-07	2.307E-06	1.270E-06	8.147E-07	5.744E-07	4.313E-07	3.389E-07	2.753E-07		
NNE	4.084E-05	1.278E-05	6.708E-06	3.361E-06	1.387E-06	7.647E-07	4.915E-07	3.470E-07	2.608E-07	2.051E-07	1.668E-07	1.387E-06	7.647E-07	4.915E-07	3.470E-07	2.608E-07	2.051E-07	1.668E-07		
NE	1.910E-05	6.027E-06	3.173E-06	1.592E-06	6.562E-07	3.616E-07	2.323E-07	1.639E-07	1.231E-07	9.680E-08	7.868E-08	1.592E-06	6.562E-07	3.616E-07	2.323E-07	1.639E-07	1.231E-07	9.680E-08		
ENE	1.677E-05	5.379E-06	2.917E-06	1.482E-06	6.023E-07	3.286E-07	2.095E-07	1.469E-07	1.098E-07	8.594E-08	6.959E-08	1.482E-06	6.023E-07	3.286E-07	2.095E-07	1.469E-07	1.098E-07	8.594E-08		
E	1.509E-05	5.037E-06	2.755E-06	1.396E-06	5.607E-07	3.035E-07	1.923E-07	1.342E-07	9.994E-08	7.794E-08	6.292E-08	1.396E-06	5.607E-07	3.035E-07	1.923E-07	1.342E-07	9.994E-08	7.794E-08		
ESE	2.538E-05	8.063E-06	4.222E-06	2.107E-06	8.656E-07	4.761E-07	3.054E-07	2.153E-07	1.617E-07	1.270E-07	1.032E-07	2.107E-06	8.656E-07	4.761E-07	3.054E-07	2.153E-07	1.617E-07	1.032E-07		
SE	3.176E-05	1.030E-05	5.437E-06	2.717E-06	1.106E-06	6.040E-07	3.854E-07	2.705E-07	2.024E-07	1.585E-07	1.285E-07	1.106E-06	6.040E-07	3.854E-07	2.705E-07	2.024E-07	1.585E-07	1.285E-07		
SSE	5.426E-05	1.723E-05	9.084E-06	4.552E-06	1.868E-06	1.027E-06	6.580E-07	4.635E-07	3.479E-07	2.731E-07	2.218E-07	1.868E-06	1.027E-06	6.580E-07	4.635E-07	3.479E-07	2.731E-07	2.218E-07		

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE											
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.733E-07	9.039E-08	5.920E-08	3.449E-08	2.361E-08	1.764E-08	1.392E-08	1.140E-08	9.599E-09	8.252E-09	7.210E-09	9.039E-08	5.920E-08	3.449E-08	2.361E-08	1.764E-08	1.392E-08	1.140E-08	9.599E-09	8.252E-09	7.210E-09	5.920E-08
SSW	7.473E-08	3.863E-08	2.514E-08	1.452E-08	9.877E-09	7.343E-09	5.771E-09	4.712E-09	3.956E-09	3.393E-09	2.958E-09	3.863E-08	2.514E-08	1.452E-08	9.877E-09	7.343E-09	5.771E-09	4.712E-09	3.956E-09	3.393E-09	2.958E-09	2.514E-08
SW	5.201E-08	2.684E-08	1.745E-08	1.006E-08	6.848E-09	5.092E-09	4.003E-09	3.269E-09	2.745E-09	2.355E-09	2.054E-09	1.745E-08	1.006E-08	6.848E-09	5.092E-09	4.003E-09	3.269E-09	2.745E-09	2.355E-09	2.054E-09	1.745E-08	1.006E-08
WSW	3.603E-08	1.826E-08	1.172E-08	6.641E-09	4.462E-09	3.285E-09	2.562E-09	2.078E-09	1.735E-09	1.480E-09	1.285E-09	1.172E-08	6.641E-09	4.462E-09	3.285E-09	2.562E-09	2.078E-09	1.735E-09	1.480E-09	1.285E-09	1.172E-08	6.641E-09
W	3.657E-08	1.864E-08	1.201E-08	6.855E-09	4.636E-09	3.431E-09	2.688E-09	2.189E-09	1.834E-09	1.570E-09	1.367E-09	1.201E-08	6.855E-09	4.636E-09	3.431E-09	2.688E-09	2.189E-09	1.834E-09	1.570E-09	1.367E-09	1.201E-08	6.855E-09
WNW	3.754E-08	1.965E-08	1.291E-08	7.569E-09	5.221E-09	3.924E-09	3.111E-09	2.560E-09	2.163E-09	1.866E-09	1.635E-09	1.291E-08	7.569E-09	5.221E-09	3.924E-09	3.111E-09	2.560E-09	2.163E-09	1.866E-09	1.635E-09	1.291E-08	7.569E-09
NW	1.031E-07	5.407E-08	3.555E-08	2.082E-08	1.431E-08	1.073E-08	8.484E-09	6.965E-09	5.874E-09	5.057E-09	4.425E-09	3.555E-08	2.082E-08	1.431E-08	1.073E-08	8.484E-09	6.965E-09	5.874E-09	5.057E-09	4.425E-09	3.555E-08	2.082E-08
NNW	1.958E-07	1.038E-07	6.874E-08	4.067E-08	2.816E-08	2.121E-08	1.685E-08	1.388E-08	1.174E-08	1.014E-08	8.892E-09	6.874E-08	4.067E-08	2.816E-08	2.121E-08	1.685E-08	1.388E-08	1.174E-08	1.014E-08	8.892E-09	6.874E-08	4.067E-08
N	2.297E-07	1.216E-07	8.047E-08	4.752E-08	3.284E-08	2.470E-08	1.960E-08	1.613E-08	1.364E-08	1.176E-08	1.031E-08	8.047E-08	4.752E-08	3.284E-08	2.470E-08	1.960E-08	1.613E-08	1.364E-08	1.176E-08	1.031E-08	8.047E-08	4.752E-08
NNE	1.392E-07	7.394E-08	4.903E-08	2.904E-08	2.011E-08	1.515E-08	1.204E-08	9.920E-09	8.393E-09	7.245E-09	6.355E-09	4.903E-08	2.904E-08	2.011E-08	1.515E-08	1.204E-08	9.920E-09	8.393E-09	7.245E-09	6.355E-09	4.903E-08	2.904E-08
NE	6.565E-08	3.479E-08	2.304E-08	1.362E-08	9.415E-09	7.085E-09	5.623E-09	4.629E-09	3.913E-09	3.376E-09	2.959E-09	2.304E-08	1.362E-08	9.415E-09	7.085E-09	5.623E-09	4.629E-09	3.913E-09	3.376E-09	2.959E-09	2.304E-08	1.362E-08
ENE	5.786E-08	3.026E-08	1.985E-08	1.158E-08	7.942E-09	5.937E-09	4.686E-09	3.840E-09	3.233E-09	2.780E-09	2.429E-09	1.985E-08	1.158E-08	7.942E-09	5.937E-09	4.686E-09	3.840E-09	3.233E-09	2.780E-09	2.429E-09	1.985E-08	1.158E-08
E	5.218E-08	2.702E-08	1.760E-08	1.017E-08	6.921E-09	5.144E-09	4.042E-09	3.299E-09	2.769E-09	2.373E-09	2.068E-09	1.760E-08	1.017E-08	6.921E-09	5.144E-09	4.042E-09	3.299E-09	2.769E-09	2.373E-09	2.068E-09	1.760E-08	1.017E-08
ESE	8.607E-08	4.558E-08	3.017E-08	1.783E-08	1.233E-08	9.284E-09	7.370E-09	6.069E-09	5.132E-09	4.428E-09	3.883E-09	3.017E-08	1.783E-08	1.233E-08	9.284E-09	7.370E-09	6.069E-09	5.132E-09	4.428E-09	3.883E-09	3.017E-08	1.783E-08
SE	1.069E-07	5.610E-08	3.690E-08	2.162E-08	1.485E-08	1.113E-08	8.799E-09	7.222E-09	6.090E-09	5.243E-09	4.587E-09	3.690E-08	2.162E-08	1.485E-08	1.113E-08	8.799E-09	7.222E-09	6.090E-09	5.243E-09	4.587E-09	3.690E-08	2.162E-08
SSE	1.850E-07	9.777E-08	6.464E-08	3.813E-08	2.632E-08	1.979E-08	1.569E-08	1.291E-08	1.091E-08	9.408E-09	8.243E-09	6.464E-08	3.813E-08	2.632E-08	1.979E-08	1.569E-08	1.291E-08	1.091E-08	9.408E-09	8.243E-09	6.464E-08	3.813E-08

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	8.824E-06	2.060E-06	6.528E-07	3.347E-07	2.101E-07	9.495E-08	3.515E-08	1.774E-08	1.143E-08	8.265E-09	
SSW	3.936E-06	9.131E-07	2.859E-07	1.455E-07	9.085E-08	4.066E-08	1.482E-08	7.390E-09	4.727E-09	3.399E-09	
SW	2.791E-06	6.412E-07	1.999E-07	1.015E-07	6.326E-08	2.826E-08	1.028E-08	5.124E-09	3.279E-09	2.359E-09	
WSW	2.063E-06	4.709E-07	1.430E-07	7.146E-08	4.405E-08	1.930E-08	6.802E-09	3.310E-09	2.086E-09	1.483E-09	
W	2.114E-06	4.743E-07	1.443E-07	7.230E-08	4.466E-08	1.968E-08	7.015E-09	3.455E-09	2.196E-09	1.573E-09	
WNW	1.963E-06	4.457E-07	1.411E-07	7.236E-08	4.549E-08	2.063E-08	7.712E-09	3.945E-09	2.566E-09	1.868E-09	
NW	5.160E-06	1.202E-06	3.843E-07	1.980E-07	1.248E-07	5.673E-08	2.120E-08	1.079E-08	6.984E-09	5.065E-09	
NNW	9.353E-06	2.193E-06	7.145E-07	3.721E-07	2.362E-07	1.086E-07	4.135E-08	2.132E-08	1.392E-08	1.015E-08	
N	1.092E-05	2.580E-06	8.398E-07	4.370E-07	2.773E-07	1.273E-07	4.832E-08	2.483E-08	1.617E-08	1.178E-08	
NNE	6.569E-06	1.549E-06	5.065E-07	2.642E-07	1.680E-07	7.738E-08	2.952E-08	1.523E-08	9.944E-09	7.255E-09	
NE	3.105E-06	7.332E-07	2.394E-07	1.247E-07	7.922E-08	3.643E-08	1.384E-08	7.122E-09	4.640E-09	3.381E-09	
ENE	2.826E-06	6.761E-07	2.162E-07	1.113E-07	7.009E-08	3.177E-08	1.180E-08	5.971E-09	3.851E-09	2.784E-09	
E	2.658E-06	6.321E-07	1.987E-07	1.014E-07	6.339E-08	2.842E-08	1.038E-08	5.177E-09	3.309E-09	2.377E-09	
ESE	4.136E-06	9.684E-07	3.149E-07	1.638E-07	1.039E-07	4.773E-08	1.813E-08	9.331E-09	6.084E-09		

VENTS GROUND LEVEL RELEASES - JAN-JUN 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	5.210E-05	1.701E-05	9.032E-06	4.515E-06	1.819E-06	9.861E-07	6.254E-07	4.366E-07	3.251E-07	2.535E-07	2.045E-07
SSW	2.273E-05	7.586E-06	4.034E-06	2.013E-06	8.042E-07	4.336E-07	2.737E-07	1.904E-07	1.413E-07	1.099E-07	8.846E-08
SW	1.628E-05	5.415E-06	2.853E-06	1.417E-06	5.644E-07	3.036E-07	1.914E-07	1.330E-07	9.864E-08	7.665E-08	6.167E-08
WSW	1.154E-05	3.977E-06	2.120E-06	1.053E-06	4.122E-07	2.191E-07	1.368E-07	9.432E-08	6.949E-08	5.369E-08	4.298E-08
W	1.219E-05	4.137E-06	2.158E-06	1.060E-06	4.154E-07	2.210E-07	1.382E-07	9.539E-08	7.036E-08	5.441E-08	4.360E-08
WNW	1.207E-05	3.867E-06	1.991E-06	9.787E-07	3.934E-07	2.132E-07	1.352E-07	9.443E-08	7.035E-08	5.488E-08	4.432E-08
NW	3.063E-05	9.993E-06	5.273E-06	2.627E-06	1.064E-06	5.793E-07	3.686E-07	2.580E-07	1.926E-07	1.505E-07	1.216E-07
NNW	5.805E-05	1.820E-05	9.507E-06	4.744E-06	1.947E-06	1.069E-06	6.849E-07	4.818E-07	3.611E-07	2.831E-07	2.295E-07
N	6.724E-05	2.113E-05	1.114E-05	5.584E-06	2.291E-06	1.258E-06	8.054E-07	5.664E-07	4.244E-07	3.326E-07	2.696E-07
NNE	4.079E-05	1.274E-05	6.684E-06	3.345E-06	1.377E-06	7.572E-07	4.854E-07	3.418E-07	2.563E-07	2.010E-07	1.631E-07
NE	1.908E-05	6.012E-06	3.162E-06	1.584E-06	6.514E-07	3.581E-07	2.294E-07	1.614E-07	1.210E-07	9.486E-08	7.691E-08
ENE	1.675E-05	5.367E-06	2.908E-06	1.476E-06	5.985E-07	3.258E-07	2.073E-07	1.450E-07	1.082E-07	8.445E-08	6.823E-08
E	1.507E-05	5.028E-06	2.748E-06	1.391E-06	5.577E-07	3.013E-07	1.906E-07	1.327E-07	9.864E-08	7.678E-08	6.186E-08
ESE	2.535E-05	8.045E-06	4.208E-06	2.098E-06	8.597E-07	4.717E-07	3.018E-07	2.122E-07	1.590E-07	1.246E-07	1.009E-07
SE	3.173E-05	1.028E-05	5.420E-06	2.706E-06	1.099E-06	5.988E-07	3.812E-07	2.670E-07	1.993E-07	1.557E-07	1.259E-07
SSE	5.419E-05	1.719E-05	9.053E-06	4.531E-06	1.855E-06	1.017E-06	6.502E-07	4.569E-07	3.420E-07	2.678E-07	2.170E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.695E-07	8.742E-08	5.661E-08	3.223E-08	2.157E-08	1.575E-08	1.215E-08	9.738E-09	8.019E-09	6.744E-09	5.766E-09
SSW	7.317E-08	3.741E-08	2.409E-08	1.361E-08	9.064E-09	6.596E-09	5.075E-09	4.058E-09	3.337E-09	2.803E-09	2.394E-09
SW	5.098E-08	2.604E-08	1.676E-08	9.468E-09	6.311E-09	4.597E-09	3.541E-09	2.834E-09	2.333E-09	1.962E-09	1.677E-09
WSW	3.537E-08	1.776E-08	1.129E-08	6.270E-09	4.131E-09	2.982E-09	2.280E-09	1.814E-09	1.485E-09	1.243E-09	1.058E-09
W	3.593E-08	1.813E-08	1.158E-08	6.476E-09	4.294E-09	3.116E-09	2.393E-09	1.911E-09	1.570E-09	1.318E-09	1.126E-09
WNW	3.676E-08	1.902E-08	1.236E-08	7.085E-09	4.779E-09	3.512E-09	2.724E-09	2.192E-09	1.813E-09	1.530E-09	1.312E-09
NW	1.010E-07	5.238E-08	3.407E-08	1.953E-08	1.313E-08	9.632E-09	7.457E-09	5.993E-09	4.949E-09	4.173E-09	3.576E-09
NNW	1.910E-07	9.998E-08	6.540E-08	3.773E-08	2.548E-08	1.872E-08	1.451E-08	1.167E-08	9.634E-09	8.120E-09	6.955E-09
N	2.243E-07	1.173E-07	7.669E-08	4.420E-08	2.981E-08	2.189E-08	1.696E-08	1.363E-08	1.126E-08	9.487E-09	8.125E-09
NNE	1.358E-07	7.117E-08	4.659E-08	2.690E-08	1.816E-08	1.334E-08	1.034E-08	8.309E-09	6.860E-09	5.780E-09	4.948E-09
NE	6.400E-08	3.348E-08	2.188E-08	1.260E-08	8.488E-09	6.225E-09	4.816E-09	3.865E-09	3.187E-09	2.682E-09	2.293E-09
ENE	5.661E-08	2.927E-08	1.898E-08	1.083E-08	7.260E-09	5.307E-09	4.097E-09	3.284E-09	2.706E-09	2.276E-09	1.946E-09
E	5.121E-08	2.626E-08	1.694E-08	9.599E-09	6.408E-09	4.673E-09	3.602E-09	2.885E-09	2.376E-09	1.998E-09	1.709E-09
ESE	8.399E-08	4.392E-08	2.870E-08	1.653E-08	1.115E-08	8.183E-09	6.336E-09	5.089E-09	4.199E-09	3.536E-09	3.027E-09
SE	1.045E-07	5.419E-08	3.523E-08	2.014E-08	1.351E-08	9.885E-09	7.634E-09	6.120E-09	5.042E-09	4.241E-09	3.626E-09
SSE	1.805E-07	9.418E-08	6.147E-08	3.534E-08	2.379E-08	1.744E-08	1.349E-08	1.082E-08	8.921E-09	7.506E-09	6.419E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	8.798E-06	2.048E-06	6.461E-07	3.297E-07	2.061E-07	9.197E-08	3.291E-08	1.587E-08	9.774E-09	6.760E-09	
SSW	3.925E-06	9.080E-07	2.830E-07	1.434E-07	8.915E-08	3.944E-08	1.392E-08	6.646E-09	4.074E-09	2.810E-09	
SW	2.784E-06	6.379E-07	1.980E-07	1.001E-07	6.215E-08	2.746E-08	9.685E-09	4.632E-09	2.845E-09	1.966E-09	
WSW	2.058E-06	4.687E-07	1.418E-07	7.057E-08	4.333E-08	1.880E-08	6.435E-09	3.008E-09	1.822E-09	1.246E-09	
W	2.110E-06	4.722E-07	1.432E-07	7.143E-08	4.396E-08	1.917E-08	6.639E-09	3.141E-09	1.919E-09	1.322E-09	
WNW	1.958E-06	4.433E-07	1.397E-07	7.134E-08	4.465E-08	2.000E-08	7.232E-09	3.535E-09	2.199E-09	1.533E-09	
NW	5.146E-06	1.196E-06	3.805E-07	1.952E-07	1.225E-07	5.504E-08	1.992E-08	9.696E-09	6.014E-09	4.182E-09	
NNW	9.322E-06	2.179E-06	7.062E-07	3.659E-07	2.311E-07	1.048E-07	3.843E-08	1.884E-08	1.170E-08	8.137E-09	
N	1.089E-05	2.564E-06	8.305E-07	4.300E-07	2.715E-07	1.230E-07	4.503E-08	2.203E-08	1.368E-08	9.507E-09	
NNE	6.547E-06	1.539E-06	5.005E-07	2.597E-07	1.642E-07	7.460E-08	2.739E-08	1.342E-08	8.336E-09	5.792E-09	
NE	3.094E-06	7.283E-07	2.365E-07	1.226E-07	7.745E-08	3.511E-08	1.284E-08	6.265E-09	3.878E-09	2.688E-09	
ENE	2.818E-06	6.722E-07	2.140E-07	1.097E-07	6.873E-08	3.077E-08	1.106E-08	5.344E-09	3.296E-09	2.281E-09	
E	2.652E-06	6.290E-07	1.970E-07	1.001E-07	6.234E-08	2.766E-08	9.812E-09	4.707E-09	2.896E-09	2.003E-09	
ESE	4.123E-06	9.624E-07	3.113E-07	1.611E-07	1.017E-07	4.606E-08	1.684E-08	8.235E-09	5.106E-09	3.544E-09	
SE	5.293E-06	1.234E-06	3.935E-07	2.020E-07	1.268E-07	5.694E-08	2.055E-08	9.952E-09	6.142E-09	4.250E-09	
SSE	8.851E-06	2.077E-06	6.706E-07	3.466E-07	2.185E-07	9.882E-08	3.601E-08	1.755E-08	1.086E-08	7.523E-09	

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.935E-05	1.556E-05	8.067E-06	3.964E-06	1.552E-06	8.215E-07	5.105E-07	3.500E-07	2.565E-07	1.970E-07	1.568E-07
SSW	2.153E-05	6.938E-06	3.603E-06	1.767E-06	6.860E-07	3.611E-07	2.234E-07	1.526E-07	1.114E-07	8.538E-08	6.780E-08
SW	1.542E-05	4.952E-06	2.548E-06	1.243E-06	4.813E-07	2.528E-07	1.562E-07	1.065E-07	7.774E-08	5.951E-08	4.723E-08
WSW	1.093E-05	3.636E-06	1.893E-06	9.237E-07	3.514E-07	1.823E-07	1.115E-07	7.550E-08	5.472E-08	4.165E-08	3.288E-08
W	1.155E-05	3.782E-06	1.926E-06	9.298E-07	3.540E-07	1.839E-07	1.126E-07	7.633E-08	5.538E-08	4.219E-08	3.335E-08
WNW	1.143E-05	3.536E-06	1.778E-06	8.590E-07	3.355E-07	1.775E-07	1.103E-07	7.567E-08	5.546E-08	4.263E-08	3.396E-08
NW	2.901E-05	9.139E-06	4.708E-06	2.306E-06	9.074E-07	4.824E-07	3.007E-07	2.068E-07	1.518E-07	1.169E-07	9.319E-08
NNW	5.499E-05	1.665E-05	8.493E-06	4.167E-06	1.662E-06	8.916E-07	5.596E-07	3.867E-07	2.852E-07	2.203E-07	1.763E-07
N	6.369E-05	1.933E-05	9.948E-06	4.903E-06	1.955E-06	1.049E-06	6.578E-07	4.544E-07	3.350E-07	2.587E-07	2.069E-07
NNE	3.864E-05	1.166E-05	5.971E-06	2.938E-06	1.175E-06	6.315E-07	3.967E-07	2.744E-07	2.025E-07	1.566E-07	1.253E-07
NE	1.807E-05	5.500E-06	2.825E-06	1.391E-06	5.561E-07	2.986E-07	1.875E-07	1.296E-07	9.561E-08	7.388E-08	5.911E-08
ENE	1.587E-05	4.909E-06	2.597E-06	1.296E-06	5.106E-07	2.715E-07	1.692E-07	1.163E-07	8.533E-08	6.565E-08	5.232E-08
E	1.428E-05	4.598E-06	2.453E-06	1.221E-06	4.755E-07	2.508E-07	1.554E-07	1.063E-07	7.770E-08	5.958E-08	4.734E-08
ESE	2.402E-05	7.358E-06	3.759E-06	1.842E-06	7.337E-07	3.932E-07	2.466E-07	1.703E-07	1.255E-07	9.695E-08	7.753E-08
SE	3.005E-05	9.399E-06	4.841E-06	2.376E-06	9.372E-07	4.989E-07	3.112E-07	2.141E-07	1.573E-07	1.211E-07	9.657E-08
SSE	5.133E-05	1.572E-05	8.087E-06	3.979E-06	1.583E-06	8.477E-07	5.312E-07	3.667E-07	2.701E-07	2.085E-07	1.667E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.284E-07	6.312E-08	3.927E-08	2.103E-08	1.344E-08	9.446E-09	7.057E-09	5.497E-09	4.416E-09	3.631E-09	3.041E-09
SSW	5.537E-08	2.699E-08	1.669E-08	8.862E-09	5.628E-09	3.939E-09	2.933E-09	2.278E-09	1.826E-09	1.498E-09	1.253E-09
SW	3.855E-08	1.876E-08	1.159E-08	6.150E-09	3.906E-09	2.735E-09	2.037E-09	1.583E-09	1.269E-09	1.042E-09	8.719E-10
WSW	2.672E-08	1.277E-08	7.792E-09	4.062E-09	2.549E-09	1.768E-09	1.306E-09	1.009E-09	8.039E-10	6.567E-10	5.469E-10
W	2.712E-08	1.304E-08	7.986E-09	4.193E-09	2.648E-09	1.846E-09	1.370E-09	1.062E-09	8.493E-10	6.959E-10	5.811E-10
WNW	2.782E-08	1.372E-08	8.565E-09	4.618E-09	2.972E-09	2.102E-09	1.578E-09	1.235E-09	9.953E-10	8.211E-10	6.898E-10
NW	7.640E-08	3.777E-08	2.360E-08	1.271E-08	8.155E-09	5.752E-09	4.309E-09	3.365E-09	2.708E-09	2.231E-09	1.872E-09
NNW	1.449E-07	7.238E-08	4.553E-08	2.475E-08	1.598E-08	1.132E-08	8.508E-09	6.660E-09	5.372E-09	4.433E-09	3.725E-09
N	1.701E-07	8.485E-08	5.332E-08	2.894E-08	1.865E-08	1.320E-08	9.911E-09	7.753E-09	6.249E-09	5.154E-09	4.328E-09
NNE	1.031E-07	5.156E-08	3.246E-08	1.767E-08	1.140E-08	8.081E-09	6.074E-09	4.755E-09	3.836E-09	3.165E-09	2.659E-09
NE	4.859E-08	2.426E-08	1.525E-08	8.282E-09	5.336E-09	3.776E-09	2.835E-09	2.217E-09	1.786E-09	1.473E-09	1.237E-09
ENE	4.286E-08	2.113E-08	1.317E-08	7.066E-09	4.520E-09	3.180E-09	2.377E-09	1.852E-09	1.488E-09	1.224E-09	1.025E-09
E	3.869E-08	1.889E-08	1.170E-08	6.219E-09	3.953E-09	2.769E-09	2.062E-09	1.602E-09	1.284E-09	1.054E-09	8.811E-10
ESE	6.371E-08	3.179E-08	1.998E-08	1.085E-08	6.995E-09	4.951E-09	3.719E-09	2.909E-09	2.345E-09	1.934E-09	1.624E-09
SE	7.917E-08	3.916E-08	2.446E-08	1.317E-08	8.441E-09	5.949E-09	4.452E-09	3.473E-09	2.793E-09	2.299E-09	1.927E-09
SSE	1.369E-07	6.820E-08	4.281E-08	2.320E-08	1.493E-08	1.056E-08	7.919E-09	6.190E-09	4.986E-09	4.109E-09	3.449E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.908E-06	1.763E-06	5.293E-07	2.605E-07	1.582E-07	6.702E-08	2.171E-08	9.554E-09	5.531E-09	3.645E-09	
SSW	3.528E-06	7.818E-07	2.318E-07	1.133E-07	6.841E-08	2.872E-08	9.164E-09	3.987E-09	2.293E-09	1.504E-09	
SW	2.502E-06	5.491E-07	1.621E-07	7.902E-08	4.765E-08	1.997E-08	6.361E-09	2.768E-09	1.593E-09	1.046E-09	
WSW	1.850E-06	4.034E-07	1.160E-07	5.568E-08	3.319E-08	1.366E-08	4.219E-09	1.792E-09	1.016E-09	6.597E-10	
W	1.896E-06	4.064E-07	1.171E-07	5.634E-08	3.366E-08	1.392E-08	4.349E-09	1.869E-09	1.069E-09	6.988E-10	
WNW	1.760E-06	3.816E-07	1.144E-07	5.635E-08	3.425E-08	1.456E-08	4.763E-09	2.124E-09	1.242E-09	8.241E-10	
NW	4.625E-06	1.029E-06	3.116E-07	1.542E-07	9.399E-08	4.005E-08	1.310E-08	5.816E-09	3.384E-09	2.239E-09	
NNW	8.383E-06	1.876E-06	5.790E-07	2.895E-07	1.777E-07	7.656E-08	2.547E-08	1.144E-08	6.697E-09	4.449E-09	
N	9.791E-06	2.207E-06	6.806E-07	3.401E-07	2.086E-07	8.977E-08	2.979E-08	1.334E-08	7.796E-09	5.172E-09	
NNE	5.887E-06	1.325E-06	4.104E-07	2.056E-07	1.263E-07	5.452E-08	1.817E-08	8.165E-09	4.782E-09	3.176E-09	
NE	2.782E-06	6.273E-07	1.940E-07	9.705E-08	5.959E-08	2.566E-08	8.522E-09	3.816E-09	2.229E-09	1.478E-09	
ENE	2.532E-06	5.787E-07	1.753E-07	8.667E-08	5.277E-08	2.242E-08	7.290E-09	3.216E-09	1.864E-09	1.229E-09	
E	2.382E-06	5.413E-07	1.612E-07	7.896E-08	4.776E-08	2.009E-08	6.429E-09	2.802E-09	1.612E-09	1.058E-09	
ESE	3.707E-06	8.287E-07	2.552E-07	1.274E-07	7.816E-08	3.364E-08	1.117E-08	5.003E-09	2.926E-09	1.941E-09	
SE	4.758E-06	1.062E-06	3.224E-07	1.597E-07	9.739E-08	4.152E-08	1.358E-08	6.015E-09	3.494E-09	2.307E-09	
SSE	7.958E-06	1.789E-06	5.498E-07	2.742E-07	1.680E-07	7.218E-08	2.388E-08	1.067E-08	6.225E-09	4.125E-09	

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS *****											
DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.452E-07	8.292E-08	4.258E-08	2.024E-08	7.271E-09	3.606E-09	2.123E-09	1.390E-09	9.782E-10	7.250E-10	5.587E-10
SSW	9.839E-08	3.327E-08	1.708E-08	8.121E-09	2.917E-09	1.447E-09	8.518E-10	5.578E-10	3.925E-10	2.909E-10	2.241E-10
SW	7.339E-08	2.482E-08	1.274E-08	6.058E-09	2.176E-09	1.079E-09	6.354E-10	4.161E-10	2.928E-10	2.170E-10	1.672E-10
WSW	6.327E-08	2.139E-08	1.098E-08	5.222E-09	1.876E-09	9.303E-10	5.478E-10	3.587E-10	2.524E-10	1.870E-10	1.441E-10
W	8.082E-08	2.733E-08	1.403E-08	6.671E-09	2.396E-09	1.188E-09	6.997E-10	4.582E-10	3.224E-10	2.389E-10	1.841E-10
WNW	6.384E-08	2.159E-08	1.108E-08	5.269E-09	1.893E-09	9.387E-10	5.527E-10	3.619E-10	2.547E-10	1.887E-10	1.454E-10
NW	1.426E-07	4.821E-08	2.475E-08	1.177E-08	4.227E-09	2.096E-09	1.234E-09	8.083E-10	5.688E-10	4.215E-10	3.248E-10
NNW	2.438E-07	8.244E-08	4.233E-08	2.012E-08	7.228E-09	3.585E-09	2.111E-09	1.382E-09	9.725E-10	7.207E-10	5.554E-10
N	3.389E-07	1.146E-07	5.885E-08	2.798E-08	1.005E-08	4.984E-09	2.935E-09	1.922E-09	1.352E-09	1.002E-09	7.722E-10
NNE	1.719E-07	5.814E-08	2.985E-08	1.419E-08	5.097E-09	2.528E-09	1.488E-09	9.747E-10	6.858E-10	5.083E-10	3.917E-10
NE	6.922E-08	2.341E-08	1.202E-08	5.713E-09	2.052E-09	1.018E-09	5.993E-10	3.924E-10	2.761E-10	2.046E-10	1.577E-10
ENE	7.660E-08	2.590E-08	1.330E-08	6.323E-09	2.271E-09	1.126E-09	6.632E-10	4.343E-10	3.056E-10	2.265E-10	1.745E-10
E	8.667E-08	2.931E-08	1.505E-08	7.154E-09	2.570E-09	1.274E-09	7.504E-10	4.913E-10	3.457E-10	2.562E-10	1.974E-10
ESE	1.219E-07	4.122E-08	2.116E-08	1.006E-08	3.614E-09	1.792E-09	1.055E-09	6.910E-10	4.862E-10	3.603E-10	2.777E-10
SE	1.894E-07	6.404E-08	3.288E-08	1.563E-08	5.615E-09	2.785E-09	1.640E-09	1.074E-09	7.555E-10	5.599E-10	4.314E-10
SSE	2.501E-07	8.458E-08	4.343E-08	2.065E-08	7.416E-09	3.678E-09	2.166E-09	1.418E-09	9.978E-10	7.395E-10	5.699E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.438E-10	1.972E-10	1.194E-10	6.037E-11	3.654E-11	2.450E-11	1.755E-11	1.318E-11	1.025E-11	8.187E-12	6.682E-12
SSW	1.781E-10	7.911E-11	4.792E-11	2.422E-11	1.466E-11	9.829E-12	7.043E-12	5.288E-12	4.112E-12	3.285E-12	2.681E-12
SW	1.328E-10	5.901E-11	3.574E-11	1.807E-11	1.094E-11	7.332E-12	5.254E-12	3.945E-12	3.067E-12	2.450E-12	2.000E-12
WSW	1.145E-10	5.087E-11	3.081E-11	1.557E-11	9.427E-12	6.320E-12	4.529E-12	3.401E-12	2.644E-12	2.112E-12	1.724E-12
W	1.463E-10	6.498E-11	3.936E-11	1.990E-11	1.204E-11	8.074E-12	5.785E-12	4.344E-12	3.378E-12	2.698E-12	2.202E-12
WNW	1.155E-10	5.133E-11	3.109E-11	1.572E-11	9.512E-12	6.377E-12	4.570E-12	3.431E-12	2.668E-12	2.131E-12	1.739E-12
NW	2.580E-10	1.146E-10	6.944E-11	3.510E-11	2.124E-11	1.424E-11	1.021E-11	7.664E-12	5.959E-12	4.760E-12	3.885E-12
NNW	4.412E-10	1.960E-10	1.187E-10	6.001E-11	3.632E-11	2.435E-11	1.745E-11	1.310E-11	1.019E-11	8.138E-12	6.643E-12
N	6.135E-10	2.725E-10	1.651E-10	8.344E-11	5.050E-11	3.386E-11	2.426E-11	1.822E-11	1.417E-11	1.132E-11	9.236E-12
NNE	3.112E-10	1.382E-10	8.373E-11	4.232E-11	2.562E-11	1.717E-11	1.231E-11	9.241E-12	7.185E-12	5.739E-12	4.685E-12
NE	1.253E-10	5.565E-11	3.371E-11	1.704E-11	1.031E-11	6.915E-12	4.955E-12	3.720E-12	2.893E-12	2.311E-12	1.886E-12
ENE	1.386E-10	6.159E-11	3.731E-11	1.886E-11	1.141E-11	7.653E-12	5.484E-12	4.118E-12	3.202E-12	2.557E-12	2.087E-12
E	1.569E-10	6.968E-11	4.221E-11	2.133E-11	1.291E-11	8.658E-12	6.204E-12	4.658E-12	3.622E-12	2.893E-12	2.362E-12
ESE	2.206E-10	9.799E-11	5.936E-11	3.000E-11	1.816E-11	1.218E-11	8.725E-12	6.551E-12	5.094E-12	4.069E-12	3.321E-12
SE	3.428E-10	1.523E-10	9.224E-11	4.662E-11	2.822E-11	1.892E-11	1.356E-11	1.018E-11	7.915E-12	6.322E-12	5.160E-12
SSE	4.527E-10	2.011E-10	1.218E-10	6.158E-11	3.727E-11	2.499E-11	1.791E-11	1.344E-11	1.045E-11	8.350E-12	6.816E-12

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS *****											
DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	4.162E-08	8.524E-09	2.225E-09	9.995E-10	5.654E-10	2.174E-10	6.290E-11	2.493E-11	1.331E-11	8.240E-12	
SSW	1.670E-08	3.420E-09	8.928E-10	4.010E-10	2.268E-10	8.724E-11	2.524E-11	1.000E-11	5.341E-12	3.306E-12	
SW	1.246E-08	2.551E-09	6.660E-10	2.991E-10	1.692E-10	6.507E-11	1.883E-11	7.461E-12	3.984E-12	2.466E-12	
WSW	1.074E-08	2.199E-09	5.741E-10	2.579E-10	1.459E-10	5.610E-11	1.623E-11	6.432E-12	3.435E-12	2.126E-12	
W	1.372E-08	2.809E-09	7.334E-10	3.294E-10	1.863E-10	7.166E-11	2.073E-11	8.217E-12	4.388E-12	2.716E-12	
WNW	1.083E-08	2.219E-09	5.793E-10	2.602E-10	1.472E-10	5.660E-11	1.637E-11	6.490E-12	3.466E-12	2.145E-12	
NW	2.420E-08	4.956E-09	1.294E-09	5.811E-10	3.287E-10	1.264E-10	3.657E-11	1.449E-11	7.740E-12	4.791E-12	
NNW	4.137E-08	8.474E-09	2.212E-09	9.936E-10	5.621E-10	2.161E-10	6.253E-11	2.478E-11	1.323E-11	8.192E-12	
N	5.752E-08	1.178E-08	3.076E-09	1.381E-09	7.815E-10	3.005E-10	8.694E-11	3.446E-11	1.840E-11	1.139E-11	
NNE	2.918E-08	5.976E-09	1.560E-09	7.007E-10	3.964E-10	1.524E-10	4.410E-11	1.748E-11	9.334E-12	5.777E-12	
NE	1.175E-08	2.406E-09	6.281E-10	2.821E-10	1.596E-10	6.137E-11	1.775E-11	7.037E-12	3.758E-12	2.326E-12	
ENE	1.300E-08	2.663E-09	6.952E-10	3.122E-10	1.766E-10	6.792E-11	1.965E-11	7.788E-12	4.159E-12	2.574E-12	
E	1.471E-08	3.013E-09	7.865E-10	3.532E-10	1.998E-10	7.684E-11	2.223E-11	8.811E-12	4.705E-12	2.912E-12	
ESE	2.068E-08	4.237E-09	1.106E-09	4.968E-10	2.810E-10	1.081E-10	3.126E-11	1.239E-11	6.617E-12	4.096E-12	
SE	3.214E-08	6.583E-09	1.719E-09	7.719E-10	4.366E-10	1.679E-10	4.858E-11	1.925E-11	1.028E-11	6.364E-12	
SSE	4.245E-08	8.695E-09	2.270E-09	1.019E-09	5.767E-10	2.218E-10	6.416E-11	2.543E-11	1.358E-11	8.405E-12	

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED
A	Site Boundary S	.80	7.8E-06	7.8E-06	6.9E-06 3.6E-08
A	Site Boundary SSW	.82	3.2E-06	3.2E-06	2.9E-06 1.3E-08
A	Site Boundary SW	.97	1.5E-06	1.5E-06	1.3E-06 6.5E-09
A	Site Boundary WSW	.93	1.3E-06	1.3E-06	1.1E-06 6.4E-09
A	Site Boundary W	.91	1.3E-06	1.3E-06	1.2E-06 8.4E-09
A	Site Boundary WNW	.94	1.1E-06	1.1E-06	1.0E-06 6.2E-09
A	Site Boundary NW	.81	4.4E-06	4.4E-06	3.9E-06 2.0E-08
A	Site Boundary NNW	.69	1.1E-05	1.1E-05	9.8E-06 4.9E-08
A	Site Boundary N	.67	1.3E-05	1.3E-05	1.2E-05 7.0E-08
A	Site Boundary NNE	.60	9.5E-06	9.5E-06	8.6E-06 4.3E-08
A	Site Boundary NE	.62	4.2E-06	4.2E-06	3.8E-06 1.6E-08
A	Site Boundary ENE	.59	4.2E-06	4.2E-06	3.8E-06 2.0E-08
A	Site Boundary E	.53	4.7E-06	4.7E-06	4.2E-06 2.7E-08
A	Site Boundary ESE	.54	7.2E-06	7.1E-06	6.5E-06 3.7E-08
A	Site Boundary SE	.65	6.8E-06	6.8E-06	6.1E-06 4.2E-08
A	Site Boundary SSE	.81	7.5E-06	7.5E-06	6.7E-06 3.5E-08
A	Nearest Res SW	1.30	7.8E-07	7.8E-07	6.7E-07 3.1E-09
A	Nearest Res WSW	1.30	5.7E-07	5.7E-07	4.9E-07 2.7E-09
A	Nearest Res W	1.00	1.1E-06	1.1E-06	9.3E-07 6.7E-09
A	Nearest Res WNW	1.70	3.0E-07	3.0E-07	2.5E-07 1.4E-09
A	Nearest Res NW	.90	3.4E-06	3.4E-06	3.0E-06 1.5E-08
A	Nearest Res NNW	1.90	1.2E-06	1.2E-06	9.9E-07 4.1E-09
A	Nearest Res N	3.00	5.7E-07	5.7E-07	4.5E-07 1.9E-09
A	Nearest Res ENE	1.70	4.6E-07	4.6E-07	3.9E-07 1.7E-09
A	Nearest Res E	2.00	3.0E-07	3.0E-07	2.5E-07 1.3E-09
A	Nearest Res ESE	2.30	3.6E-07	3.6E-07	2.9E-07 1.3E-09
A	Nearest Cow NNW	3.50	3.7E-07	3.6E-07	2.9E-07 9.7E-10
A	Nearest Garde SW	1.30	7.8E-07	7.8E-07	6.7E-07 3.1E-09
A	Nearest Garde WSW	1.90	2.5E-07	2.4E-07	2.0E-07 1.1E-09
A	Nearest Garde WNW	2.40	1.5E-07	1.5E-07	1.2E-07 6.1E-10
A	Nearest Garde NW	2.90	2.8E-07	2.8E-07	2.2E-07 8.7E-10
A	Nearest Garde NNW	1.90	1.2E-06	1.2E-06	9.9E-07 4.1E-09
A	Nearest Garde ENE	2.80	1.7E-07	1.7E-07	1.3E-07 5.1E-10
A	Nearest Garde E	2.00	3.0E-07	3.0E-07	2.5E-07 1.3E-09
A	Nearest Garde ESE	2.30	3.6E-07	3.6E-07	2.9E-07 1.3E-09
A	Nearest Garde SE	1.20	1.8E-06	1.8E-06	1.6E-06 9.8E-09

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***Atmospheric Diffusion Estimates***

**Ground Level Releases**

July-September 2004

VENTS GROUND LEVEL RELEASES - JUL-SEP 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.944E-05	1.365E-05	7.412E-06	3.716E-06	1.464E-06	7.817E-07	4.902E-07	3.393E-07	2.508E-07	1.944E-07	1.561E-07
SSW	1.631E-05	5.554E-06	2.974E-06	1.477E-06	5.700E-07	3.001E-07	1.861E-07	1.277E-07	9.370E-08	7.217E-08	5.764E-08
SW	1.560E-05	5.080E-06	2.683E-06	1.333E-06	5.269E-07	2.824E-07	1.777E-07	1.234E-07	9.147E-08	7.109E-08	5.723E-08
WSW	1.166E-05	4.004E-06	2.110E-06	1.037E-06	4.031E-07	2.134E-07	1.330E-07	9.158E-08	6.745E-08	5.211E-08	4.173E-08
W	1.042E-05	3.534E-06	1.910E-06	9.570E-07	3.764E-07	2.008E-07	1.259E-07	8.704E-08	6.433E-08	4.984E-08	4.001E-08
WNW	1.172E-05	3.945E-06	2.090E-06	1.035E-06	4.032E-07	2.137E-07	1.333E-07	9.185E-08	6.767E-08	5.229E-08	4.188E-08
NW	2.750E-05	9.323E-06	4.995E-06	2.484E-06	9.717E-07	5.167E-07	3.231E-07	2.232E-07	1.647E-07	1.275E-07	1.023E-07
NNW	7.476E-05	2.455E-05	1.305E-05	6.510E-06	2.617E-06	1.419E-06	9.004E-07	6.293E-07	4.692E-07	3.664E-07	2.962E-07
N	8.890E-05	2.889E-05	1.552E-05	7.812E-06	3.170E-06	1.728E-06	1.102E-06	7.725E-07	5.776E-07	4.520E-07	3.661E-07
NNE	4.582E-05	1.475E-05	7.823E-06	3.920E-06	1.596E-06	8.723E-07	5.570E-07	3.911E-07	2.928E-07	2.294E-07	1.859E-07
NE	3.133E-05	9.796E-06	5.123E-06	2.561E-06	1.057E-06	5.831E-07	3.750E-07	2.648E-07	1.991E-07	1.566E-07	1.274E-07
ENE	3.162E-05	9.711E-06	5.071E-06	2.545E-06	1.062E-06	5.897E-07	3.810E-07	2.700E-07	2.036E-07	1.606E-07	1.309E-07
E	2.490E-05	7.703E-06	4.067E-06	2.050E-06	8.506E-07	4.709E-07	3.035E-07	2.147E-07	1.617E-07	1.273E-07	1.037E-07
ESE	3.413E-05	1.035E-05	5.541E-06	2.826E-06	1.177E-06	6.524E-07	4.209E-07	2.979E-07	2.245E-07	1.768E-07	1.440E-07
SE	3.902E-05	1.216E-05	6.564E-06	3.343E-06	1.374E-06	7.559E-07	4.847E-07	3.415E-07	2.563E-07	2.012E-07	1.634E-07
SSE	7.145E-05	2.301E-05	1.239E-05	6.271E-06	2.560E-06	1.401E-06	8.956E-07	6.292E-07	4.712E-07	3.693E-07	2.994E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.289E-07	6.560E-08	4.222E-08	2.399E-08	1.615E-08	1.190E-08	9.284E-09	7.534E-09	6.291E-09	5.368E-09	4.660E-09
SSW	4.736E-08	2.372E-08	1.510E-08	8.470E-09	5.677E-09	4.172E-09	3.248E-09	2.631E-09	2.193E-09	1.869E-09	1.621E-09
SW	4.739E-08	2.449E-08	1.594E-08	9.214E-09	6.286E-09	4.684E-09	3.688E-09	3.017E-09	2.536E-09	2.178E-09	1.901E-09
WSW	3.438E-08	1.737E-08	1.114E-08	6.312E-09	4.259E-09	3.146E-09	2.460E-09	2.001E-09	1.674E-09	1.431E-09	1.244E-09
W	3.301E-08	1.676E-08	1.077E-08	6.117E-09	4.125E-09	3.046E-09	2.380E-09	1.934E-09	1.617E-09	1.381E-09	1.200E-09
WNW	3.452E-08	1.748E-08	1.122E-08	6.358E-09	4.277E-09	3.152E-09	2.461E-09	1.998E-09	1.669E-09	1.425E-09	1.238E-09
NW	8.438E-08	4.288E-08	2.758E-08	1.568E-08	1.057E-08	7.802E-09	6.096E-09	4.953E-09	4.141E-09	3.538E-09	3.074E-09
NNW	2.460E-07	1.282E-07	8.390E-08	4.885E-08	3.345E-08	2.499E-08	1.971E-08	1.615E-08	1.360E-08	1.169E-08	1.021E-08
N	3.045E-07	1.594E-07	1.047E-07	6.119E-08	4.199E-08	3.142E-08	2.482E-08	2.035E-08	1.714E-08	1.475E-08	1.289E-08
NNE	1.548E-07	8.126E-08	5.348E-08	3.136E-08	2.159E-08	1.620E-08	1.282E-08	1.053E-08	8.886E-09	7.654E-09	6.700E-09
NE	1.064E-07	5.653E-08	3.751E-08	2.224E-08	1.542E-08	1.163E-08	9.250E-09	7.627E-09	6.456E-09	5.576E-09	4.893E-09
ENE	1.095E-07	5.852E-08	3.898E-08	2.323E-08	1.614E-08	1.220E-08	9.712E-09	8.016E-09	6.792E-09	5.871E-09	5.156E-09
E	8.660E-08	4.612E-08	3.064E-08	1.820E-08	1.263E-08	9.530E-09	7.580E-09	6.250E-09	5.292E-09	4.571E-09	4.011E-09
ESE	1.203E-07	6.409E-08	4.258E-08	2.527E-08	1.752E-08	1.321E-08	1.050E-08	8.651E-09	7.320E-09	6.319E-09	5.542E-09
SE	1.362E-07	7.200E-08	4.757E-08	2.803E-08	1.932E-08	1.451E-08	1.149E-08	9.447E-09	7.975E-09	6.871E-09	6.015E-09
SSE	2.492E-07	1.309E-07	8.615E-08	5.047E-08	3.467E-08	2.596E-08	2.052E-08	1.683E-08	1.419E-08	1.221E-08	1.067E-08

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.156E-06	1.661E-06	5.076E-07	2.546E-07	1.574E-07	6.927E-08	2.455E-08	1.199E-08	7.560E-09	5.379E-09
SSW	2.882E-06	6.517E-07	1.931E-07	9.521E-08	5.814E-08	2.514E-08	8.701E-09	4.204E-09	2.640E-09	1.873E-09
SW	2.616E-06	5.974E-07	1.839E-07	9.282E-08	5.769E-08	2.578E-08	9.407E-09	4.713E-09	3.026E-09	2.181E-09
WSW	2.054E-06	4.597E-07	1.379E-07	6.850E-08	4.208E-08	1.838E-08	6.471E-09	3.168E-09	2.007E-09	1.434E-09
W	1.847E-06	4.274E-07	1.303E-07	6.530E-08	4.033E-08	1.771E-08	6.266E-09	3.067E-09	1.940E-09	1.384E-09
WNW	2.033E-06	4.594E-07	1.382E-07	6.872E-08	4.224E-08	1.848E-08	6.514E-09	3.176E-09	2.005E-09	1.428E-09
NW	4.841E-06	1.106E-06	3.348E-07	1.672E-07	1.031E-07	4.530E-08	1.605E-08	7.858E-09	4.970E-09	3.545E-09
NNW	1.270E-05	2.950E-06	9.302E-07	4.758E-07	2.984E-07	1.347E-07	4.979E-08	2.513E-08	1.620E-08	1.171E-08
N	1.506E-05	3.561E-06	1.137E-06	5.854E-07	3.687E-07	1.673E-07	6.233E-08	3.160E-08	2.040E-08	1.477E-08
NNE	7.628E-06	1.791E-06	5.747E-07	2.967E-07	1.873E-07	8.524E-08	3.193E-08	1.628E-08	1.056E-08	7.666E-09
NE	5.023E-06	1.181E-06	3.864E-07	2.017E-07	1.283E-07	5.916E-08	2.261E-08	1.169E-08	7.645E-09	5.584E-09
ENE	4.979E-06	1.182E-06	3.922E-07	2.062E-07	1.318E-07	6.116E-08	2.358E-08	1.226E-08	8.034E-09	5.879E-09
E	3.978E-06	9.483E-07	3.126E-07	1.637E-07	1.043E-07	4.824E-08	1.849E-08	9.576E-09	6.265E-09	4.577E-09
ESE	5.402E-06	1.310E-06	4.335E-07	2.273E-07	1.449E-07	6.702E-08	2.567E-08	1.327E-08	8.671E-09	6.328E-09
SE	6.376E-06	1.537E-06	4.997E-07	2.596E-07	1.645E-07	7.542E-08	2.850E-08	1.459E-08	9.471E-09	6.881E-09
SSE	1.203E-05	2.870E-06	9.239E-07	4.775E-07	3.015E-07	1.373E-07	5.138E-08	2.611E-08	1.688E-08	1.223E-08

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.940E-05	1.363E-05	7.390E-06	3.701E-06	1.455E-06	7.751E-07	4.851E-07	3.349E-07	2.471E-07	1.911E-07	1.531E-07
SSW	1.629E-05	5.542E-06	2.965E-06	1.471E-06	5.663E-07	2.975E-07	1.841E-07	1.260E-07	9.226E-08	7.090E-08	5.649E-08
SW	1.558E-05	5.069E-06	2.674E-06	1.327E-06	5.233E-07	2.798E-07	1.757E-07	1.217E-07	8.999E-08	6.977E-08	5.603E-08
WSW	1.165E-05	3.997E-06	2.104E-06	1.034E-06	4.010E-07	2.119E-07	1.318E-07	9.060E-08	6.660E-08	5.136E-08	4.106E-08
W	1.041E-05	3.527E-06	1.904E-06	9.532E-07	3.742E-07	1.992E-07	1.246E-07	8.597E-08	6.340E-08	4.902E-08	3.927E-08
WNW	1.171E-05	3.939E-06	2.084E-06	1.031E-06	4.011E-07	2.123E-07	1.322E-07	9.090E-08	6.684E-08	5.156E-08	4.123E-08
NW	2.748E-05	9.309E-06	4.983E-06	2.476E-06	9.672E-07	5.136E-07	3.206E-07	2.211E-07	1.629E-07	1.259E-07	1.008E-07
NNW	7.468E-05	2.451E-05	1.301E-05	6.484E-06	2.602E-06	1.407E-06	8.913E-07	6.216E-07	4.625E-07	3.604E-07	2.907E-07
N	8.880E-05	2.882E-05	1.546E-05	7.777E-06	3.148E-06	1.713E-06	1.089E-06	7.618E-07	5.682E-07	4.436E-07	3.584E-07
NNE	4.576E-05	1.471E-05	7.794E-06	3.901E-06	1.584E-06	8.635E-07	5.499E-07	3.851E-07	2.875E-07	2.247E-07	1.816E-07
NE	3.129E-05	9.770E-06	5.103E-06	2.548E-06	1.049E-06	5.769E-07	3.699E-07	2.605E-07	1.954E-07	1.533E-07	1.243E-07
ENE	3.157E-05	9.683E-06	5.049E-06	2.531E-06	1.053E-06	5.829E-07	3.755E-07	2.653E-07	1.995E-07	1.569E-07	1.275E-07
E	2.486E-05	7.681E-06	4.051E-06	2.038E-06	8.435E-07	4.656E-07	2.992E-07	2.111E-07	1.585E-07	1.244E-07	1.010E-07
ESE	3.409E-05	1.032E-05	5.517E-06	2.810E-06	1.167E-06	6.451E-07	4.150E-07	2.929E-07	2.200E-07	1.728E-07	1.403E-07
SE	3.897E-05	1.213E-05	6.537E-06	3.325E-06	1.363E-06	7.476E-07	4.781E-07	3.359E-07	2.514E-07	1.968E-07	1.594E-07
SSE	7.135E-05	2.295E-05	1.235E-05	6.238E-06	2.540E-06	1.387E-06	8.838E-07	6.193E-07	4.625E-07	3.615E-07	2.923E-07

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.261E-07	6.348E-08	4.040E-08	2.245E-08	1.477E-08	1.065E-08	8.124E-09	6.447E-09	5.265E-09	4.394E-09	3.731E-09
SSW	4.632E-08	2.293E-08	1.443E-08	7.910E-09	5.181E-09	3.720E-09	2.831E-09	2.241E-09	1.826E-09	1.521E-09	1.289E-09
SW	4.629E-08	2.363E-08	1.520E-08	8.575E-09	5.712E-09	4.155E-09	3.195E-09	2.552E-09	2.095E-09	1.757E-09	1.498E-09
WSW	3.376E-08	1.690E-08	1.073E-08	5.967E-09	3.950E-09	2.863E-09	2.197E-09	1.753E-09	1.440E-09	1.208E-09	1.031E-09
W	3.233E-08	1.623E-08	1.032E-08	5.735E-09	3.785E-09	2.735E-09	2.092E-09	1.664E-09	1.361E-09	1.138E-09	9.685E-10
WNW	3.391E-08	1.702E-08	1.083E-08	6.027E-09	3.983E-09	2.884E-09	2.212E-09	1.765E-09	1.449E-09	1.216E-09	1.038E-09
NW	8.304E-08	4.185E-08	2.670E-08	1.493E-08	9.896E-09	7.184E-09	5.521E-09	4.413E-09	3.629E-09	3.050E-09	2.608E-09
NNW	2.409E-07	1.242E-07	8.039E-08	4.579E-08	3.067E-08	2.242E-08	1.731E-08	1.388E-08	1.143E-08	9.621E-09	8.229E-09
N	2.974E-07	1.538E-07	9.981E-08	5.694E-08	3.815E-08	2.786E-08	2.149E-08	1.721E-08	1.416E-08	1.190E-08	1.016E-08
NNE	1.508E-07	7.812E-08	5.073E-08	2.898E-08	1.943E-08	1.419E-08	1.095E-08	8.760E-09	7.203E-09	6.046E-09	5.158E-09
NE	1.035E-07	5.424E-08	3.549E-08	2.046E-08	1.380E-08	1.013E-08	7.833E-09	6.284E-09	5.176E-09	4.352E-09	3.717E-09
ENE	1.063E-07	5.599E-08	3.675E-08	2.126E-08	1.435E-08	1.053E-08	8.141E-09	6.528E-09	5.374E-09	4.514E-09	3.852E-09
E	8.417E-08	4.418E-08	2.894E-08	1.670E-08	1.126E-08	8.262E-09	6.389E-09	5.123E-09	4.218E-09	3.544E-09	3.025E-09
ESE	1.169E-07	6.139E-08	4.020E-08	2.319E-08	1.563E-08	1.145E-08	8.852E-09	7.095E-09	5.839E-09	4.904E-09	4.185E-09
SE	1.325E-07	6.906E-08	4.500E-08	2.578E-08	1.729E-08	1.263E-08	9.738E-09	7.789E-09	6.400E-09	5.367E-09	4.575E-09
SSE	2.427E-07	1.257E-07	8.163E-08	4.654E-08	3.112E-08	2.268E-08	1.745E-08	1.394E-08	1.144E-08	9.586E-09	8.164E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.136E-06	1.652E-06	5.024E-07	2.509E-07	1.544E-07	6.715E-08	2.303E-08	1.074E-08	6.476E-09	4.406E-09
SSW	2.874E-06	6.479E-07	1.911E-07	9.376E-08	5.699E-08	2.435E-08	8.145E-09	3.754E-09	2.251E-09	1.526E-09
SW	2.608E-06	5.937E-07	1.818E-07	9.134E-08	5.650E-08	2.492E-08	8.774E-09	4.186E-09	2.562E-09	1.762E-09
WSW	2.049E-06	4.575E-07	1.367E-07	6.765E-08	4.141E-08	1.790E-08	6.129E-09	2.886E-09	1.761E-09	1.211E-09
W	1.842E-06	4.251E-07	1.290E-07	6.437E-08	3.959E-08	1.718E-08	5.887E-09	2.758E-09	1.671E-09	1.142E-09
WNW	2.029E-06	4.573E-07	1.370E-07	6.789E-08	4.158E-08	1.802E-08	6.185E-09	2.908E-09	1.772E-09	1.219E-09
NW	4.831E-06	1.101E-06	3.322E-07	1.654E-07	1.017E-07	4.427E-08	1.531E-08	7.242E-09	4.431E-09	3.058E-09
NNW	1.266E-05	2.934E-06	9.210E-07	4.691E-07	2.929E-07	1.306E-07	4.676E-08	2.258E-08	1.393E-08	9.643E-09
N	1.502E-05	3.539E-06	1.124E-06	5.760E-07	3.610E-07	1.617E-07	5.812E-08	2.806E-08	1.727E-08	1.192E-08
NNE	7.601E-06	1.779E-06	5.676E-07	2.915E-07	1.830E-07	8.210E-08	2.957E-08	1.429E-08	8.792E-09	6.060E-09
NE	5.004E-06	1.172E-06	3.814E-07	1.979E-07	1.252E-07	5.685E-08	2.084E-08	1.019E-08	6.304E-09	4.361E-09
ENE	4.960E-06	1.172E-06	3.867E-07	2.021E-07	1.283E-07	5.862E-08	2.163E-08	1.059E-08	6.549E-09	4.524E-09
E	3.963E-06	9.411E-07	3.083E-07	1.605E-07	1.017E-07	4.629E-08	1.700E-08	8.313E-09	5.140E-09	3.552E-09
ESE	5.381E-06	1.300E-06	4.275E-07	2.229E-07	1.413E-07	6.432E-08	2.361E-08	1.153E-08	7.119E-09	4.915E-09
SE	6.352E-06	1.526E-06	4.931E-07	2.547E-07	1.605E-07	7.247E-08	2.628E-08	1.272E-08	7.816E-09	5.380E-09
SSE	1.199E-05	2.849E-06	9.122E-07	4.688E-07	2.944E-07	1.321E-07	4.749E-08	2.284E-08	1.399E-08	9.609E-09

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.732E-05	1.246E-05	6.600E-06	3.249E-06	1.241E-06	6.457E-07	3.959E-07	2.685E-07	1.949E-07	1.485E-07	1.174E-07
SSW	1.543E-05	5.069E-06	2.648E-06	1.292E-06	4.832E-07	2.479E-07	1.503E-07	1.010E-07	7.280E-08	5.513E-08	4.333E-08
SW	1.476E-05	4.636E-06	2.389E-06	1.165E-06	4.466E-07	2.332E-07	1.435E-07	9.760E-08	7.105E-08	5.428E-08	4.301E-08
WSW	1.103E-05	3.655E-06	1.879E-06	9.071E-07	3.418E-07	1.763E-07	1.074E-07	7.252E-08	5.244E-08	3.984E-08	3.141E-08
W	9.862E-06	3.226E-06	1.700E-06	8.368E-07	3.192E-07	1.659E-07	1.017E-07	6.890E-08	4.999E-08	3.808E-08	3.009E-08
WNW	1.109E-05	3.601E-06	1.861E-06	9.051E-07	3.419E-07	1.766E-07	1.077E-07	7.274E-08	5.262E-08	3.998E-08	3.153E-08
NW	2.602E-05	8.510E-06	4.448E-06	2.172E-06	8.241E-07	4.271E-07	2.612E-07	1.768E-07	1.281E-07	9.753E-08	7.702E-08
NNW	7.073E-05	2.241E-05	1.162E-05	5.692E-06	2.219E-06	1.172E-06	7.273E-07	4.981E-07	3.647E-07	2.800E-07	2.228E-07
N	8.411E-05	2.636E-05	1.381E-05	6.829E-06	2.687E-06	1.427E-06	8.894E-07	6.112E-07	4.486E-07	3.452E-07	2.751E-07
NNE	4.335E-05	1.346E-05	6.964E-06	3.427E-06	1.352E-06	7.202E-07	4.495E-07	3.093E-07	2.273E-07	1.750E-07	1.397E-07
NE	2.964E-05	8.939E-06	4.560E-06	2.238E-06	8.956E-07	4.814E-07	3.026E-07	2.094E-07	1.546E-07	1.195E-07	9.567E-08
ENE	2.991E-05	8.861E-06	4.513E-06	2.224E-06	8.994E-07	4.867E-07	3.073E-07	2.134E-07	1.580E-07	1.225E-07	9.822E-08
E	2.355E-05	7.028E-06	3.620E-06	1.791E-06	7.207E-07	3.887E-07	2.448E-07	1.697E-07	1.254E-07	9.710E-08	7.780E-08
ESE	3.229E-05	9.441E-06	4.932E-06	2.470E-06	9.969E-07	5.385E-07	3.396E-07	2.355E-07	1.742E-07	1.348E-07	1.081E-07
SE	3.692E-05	1.110E-05	5.842E-06	2.922E-06	1.165E-06	6.240E-07	3.911E-07	2.700E-07	1.989E-07	1.535E-07	1.227E-07
SSE	6.759E-05	2.100E-05	1.103E-05	5.481E-06	2.169E-06	1.157E-06	7.227E-07	4.976E-07	3.657E-07	2.818E-07	2.248E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	9.549E-08	4.582E-08	2.801E-08	1.464E-08	9.193E-09	6.378E-09	4.713E-09	3.638E-09	2.898E-09	2.366E-09	1.969E-09
SSW	3.508E-08	1.656E-08	1.001E-08	5.166E-09	3.230E-09	2.234E-09	1.647E-09	1.269E-09	1.009E-09	8.228E-10	6.839E-10
SW	3.509E-08	1.709E-08	1.056E-08	5.613E-09	3.572E-09	2.504E-09	1.867E-09	1.451E-09	1.164E-09	9.557E-10	7.995E-10
WSW	2.549E-08	1.215E-08	7.403E-09	3.863E-09	2.434E-09	1.694E-09	1.256E-09	9.725E-10	7.772E-10	6.363E-10	5.311E-10
W	2.446E-08	1.171E-08	7.148E-09	3.735E-09	2.351E-09	1.634E-09	1.210E-09	9.351E-10	7.461E-10	6.100E-10	5.083E-10
WNW	2.560E-08	1.223E-08	7.462E-09	3.894E-09	2.448E-09	1.701E-09	1.259E-09	9.734E-10	7.771E-10	6.358E-10	5.302E-10
NW	6.261E-08	3.002E-08	1.836E-08	9.614E-09	6.058E-09	4.216E-09	3.125E-09	2.419E-09	1.933E-09	1.582E-09	1.321E-09
NNW	1.823E-07	8.954E-08	5.569E-08	2.982E-08	1.905E-08	1.340E-08	1.001E-08	7.804E-09	6.270E-09	5.157E-09	4.321E-09
N	2.254E-07	1.113E-07	6.939E-08	3.728E-08	2.386E-08	1.680E-08	1.256E-08	9.788E-09	7.866E-09	6.469E-09	5.420E-09
NNE	1.145E-07	5.665E-08	3.539E-08	1.907E-08	1.223E-08	8.629E-09	6.461E-09	5.042E-09	4.056E-09	3.338E-09	2.799E-09
NE	7.869E-08	3.939E-08	2.481E-08	1.351E-08	8.726E-09	6.186E-09	4.651E-09	3.641E-09	2.937E-09	2.423E-09	2.035E-09
ENE	8.093E-08	4.074E-08	2.575E-08	1.408E-08	9.115E-09	6.470E-09	4.869E-09	3.815E-09	3.078E-09	2.541E-09	2.135E-09
E	6.404E-08	3.212E-08	2.025E-08	1.104E-08	7.138E-09	5.062E-09	3.806E-09	2.980E-09	2.403E-09	1.983E-09	1.666E-09
ESE	8.896E-08	4.463E-08	2.814E-08	1.533E-08	9.902E-09	7.016E-09	5.272E-09	4.125E-09	3.325E-09	2.742E-09	2.302E-09
SE	1.008E-07	5.016E-08	3.146E-08	1.702E-08	1.093E-08	7.717E-09	5.781E-09	4.512E-09	3.629E-09	2.987E-09	2.504E-09
SSE	1.844E-07	9.124E-08	5.700E-08	3.067E-08	1.963E-08	1.382E-08	1.033E-08	8.050E-09	6.466E-09	5.316E-09	4.451E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.413E-06	1.423E-06	4.116E-07	1.983E-07	1.185E-07	4.894E-08	1.519E-08	6.463E-09	3.663E-09	2.377E-09
SSW	2.583E-06	5.582E-07	1.566E-07	7.413E-08	4.377E-08	1.777E-08	5.382E-09	2.265E-09	1.278E-09	8.266E-10
SW	2.344E-06	5.115E-07	1.491E-07	7.225E-08	4.342E-08	1.819E-08	5.806E-09	2.534E-09	1.461E-09	9.595E-10
WSW	1.841E-06	3.939E-07	1.118E-07	5.338E-08	3.172E-08	1.301E-08	4.015E-09	1.716E-09	9.791E-10	6.391E-10
W	1.656E-06	3.661E-07	1.057E-07	5.086E-08	3.037E-08	1.252E-08	3.878E-09	1.656E-09	9.416E-10	6.127E-10
WNW	1.823E-06	3.936E-07	1.121E-07	5.356E-08	3.184E-08	1.308E-08	4.044E-09	1.723E-09	9.801E-10	6.386E-10
NW	4.339E-06	9.473E-07	2.717E-07	1.304E-07	7.776E-08	3.208E-08	9.977E-09	4.271E-09	2.435E-09	1.589E-09
NNW	1.138E-05	2.525E-06	7.543E-07	3.705E-07	2.247E-07	9.510E-08	3.078E-08	1.355E-08	7.851E-09	5.177E-09
N	1.350E-05	3.048E-06	9.216E-07	4.556E-07	2.775E-07	1.180E-07	3.845E-08	1.698E-08	9.847E-09	6.494E-09
NNE	6.835E-06	1.532E-06	4.656E-07	2.308E-07	1.408E-07	6.006E-08	1.966E-08	8.724E-09	5.072E-09	3.351E-09
NE	4.501E-06	1.010E-06	3.130E-07	1.569E-07	9.644E-08	4.164E-08	1.389E-08	6.249E-09	3.661E-09	2.432E-09
ENE	4.462E-06	1.010E-06	3.176E-07	1.603E-07	9.900E-08	4.301E-08	1.447E-08	6.535E-09	3.835E-09	2.550E-09
E	3.565E-06	8.111E-07	2.531E-07	1.273E-07	7.842E-08	3.394E-08	1.135E-08	5.113E-09	2.996E-09	1.990E-09
ESE	4.839E-06	1.120E-06	3.510E-07	1.767E-07	1.089E-07	4.715E-08	1.577E-08	7.088E-09	4.148E-09	2.752E-09
SE	5.712E-06	1.315E-06	4.047E-07	2.019E-07	1.237E-07	5.309E-08	1.752E-08	7.800E-09	4.538E-09	2.999E-09
SSE	1.078E-05	2.455E-06	7.485E-07	3.714E-07	2.267E-07	9.672E-08	3.161E-08	1.397E-08	8.098E-09	5.336E-09

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2004  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

*****		RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS											*****	
DIRECTION FROM SITE		DISTANCES IN MILES												
		.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50		
S		1.716E-07	5.802E-08	2.979E-08	1.416E-08	5.087E-09	2.522E-09	1.486E-09	9.727E-10	6.845E-10	5.073E-10	3.909E-10		
SSW		7.579E-08	2.563E-08	1.316E-08	6.256E-09	2.247E-09	1.114E-09	6.562E-10	4.297E-10	3.023E-10	2.240E-10	1.727E-10		
SW		6.738E-08	2.279E-08	1.170E-08	5.562E-09	1.998E-09	9.908E-10	5.834E-10	3.820E-10	2.688E-10	1.992E-10	1.535E-10		
WSW		6.525E-08	2.207E-08	1.133E-08	5.386E-09	1.935E-09	9.595E-10	5.649E-10	3.699E-10	2.603E-10	1.929E-10	1.487E-10		
W		5.263E-08	1.780E-08	9.138E-09	4.344E-09	1.561E-09	7.739E-10	4.557E-10	2.984E-10	2.100E-10	1.556E-10	1.199E-10		
WNW		7.157E-08	2.420E-08	1.243E-08	5.907E-09	2.122E-09	1.052E-09	6.196E-10	4.057E-10	2.855E-10	2.116E-10	1.630E-10		
NW		2.284E-07	7.722E-08	3.965E-08	1.885E-08	6.771E-09	3.358E-09	1.977E-09	1.295E-09	9.110E-10	6.751E-10	5.203E-10		
NNW		4.337E-07	1.467E-07	7.531E-08	3.580E-08	1.286E-08	6.378E-09	3.755E-09	2.459E-09	1.730E-09	1.282E-09	9.882E-10		
N		4.012E-07	1.357E-07	6.966E-08	3.312E-08	1.190E-08	5.900E-09	3.474E-09	2.275E-09	1.600E-09	1.186E-09	9.140E-10		
NNE		1.401E-07	4.739E-08	2.433E-08	1.157E-08	4.155E-09	2.061E-09	1.213E-09	7.945E-10	5.590E-10	4.143E-10	3.193E-10		
NE		9.276E-08	3.137E-08	1.611E-08	7.657E-09	2.750E-09	1.364E-09	8.031E-10	5.259E-10	3.700E-10	2.742E-10	2.113E-10		
ENE		6.438E-08	2.177E-08	1.118E-08	5.314E-09	1.909E-09	9.466E-10	5.574E-10	3.650E-10	2.568E-10	1.903E-10	1.467E-10		
E		5.591E-08	1.891E-08	9.707E-09	4.615E-09	1.658E-09	8.221E-10	4.841E-10	3.170E-10	2.230E-10	1.653E-10	1.274E-10		
ESE		7.492E-08	2.533E-08	1.301E-08	6.184E-09	2.221E-09	1.102E-09	6.486E-10	4.247E-10	2.988E-10	2.215E-10	1.707E-10		
SE		1.075E-07	3.636E-08	1.867E-08	8.877E-09	3.188E-09	1.581E-09	9.311E-10	6.096E-10	4.290E-10	3.179E-10	2.450E-10		
SSE		2.129E-07	7.198E-08	3.696E-08	1.757E-08	6.312E-09	3.130E-09	1.843E-09	1.207E-09	8.492E-10	6.293E-10	4.850E-10		

DIRECTION FROM SITE		DISTANCES IN MILES										
		5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S		3.105E-10	1.380E-10	8.357E-11	4.224E-11	2.557E-11	1.714E-11	1.228E-11	9.223E-12	7.171E-12	5.728E-12	4.675E-12
SSW		1.372E-10	6.093E-11	3.691E-11	1.866E-11	1.129E-11	7.571E-12	5.425E-12	4.074E-12	3.167E-12	2.530E-12	2.065E-12
SW		1.220E-10	5.418E-11	3.282E-11	1.659E-11	1.004E-11	6.732E-12	4.824E-12	3.622E-12	2.816E-12	2.250E-12	1.836E-12
WSW		1.181E-10	5.246E-11	3.178E-11	1.606E-11	9.722E-12	6.519E-12	4.671E-12	3.507E-12	2.727E-12	2.178E-12	1.778E-12
W		9.526E-11	4.232E-11	2.563E-11	1.296E-11	7.842E-12	5.258E-12	3.767E-12	2.829E-12	2.200E-12	1.757E-12	1.434E-12
WNW		1.295E-10	5.754E-11	3.486E-11	1.762E-11	1.066E-11	7.149E-12	5.123E-12	3.847E-12	2.991E-12	2.389E-12	1.950E-12
NW		4.133E-10	1.836E-10	1.112E-10	5.622E-11	3.403E-11	2.281E-11	1.635E-11	1.228E-11	9.544E-12	7.624E-12	6.223E-12
NNW		7.850E-10	3.487E-10	2.112E-10	1.068E-10	6.463E-11	4.333E-11	3.105E-11	2.331E-11	1.813E-11	1.448E-11	1.182E-11
N		7.262E-10	3.226E-10	1.954E-10	9.877E-11	5.978E-11	4.008E-11	2.872E-11	2.157E-11	1.677E-11	1.339E-11	1.093E-11
NNE		2.536E-10	1.127E-10	6.825E-11	3.450E-11	2.088E-11	1.400E-11	1.002E-11	7.532E-12	5.857E-12	4.678E-12	3.819E-12
NE		1.679E-10	7.458E-11	4.518E-11	2.283E-11	1.382E-11	9.267E-12	6.640E-12	4.986E-12	3.877E-12	3.097E-12	2.528E-12
ENE		1.165E-10	5.176E-11	3.135E-11	1.585E-11	9.592E-12	6.431E-12	4.608E-12	3.460E-12	2.690E-12	2.149E-12	1.754E-12
E		1.012E-10	4.495E-11	2.723E-11	1.376E-11	8.330E-12	5.585E-12	4.002E-12	3.005E-12	2.337E-12	1.867E-12	1.523E-12
ESE		1.356E-10	6.023E-11	3.649E-11	1.844E-11	1.116E-11	7.484E-12	5.363E-12	4.027E-12	3.131E-12	2.501E-12	2.041E-12
SE		1.946E-10	8.646E-11	5.237E-11	2.647E-11	1.602E-11	1.074E-11	7.698E-12	5.780E-12	4.494E-12	3.590E-12	2.930E-12
SSE		3.853E-10	1.712E-10	1.037E-10	5.240E-11	3.172E-11	2.127E-11	1.524E-11	1.144E-11	8.897E-12	7.107E-12	5.801E-12

*****		RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS										*****	
DIRECTION FROM SITE		SEGMENT BOUNDARIES IN MILES											
		.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50		
S		2.912E-08	5.964E-09	1.557E-09	6.993E-10	3.956E-10	1.521E-10	4.401E-11	1.744E-11	9.315E-12	5.766E-12		
SSW		1.286E-08	2.634E-09	6.877E-10	3.089E-10	1.747E-10	6.720E-11	1.944E-11	7.705E-12	4.114E-12	2.547E-12		
SW		1.144E-08	2.342E-09	6.115E-10	2.746E-10	1.554E-10	5.975E-11	1.728E-11	6.851E-12	3.658E-12	2.264E-12		
WSW		1.107E-08	2.268E-09	5.921E-10	2.659E-10	1.504E-10	5.786E-11	1.674E-11	6.634E-12	3.542E-12	2.193E-12		
W		8.932E-09	1.830E-09	4.776E-10	2.145E-10	1.213E-10	4.667E-11	1.350E-11	5.351E-12	2.857E-12	1.769E-12		
WNW		1.215E-08	2.488E-09	6.494E-10	2.917E-10	1.650E-10	6.345E-11	1.836E-11	7.276E-12	3.885E-12	2.405E-12		
NW		3.876E-08	7.939E-09	2.072E-09	9.308E-10	5.265E-10	2.025E-10	5.858E-11	2.322E-11	1.240E-11	7.674E-12		
NNW		7.361E-08	1.508E-08	3.936E-09	1.768E-09	1.000E-09	3.846E-10	1.113E-10	4.410E-11	2.355E-11	1.458E-11		
N		6.809E-08	1.395E-08	3.641E-09	1.635E-09	9.251E-10	3.557E-10	1.029E-10	4.079E-11	2.178E-11	1.348E-11		
NNE		2.378E-08	4.871E-09	1.272E-09	5.711E-10	3.231E-10	1.243E-10	3.595E-11	1.425E-11	7.608E-12	4.709E-12		
NE		1.574E-08	3.224E-09	8.418E-10	3.781E-10	2.139E-10	8.225E-11	2.379E-11	9.430E-12	5.036E-12	3.117E-12		
ENE		1.093E-08	2.238E-09	5.842E-10	2.624E-10	1.484E-10	5.708E-11	1.651E-11	6.545E-12	3.495E-12	2.163E-12		
E		9.488E-09	1.944E-09	5.074E-10	2.279E-10	1.289E-10	4.957E-11	1.434E-11	5.684E-12	3.035E-12	1.879E-12		
ESE		1.271E-08	2.604E-09	6.798E-10	3.053E-10	1.727E-10	6.642E-11	1.922E-11	7.616E-12	4.067E-12	2.517E-12		
SE		1.825E-08	3.738E-09	9.759E-10	4.383E-10	2.479E-10	9.535E-11	2.758E-11	1.093E-11	5.838E-12	3.614E-12		
SSE		3.613E-08	7.400E-09	1.932E-09	8.676E-10	4.908E-10	1.887E-10	5.460E-11	2.164E-11	1.156E-11	7.153E-12		

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2004

CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
 ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
 NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED		DEPLETED
A	Site Boundary S	.80	6.4E-06	6.4E-06	5.7E-06 2.5E-08
A	Site Boundary SSW	.82	2.4E-06	2.4E-06	2.1E-06 1.0E-08
A	Site Boundary SW	.97	1.4E-06	1.4E-06	1.2E-06 5.9E-09
A	Site Boundary WSW	.93	1.3E-06	1.3E-06	1.1E-06 6.6E-09
A	Site Boundary W	.91	1.2E-06	1.2E-06	1.0E-06 5.5E-09
A	Site Boundary WNW	.94	1.2E-06	1.2E-06	1.1E-06 7.0E-09
A	Site Boundary NW	.81	4.1E-06	4.1E-06	3.7E-06 3.2E-08
A	Site Boundary NNW	.69	1.5E-05	1.5E-05	1.3E-05 8.7E-08
A	Site Boundary N	.67	1.8E-05	1.8E-05	1.6E-05 8.3E-08
A	Site Boundary NNE	.60	1.1E-05	1.1E-05	1.0E-05 3.5E-08
A	Site Boundary NE	.62	6.8E-06	6.8E-06	6.1E-06 2.2E-08
A	Site Boundary ENE	.59	7.5E-06	7.4E-06	6.7E-06 1.7E-08
A	Site Boundary E	.53	7.1E-06	7.1E-06	6.5E-06 1.7E-08
A	Site Boundary ESE	.54	9.1E-06	9.1E-06	8.3E-06 2.3E-08
A	Site Boundary SE	.65	8.1E-06	8.1E-06	7.3E-06 2.4E-08
A	Site Boundary SSE	.81	1.0E-05	1.0E-05	9.1E-06 3.0E-08
A	Nearest Res SW	1.30	7.3E-07	7.2E-07	6.2E-07 2.9E-09
A	Nearest Res WSW	1.30	5.6E-07	5.6E-07	4.8E-07 2.8E-09
A	Nearest Res W	1.00	9.6E-07	9.5E-07	8.4E-07 4.3E-09
A	Nearest Res WNW	1.70	3.0E-07	3.0E-07	2.6E-07 1.6E-09
A	Nearest Res NW	.90	3.2E-06	3.2E-06	2.8E-06 2.5E-08
A	Nearest Res NNW	1.90	1.6E-06	1.6E-06	1.3E-06 7.2E-09
A	Nearest Res N	3.00	7.7E-07	7.6E-07	6.1E-07 2.3E-09
A	Nearest Res ENE	1.70	8.2E-07	8.1E-07	6.9E-07 1.4E-09
A	Nearest Res E	2.00	4.7E-07	4.7E-07	3.9E-07 8.2E-10
A	Nearest Res ESE	2.30	4.9E-07	4.9E-07	4.0E-07 7.9E-10
A	Nearest Res NNW	3.50	4.7E-07	4.6E-07	3.6E-07 1.7E-09
A	Nearest Res SW	1.30	7.3E-07	7.2E-07	6.2E-07 2.9E-09
A	Nearest Res WSW	1.90	2.4E-07	2.4E-07	2.0E-07 1.1E-09
A	Nearest Res WNW	2.40	1.5E-07	1.4E-07	1.2E-07 6.8E-10
A	Nearest Res NW	2.90	2.4E-07	2.4E-07	1.9E-07 1.4E-09
A	Nearest Res NNW	1.90	1.6E-06	1.6E-06	1.3E-06 7.2E-09
A	Nearest Res ENE	2.80	3.1E-07	3.0E-07	2.4E-07 4.3E-10
A	Nearest Res E	2.00	4.7E-07	4.7E-07	3.9E-07 8.2E-10
A	Nearest Res ESE	2.30	4.9E-07	4.9E-07	4.0E-07 7.9E-10
A	Nearest Res SE	1.20	2.2E-06	2.2E-06	1.9E-06 5.6E-09

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**Atmospheric Diffusion Estimates**

**Ground Level Releases**

October-December 2004

VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.617E-05	1.531E-05	8.164E-06	4.084E-06	1.640E-06	8.875E-07	5.624E-07	3.926E-07	2.924E-07	2.280E-07	1.841E-07
SSW	2.061E-05	6.914E-06	3.692E-06	1.844E-06	7.325E-07	3.936E-07	2.481E-07	1.724E-07	1.279E-07	9.941E-08	8.004E-08
SW	1.593E-05	5.289E-06	2.798E-06	1.392E-06	5.555E-07	2.995E-07	1.893E-07	1.318E-07	9.799E-08	7.632E-08	6.155E-08
WSW	1.461E-05	4.852E-06	2.561E-06	1.271E-06	5.032E-07	2.699E-07	1.698E-07	1.179E-07	8.742E-08	6.793E-08	5.468E-08
W	1.380E-05	4.638E-06	2.437E-06	1.204E-06	4.760E-07	2.549E-07	1.603E-07	1.111E-07	8.233E-08	6.392E-08	5.141E-08
WNW	1.376E-05	4.566E-06	2.388E-06	1.178E-06	4.674E-07	2.510E-07	1.581E-07	1.099E-07	8.153E-08	6.340E-08	5.106E-08
NW	3.114E-05	1.027E-05	5.433E-06	2.705E-06	1.087E-06	5.887E-07	3.734E-07	2.608E-07	1.944E-07	1.517E-07	1.226E-07
NNW	5.968E-05	1.911E-05	1.006E-05	5.024E-06	2.049E-06	1.122E-06	7.169E-07	5.039E-07	3.775E-07	2.959E-07	2.400E-07
N	7.403E-05	2.361E-05	1.250E-05	6.270E-06	2.567E-06	1.408E-06	9.017E-07	6.346E-07	4.759E-07	3.734E-07	3.031E-07
NNE	4.065E-05	1.290E-05	6.781E-06	3.391E-06	1.391E-06	7.641E-07	4.897E-07	3.449E-07	2.588E-07	2.032E-07	1.650E-07
NE	2.384E-05	7.490E-06	3.927E-06	1.966E-06	8.107E-07	4.469E-07	2.872E-07	2.027E-07	1.523E-07	1.198E-07	9.738E-08
ENE	2.324E-05	7.330E-06	3.882E-06	1.954E-06	8.041E-07	4.426E-07	2.841E-07	2.003E-07	1.504E-07	1.181E-07	9.597E-08
E	1.976E-05	6.399E-06	3.424E-06	1.724E-06	7.028E-07	3.843E-07	2.454E-07	1.724E-07	1.290E-07	1.011E-07	8.193E-08
ESE	2.797E-05	8.890E-06	4.732E-06	2.384E-06	9.773E-07	5.366E-07	3.437E-07	2.420E-07	1.815E-07	1.424E-07	1.156E-07
SE	3.250E-05	1.051E-05	5.611E-06	2.824E-06	1.148E-06	6.269E-07	3.998E-07	2.805E-07	2.098E-07	1.642E-07	1.330E-07
SSE	5.344E-05	1.714E-05	9.132E-06	4.594E-06	1.877E-06	1.028E-06	6.573E-07	4.621E-07	3.462E-07	2.714E-07	2.201E-07

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.528E-07	7.924E-08	5.170E-08	2.995E-08	2.043E-08	1.522E-08	1.198E-08	9.795E-09	8.232E-09	7.066E-09	6.166E-09
SSW	6.623E-08	3.402E-08	2.205E-08	1.266E-08	8.589E-09	6.371E-09	4.998E-09	4.075E-09	3.417E-09	2.927E-09	2.549E-09
SW	5.101E-08	2.638E-08	1.718E-08	9.930E-09	6.767E-09	5.037E-09	3.963E-09	3.239E-09	2.722E-09	2.336E-09	2.038E-09
WSW	4.524E-08	2.326E-08	1.509E-08	8.682E-09	5.904E-09	4.388E-09	3.448E-09	2.815E-09	2.364E-09	2.027E-09	1.767E-09
W	4.250E-08	2.177E-08	1.408E-08	8.072E-09	5.474E-09	4.060E-09	3.185E-09	2.597E-09	2.178E-09	1.866E-09	1.626E-09
WNW	4.227E-08	2.177E-08	1.414E-08	8.153E-09	5.555E-09	4.136E-09	3.255E-09	2.661E-09	2.237E-09	1.920E-09	1.676E-09
NW	1.018E-07	5.292E-08	3.460E-08	2.011E-08	1.376E-08	1.027E-08	8.100E-09	6.633E-09	5.583E-09	4.798E-09	4.192E-09
NNW	1.999E-07	1.053E-07	6.942E-08	4.082E-08	2.813E-08	2.112E-08	1.674E-08	1.376E-08	1.162E-08	1.001E-08	8.768E-09
N	2.526E-07	1.332E-07	8.794E-08	5.176E-08	3.569E-08	2.681E-08	2.124E-08	1.746E-08	1.474E-08	1.271E-08	1.113E-08
NNE	1.376E-07	7.273E-08	4.808E-08	2.837E-08	1.960E-08	1.474E-08	1.169E-08	9.622E-09	8.132E-09	7.014E-09	6.147E-09
NE	8.127E-08	4.311E-08	2.857E-08	1.691E-08	1.171E-08	8.818E-09	7.005E-09	5.770E-09	4.881E-09	4.214E-09	3.695E-09
ENE	8.004E-08	4.233E-08	2.799E-08	1.651E-08	1.140E-08	8.573E-09	6.799E-09	5.594E-09	4.726E-09	4.075E-09	3.571E-09
E	6.819E-08	3.578E-08	2.353E-08	1.378E-08	9.467E-09	7.090E-09	5.605E-09	4.599E-09	3.877E-09	3.336E-09	2.918E-09
ESE	9.634E-08	5.082E-08	3.355E-08	1.975E-08	1.361E-08	1.022E-08	8.099E-09	6.657E-09	5.620E-09	4.843E-09	4.241E-09
SE	1.107E-07	5.799E-08	3.810E-08	2.228E-08	1.529E-08	1.144E-08	9.036E-09	7.410E-09	6.243E-09	5.371E-09	4.695E-09
SSE	1.833E-07	9.644E-08	6.355E-08	3.730E-08	2.567E-08	1.925E-08	1.523E-08	1.251E-08	1.055E-08	9.086E-09	7.951E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT		SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.938E-06	1.849E-06	5.812E-07	2.965E-07	1.855E-07	8.334E-08	3.055E-08	1.531E-08	9.824E-09	7.078E-09	
SSW	3.586E-06	8.288E-07	2.566E-07	1.297E-07	8.066E-08	3.586E-08	1.294E-08	6.413E-09	4.088E-09	2.932E-09	
SW	2.727E-06	6.277E-07	1.957E-07	9.940E-08	6.202E-08	2.776E-08	1.014E-08	5.069E-09	3.249E-09	2.340E-09	
WSW	2.497E-06	5.700E-07	1.757E-07	8.870E-08	5.511E-08	2.451E-08	8.871E-09	4.416E-09	2.824E-09	2.031E-09	
W	2.378E-06	5.396E-07	1.659E-07	8.355E-08	5.182E-08	2.296E-08	8.253E-09	4.087E-09	2.605E-09	1.870E-09	
WNW	2.334E-06	5.292E-07	1.636E-07	8.273E-08	5.146E-08	2.293E-08	8.329E-09	4.162E-09	2.669E-09	1.923E-09	
NW	5.296E-06	1.225E-06	3.858E-07	1.971E-07	1.235E-07	5.563E-08	2.051E-08	1.033E-08	6.652E-09	4.806E-09	
NNW	9.833E-06	2.298E-06	7.396E-07	3.825E-07	2.417E-07	1.104E-07	4.153E-08	2.124E-08	1.379E-08	1.003E-08	
N	1.220E-05	2.875E-06	9.300E-07	4.822E-07	3.052E-07	1.396E-07	5.266E-08	2.695E-08	1.751E-08	1.273E-08	
NNE	6.634E-06	1.557E-06	5.049E-07	2.622E-07	1.662E-07	7.619E-08	2.885E-08	1.482E-08	9.646E-09	7.024E-09	
NE	3.847E-06	9.057E-07	2.960E-07	1.543E-07	9.804E-08	4.513E-08	1.719E-08	8.863E-09	5.784E-09	4.220E-09	
ENE	3.791E-06	8.989E-07	2.928E-07	1.523E-07	9.663E-08	4.433E-08	1.679E-08	8.618E-09	5.608E-09	4.081E-09	
E	3.330E-06	7.882E-07	2.533E-07	1.308E-07	8.252E-08	3.754E-08	1.403E-08	7.130E-09	4.611E-09	3.341E-09	
ESE	4.613E-06	1.094E-06	3.544E-07	1.839E-07	1.164E-07	5.326E-08	2.009E-08	1.028E-08	6.674E-09	4.850E-09	
SE	5.461E-06	1.289E-06	4.127E-07	2.126E-07	1.340E-07	6.086E-08	2.269E-08	1.150E-08	7.430E-09	5.379E-09	
SSE	8.896E-06	2.103E-06	6.780E-07	3.508E-07	2.217E-07	1.011E-07	3.796E-08	1.935E-08	1.254E-08	9.100E-09	

B265



VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	250	500	750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.612E-05	1.527E-05	8.139E-06	4.068E-06	1.629E-06	8.800E-07	5.565E-07	3.875E-07	2.880E-07	2.241E-07	1.806E-07
SSW	2.059E-05	6.899E-06	3.680E-06	1.836E-06	7.279E-07	3.903E-07	2.454E-07	1.701E-07	1.259E-07	9.769E-08	7.848E-08
SW	1.591E-05	5.278E-06	2.789E-06	1.386E-06	5.521E-07	2.970E-07	1.873E-07	1.301E-07	9.653E-08	7.502E-08	6.036E-08
WSW	1.460E-05	4.843E-06	2.554E-06	1.266E-06	5.004E-07	2.679E-07	1.683E-07	1.166E-07	8.627E-08	6.691E-08	5.375E-08
W	1.379E-05	4.630E-06	2.430E-06	1.200E-06	4.735E-07	2.531E-07	1.588E-07	1.099E-07	8.124E-08	6.295E-08	5.053E-08
WNW	1.374E-05	4.558E-06	2.381E-06	1.174E-06	4.648E-07	2.491E-07	1.567E-07	1.086E-07	8.044E-08	6.243E-08	5.018E-08
NW	3.111E-05	1.025E-05	5.419E-06	2.696E-06	1.081E-06	5.844E-07	3.699E-07	2.579E-07	1.918E-07	1.494E-07	1.205E-07
NNW	5.961E-05	1.907E-05	1.003E-05	5.002E-06	2.036E-06	1.112E-06	7.089E-07	4.971E-07	3.715E-07	2.906E-07	2.351E-07
N	7.394E-05	2.355E-05	1.246E-05	6.242E-06	2.550E-06	1.396E-06	8.916E-07	6.260E-07	4.683E-07	3.666E-07	2.968E-07
NNE	4.060E-05	1.287E-05	6.757E-06	3.375E-06	1.381E-06	7.567E-07	4.837E-07	3.398E-07	2.544E-07	1.992E-07	1.614E-07
NE	2.381E-05	7.472E-06	3.913E-06	1.957E-06	8.048E-07	4.426E-07	2.837E-07	1.997E-07	1.497E-07	1.174E-07	9.521E-08
ENE	2.321E-05	7.313E-06	3.868E-06	1.944E-06	7.983E-07	4.383E-07	2.805E-07	1.973E-07	1.478E-07	1.158E-07	9.382E-08
E	1.974E-05	6.385E-06	3.412E-06	1.717E-06	6.980E-07	3.808E-07	2.426E-07	1.700E-07	1.269E-07	9.922E-08	8.023E-08
ESE	2.794E-05	8.869E-06	4.716E-06	2.373E-06	9.704E-07	5.315E-07	3.396E-07	2.385E-07	1.784E-07	1.396E-07	1.131E-07
SE	3.247E-05	1.049E-05	5.593E-06	2.811E-06	1.141E-06	6.213E-07	3.954E-07	2.767E-07	2.065E-07	1.612E-07	1.303E-07
SSE	5.337E-05	1.711E-05	9.100E-06	4.573E-06	1.863E-06	1.018E-06	6.494E-07	4.554E-07	3.403E-07	2.662E-07	2.153E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.495E-07	7.665E-08	4.944E-08	2.800E-08	1.867E-08	1.359E-08	1.046E-08	8.361E-09	6.872E-09	5.768E-09	4.923E-09
SSW	6.480E-08	3.292E-08	2.109E-08	1.184E-08	7.856E-09	5.699E-09	4.373E-09	3.487E-09	2.860E-09	2.397E-09	2.043E-09
SW	4.992E-08	2.553E-08	1.644E-08	9.292E-09	6.191E-09	4.507E-09	3.468E-09	2.773E-09	2.279E-09	1.914E-09	1.634E-09
WSW	4.439E-08	2.260E-08	1.451E-08	8.187E-09	5.458E-09	3.977E-09	3.064E-09	2.453E-09	2.020E-09	1.699E-09	1.453E-09
W	4.169E-08	2.114E-08	1.354E-08	7.600E-09	5.048E-09	3.667E-09	2.818E-09	2.251E-09	1.850E-09	1.553E-09	1.325E-09
WNW	4.145E-08	2.113E-08	1.358E-08	7.669E-09	5.118E-09	3.731E-09	2.876E-09	2.303E-09	1.896E-09	1.595E-09	1.364E-09
NW	9.981E-08	5.138E-08	3.325E-08	1.893E-08	1.269E-08	9.282E-09	7.172E-09	5.756E-09	4.748E-09	3.999E-09	3.425E-09
NNW	1.954E-07	1.017E-07	6.625E-08	3.804E-08	2.561E-08	1.878E-08	1.453E-08	1.167E-08	9.630E-09	8.110E-09	6.942E-09
N	2.468E-07	1.286E-07	8.390E-08	4.822E-08	3.246E-08	2.381E-08	1.842E-08	1.480E-08	1.221E-08	1.028E-08	8.797E-09
NNE	1.342E-07	7.003E-08	4.571E-08	2.629E-08	1.770E-08	1.298E-08	1.004E-08	8.062E-09	6.647E-09	5.594E-09	4.784E-09
NE	7.926E-08	4.150E-08	2.715E-08	1.566E-08	1.057E-08	7.758E-09	6.008E-09	4.826E-09	3.982E-09	3.353E-09	2.868E-09
ENE	7.804E-08	4.074E-08	2.659E-08	1.528E-08	1.028E-08	7.535E-09	5.825E-09	4.672E-09	3.849E-09	3.236E-09	2.766E-09
E	6.661E-08	3.453E-08	2.244E-08	1.282E-08	8.599E-09	6.287E-09	4.852E-09	3.887E-09	3.200E-09	2.690E-09	2.298E-09
ESE	9.399E-08	4.896E-08	3.191E-08	1.831E-08	1.231E-08	9.015E-09	6.966E-09	5.585E-09	4.601E-09	3.869E-09	3.306E-09
SE	1.081E-07	5.598E-08	3.634E-08	2.074E-08	1.389E-08	1.015E-08	7.825E-09	6.265E-09	5.155E-09	4.331E-09	3.699E-09
SSE	1.789E-07	9.293E-08	6.046E-08	3.461E-08	2.322E-08	1.698E-08	1.310E-08	1.050E-08	8.639E-09	7.258E-09	6.198E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.915E-06	1.838E-06	5.752E-07	2.921E-07	1.819E-07	8.073E-08	2.862E-08	1.369E-08	8.393E-09	5.782E-09	
SSW	3.576E-06	8.241E-07	2.539E-07	1.278E-07	7.911E-08	3.475E-08	1.213E-08	5.744E-09	3.501E-09	2.403E-09	
SW	2.719E-06	6.241E-07	1.937E-07	9.794E-08	6.083E-08	2.691E-08	9.502E-09	4.541E-09	2.783E-09	1.918E-09	
WSW	2.491E-06	5.672E-07	1.742E-07	8.756E-08	5.418E-08	2.385E-08	8.380E-09	4.007E-09	2.463E-09	1.703E-09	
W	2.372E-06	5.370E-07	1.644E-07	8.246E-08	5.094E-08	2.233E-08	7.784E-09	3.696E-09	2.260E-09	1.556E-09	
WNW	2.329E-06	5.266E-07	1.621E-07	8.164E-08	5.058E-08	2.229E-08	7.849E-09	3.759E-09	2.312E-09	1.598E-09	
NW	5.282E-06	1.219E-06	3.823E-07	1.945E-07	1.214E-07	5.408E-08	1.934E-08	9.347E-09	5.776E-09	4.008E-09	
NNW	9.803E-06	2.284E-06	7.316E-07	3.766E-07	2.368E-07	1.068E-07	3.878E-08	1.890E-08	1.171E-08	8.128E-09	
N	1.216E-05	2.858E-06	9.198E-07	4.746E-07	2.990E-07	1.350E-07	4.914E-08	2.396E-08	1.485E-08	1.030E-08	
NNE	6.612E-06	1.547E-06	4.990E-07	2.578E-07	1.625E-07	7.348E-08	2.679E-08	1.307E-08	8.089E-09	5.606E-09	
NE	3.835E-06	8.998E-07	2.924E-07	1.517E-07	9.588E-08	4.351E-08	1.595E-08	7.807E-09	4.842E-09	3.360E-09	
ENE	3.778E-06	8.930E-07	2.893E-07	1.497E-07	9.448E-08	4.274E-08	1.557E-08	7.584E-09	4.688E-09	3.244E-09	
E	3.319E-06	7.834E-07	2.504E-07	1.287E-07	8.081E-08	3.628E-08	1.308E-08	6.330E-09	3.901E-09	2.696E-09	
ESE	4.598E-06	1.087E-06	3.503E-07	1.808E-07	1.139E-07	5.139E-08	1.867E-08	9.074E-09	5.605E-09	3.877E-09	
SE	5.444E-06	1.281E-06	4.082E-07	2.093E-07	1.313E-07	5.884E-08	2.116E-08	1.022E-08	6.288E-09	4.341E-09	
SSE	8.867E-06	2.090E-06	6.702E-07	3.450E-07	2.169E-07	9.760E-08	3.529E-08	1.709E-08	1.053E-08	7.275E-09	

B266

VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	DISTANCE IN MILES FROM THE SITE										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.368E-05	1.397E-05	7.269E-06	3.571E-06	1.390E-06	7.332E-07	4.542E-07	3.107E-07	2.271E-07	1.742E-07	1.385E-07
SSW	1.950E-05	6.310E-06	3.287E-06	1.612E-06	6.210E-07	3.252E-07	2.003E-07	1.364E-07	9.935E-08	7.594E-08	6.018E-08
SW	1.507E-05	4.827E-06	2.491E-06	1.217E-06	4.710E-07	2.474E-07	1.529E-07	1.043E-07	7.614E-08	5.830E-08	4.628E-08
WSW	1.382E-05	4.429E-06	2.281E-06	1.111E-06	4.267E-07	2.230E-07	1.372E-07	9.336E-08	6.796E-08	5.192E-08	4.114E-08
W	1.306E-05	4.233E-06	2.170E-06	1.053E-06	4.037E-07	2.107E-07	1.295E-07	8.800E-08	6.400E-08	4.886E-08	3.868E-08
WNW	1.302E-05	4.168E-06	2.126E-06	1.031E-06	3.963E-07	2.074E-07	1.278E-07	8.700E-08	6.338E-08	4.846E-08	3.842E-08
NW	2.946E-05	9.374E-06	4.838E-06	2.366E-06	9.215E-07	4.865E-07	3.017E-07	2.065E-07	1.511E-07	1.160E-07	9.223E-08
NNW	5.646E-05	1.744E-05	8.956E-06	4.392E-06	1.737E-06	9.264E-07	5.789E-07	3.987E-07	2.932E-07	2.260E-07	1.804E-07
N	7.004E-05	2.154E-05	1.113E-05	5.481E-06	2.176E-06	1.163E-06	7.281E-07	5.021E-07	3.696E-07	2.851E-07	2.278E-07
NNE	3.846E-05	1.177E-05	6.037E-06	2.964E-06	1.179E-06	6.309E-07	3.953E-07	2.728E-07	2.010E-07	1.551E-07	1.240E-07
NE	2.256E-05	6.835E-06	3.496E-06	1.719E-06	6.871E-07	3.690E-07	2.318E-07	1.603E-07	1.183E-07	9.142E-08	7.316E-08
ENE	2.199E-05	6.689E-06	3.456E-06	1.708E-06	6.815E-07	3.655E-07	2.293E-07	1.584E-07	1.168E-07	9.016E-08	7.210E-08
E	1.870E-05	5.840E-06	3.048E-06	1.507E-06	5.957E-07	3.174E-07	1.982E-07	1.364E-07	1.002E-07	7.719E-08	6.158E-08
ESE	2.646E-05	8.113E-06	4.213E-06	2.084E-06	8.284E-07	4.431E-07	2.775E-07	1.914E-07	1.409E-07	1.087E-07	8.686E-08
SE	3.075E-05	9.590E-06	4.996E-06	2.469E-06	9.733E-07	5.178E-07	3.229E-07	2.220E-07	1.630E-07	1.254E-07	1.000E-07
SSE	5.056E-05	1.565E-05	8.130E-06	4.016E-06	1.591E-06	8.489E-07	5.306E-07	3.655E-07	2.688E-07	2.072E-07	1.654E-07

SECTOR	DISTANCE IN MILES FROM THE SITE										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.132E-07	5.533E-08	3.429E-08	1.827E-08	1.163E-08	8.152E-09	6.076E-09	4.724E-09	3.788E-09	3.110E-09	2.601E-09
SSW	4.906E-08	2.376E-08	1.463E-08	7.724E-09	4.890E-09	3.414E-09	2.537E-09	1.967E-09	1.574E-09	1.290E-09	1.077E-09
SW	3.779E-08	1.842E-08	1.140E-08	6.059E-09	3.853E-09	2.700E-09	2.011E-09	1.563E-09	1.254E-09	1.029E-09	8.610E-10
WSW	3.354E-08	1.626E-08	1.003E-08	5.309E-09	3.371E-09	2.360E-09	1.758E-09	1.366E-09	1.095E-09	8.992E-10	7.522E-10
W	3.151E-08	1.522E-08	9.355E-09	4.934E-09	3.123E-09	2.181E-09	1.621E-09	1.258E-09	1.007E-09	8.258E-10	6.901E-10
WNW	3.134E-08	1.522E-08	9.390E-09	4.982E-09	3.169E-09	2.222E-09	1.656E-09	1.288E-09	1.034E-09	8.491E-10	7.108E-10
NW	7.544E-08	3.699E-08	2.298E-08	1.229E-08	7.850E-09	5.519E-09	4.124E-09	3.214E-09	2.582E-09	2.124E-09	1.780E-09
NNW	1.481E-07	7.348E-08	4.602E-08	2.487E-08	1.599E-08	1.130E-08	8.473E-09	6.622E-09	5.333E-09	4.396E-09	3.689E-09
N	1.870E-07	9.298E-08	5.829E-08	3.154E-08	2.028E-08	1.433E-08	1.075E-08	8.401E-09	6.767E-09	5.577E-09	4.681E-09
NNE	1.018E-07	5.072E-08	3.184E-08	1.726E-08	1.112E-08	7.863E-09	5.902E-09	4.615E-09	3.719E-09	3.066E-09	2.574E-09
NE	6.015E-08	3.006E-08	1.892E-08	1.029E-08	6.638E-09	4.702E-09	3.534E-09	2.766E-09	2.231E-09	1.840E-09	1.546E-09
ENE	5.923E-08	2.952E-08	1.853E-08	1.004E-08	6.465E-09	4.571E-09	3.429E-09	2.680E-09	2.159E-09	1.779E-09	1.493E-09
E	5.049E-08	2.497E-08	1.560E-08	8.394E-09	5.378E-09	3.789E-09	2.835E-09	2.211E-09	1.778E-09	1.463E-09	1.226E-09
ESE	7.131E-08	3.545E-08	2.222E-08	1.202E-08	7.724E-09	5.455E-09	4.089E-09	3.194E-09	2.571E-09	2.118E-09	1.777E-09
SE	8.195E-08	4.047E-08	2.525E-08	1.357E-08	8.685E-09	6.114E-09	4.571E-09	3.563E-09	2.863E-09	2.355E-09	1.973E-09
SSE	1.357E-07	6.728E-08	4.209E-08	2.270E-08	1.457E-08	1.027E-08	7.691E-09	6.002E-09	4.827E-09	3.974E-09	3.331E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.114E-06	1.583E-06	4.712E-07	2.308E-07	1.397E-07	5.883E-08	1.888E-08	8.248E-09	4.753E-09	3.122E-09	
SSW	3.214E-06	7.097E-07	2.080E-07	1.010E-07	6.073E-08	2.532E-08	7.999E-09	3.457E-09	1.980E-09	1.295E-09	
SW	2.444E-06	5.374E-07	1.587E-07	7.740E-08	4.670E-08	1.961E-08	6.265E-09	2.732E-09	1.573E-09	1.033E-09	
WSW	2.238E-06	4.883E-07	1.425E-07	6.911E-08	4.152E-08	1.733E-08	5.496E-09	2.389E-09	1.375E-09	9.028E-10	
W	2.132E-06	4.622E-07	1.345E-07	6.509E-08	3.904E-08	1.623E-08	5.112E-09	2.209E-09	1.266E-09	8.292E-10	
WNW	2.093E-06	4.533E-07	1.327E-07	6.444E-08	3.877E-08	1.621E-08	5.156E-09	2.248E-09	1.296E-09	8.525E-10	
NW	4.747E-06	1.049E-06	3.129E-07	1.535E-07	9.304E-08	3.931E-08	1.269E-08	5.583E-09	3.233E-09	2.132E-09	
NNW	8.813E-06	1.967E-06	5.995E-07	2.978E-07	1.819E-07	7.785E-08	2.563E-08	1.142E-08	6.660E-09	4.412E-09	
N	1.093E-05	2.460E-06	7.537E-07	3.753E-07	2.297E-07	9.846E-08	3.248E-08	1.449E-08	8.450E-09	5.597E-09	
NNE	5.946E-06	1.332E-06	4.091E-07	2.040E-07	1.250E-07	5.369E-08	1.777E-08	7.946E-09	4.641E-09	3.077E-09	
NE	3.448E-06	7.750E-07	2.398E-07	1.201E-07	7.375E-08	3.179E-08	1.058E-08	4.751E-09	2.781E-09	1.847E-09	
ENE	3.398E-06	7.691E-07	2.373E-07	1.185E-07	7.269E-08	3.124E-08	1.034E-08	4.619E-09	2.696E-09	1.786E-09	
E	2.984E-06	6.746E-07	2.053E-07	1.018E-07	6.210E-08	2.647E-08	8.654E-09	3.831E-09	2.224E-09	1.468E-09	
ESE	4.133E-06	9.362E-07	2.872E-07	1.431E-07	8.758E-08	3.754E-08	1.238E-08	5.514E-09	3.213E-09	2.126E-09	
SE	4.894E-06	1.103E-06	3.345E-07	1.655E-07	1.008E-07	4.293E-08	1.400E-08	6.183E-09	3.584E-09	2.364E-09	
SSE	7.972E-06	1.800E-06	5.494E-07	2.730E-07	1.668E-07	7.129E-08	2.339E-08	1.038E-08	6.037E-09	3.989E-09	

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.120E-07	7.170E-08	3.682E-08	1.750E-08	6.287E-09	3.118E-09	1.836E-09	1.202E-09	8.459E-10	6.269E-10	4.831E-10
SSW	9.094E-08	3.075E-08	1.579E-08	7.507E-09	2.696E-09	1.337E-09	7.874E-10	5.156E-10	3.628E-10	2.688E-10	2.072E-10
SW	6.715E-08	2.271E-08	1.166E-08	5.543E-09	1.991E-09	9.874E-10	5.814E-10	3.807E-10	2.679E-10	1.985E-10	1.530E-10
WSW	7.480E-08	2.529E-08	1.299E-08	6.174E-09	2.218E-09	1.100E-09	6.476E-10	4.241E-10	2.984E-10	2.211E-10	1.704E-10
W	7.797E-08	2.637E-08	1.354E-08	6.436E-09	2.312E-09	1.147E-09	6.751E-10	4.420E-10	3.110E-10	2.305E-10	1.776E-10
WNW	7.692E-08	2.601E-08	1.336E-08	6.349E-09	2.281E-09	1.131E-09	6.660E-10	4.361E-10	3.068E-10	2.274E-10	1.752E-10
NW	1.734E-07	5.864E-08	3.011E-08	1.431E-08	5.142E-09	2.550E-09	1.501E-09	9.831E-10	6.918E-10	5.127E-10	3.951E-10
NNW	2.753E-07	9.309E-08	4.780E-08	2.272E-08	8.162E-09	4.048E-09	2.383E-09	1.561E-09	1.098E-09	8.138E-10	6.272E-10
N	3.470E-07	1.173E-07	6.024E-08	2.864E-08	1.029E-08	5.102E-09	3.004E-09	1.967E-09	1.384E-09	1.026E-09	7.905E-10
NNE	1.590E-07	5.376E-08	2.760E-08	1.312E-08	4.714E-09	2.338E-09	1.377E-09	9.013E-10	6.342E-10	4.700E-10	3.622E-10
NE	8.758E-08	2.962E-08	1.521E-08	7.229E-09	2.597E-09	1.288E-09	7.583E-10	4.965E-10	3.494E-10	2.589E-10	1.995E-10
ENE	7.965E-08	2.694E-08	1.383E-08	6.575E-09	2.362E-09	1.171E-09	6.896E-10	4.516E-10	3.177E-10	2.355E-10	1.815E-10
E	8.199E-08	2.773E-08	1.424E-08	6.768E-09	2.431E-09	1.206E-09	7.099E-10	4.648E-10	3.271E-10	2.424E-10	1.868E-10
ESE	1.116E-07	3.775E-08	1.938E-08	9.215E-09	3.310E-09	1.642E-09	9.666E-10	6.329E-10	4.453E-10	3.300E-10	2.543E-10
SE	1.685E-07	5.696E-08	2.925E-08	1.390E-08	4.995E-09	2.477E-09	1.458E-09	9.550E-10	6.720E-10	4.980E-10	3.838E-10
SSE	2.322E-07	7.853E-08	4.032E-08	1.917E-08	6.886E-09	3.415E-09	2.011E-09	1.317E-09	9.264E-10	6.866E-10	5.291E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	3.838E-10	1.705E-10	1.033E-10	5.220E-11	3.159E-11	2.118E-11	1.518E-11	1.140E-11	8.862E-12	7.079E-12	5.778E-12
SSW	1.646E-10	7.312E-11	4.429E-11	2.239E-11	1.355E-11	9.085E-12	6.510E-12	4.888E-12	3.801E-12	3.036E-12	2.478E-12
SW	1.215E-10	5.399E-11	3.271E-11	1.653E-11	1.001E-11	6.708E-12	4.807E-12	3.609E-12	2.806E-12	2.242E-12	1.830E-12
WSW	1.354E-10	6.014E-11	3.643E-11	1.841E-11	1.115E-11	7.473E-12	5.354E-12	4.021E-12	3.126E-12	2.497E-12	2.038E-12
W	1.411E-10	6.269E-11	3.798E-11	1.919E-11	1.162E-11	7.789E-12	5.581E-12	4.191E-12	3.259E-12	2.603E-12	2.125E-12
WNW	1.392E-10	6.184E-11	3.746E-11	1.894E-11	1.146E-11	7.684E-12	5.506E-12	4.134E-12	3.215E-12	2.568E-12	2.096E-12
NW	3.139E-10	1.394E-10	8.446E-11	4.269E-11	2.584E-11	1.732E-11	1.241E-11	9.321E-12	7.247E-12	5.789E-12	4.725E-12
NNW	4.982E-10	2.213E-10	1.341E-10	6.777E-11	4.102E-11	2.750E-11	1.971E-11	1.480E-11	1.151E-11	9.190E-12	7.501E-12
N	6.280E-10	2.790E-10	1.690E-10	8.542E-11	5.170E-11	3.466E-11	2.484E-11	1.865E-11	1.450E-11	1.158E-11	9.455E-12
NNE	2.877E-10	1.278E-10	7.743E-11	3.914E-11	2.369E-11	1.588E-11	1.138E-11	8.546E-12	6.644E-12	5.308E-12	4.332E-12
NE	1.585E-10	7.042E-11	4.266E-11	2.156E-11	1.305E-11	8.749E-12	6.269E-12	4.708E-12	3.660E-12	2.924E-12	2.386E-12
ENE	1.442E-10	6.404E-11	3.879E-11	1.961E-11	1.187E-11	7.957E-12	5.702E-12	4.281E-12	3.329E-12	2.659E-12	2.170E-12
E	1.484E-10	6.592E-11	3.993E-11	2.018E-11	1.222E-11	8.191E-12	5.869E-12	4.407E-12	3.427E-12	2.737E-12	2.234E-12
ESE	2.021E-10	8.976E-11	5.437E-11	2.748E-11	1.663E-11	1.115E-11	7.991E-12	6.001E-12	4.666E-12	3.727E-12	3.042E-12
SE	3.049E-10	1.354E-10	8.204E-11	4.147E-11	2.510E-11	1.683E-11	1.206E-11	9.054E-12	7.040E-12	5.624E-12	4.590E-12
SSE	4.203E-10	1.867E-10	1.131E-10	5.717E-11	3.460E-11	2.320E-11	1.662E-11	1.248E-11	9.706E-12	7.753E-12	6.328E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	3.599E-08	7.371E-09	1.924E-09	8.642E-10	4.889E-10	1.880E-10	5.439E-11	2.156E-11	1.151E-11	7.125E-12
SSW	1.543E-08	3.161E-09	8.253E-10	3.706E-10	2.097E-10	8.063E-11	2.333E-11	9.245E-12	4.937E-12	3.056E-12
SW	1.140E-08	2.334E-09	6.094E-10	2.737E-10	1.548E-10	5.954E-11	1.723E-11	6.827E-12	3.646E-12	2.257E-12
WSW	1.269E-08	2.600E-09	6.788E-10	3.049E-10	1.725E-10	6.632E-11	1.919E-11	7.605E-12	4.061E-12	2.514E-12
W	1.323E-08	2.710E-09	7.076E-10	3.178E-10	1.798E-10	6.914E-11	2.000E-11	7.927E-12	4.233E-12	2.620E-12
WNW	1.305E-08	2.674E-09	6.980E-10	3.135E-10	1.774E-10	6.820E-11	1.973E-11	7.820E-12	4.176E-12	2.585E-12
NW	2.943E-08	6.028E-09	1.574E-09	7.068E-10	3.998E-10	1.538E-10	4.448E-11	1.763E-11	9.415E-12	5.827E-12
NNW	4.672E-08	9.570E-09	2.498E-09	1.122E-09	6.347E-10	2.441E-10	7.061E-11	2.799E-11	1.495E-11	9.251E-12
N	5.888E-08	1.206E-08	3.149E-09	1.414E-09	8.000E-10	3.076E-10	8.900E-11	3.527E-11	1.884E-11	1.166E-11
NNE	2.698E-08	5.527E-09	1.443E-09	6.480E-10	3.666E-10	1.410E-10	4.078E-11	1.616E-11	8.631E-12	5.342E-12
NE	1.486E-08	3.044E-09	7.948E-10	3.570E-10	2.019E-10	7.766E-11	2.247E-11	8.904E-12	4.755E-12	2.943E-12
ENE	1.352E-08	2.769E-09	7.228E-10	3.246E-10	1.837E-10	7.063E-11	2.043E-11	8.098E-12	4.324E-12	2.677E-12
E	1.391E-08	2.850E-09	7.440E-10	3.342E-10	1.890E-10	7.270E-11	2.103E-11	8.336E-12	4.451E-12	2.755E-12
ESE	1.895E-08	3.881E-09	1.013E-09	4.550E-10	2.574E-10	9.899E-11	2.864E-11	1.135E-11	6.061E-12	3.751E-12
SE	2.859E-08	5.856E-09	1.529E-09	6.866E-10	3.884E-10	1.494E-10	4.321E-11	1.713E-11	9.145E-12	5.660E-12
SSE	3.941E-08	8.073E-09	2.107E-09	9.465E-10	5.355E-10	2.059E-10	5.957E-11	2.361E-11	1.261E-11	7.804E-12

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
 SPECIFIC POINTS OF INTEREST

RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
 ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
 NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	DEPLETED	
A	Site Boundary S	.80	7.0E-06	7.0E-06	6.2E-06 3.1E-08
A	Site Boundary SSW	.82	2.9E-06	2.9E-06	2.6E-06 1.2E-08
A	Site Boundary SW	.97	1.5E-06	1.5E-06	1.3E-06 5.9E-09
A	Site Boundary WSW	.93	1.5E-06	1.5E-06	1.3E-06 7.5E-09
A	Site Boundary W	.91	1.5E-06	1.5E-06	1.3E-06 8.2E-09
A	Site Boundary WNW	.94	1.4E-06	1.4E-06	1.2E-06 7.5E-09
A	Site Boundary NW	.81	4.5E-06	4.5E-06	4.0E-06 2.5E-08
A	Site Boundary NNW	.69	1.2E-05	1.1E-05	1.0E-05 5.5E-08
A	Site Boundary N	.67	1.5E-05	1.5E-05	1.3E-05 7.2E-08
A	Site Boundary NNE	.60	9.6E-06	9.6E-06	8.7E-06 4.0E-08
A	Site Boundary NE	.62	5.2E-06	5.2E-06	4.7E-06 2.1E-08
A	Site Boundary ENE	.59	5.7E-06	5.7E-06	5.1E-06 2.1E-08
A	Site Boundary E	.53	5.9E-06	5.9E-06	5.4E-06 2.6E-08
A	Site Boundary ESE	.54	7.9E-06	7.9E-06	7.2E-06 3.4E-08
A	Site Boundary SE	.65	7.0E-06	7.0E-06	6.3E-06 3.7E-08
A	Site Boundary SSE	.81	7.6E-06	7.5E-06	6.7E-06 3.3E-08
A	Nearest Res SW	1.30	7.6E-07	7.6E-07	6.5E-07 2.8E-09
A	Nearest Res WSW	1.30	6.9E-07	6.9E-07	5.9E-07 3.2E-09
A	Nearest Res W	1.00	1.2E-06	1.2E-06	1.1E-06 6.4E-09
A	Nearest Res WNW	1.70	3.6E-07	3.5E-07	3.0E-07 1.7E-09
A	Nearest Res NW	.90	3.5E-06	3.5E-06	3.1E-06 1.9E-08
A	Nearest Res NNW	1.90	1.2E-06	1.2E-06	1.0E-06 4.6E-09
A	Nearest Res N	3.00	6.3E-07	6.3E-07	5.0E-07 2.0E-09
A	Nearest Res ENE	1.70	6.2E-07	6.1E-07	5.2E-07 1.7E-09
A	Nearest Res E	2.00	3.8E-07	3.8E-07	3.2E-07 1.2E-09
A	Nearest Res ESE	2.30	4.1E-07	4.0E-07	3.3E-07 1.2E-09
A	Nearest Res NNW	3.50	3.8E-07	3.7E-07	2.9E-07 1.1E-09
A	Nearest Garde SW	1.30	7.6E-07	7.6E-07	6.5E-07 2.8E-09
A	Nearest Garde WSW	1.90	3.0E-07	3.0E-07	2.5E-07 1.2E-09
A	Nearest Garde WNW	2.40	1.7E-07	1.7E-07	1.4E-07 7.3E-10
A	Nearest Garde NW	2.90	2.8E-07	2.8E-07	2.2E-07 1.1E-09
A	Nearest Garde NNW	1.90	1.2E-06	1.2E-06	1.0E-06 4.6E-09
A	Nearest Garde ENE	2.80	2.3E-07	2.3E-07	1.8E-07 5.3E-10
A	Nearest Garde E	2.00	3.8E-07	3.8E-07	3.2E-07 1.2E-09
A	Nearest Garde ESE	2.30	4.1E-07	4.0E-07	3.3E-07 1.2E-09
A	Nearest Garde SE	1.20	1.9E-06	1.9E-06	1.6E-06 8.7E-09

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**Atmospheric Diffusion Estimates**

**Ground Level Releases**

July-December 2004

VENTS GROUND LEVEL RELEASES - JUL-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500			
S	4.033E-05	1.361E-05	7.289E-06	3.645E-06	1.454E-06	7.832E-07	4.945E-07	3.441E-07	2.556E-07	1.989E-07	1.603E-07	1.454E-06	7.832E-07	4.945E-07	3.441E-07	2.556E-07	1.989E-07	1.603E-07			
SSW	1.853E-05	6.245E-06	3.347E-06	1.671E-06	6.579E-07	3.513E-07	2.203E-07	1.525E-07	1.127E-07	8.740E-08	7.020E-08	1.671E-06	6.579E-07	3.513E-07	2.203E-07	1.525E-07	1.127E-07	8.740E-08			
SW	1.555E-05	5.148E-06	2.733E-06	1.361E-06	5.431E-07	2.929E-07	1.851E-07	1.290E-07	9.589E-08	7.471E-08	6.026E-08	1.361E-06	5.431E-07	2.929E-07	1.851E-07	1.290E-07	9.589E-08	7.471E-08			
WSW	1.760E-05	5.701E-06	2.987E-06	1.481E-06	5.900E-07	3.180E-07	2.009E-07	1.399E-07	1.041E-07	8.107E-08	6.540E-08	1.481E-06	5.900E-07	3.180E-07	2.009E-07	1.399E-07	1.041E-07	8.107E-08			
W	1.539E-05	5.130E-06	2.709E-06	1.345E-06	5.343E-07	2.872E-07	1.810E-07	1.258E-07	9.337E-08	7.261E-08	5.848E-08	1.345E-06	5.343E-07	2.872E-07	1.810E-07	1.258E-07	9.337E-08	7.261E-08			
WNW	1.548E-05	5.269E-06	2.784E-06	1.377E-06	5.403E-07	2.878E-07	1.802E-07	1.245E-07	9.199E-08	7.125E-08	5.717E-08	1.377E-06	5.403E-07	2.878E-07	1.802E-07	1.245E-07	9.199E-08	7.125E-08			
NW	3.171E-05	1.055E-05	5.589E-06	2.779E-06	1.106E-06	5.949E-07	3.754E-07	2.611E-07	1.939E-07	1.509E-07	1.216E-07	1.106E-06	5.949E-07	3.754E-07	2.611E-07	1.939E-07	1.509E-07	1.216E-07			
NNW	6.129E-05	1.999E-05	1.058E-05	5.283E-06	2.138E-06	1.164E-06	7.412E-07	5.193E-07	3.880E-07	3.035E-07	2.457E-07	2.138E-06	1.164E-06	7.412E-07	5.193E-07	3.880E-07	3.035E-07	2.457E-07			
N	8.059E-05	2.599E-05	1.380E-05	6.919E-06	2.822E-06	1.545E-06	9.871E-07	6.936E-07	5.195E-07	4.072E-07	3.302E-07	2.822E-06	1.545E-06	9.871E-07	6.936E-07	5.195E-07	4.072E-07	3.302E-07			
NNE	4.041E-05	1.301E-05	6.846E-06	3.417E-06	1.393E-06	7.626E-07	4.873E-07	3.425E-07	2.565E-07	2.011E-07	1.631E-07	1.393E-06	7.626E-07	4.873E-07	3.425E-07	2.565E-07	2.011E-07	1.631E-07			
NE	2.839E-05	8.895E-06	4.653E-06	2.326E-06	9.591E-07	5.287E-07	3.398E-07	2.398E-07	1.803E-07	1.417E-07	1.153E-07	2.326E-06	9.591E-07	5.287E-07	3.398E-07	2.398E-07	1.803E-07	1.417E-07			
ENE	2.933E-05	9.171E-06	4.794E-06	2.400E-06	9.947E-07	5.501E-07	3.543E-07	2.505E-07	1.886E-07	1.484E-07	1.208E-07	2.400E-06	9.947E-07	5.501E-07	3.543E-07	2.505E-07	1.886E-07	1.484E-07			
E	2.416E-05	7.682E-06	4.054E-06	2.034E-06	8.367E-07	4.605E-07	2.955E-07	2.083E-07	1.564E-07	1.229E-07	9.982E-08	2.034E-06	8.367E-07	4.605E-07	2.955E-07	2.083E-07	1.564E-07	1.229E-07			
ESE	3.066E-05	9.746E-06	5.255E-06	2.667E-06	1.092E-06	5.987E-07	3.831E-07	2.694E-07	2.019E-07	1.583E-07	1.284E-07	1.092E-06	5.987E-07	3.831E-07	2.694E-07	2.019E-07	1.583E-07	1.284E-07			
SE	3.337E-05	1.075E-05	5.802E-06	2.938E-06	1.194E-06	6.518E-07	4.156E-07	2.915E-07	2.179E-07	1.705E-07	1.381E-07	1.194E-06	6.518E-07	4.156E-07	2.915E-07	2.179E-07	1.705E-07	1.381E-07			
SSE	5.283E-05	1.712E-05	9.207E-06	4.649E-06	1.891E-06	1.033E-06	6.588E-07	4.622E-07	3.457E-07	2.707E-07	2.192E-07	1.891E-06	1.033E-06	6.588E-07	4.622E-07	3.457E-07	2.707E-07	2.192E-07			

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000		
S	1.328E-07	6.838E-08	4.440E-08	2.554E-08	1.734E-08	1.287E-08	1.010E-08	8.233E-09	6.904E-09	5.914E-09	5.152E-09	1.734E-08	1.287E-08	1.010E-08	8.233E-09	6.904E-09	5.914E-09	5.152E-09			
SSW	5.797E-08	2.955E-08	1.904E-08	1.086E-08	7.340E-09	5.429E-09	4.249E-09	3.457E-09	2.894E-09	2.475E-09	2.152E-09	1.086E-08	7.340E-09	5.429E-09	4.249E-09	3.457E-09	2.894E-09	2.475E-09			
SW	4.997E-08	2.590E-08	1.689E-08	9.784E-09	6.677E-09	4.976E-09	3.918E-09	3.204E-09	2.694E-09	2.313E-09	2.019E-09	9.784E-09	6.677E-09	4.976E-09	3.918E-09	3.204E-09	2.694E-09	2.313E-09			
WSW	5.423E-08	2.814E-08	1.837E-08	1.067E-08	7.310E-09	5.463E-09	4.312E-09	3.534E-09	2.977E-09	2.560E-09	2.238E-09	1.067E-08	7.310E-09	5.463E-09	4.312E-09	3.534E-09	2.977E-09	2.560E-09			
W	4.840E-08	2.488E-08	1.614E-08	9.283E-09	6.308E-09	4.685E-09	3.680E-09	3.003E-09	2.521E-09	2.161E-09	1.884E-09	9.283E-09	6.308E-09	4.685E-09	3.680E-09	3.003E-09	2.521E-09	2.161E-09			
WNW	4.718E-08	2.399E-08	1.544E-08	8.783E-09	5.923E-09	4.374E-09	3.420E-09	2.780E-09	2.326E-09	1.988E-09	1.728E-09	8.783E-09	5.923E-09	4.374E-09	3.420E-09	2.780E-09	2.326E-09	1.988E-09			
NW	1.007E-07	5.195E-08	3.377E-08	1.947E-08	1.326E-08	9.858E-09	7.751E-09	6.331E-09	5.318E-09	4.561E-09	3.978E-09	1.947E-08	1.326E-08	9.858E-09	7.751E-09	6.331E-09	5.318E-09	4.561E-09			
NNW	2.043E-07	1.069E-07	7.019E-08	4.102E-08	2.816E-08	2.107E-08	1.665E-08	1.366E-08	1.151E-08	9.905E-09	8.662E-09	4.102E-08	2.816E-08	2.107E-08	1.665E-08	1.366E-08	1.151E-08	9.905E-09			
N	2.750E-07	1.446E-07	9.525E-08	5.591E-08	3.848E-08	2.886E-08	2.284E-08	1.876E-08	1.583E-08	1.363E-08	1.193E-08	5.591E-08	3.848E-08	2.886E-08	2.284E-08	1.876E-08	1.583E-08	1.363E-08			
NNE	1.358E-07	7.144E-08	4.708E-08	2.766E-08	1.906E-08	1.431E-08	1.133E-08	9.314E-09	7.864E-09	6.776E-09	5.934E-09	2.766E-08	1.906E-08	1.431E-08	1.133E-08	9.314E-09	7.864E-09	6.776E-09			
NE	9.620E-08	5.104E-08	3.384E-08	2.004E-08	1.389E-08	1.047E-08	8.133E-09	6.855E-09	5.801E-09	5.009E-09	4.395E-09	3.384E-08	2.004E-08	1.389E-08	1.047E-08	8.133E-09	6.855E-09	5.801E-09			
ENE	1.009E-07	5.367E-08	3.563E-08	2.114E-08	1.465E-08	1.104E-08	8.779E-09	7.236E-09	6.124E-09	5.289E-09	4.640E-09	3.563E-08	2.114E-08	1.465E-08	1.104E-08	8.779E-09	7.236E-09	6.124E-09			
E	8.325E-08	4.402E-08	2.910E-08	1.717E-08	1.186E-08	8.914E-09	7.070E-09	5.817E-09	4.915E-09	4.239E-09	3.714E-09	2.910E-08	1.717E-08	1.186E-08	8.914E-09	7.070E-09	5.817E-09	4.915E-09			
ESE	1.070E-07	5.626E-08	3.706E-08	2.174E-08	1.495E-08	1.121E-08	8.865E-09	7.276E-09	6.136E-09	5.282E-09	4.620E-09	3.706E-08	2.174E-08	1.495E-08	1.121E-08	8.865E-09	7.276E-09	6.136E-09			
SE	1.149E-07	6.011E-08	3.946E-08	2.304E-08	1.579E-08	1.180E-08	9.315E-09	7.633E-09	6.427E-09	5.525E-09	4.828E-09	2.304E-08	1.579E-08	1.180E-08	9.315E-09	7.633E-09	6.427E-09	5.525E-09			
SSE	1.824E-07	9.552E-08	6.273E-08	3.665E-08	2.514E-08	1.880E-08	1.484E-08	1.217E-08	1.025E-08	8.812E-09	7.702E-09	6.273E-08	3.665E-08	2.514E-08	1.880E-08	1.484E-08	1.217E-08	1.025E-08			

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.074E-06	1.643E-06	5.113E-07	2.593E-07	1.615E-07	7.203E-08	2.608E-08	1.295E-08	8.259E-09	5.925E-09
SSW	3.246E-06	7.468E-07	2.281E-07	1.144E-07	7.077E-08	3.119E-08	1.111E-08	5.466E-09	3.469E-09	2.480E-09
SW	2.660E-06	6.137E-07	1.914E-07	9.727E-08	6.073E-08	2.724E-08	9.982E-09	5.006E-09	3.214E-09	2.317E-09
WSW	2.921E-06	6.670E-07	2.077E-07	1.056E-07	6.591E-08	2.960E-08	1.089E-08	5.495E-09	3.544E-09	2.564E-09
W	2.640E-06	6.046E-07	1.873E-07	9.473E-08	5.893E-08	2.622E-08	9.485E-09	4.716E-09	3.013E-09	2.165E-09
WNW	2.711E-06	6.140E-07	1.866E-07	9.339E-08	5.764E-08	2.534E-08	8.991E-09	4.405E-09	2.790E-09	1.992E-09
NW	5.442E-06	1.250E-06	3.882E-07	1.968E-07	1.226E-07	5.471E-08	1.989E-08	9.921E-09	6.351E-09	4.569E-09
NNW	1.032E-05	2.404E-06	7.653E-07	3.934E-07	2.475E-07	1.122E-07	4.179E-08	2.119E-08	1.370E-08	9.921E-09
N	1.345E-05	3.165E-06	1.018E-06	5.265E-07	3.326E-07	1.516E-07	5.690E-08	2.901E-08	1.881E-08	1.365E-08
NNE	6.692E-06	1.563E-06	5.028E-07	2.600E-07	1.642E-07	7.491E-08	2.815E-08	1.438E-08	9.338E-09	6.787E-09
NE	4.561E-06	1.072E-06	3.502E-07	1.826E-07	1.160E-07	5.343E-08	2.037E-08	1.052E-08	6.872E-09	5.016E-09
ENE	4.703E-06	1.109E-06	3.650E-07	1.910E-07	1.216E-07	5.615E-08	2.147E-08	1.110E-08	7.253E-09	5.296E-09
E	3.962E-06	9.355E-07	3.046E-07	1.585E-07	1.005E-07	4.611E-08	1.746E-08	8.961E-09	5.832E-09	4.245E-09
ESE	5.103E-06	1.223E-06	3.951E-07	2.046E-07	1.293E-07	5.899E-08	2.213E-08	1.127E-08	7.296E-09	5.290E-09
SE	5.629E-06	1.341E-06	4.289E-07	2.209E-07	1.391E-07	6.310E-08	2.346E-08	1.187E-08	7.654E-09	5.534E-09
SSE	8.940E-06	2.123E-06	6.799E-07	3.504E-07	2.208E-07	1.002E-07	3.733E-08	1.891E-08	1.220E-08	8.826E-09

B271

VENTS GROUND LEVEL RELEASES - JUL-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.029E-05	1.358E-05	7.267E-06	3.630E-06	1.445E-06	7.765E-07	4.892E-07	3.397E-07	2.517E-07	1.955E-07	1.572E-07
SSW	1.851E-05	6.232E-06	3.336E-06	1.664E-06	6.536E-07	3.482E-07	2.178E-07	1.504E-07	1.110E-07	8.582E-08	6.876E-08
SW	1.553E-05	5.137E-06	2.724E-06	1.355E-06	5.394E-07	2.902E-07	1.830E-07	1.272E-07	9.435E-08	7.333E-08	5.901E-08
WSW	1.758E-05	5.690E-06	2.979E-06	1.475E-06	5.867E-07	3.156E-07	1.990E-07	1.384E-07	1.027E-07	7.984E-08	6.428E-08
W	1.537E-05	5.120E-06	2.701E-06	1.340E-06	5.312E-07	2.849E-07	1.792E-07	1.243E-07	9.206E-08	7.144E-08	5.742E-08
WNW	1.546E-05	5.260E-06	2.776E-06	1.372E-06	5.374E-07	2.857E-07	1.786E-07	1.232E-07	9.080E-08	7.018E-08	5.621E-08
NW	3.168E-05	1.053E-05	5.575E-06	2.769E-06	1.100E-06	5.908E-07	3.721E-07	2.584E-07	1.915E-07	1.488E-07	1.197E-07
NNW	6.123E-05	1.995E-05	1.055E-05	5.262E-06	2.125E-06	1.155E-06	7.335E-07	5.128E-07	3.823E-07	2.984E-07	2.410E-07
N	8.050E-05	2.593E-05	1.375E-05	6.890E-06	2.804E-06	1.531E-06	9.761E-07	6.844E-07	5.114E-07	3.999E-07	3.236E-07
NNE	4.037E-05	1.298E-05	6.822E-06	3.401E-06	1.384E-06	7.553E-07	4.815E-07	3.375E-07	2.522E-07	1.972E-07	1.595E-07
NE	2.835E-05	8.874E-06	4.637E-06	2.316E-06	9.524E-07	5.238E-07	3.357E-07	2.364E-07	1.773E-07	1.390E-07	1.128E-07
ENE	2.929E-05	9.148E-06	4.776E-06	2.388E-06	9.871E-07	5.445E-07	3.498E-07	2.466E-07	1.851E-07	1.454E-07	1.180E-07
E	2.413E-05	7.663E-06	4.039E-06	2.024E-06	8.305E-07	4.559E-07	2.918E-07	2.052E-07	1.537E-07	1.204E-07	9.757E-08
ESE	3.063E-05	9.722E-06	5.236E-06	2.654E-06	1.084E-06	5.928E-07	3.783E-07	2.654E-07	1.984E-07	1.552E-07	1.255E-07
SE	3.333E-05	1.073E-05	5.782E-06	2.924E-06	1.186E-06	6.457E-07	4.107E-07	2.873E-07	2.143E-07	1.673E-07	1.352E-07
SSE	5.277E-05	1.708E-05	9.175E-06	4.627E-06	1.878E-06	1.023E-06	6.509E-07	4.555E-07	3.399E-07	2.654E-07	2.144E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.299E-07	6.613E-08	4.245E-08	2.386E-08	1.583E-08	1.148E-08	8.799E-09	7.011E-09	5.745E-09	4.810E-09	4.094E-09
SSW	5.665E-08	2.853E-08	1.817E-08	1.012E-08	6.676E-09	4.821E-09	3.684E-09	2.927E-09	2.393E-09	1.998E-09	1.697E-09
SW	4.881E-08	2.499E-08	1.611E-08	9.107E-09	6.067E-09	4.414E-09	3.393E-09	2.709E-09	2.224E-09	1.865E-09	1.589E-09
WSW	5.320E-08	2.733E-08	1.767E-08	1.006E-08	6.758E-09	4.952E-09	3.834E-09	3.082E-09	2.546E-09	2.148E-09	1.842E-09
W	4.742E-08	2.413E-08	1.548E-08	8.715E-09	5.796E-09	4.214E-09	3.240E-09	2.588E-09	2.126E-09	1.785E-09	1.523E-09
WNW	4.629E-08	2.331E-08	1.485E-08	8.282E-09	5.475E-09	3.963E-09	3.037E-09	2.420E-09	1.985E-09	1.663E-09	1.418E-09
NW	9.892E-08	5.052E-08	3.252E-08	1.839E-08	1.228E-08	8.955E-09	6.905E-09	5.531E-09	4.556E-09	3.833E-09	3.279E-09
NNW	2.000E-07	1.035E-07	6.718E-08	3.839E-08	2.576E-08	1.885E-08	1.457E-08	1.169E-08	9.632E-09	8.106E-09	6.934E-09
N	2.688E-07	1.397E-07	9.096E-08	5.215E-08	3.506E-08	2.569E-08	1.986E-08	1.594E-08	1.314E-08	1.106E-08	9.459E-09
NNE	1.325E-07	6.884E-08	4.479E-08	2.566E-08	1.724E-08	1.262E-08	9.747E-09	7.812E-09	6.433E-09	5.407E-09	4.619E-09
NE	9.389E-08	4.920E-08	3.221E-08	1.860E-08	1.257E-08	9.240E-09	7.163E-09	5.759E-09	4.755E-09	4.006E-09	3.429E-09
ENE	9.829E-08	5.159E-08	3.379E-08	1.951E-08	1.317E-08	9.667E-09	7.482E-09	6.006E-09	4.951E-09	4.164E-09	3.559E-09
E	8.116E-08	4.236E-08	2.764E-08	1.589E-08	1.069E-08	7.830E-09	6.051E-09	4.852E-09	3.995E-09	3.358E-09	2.868E-09
ESE	1.043E-07	5.416E-08	3.522E-08	2.014E-08	1.350E-08	9.867E-09	7.610E-09	6.092E-09	5.010E-09	4.206E-09	3.590E-09
SE	1.121E-07	5.796E-08	3.757E-08	2.140E-08	1.431E-08	1.043E-08	8.035E-09	6.424E-09	5.279E-09	4.429E-09	3.777E-09
SSE	1.779E-07	9.201E-08	5.967E-08	3.399E-08	2.273E-08	1.657E-08	1.276E-08	1.020E-08	8.378E-09	7.027E-09	5.991E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.054E-06	1.633E-06	5.060E-07	2.554E-07	1.584E-07	6.977E-08	2.442E-08	1.157E-08	7.040E-09	4.822E-09	
SSW	3.236E-06	7.423E-07	2.256E-07	1.127E-07	6.933E-08	3.018E-08	1.038E-08	4.861E-09	2.940E-09	2.004E-09	
SW	2.652E-06	6.100E-07	1.893E-07	9.572E-08	5.947E-08	2.634E-08	9.311E-09	4.446E-09	2.720E-09	1.869E-09	
WSW	2.913E-06	6.637E-07	2.058E-07	1.042E-07	6.479E-08	2.879E-08	1.028E-08	4.986E-09	3.092E-09	2.152E-09	
W	2.633E-06	6.014E-07	1.855E-07	9.342E-08	5.787E-08	2.546E-08	8.922E-09	4.246E-09	2.598E-09	1.789E-09	
WNW	2.704E-06	6.110E-07	1.850E-07	9.219E-08	5.668E-08	2.466E-08	8.494E-09	3.996E-09	2.430E-09	1.667E-09	
NW	5.429E-06	1.245E-06	3.849E-07	1.943E-07	1.206E-07	5.328E-08	1.882E-08	9.021E-09	5.552E-09	3.842E-09	
NNW	1.029E-05	2.391E-06	7.575E-07	3.876E-07	2.428E-07	1.088E-07	3.918E-08	1.898E-08	1.173E-08	8.124E-09	
N	1.341E-05	3.146E-06	1.007E-06	5.184E-07	3.259E-07	1.467E-07	5.318E-08	2.586E-08	1.599E-08	1.108E-08	
NNE	6.670E-06	1.553E-06	4.969E-07	2.556E-07	1.607E-07	7.230E-08	2.617E-08	1.270E-08	7.840E-09	5.419E-09	
NE	4.547E-06	1.065E-06	3.461E-07	1.796E-07	1.136E-07	5.158E-08	1.894E-08	9.297E-09	5.777E-09	4.014E-09	
ENE	4.686E-06	1.102E-06	3.604E-07	1.876E-07	1.188E-07	5.406E-08	1.987E-08	9.727E-09	6.026E-09	4.173E-09	
E	3.949E-06	9.292E-07	3.009E-07	1.557E-07	9.826E-08	4.444E-08	1.619E-08	7.881E-09	4.868E-09	3.365E-09	
ESE	5.085E-06	1.214E-06	3.903E-07	2.011E-07	1.264E-07	5.688E-08	2.054E-08	9.934E-09	6.113E-09	4.216E-09	
SE	5.611E-06	1.332E-06	4.240E-07	2.173E-07	1.361E-07	6.093E-08	2.184E-08	1.051E-08	6.448E-09	4.439E-09	
SSE	8.911E-06	2.109E-06	6.719E-07	3.445E-07	2.160E-07	9.673E-08	3.469E-08	1.669E-08	1.024E-08	7.044E-09	

B272

VENTS GROUND LEVEL RELEASES - JUL-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	3.816E-05	1.242E-05	6.490E-06	3.187E-06	1.232E-06	6.469E-07	3.993E-07	2.723E-07	1.986E-07	1.519E-07	1.205E-07	
SSW	1.753E-05	5.700E-06	2.980E-06	1.461E-06	5.577E-07	2.902E-07	1.779E-07	1.206E-07	8.758E-08	6.675E-08	5.277E-08	
SW	1.471E-05	4.699E-06	2.433E-06	1.190E-06	4.604E-07	2.419E-07	1.495E-07	1.020E-07	7.448E-08	5.705E-08	4.529E-08	
WSW	1.665E-05	5.203E-06	2.660E-06	1.295E-06	5.003E-07	2.627E-07	1.623E-07	1.108E-07	8.089E-08	6.196E-08	4.921E-08	
W	1.456E-05	4.682E-06	2.412E-06	1.176E-06	4.531E-07	2.373E-07	1.462E-07	9.960E-08	7.257E-08	5.548E-08	4.399E-08	
WNW	1.464E-05	4.810E-06	2.479E-06	1.204E-06	4.581E-07	2.379E-07	1.456E-07	9.862E-08	7.152E-08	5.446E-08	4.302E-08	
NW	3.000E-05	9.628E-06	4.977E-06	2.430E-06	9.376E-07	4.917E-07	3.033E-07	2.068E-07	1.508E-07	1.154E-07	9.154E-08	
NNW	5.799E-05	1.824E-05	9.423E-06	4.620E-06	1.813E-06	9.617E-07	5.986E-07	4.110E-07	3.015E-07	2.319E-07	1.848E-07	
N	7.625E-05	2.372E-05	1.229E-05	6.049E-06	2.392E-06	1.276E-06	7.970E-07	5.489E-07	4.036E-07	3.110E-07	2.482E-07	
NNE	3.824E-05	1.187E-05	6.095E-06	2.987E-06	1.181E-06	6.297E-07	3.934E-07	2.709E-07	1.992E-07	1.535E-07	1.225E-07	
NE	2.686E-05	8.117E-06	4.142E-06	2.034E-06	8.129E-07	4.367E-07	2.743E-07	1.897E-07	1.400E-07	1.082E-07	8.661E-08	
ENE	2.774E-05	8.369E-06	4.267E-06	2.098E-06	8.429E-07	4.542E-07	2.860E-07	1.981E-07	1.464E-07	1.133E-07	9.073E-08	
E	2.286E-05	7.010E-06	3.609E-06	1.778E-06	7.091E-07	3.802E-07	2.385E-07	1.647E-07	1.214E-07	9.378E-08	7.499E-08	
ESE	2.901E-05	8.894E-06	4.678E-06	2.331E-06	9.253E-07	4.944E-07	3.092E-07	2.131E-07	1.568E-07	1.208E-07	9.648E-08	
SE	3.157E-05	9.814E-06	5.165E-06	2.568E-06	1.012E-06	5.383E-07	3.355E-07	2.306E-07	1.692E-07	1.302E-07	1.038E-07	
SSE	4.998E-05	1.563E-05	8.197E-06	4.064E-06	1.603E-06	8.529E-07	5.318E-07	3.656E-07	2.685E-07	2.066E-07	1.647E-07	

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	9.834E-08	4.775E-08	2.945E-08	1.558E-08	9.865E-09	6.890E-09	5.119E-09	3.969E-09	3.175E-09	2.602E-09	2.172E-09	
SSW	4.293E-08	2.062E-08	1.262E-08	6.618E-09	4.172E-09	2.904E-09	2.151E-09	1.664E-09	1.329E-09	1.087E-09	9.057E-10	
SW	3.700E-08	1.807E-08	1.120E-08	5.961E-09	3.794E-09	2.661E-09	1.983E-09	1.542E-09	1.236E-09	1.015E-09	8.492E-10	
WSW	4.021E-08	1.967E-08	1.221E-08	6.526E-09	4.174E-09	2.939E-09	2.199E-09	1.715E-09	1.380E-09	1.136E-09	9.532E-10	
W	3.587E-08	1.739E-08	1.072E-08	5.670E-09	3.596E-09	2.515E-09	1.871E-09	1.453E-09	1.164E-09	9.549E-10	7.983E-10	
WNW	3.498E-08	1.677E-08	1.026E-08	5.371E-09	3.382E-09	2.353E-09	1.743E-09	1.349E-09	1.077E-09	8.817E-10	7.354E-10	
NW	7.471E-08	3.633E-08	2.244E-08	1.191E-08	7.573E-09	5.307E-09	3.954E-09	3.074E-09	2.466E-09	2.025E-09	1.695E-09	
NNW	1.514E-07	7.467E-08	4.657E-08	2.503E-08	1.603E-08	1.129E-08	8.452E-09	6.593E-09	5.302E-09	4.365E-09	3.659E-09	
N	2.036E-07	1.009E-07	6.316E-08	3.408E-08	2.188E-08	1.544E-08	1.157E-08	9.036E-09	7.273E-09	5.991E-09	5.025E-09	
NNE	1.005E-07	4.983E-08	3.118E-08	1.684E-08	1.082E-08	7.637E-09	5.724E-09	4.471E-09	3.599E-09	2.965E-09	2.487E-09	
NE	7.122E-08	3.561E-08	2.242E-08	1.220E-08	7.881E-09	5.588E-09	4.203E-09	3.292E-09	2.656E-09	2.193E-09	1.843E-09	
ENE	7.465E-08	3.741E-08	2.358E-08	1.285E-08	8.298E-09	5.882E-09	4.423E-09	3.463E-09	2.793E-09	2.305E-09	1.937E-09	
E	6.161E-08	3.069E-08	1.927E-08	1.044E-08	6.722E-09	4.753E-09	3.566E-09	2.788E-09	2.245E-09	1.851E-09	1.553E-09	
ESE	7.916E-08	3.924E-08	2.454E-08	1.323E-08	8.483E-09	5.979E-09	4.475E-09	3.490E-09	2.806E-09	2.309E-09	1.935E-09	
SE	8.503E-08	4.194E-08	2.614E-08	1.403E-08	8.964E-09	6.303E-09	4.708E-09	3.667E-09	2.944E-09	2.420E-09	2.026E-09	
SSE	1.350E-07	6.663E-08	4.155E-08	2.231E-08	1.426E-08	1.003E-08	7.496E-09	5.839E-09	4.689E-09	3.854E-09	3.227E-09	

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE											
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50		
S	6.340E-06	1.407E-06	4.146E-07	2.019E-07	1.216E-07	5.086E-08	1.612E-08	6.975E-09	3.995E-09	2.613E-09		
SSW	2.909E-06	6.395E-07	1.849E-07	8.909E-08	5.327E-08	2.202E-08	6.866E-09	2.941E-09	1.675E-09	1.091E-09		
SW	2.384E-06	5.254E-07	1.551E-07	7.571E-08	4.570E-08	1.922E-08	6.161E-09	2.692E-09	1.552E-09	1.019E-09		
WSW	2.618E-06	5.713E-07	1.685E-07	8.222E-08	4.965E-08	2.092E-08	6.744E-09	2.972E-09	1.726E-09	1.141E-09		
W	2.367E-06	5.178E-07	1.519E-07	7.378E-08	4.439E-08	1.853E-08	5.870E-09	2.546E-09	1.462E-09	9.588E-10		
WNW	2.430E-06	5.260E-07	1.514E-07	7.276E-08	4.343E-08	1.792E-08	5.573E-09	2.384E-09	1.358E-09	8.855E-10		
NW	4.879E-06	1.071E-06	3.149E-07	1.533E-07	9.237E-08	3.869E-08	1.232E-08	5.370E-09	3.094E-09	2.033E-09		
NNW	9.248E-06	2.058E-06	6.204E-07	3.063E-07	1.864E-07	7.923E-08	2.582E-08	1.142E-08	6.632E-09	4.381E-09		
N	1.205E-05	2.709E-06	8.254E-07	4.098E-07	2.503E-07	1.070E-07	3.512E-08	1.561E-08	9.089E-09	6.013E-09		
NNE	5.997E-06	1.337E-06	4.074E-07	2.023E-07	1.236E-07	5.281E-08	1.735E-08	7.720E-09	4.497E-09	2.976E-09		
NE	4.088E-06	9.170E-07	2.838E-07	1.421E-07	8.731E-08	3.766E-08	1.255E-08	5.646E-09	3.310E-09	2.200E-09		
ENE	4.215E-06	9.490E-07	2.957E-07	1.485E-07	9.145E-08	3.954E-08	1.321E-08	5.943E-09	3.482E-09	2.313E-09		
E	3.551E-06	8.004E-07	2.468E-07	1.233E-07	7.560E-08	3.249E-08	1.075E-08	4.803E-09	2.803E-09	1.857E-09		
ESE	4.572E-06	1.046E-06	3.201E-07	1.592E-07	9.728E-08	4.158E-08	1.363E-08	6.045E-09	3.511E-09	2.318E-09		
SE	5.044E-06	1.147E-06	3.476E-07	1.719E-07	1.047E-07	4.449E-08	1.447E-08	6.375E-09	3.689E-09	2.429E-09		
SSE	8.011E-06	1.816E-06	5.510E-07	2.727E-07	1.661E-07	7.067E-08	2.301E-08	1.015E-08	5.874E-09	3.869E-09		

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	1.793E-07	6.062E-08	3.112E-08	1.480E-08	5.315E-09	2.636E-09	1.552E-09	1.016E-09	7.151E-10	5.299E-10	4.084E-10
SSW	8.358E-08	2.826E-08	1.451E-08	6.899E-09	2.478E-09	1.229E-09	7.237E-10	4.739E-10	3.334E-10	2.471E-10	1.904E-10
SW	6.098E-08	2.062E-08	1.059E-08	5.034E-09	1.808E-09	8.967E-10	5.280E-10	3.457E-10	2.433E-10	1.803E-10	1.389E-10
WSW	8.620E-08	2.915E-08	1.497E-08	7.115E-09	2.556E-09	1.267E-09	7.463E-10	4.887E-10	3.439E-10	2.548E-10	1.964E-10
W	7.516E-08	2.542E-08	1.305E-08	6.204E-09	2.228E-09	1.105E-09	6.507E-10	4.261E-10	2.998E-10	2.222E-10	1.712E-10
WNW	8.987E-08	3.039E-08	1.560E-08	7.418E-09	2.665E-09	1.321E-09	7.781E-10	5.095E-10	3.585E-10	2.657E-10	2.047E-10
NW	2.039E-07	6.896E-08	3.540E-08	1.683E-08	6.046E-09	2.998E-09	1.766E-09	1.156E-09	8.134E-10	6.028E-10	4.646E-10
NNW	3.065E-07	1.036E-07	5.321E-08	2.530E-08	9.086E-09	4.506E-09	2.653E-09	1.737E-09	1.223E-09	9.060E-10	6.982E-10
N	3.549E-07	1.200E-07	6.162E-08	2.929E-08	1.052E-08	5.218E-09	3.073E-09	2.012E-09	1.416E-09	1.049E-09	8.085E-10
NNE	1.462E-07	4.943E-08	2.538E-08	1.207E-08	4.334E-09	2.150E-09	1.266E-09	8.288E-10	5.832E-10	4.322E-10	3.330E-10
NE	1.057E-07	3.575E-08	1.835E-08	8.726E-09	3.134E-09	1.554E-09	9.152E-10	5.993E-10	4.217E-10	3.125E-10	2.408E-10
ENE	8.261E-08	2.793E-08	1.434E-08	6.819E-09	2.449E-09	1.215E-09	7.152E-10	4.683E-10	3.295E-10	2.442E-10	1.882E-10
E	7.733E-08	2.615E-08	1.343E-08	6.383E-09	2.293E-09	1.137E-09	6.695E-10	4.384E-10	3.085E-10	2.286E-10	1.762E-10
ESE	1.015E-07	3.434E-08	1.763E-08	8.382E-09	3.011E-09	1.493E-09	8.791E-10	5.757E-10	4.051E-10	3.002E-10	2.313E-10
SE	1.478E-07	4.997E-08	2.566E-08	1.220E-08	4.382E-09	2.173E-09	1.280E-09	8.378E-10	5.895E-10	4.369E-10	3.367E-10
SSE	2.146E-07	7.256E-08	3.726E-08	1.771E-08	6.362E-09	3.155E-09	1.858E-09	1.216E-09	8.560E-10	6.344E-10	4.888E-10

DIRECTION FROM SITE	DISTANCES IN MILES											
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00	
S	3.244E-10	1.441E-10	8.730E-11	4.413E-11	2.671E-11	1.791E-11	1.283E-11	9.635E-12	7.492E-12	5.984E-12	4.885E-12	
SSW	1.513E-10	6.720E-11	4.071E-11	2.058E-11	1.245E-11	8.350E-12	5.983E-12	4.493E-12	3.493E-12	2.790E-12	2.278E-12	
SW	1.104E-10	4.903E-11	2.970E-11	1.501E-11	9.086E-12	6.092E-12	4.365E-12	3.278E-12	2.549E-12	2.036E-12	1.662E-12	
WSW	1.560E-10	6.930E-11	4.198E-11	2.122E-11	1.284E-11	8.611E-12	6.170E-12	4.633E-12	3.602E-12	2.878E-12	2.349E-12	
W	1.360E-10	6.043E-11	3.661E-11	1.850E-11	1.120E-11	7.508E-12	5.380E-12	4.040E-12	3.141E-12	2.509E-12	2.048E-12	
WNW	1.626E-10	7.225E-11	4.377E-11	2.212E-11	1.339E-11	8.977E-12	6.433E-12	4.830E-12	3.756E-12	3.000E-12	2.449E-12	
NW	3.691E-10	1.640E-10	9.931E-11	5.020E-11	3.038E-11	2.037E-11	1.460E-11	1.096E-11	8.522E-12	6.808E-12	5.556E-12	
NNW	5.547E-10	2.464E-10	1.493E-10	7.544E-11	4.566E-11	3.061E-11	2.194E-11	1.647E-11	1.281E-11	1.023E-11	8.351E-12	
N	6.423E-10	2.853E-10	1.728E-10	8.737E-11	5.288E-11	3.545E-11	2.540E-11	1.908E-11	1.483E-11	1.185E-11	9.670E-12	
NNE	2.646E-10	1.175E-10	7.120E-11	3.599E-11	2.178E-11	1.460E-11	1.046E-11	7.858E-12	6.110E-12	4.880E-12	3.983E-12	
NE	1.913E-10	8.499E-11	5.148E-11	2.602E-11	1.575E-11	1.056E-11	7.567E-12	5.682E-12	4.418E-12	3.529E-12	2.880E-12	
ENE	1.495E-10	6.642E-11	4.023E-11	2.034E-11	1.231E-11	8.252E-12	5.913E-12	4.440E-12	3.452E-12	2.758E-12	2.251E-12	
E	1.400E-10	6.217E-11	3.766E-11	1.904E-11	1.152E-11	7.725E-12	5.535E-12	4.156E-12	3.232E-12	2.581E-12	2.107E-12	
ESE	1.838E-10	8.164E-11	4.945E-11	2.500E-11	1.513E-11	1.014E-11	7.269E-12	5.458E-12	4.244E-12	3.390E-12	2.767E-12	
SE	2.675E-10	1.188E-10	7.198E-11	3.638E-11	2.202E-11	1.476E-11	1.058E-11	7.944E-12	6.176E-12	4.934E-12	4.027E-12	
SSE	3.884E-10	1.725E-10	1.045E-10	5.282E-11	3.197E-11	2.144E-11	1.536E-11	1.153E-11	8.968E-12	7.163E-12	5.847E-12	

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	3.042E-08	6.231E-09	1.627E-09	7.306E-10	4.133E-10	1.589E-10	4.598E-11	1.822E-11	9.732E-12	6.024E-12
SSW	1.418E-08	2.906E-09	7.585E-10	3.407E-10	1.927E-10	7.411E-11	2.144E-11	8.498E-12	4.538E-12	2.809E-12
SW	1.035E-08	2.120E-09	5.534E-10	2.485E-10	1.406E-10	5.407E-11	1.564E-11	6.200E-12	3.311E-12	2.049E-12
WSW	1.463E-08	2.996E-09	7.822E-10	3.513E-10	1.987E-10	7.643E-11	2.211E-11	8.763E-12	4.680E-12	2.897E-12
W	1.276E-08	2.613E-09	6.821E-10	3.063E-10	1.733E-10	6.664E-11	1.928E-11	7.641E-12	4.080E-12	2.526E-12
WNW	1.525E-08	3.124E-09	8.155E-10	3.663E-10	2.072E-10	7.968E-11	2.305E-11	9.136E-12	4.879E-12	3.020E-12
NW	3.461E-08	7.088E-09	1.850E-09	8.311E-10	4.702E-10	1.808E-10	5.231E-11	2.073E-11	1.107E-11	6.852E-12
NNW	5.201E-08	1.065E-08	2.781E-09	1.249E-09	7.066E-10	2.717E-10	7.861E-11	3.116E-11	1.664E-11	1.030E-11
N	6.023E-08	1.234E-08	3.221E-09	1.446E-09	8.183E-10	3.147E-10	9.103E-11	3.608E-11	1.927E-11	1.193E-11
NNE	2.481E-08	5.082E-09	1.327E-09	5.958E-10	3.371E-10	1.296E-10	3.750E-11	1.486E-11	7.936E-12	4.912E-12
NE	1.794E-08	3.675E-09	9.593E-10	4.308E-10	2.437E-10	9.373E-11	2.712E-11	1.075E-11	5.739E-12	3.552E-12
ENE	1.402E-08	2.872E-09	7.496E-10	3.367E-10	1.905E-10	7.324E-11	2.119E-11	8.398E-12	4.485E-12	2.776E-12
E	1.312E-08	2.688E-09	7.017E-10	3.152E-10	1.783E-10	6.856E-11	1.983E-11	7.861E-12	4.198E-12	2.598E-12
ESE	1.723E-08	3.530E-09	9.215E-10	4.138E-10	2.341E-10	9.003E-11	2.605E-11	1.032E-11	5.513E-12	3.412E-12
SE	2.508E-08	5.137E-09	1.341E-09	6.023E-10	3.407E-10	1.310E-10	3.791E-11	1.502E-11	8.023E-12	4.966E-12
SSE	3.641E-08	7.459E-09	1.947E-09	8.745E-10	4.947E-10	1.903E-10	5.504E-11	2.181E-11	1.165E-11	7.210E-12

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

			UNDEPLETED	UNDEPLETED	DEPLETED	
A	Site Boundary	S	.80	6.3E-06	6.2E-06	5.6E-06 2.6E-08
A	Site Boundary	SSW	.82	2.7E-06	2.7E-06	2.4E-06 1.1E-08
A	Site Boundary	SW	.97	1.4E-06	1.4E-06	1.3E-06 5.4E-09
A	Site Boundary	WSW	.93	1.8E-06	1.8E-06	1.6E-06 8.7E-09
A	Site Boundary	W	.91	1.7E-06	1.7E-06	1.5E-06 7.9E-09
A	Site Boundary	WNW	.94	1.6E-06	1.6E-06	1.4E-06 8.8E-09
A	Site Boundary	NW	.81	4.6E-06	4.6E-06	4.1E-06 2.9E-08
A	Site Boundary	NNW	.69	1.2E-05	1.2E-05	1.1E-05 6.2E-08
A	Site Boundary	N	.67	1.6E-05	1.6E-05	1.5E-05 7.4E-08
A	Site Boundary	NNE	.60	9.7E-06	9.7E-06	8.8E-06 3.7E-08
A	Site Boundary	NE	.62	6.2E-06	6.2E-06	5.6E-06 2.5E-08
A	Site Boundary	ENE	.59	7.1E-06	7.0E-06	6.4E-06 2.1E-08
A	Site Boundary	E	.53	7.1E-06	7.1E-06	6.4E-06 2.4E-08
A	Site Boundary	ESE	.54	8.7E-06	8.6E-06	7.9E-06 3.1E-08
A	Site Boundary	SE	.65	7.2E-06	7.2E-06	6.4E-06 3.3E-08
A	Site Boundary	SSE	.81	7.6E-06	7.6E-06	6.8E-06 3.0E-08
A	Nearest Res	SW	1.30	7.5E-07	7.4E-07	6.4E-07 2.6E-09
A	Nearest Res	WSW	1.30	8.1E-07	8.1E-07	7.0E-07 3.7E-09
A	Nearest Res	W	1.00	1.3E-06	1.3E-06	1.2E-06 6.2E-09
A	Nearest Res	WNW	1.70	4.1E-07	4.1E-07	3.4E-07 2.0E-09
A	Nearest Res	NW	.90	3.6E-06	3.6E-06	3.2E-06 2.2E-08
A	Nearest Res	NNW	1.90	1.3E-06	1.3E-06	1.1E-06 5.1E-09
A	Nearest Res	N	3.00	6.9E-07	6.8E-07	5.5E-07 2.0E-09
A	Nearest Res	ENE	1.70	7.7E-07	7.6E-07	6.4E-07 1.8E-09
A	Nearest Res	E	2.00	4.6E-07	4.6E-07	3.8E-07 1.1E-09
A	Nearest Res	ESE	2.30	4.5E-07	4.5E-07	3.7E-07 1.1E-09
A	Nearest Cow	NNW	3.50	3.9E-07	3.8E-07	3.0E-07 1.2E-09
A	Nearest Garde	SW	1.30	7.5E-07	7.4E-07	6.4E-07 2.6E-09
A	Nearest Garde	WSW	1.90	3.5E-07	3.5E-07	2.9E-07 1.4E-09
A	Nearest Garde	WNW	2.40	2.0E-07	1.9E-07	1.6E-07 8.6E-10
A	Nearest Garde	NW	2.90	2.8E-07	2.8E-07	2.2E-07 1.3E-09
A	Nearest Garde	NNW	1.90	1.3E-06	1.3E-06	1.1E-06 5.1E-09
A	Nearest Garde	ENE	2.80	2.9E-07	2.8E-07	2.3E-07 5.5E-10
A	Nearest Garde	E	2.00	4.6E-07	4.6E-07	3.8E-07 1.1E-09
A	Nearest Garde	ESE	2.30	4.5E-07	4.5E-07	3.7E-07 1.1E-09
A	Nearest Garde	SE	1.20	1.9E-06	1.9E-06	1.7E-06 7.7E-09

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**Atmospheric Diffusion Estimates**

**Ground Level Releases**

January-December 2004

VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.617E-05	1.531E-05	8.164E-06	4.084E-06	1.640E-06	8.875E-07	5.624E-07	3.926E-07	2.924E-07	2.280E-07	1.841E-07
SSW	2.061E-05	6.914E-06	3.692E-06	1.844E-06	7.325E-07	3.936E-07	2.481E-07	1.724E-07	1.279E-07	9.941E-08	8.004E-08
SW	1.593E-05	5.289E-06	2.798E-06	1.392E-06	5.555E-07	2.995E-07	1.893E-07	1.318E-07	9.799E-08	7.632E-08	6.155E-08
WSW	1.461E-05	4.852E-06	2.561E-06	1.271E-06	5.032E-07	2.699E-07	1.698E-07	1.179E-07	8.742E-08	6.793E-08	5.468E-08
W	1.380E-05	4.638E-06	2.437E-06	1.204E-06	4.760E-07	2.549E-07	1.603E-07	1.111E-07	8.233E-08	6.392E-08	5.141E-08
WNW	1.376E-05	4.566E-06	2.388E-06	1.178E-06	4.674E-07	2.510E-07	1.581E-07	1.099E-07	8.153E-08	6.340E-08	5.106E-08
NW	3.114E-05	1.027E-05	5.433E-06	2.705E-06	1.087E-06	5.887E-07	3.734E-07	2.608E-07	1.944E-07	1.517E-07	1.226E-07
NNW	5.968E-05	1.911E-05	1.006E-05	5.024E-06	2.049E-06	1.122E-06	7.169E-07	5.039E-07	3.775E-07	2.959E-07	2.400E-07
N	7.403E-05	2.361E-05	1.250E-05	6.270E-06	2.567E-06	1.408E-06	9.017E-07	6.346E-07	4.759E-07	3.734E-07	3.031E-07
NNE	4.065E-05	1.290E-05	6.781E-06	3.391E-06	1.391E-06	7.641E-07	4.897E-07	3.449E-07	2.588E-07	2.032E-07	1.650E-07
NE	2.384E-05	7.490E-06	3.927E-06	1.966E-06	8.107E-07	4.469E-07	2.872E-07	2.027E-07	1.523E-07	1.198E-07	9.738E-08
ENE	2.324E-05	7.330E-06	3.882E-06	1.954E-06	8.041E-07	4.426E-07	2.841E-07	2.003E-07	1.504E-07	1.181E-07	9.597E-08
E	1.976E-05	6.399E-06	3.424E-06	1.724E-06	7.028E-07	3.843E-07	2.454E-07	1.724E-07	1.290E-07	1.011E-07	8.193E-08
ESE	2.797E-05	8.890E-06	4.732E-06	2.384E-06	9.773E-07	5.366E-07	3.437E-07	2.420E-07	1.815E-07	1.424E-07	1.156E-07
SE	3.250E-05	1.051E-05	5.611E-06	2.824E-06	1.148E-06	6.269E-07	3.998E-07	2.805E-07	2.098E-07	1.642E-07	1.330E-07
SSE	5.344E-05	1.714E-05	9.132E-06	4.594E-06	1.877E-06	1.028E-06	6.573E-07	4.621E-07	3.462E-07	2.714E-07	2.201E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.528E-07	7.924E-08	5.170E-08	2.995E-08	2.043E-08	1.522E-08	1.198E-08	9.795E-09	8.232E-09	7.066E-09	6.166E-09
SSW	6.623E-08	3.402E-08	2.205E-08	1.266E-08	8.589E-09	6.371E-09	4.998E-09	4.075E-09	3.417E-09	2.927E-09	2.549E-09
SW	5.101E-08	2.638E-08	1.718E-08	9.930E-09	6.767E-09	5.037E-09	3.963E-09	3.239E-09	2.722E-09	2.336E-09	2.038E-09
WSW	4.524E-08	2.326E-08	1.509E-08	8.682E-09	5.904E-09	4.388E-09	3.448E-09	2.815E-09	2.364E-09	2.027E-09	1.767E-09
W	4.250E-08	2.177E-08	1.408E-08	8.072E-09	5.474E-09	4.060E-09	3.185E-09	2.597E-09	2.178E-09	1.866E-09	1.626E-09
WNW	4.227E-08	2.177E-08	1.414E-08	8.153E-09	5.555E-09	4.136E-09	3.255E-09	2.661E-09	2.237E-09	1.920E-09	1.676E-09
NW	1.018E-07	5.292E-08	3.460E-08	2.011E-08	1.376E-08	1.027E-08	8.100E-09	6.633E-09	5.583E-09	4.798E-09	4.192E-09
NNW	1.999E-07	1.053E-07	6.942E-08	4.082E-08	2.813E-08	2.112E-08	1.674E-08	1.376E-08	1.162E-08	1.001E-08	8.768E-09
N	2.526E-07	1.332E-07	8.794E-08	5.176E-08	3.569E-08	2.681E-08	2.124E-08	1.746E-08	1.474E-08	1.271E-08	1.113E-08
NNE	1.376E-07	7.273E-08	4.808E-08	2.837E-08	1.960E-08	1.474E-08	1.169E-08	9.622E-09	8.132E-09	7.014E-09	6.147E-09
NE	8.127E-08	4.311E-08	2.857E-08	1.691E-08	1.171E-08	8.818E-09	7.005E-09	5.770E-09	4.881E-09	4.214E-09	3.695E-09
ENE	8.004E-08	4.233E-08	2.799E-08	1.651E-08	1.140E-08	8.573E-09	6.799E-09	5.594E-09	4.726E-09	4.075E-09	3.571E-09
E	6.819E-08	3.578E-08	2.353E-08	1.378E-08	9.467E-09	7.090E-09	5.605E-09	4.599E-09	3.877E-09	3.336E-09	2.918E-09
ESE	9.634E-08	5.082E-08	3.355E-08	1.975E-08	1.361E-08	1.022E-08	8.099E-09	6.657E-09	5.620E-09	4.843E-09	4.241E-09
SE	1.107E-07	5.799E-08	3.810E-08	2.228E-08	1.529E-08	1.144E-08	9.036E-09	7.410E-09	6.243E-09	5.371E-09	4.695E-09
SSE	1.833E-07	9.644E-08	6.355E-08	3.730E-08	2.567E-08	1.925E-08	1.523E-08	1.251E-08	1.055E-08	9.086E-09	7.951E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.938E-06	1.849E-06	5.812E-07	2.965E-07	1.855E-07	8.334E-08	3.055E-08	1.531E-08	9.824E-09	7.078E-09	
SSW	3.586E-06	8.288E-07	2.566E-07	1.297E-07	8.066E-08	3.586E-08	1.294E-08	6.413E-09	4.088E-09	2.932E-09	
SW	2.727E-06	6.277E-07	1.957E-07	9.940E-08	6.202E-08	2.776E-08	1.014E-08	5.069E-09	3.249E-09	2.340E-09	
WSW	2.497E-06	5.700E-07	1.757E-07	8.870E-08	5.511E-08	2.451E-08	8.871E-09	4.416E-09	2.824E-09	2.031E-09	
W	2.378E-06	5.396E-07	1.659E-07	8.355E-08	5.182E-08	2.296E-08	8.253E-09	4.087E-09	2.605E-09	1.870E-09	
WNW	2.334E-06	5.292E-07	1.636E-07	8.273E-08	5.146E-08	2.293E-08	8.329E-09	4.162E-09	2.669E-09	1.923E-09	
NW	5.296E-06	1.225E-06	3.858E-07	1.971E-07	1.235E-07	5.563E-08	2.051E-08	1.033E-08	6.652E-09	4.806E-09	
NNW	9.833E-06	2.298E-06	7.396E-07	3.825E-07	2.417E-07	1.104E-07	4.153E-08	2.124E-08	1.379E-08	1.003E-08	
N	1.220E-05	2.875E-06	9.300E-07	4.822E-07	3.052E-07	1.396E-07	5.266E-08	2.695E-08	1.751E-08	1.273E-08	
NNE	6.634E-06	1.557E-06	5.049E-07	2.622E-07	1.662E-07	7.619E-08	2.885E-08	1.482E-08	9.646E-09	7.024E-09	
NE	3.847E-06	9.057E-07	2.960E-07	1.543E-07	9.804E-08	4.513E-08	1.719E-08	8.863E-09	5.784E-09	4.220E-09	
ENE	3.791E-06	8.989E-07	2.928E-07	1.523E-07	9.663E-08	4.433E-08	1.679E-08	8.618E-09	5.608E-09	4.081E-09	
E	3.330E-06	7.882E-07	2.533E-07	1.308E-07	8.252E-08	3.754E-08	1.403E-08	7.130E-09	4.611E-09	3.341E-09	
ESE	4.613E-06	1.094E-06	3.544E-07	1.839E-07	1.164E-07	5.326E-08	2.009E-08	1.028E-08	6.674E-09	4.850E-09	
SE	5.461E-06	1.289E-06	4.127E-07	2.126E-07	1.340E-07	6.086E-08	2.269E-08	1.150E-08	7.430E-09	5.379E-09	
SSE	8.896E-06	2.103E-06	6.780E-07	3.508E-07	2.217E-07	1.011E-07	3.796E-08	1.935E-08	1.254E-08	9.100E-09	

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.612E-05	1.527E-05	8.139E-06	4.068E-06	1.629E-06	8.800E-07	5.565E-07	3.875E-07	2.880E-07	2.241E-07	1.806E-07
SSW	2.059E-05	6.899E-06	3.680E-06	1.836E-06	7.279E-07	3.903E-07	2.454E-07	1.701E-07	1.259E-07	9.769E-08	7.848E-08
SW	1.591E-05	5.278E-06	2.789E-06	1.386E-06	5.521E-07	2.970E-07	1.873E-07	1.301E-07	9.653E-08	7.502E-08	6.036E-08
WSW	1.460E-05	4.843E-06	2.554E-06	1.266E-06	5.004E-07	2.679E-07	1.683E-07	1.166E-07	8.627E-08	6.691E-08	5.375E-08
W	1.379E-05	4.630E-06	2.430E-06	1.200E-06	4.735E-07	2.531E-07	1.588E-07	1.099E-07	8.124E-08	6.295E-08	5.053E-08
WNW	1.374E-05	4.558E-06	2.381E-06	1.174E-06	4.648E-07	2.491E-07	1.567E-07	1.086E-07	8.044E-08	6.243E-08	5.018E-08
NW	3.111E-05	1.025E-05	5.419E-06	2.696E-06	1.081E-06	5.844E-07	3.699E-07	2.579E-07	1.918E-07	1.494E-07	1.205E-07
NNW	5.961E-05	1.907E-05	1.003E-05	5.002E-06	2.036E-06	1.112E-06	7.089E-07	4.971E-07	3.715E-07	2.906E-07	2.351E-07
N	7.394E-05	2.355E-05	1.246E-05	6.242E-06	2.550E-06	1.396E-06	8.916E-07	6.260E-07	4.683E-07	3.666E-07	2.968E-07
NNE	4.060E-05	1.287E-05	6.757E-06	3.375E-06	1.381E-06	7.567E-07	4.837E-07	3.398E-07	2.544E-07	1.992E-07	1.614E-07
NE	2.381E-05	7.472E-06	3.913E-06	1.957E-06	8.048E-07	4.426E-07	2.837E-07	1.997E-07	1.497E-07	1.174E-07	9.521E-08
ENE	2.321E-05	7.313E-06	3.868E-06	1.944E-06	7.983E-07	4.383E-07	2.805E-07	1.973E-07	1.478E-07	1.158E-07	9.382E-08
E	1.974E-05	6.385E-06	3.412E-06	1.717E-06	6.980E-07	3.808E-07	2.426E-07	1.700E-07	1.269E-07	9.922E-08	8.023E-08
ESE	2.794E-05	8.869E-06	4.716E-06	2.373E-06	9.704E-07	5.315E-07	3.396E-07	2.385E-07	1.784E-07	1.396E-07	1.131E-07
SE	3.247E-05	1.049E-05	5.593E-06	2.811E-06	1.141E-06	6.213E-07	3.954E-07	2.767E-07	2.065E-07	1.612E-07	1.303E-07
SSE	5.337E-05	1.711E-05	9.100E-06	4.573E-06	1.863E-06	1.018E-06	6.494E-07	4.554E-07	3.403E-07	2.662E-07	2.153E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.495E-07	7.665E-08	4.944E-08	2.800E-08	1.867E-08	1.359E-08	1.046E-08	8.361E-09	6.872E-09	5.768E-09	4.923E-09
SSW	6.480E-08	3.292E-08	2.109E-08	1.184E-08	7.856E-09	5.699E-09	4.373E-09	3.487E-09	2.860E-09	2.397E-09	2.043E-09
SW	4.992E-08	2.553E-08	1.644E-08	9.292E-09	6.191E-09	4.507E-09	3.468E-09	2.773E-09	2.279E-09	1.914E-09	1.634E-09
WSW	4.439E-08	2.260E-08	1.451E-08	8.187E-09	5.458E-09	3.977E-09	3.064E-09	2.453E-09	2.020E-09	1.699E-09	1.453E-09
W	4.169E-08	2.114E-08	1.354E-08	7.600E-09	5.048E-09	3.667E-09	2.818E-09	2.251E-09	1.850E-09	1.553E-09	1.325E-09
WNW	4.145E-08	2.113E-08	1.358E-08	7.669E-09	5.118E-09	3.731E-09	2.876E-09	2.303E-09	1.896E-09	1.595E-09	1.364E-09
NW	9.981E-08	5.138E-08	3.325E-08	1.893E-08	1.269E-08	9.282E-09	7.172E-09	5.756E-09	4.748E-09	3.999E-09	3.425E-09
NNW	1.954E-07	1.017E-07	6.625E-08	3.804E-08	2.561E-08	1.878E-08	1.453E-08	1.167E-08	9.630E-09	8.110E-09	6.942E-09
N	2.468E-07	1.286E-07	8.390E-08	4.822E-08	3.246E-08	2.381E-08	1.842E-08	1.480E-08	1.221E-08	1.028E-08	8.797E-09
NNE	1.342E-07	7.003E-08	4.571E-08	2.629E-08	1.770E-08	1.298E-08	1.004E-08	8.062E-09	6.647E-09	5.594E-09	4.784E-09
NE	7.926E-08	4.150E-08	2.715E-08	1.566E-08	1.057E-08	7.758E-09	6.008E-09	4.826E-09	3.982E-09	3.353E-09	2.868E-09
ENE	7.804E-08	4.074E-08	2.659E-08	1.528E-08	1.028E-08	7.535E-09	5.825E-09	4.672E-09	3.849E-09	3.236E-09	2.766E-09
E	6.661E-08	3.453E-08	2.244E-08	1.282E-08	8.599E-09	6.287E-09	4.852E-09	3.887E-09	3.200E-09	2.690E-09	2.298E-09
ESE	9.399E-08	4.896E-08	3.191E-08	1.831E-08	1.231E-08	9.015E-09	6.966E-09	5.585E-09	4.601E-09	3.869E-09	3.306E-09
SE	1.081E-07	5.598E-08	3.634E-08	2.074E-08	1.389E-08	1.015E-08	7.825E-09	6.265E-09	5.155E-09	4.331E-09	3.699E-09
SSE	1.789E-07	9.293E-08	6.046E-08	3.461E-08	2.322E-08	1.698E-08	1.310E-08	1.050E-08	8.639E-09	7.258E-09	6.198E-09

DIRECTION FROM SITE	CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT											
	.5-1	1-2	2-3	3-4	SEGMENT BOUNDARIES IN MILES FROM THE SITE							
				4-5	5-10	10-20	20-30	30-40	40-50			
S	7.915E-06	1.838E-06	5.752E-07	2.921E-07	1.819E-07	8.073E-08	2.862E-08	1.369E-08	8.393E-09	5.782E-09		
SSW	3.576E-06	8.241E-07	2.539E-07	1.278E-07	7.911E-08	3.475E-08	1.213E-08	5.744E-09	3.501E-09	2.403E-09		
SW	2.719E-06	6.241E-07	1.937E-07	9.794E-08	6.083E-08	2.691E-08	9.502E-09	4.541E-09	2.783E-09	1.918E-09		
WSW	2.491E-06	5.672E-07	1.742E-07	8.756E-08	5.418E-08	2.385E-08	8.380E-09	4.007E-09	2.463E-09	1.703E-09		
W	2.372E-06	5.370E-07	1.644E-07	8.246E-08	5.094E-08	2.233E-08	7.784E-09	3.696E-09	2.260E-09	1.556E-09		
WNW	2.329E-06	5.266E-07	1.621E-07	8.164E-08	5.058E-08	2.229E-08	7.849E-09	3.759E-09	2.312E-09	1.598E-09		
NW	5.282E-06	1.219E-06	3.823E-07	1.945E-07	1.214E-07	5.408E-08	1.934E-08	9.347E-09	5.776E-09	4.008E-09		
NNW	9.803E-06	2.284E-06	7.316E-07	3.766E-07	2.368E-07	1.068E-07	3.878E-08	1.890E-08	1.171E-08	8.128E-09		
N	1.216E-05	2.858E-06	9.198E-07	4.746E-07	2.990E-07	1.350E-07	4.914E-08	2.396E-08	1.485E-08	1.030E-08		
NNE	6.612E-06	1.547E-06	4.990E-07	2.578E-07	1.625E-07	7.348E-08	2.679E-08	1.307E-08	8.089E-09	5.606E-09		
NE	3.835E-06	8.998E-07	2.924E-07	1.517E-07	9.588E-08	4.351E-08	1.595E-08	7.807E-09	4.842E-09	3.360E-09		
ENE	3.778E-06	8.930E-07	2.893E-07	1.497E-07	9.448E-08	4.274E-08	1.557E-08	7.584E-09	4.688E-09	3.244E-09		
E	3.319E-06	7.834E-07	2.504E-07	1.287E-07	8.081E-08	3.628E-08	1.308E-08	6.330E-09	3.901E-09	2.696E-09		
ESE	4.598E-06	1.087E-06	3.503E-07	1.808E-07	1.139E-07	5.139E-08	1.867E-08	9.074E-09	5.605E-09	3.877E-09		
SE	5.444E-06	1.281E-06	4.082E-07	2.093E-07	1.313E-07	5.884E-08	2.116E-08	1.022E-08	6.288E-09	4.341E-09		
SSE	8.867E-06	2.090E-06	6.702E-07	3.450E-07	2.169E-07	9.760E-08	3.529E-08	1.709E-08	1.053E-08	7.275E-09		

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.368E-05	1.397E-05	7.269E-06	3.571E-06	1.390E-06	7.332E-07	4.542E-07	3.107E-07	2.271E-07	1.742E-07	1.385E-07
SSW	1.950E-05	6.310E-06	3.287E-06	1.612E-06	6.210E-07	3.252E-07	2.003E-07	1.364E-07	9.935E-08	7.594E-08	6.018E-08
SW	1.507E-05	4.827E-06	2.491E-06	1.217E-06	4.710E-07	2.474E-07	1.529E-07	1.043E-07	7.614E-08	5.830E-08	4.628E-08
WSW	1.382E-05	4.429E-06	2.281E-06	1.111E-06	4.267E-07	2.230E-07	1.372E-07	9.336E-08	6.796E-08	5.192E-08	4.114E-08
W	1.306E-05	4.233E-06	2.170E-06	1.053E-06	4.037E-07	2.107E-07	1.295E-07	8.800E-08	6.400E-08	4.886E-08	3.868E-08
WNW	1.302E-05	4.168E-06	2.126E-06	1.031E-06	3.963E-07	2.074E-07	1.278E-07	8.700E-08	6.338E-08	4.846E-08	3.842E-08
NW	2.946E-05	9.374E-06	4.838E-06	2.366E-06	9.215E-07	4.865E-07	3.017E-07	2.065E-07	1.511E-07	1.160E-07	9.223E-08
NNW	5.646E-05	1.744E-05	8.956E-06	4.392E-06	1.737E-06	9.264E-07	5.789E-07	3.987E-07	2.932E-07	2.260E-07	1.804E-07
N	7.004E-05	2.154E-05	1.113E-05	5.481E-06	2.176E-06	1.163E-06	7.281E-07	5.021E-07	3.696E-07	2.851E-07	2.278E-07
NNE	3.846E-05	1.177E-05	6.037E-06	2.964E-06	1.179E-06	6.309E-07	3.953E-07	2.728E-07	2.010E-07	1.551E-07	1.240E-07
NE	2.256E-05	6.835E-06	3.496E-06	1.719E-06	6.871E-07	3.690E-07	2.318E-07	1.603E-07	1.183E-07	9.142E-08	7.316E-08
ENE	2.199E-05	6.689E-06	3.456E-06	1.708E-06	6.815E-07	3.655E-07	2.293E-07	1.584E-07	1.168E-07	9.016E-08	7.210E-08
E	1.870E-05	5.840E-06	3.048E-06	1.507E-06	5.957E-07	3.174E-07	1.982E-07	1.364E-07	1.002E-07	7.719E-08	6.158E-08
ESE	2.646E-05	8.113E-06	4.213E-06	2.084E-06	8.284E-07	4.431E-07	2.775E-07	1.914E-07	1.409E-07	1.087E-07	8.686E-08
SE	3.075E-05	9.590E-06	4.996E-06	2.469E-06	9.733E-07	5.178E-07	3.229E-07	2.220E-07	1.630E-07	1.254E-07	1.000E-07
SSE	5.056E-05	1.565E-05	8.130E-06	4.016E-06	1.591E-06	8.489E-07	5.306E-07	3.655E-07	2.688E-07	2.072E-07	1.654E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.132E-07	5.533E-08	3.429E-08	1.827E-08	1.163E-08	8.152E-09	6.076E-09	4.724E-09	3.788E-09	3.110E-09	2.601E-09
SSW	4.906E-08	2.376E-08	1.463E-08	7.724E-09	4.890E-09	3.414E-09	2.537E-09	1.967E-09	1.574E-09	1.290E-09	1.077E-09
SW	3.779E-08	1.842E-08	1.140E-08	6.059E-09	3.853E-09	2.700E-09	2.011E-09	1.563E-09	1.254E-09	1.029E-09	8.610E-10
WSW	3.354E-08	1.626E-08	1.003E-08	5.309E-09	3.371E-09	2.360E-09	1.758E-09	1.366E-09	1.095E-09	8.992E-10	7.522E-10
W	3.151E-08	1.522E-08	9.355E-09	4.934E-09	3.123E-09	2.181E-09	1.621E-09	1.258E-09	1.007E-09	8.258E-10	6.901E-10
WNW	3.134E-08	1.522E-08	9.390E-09	4.982E-09	3.169E-09	2.222E-09	1.656E-09	1.288E-09	1.034E-09	8.491E-10	7.108E-10
NW	7.544E-08	3.699E-08	2.298E-08	1.229E-08	7.850E-09	5.519E-09	4.124E-09	3.214E-09	2.582E-09	2.124E-09	1.780E-09
NNW	1.481E-07	7.348E-08	4.602E-08	2.487E-08	1.599E-08	1.130E-08	8.473E-09	6.622E-09	5.333E-09	4.396E-09	3.689E-09
N	1.870E-07	9.298E-08	5.829E-08	3.154E-08	2.028E-08	1.433E-08	1.075E-08	8.401E-09	6.767E-09	5.577E-09	4.681E-09
NNE	1.018E-07	5.072E-08	3.184E-08	1.726E-08	1.112E-08	7.863E-09	5.902E-09	4.615E-09	3.719E-09	3.066E-09	2.574E-09
NE	6.015E-08	3.006E-08	1.892E-08	1.029E-08	6.638E-09	4.702E-09	3.534E-09	2.766E-09	2.231E-09	1.840E-09	1.546E-09
ENE	5.923E-08	2.952E-08	1.853E-08	1.004E-08	6.465E-09	4.571E-09	3.429E-09	2.680E-09	2.159E-09	1.779E-09	1.493E-09
E	5.049E-08	2.497E-08	1.560E-08	8.394E-09	5.378E-09	3.789E-09	2.835E-09	2.211E-09	1.778E-09	1.463E-09	1.226E-09
ESE	7.131E-08	3.545E-08	2.222E-08	1.202E-08	7.724E-09	5.455E-09	4.089E-09	3.194E-09	2.571E-09	2.118E-09	1.777E-09
SE	8.195E-08	4.047E-08	2.525E-08	1.357E-08	8.685E-09	6.114E-09	4.571E-09	3.563E-09	2.863E-09	2.355E-09	1.973E-09
SSE	1.357E-07	6.728E-08	4.209E-08	2.270E-08	1.457E-08	1.027E-08	7.691E-09	6.002E-09	4.827E-09	3.974E-09	3.331E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	7.114E-06	1.583E-06	4.712E-07	2.308E-07	1.397E-07	5.883E-08	1.888E-08	8.248E-09	4.753E-09	3.122E-09	
SSW	3.214E-06	7.097E-07	2.080E-07	1.010E-07	6.073E-08	2.532E-08	7.999E-09	3.457E-09	1.980E-09	1.295E-09	
SW	2.444E-06	5.374E-07	1.587E-07	7.740E-08	4.670E-08	1.961E-08	6.265E-09	2.732E-09	1.573E-09	1.033E-09	
WSW	2.238E-06	4.883E-07	1.425E-07	6.911E-08	4.152E-08	1.733E-08	5.496E-09	2.389E-09	1.375E-09	9.028E-10	
W	2.132E-06	4.622E-07	1.345E-07	6.509E-08	3.904E-08	1.623E-08	5.112E-09	2.209E-09	1.266E-09	8.292E-10	
WNW	2.093E-06	4.533E-07	1.327E-07	6.444E-08	3.877E-08	1.621E-08	5.156E-09	2.248E-09	1.296E-09	8.525E-10	
NW	4.747E-06	1.049E-06	3.129E-07	1.535E-07	9.304E-08	3.931E-08	1.269E-08	5.583E-09	3.233E-09	2.132E-09	
NNW	8.813E-06	1.967E-06	5.995E-07	2.978E-07	1.819E-07	7.785E-08	2.563E-08	1.142E-08	6.666E-09	4.412E-09	
N	1.093E-05	2.460E-06	7.537E-07	3.753E-07	2.297E-07	9.846E-08	3.248E-08	1.449E-08	8.450E-09	5.597E-09	
NNE	5.946E-06	1.332E-06	4.091E-07	2.040E-07	1.250E-07	5.369E-08	1.777E-08	7.946E-09	4.641E-09	3.077E-09	
NE	3.448E-06	7.750E-07	2.398E-07	1.201E-07	7.375E-08	3.179E-08	1.058E-08	4.751E-09	2.781E-09	1.847E-09	
ENE	3.398E-06	7.691E-07	2.373E-07	1.185E-07	7.269E-08	3.124E-08	1.034E-08	4.619E-09	2.696E-09	1.786E-09	
E	2.984E-06	6.746E-07	2.053E-07	1.018E-07	6.210E-08	2.647E-08	8.654E-09	3.831E-09	2.224E-09	1.468E-09	
ESE	4.133E-06	9.362E-07	2.872E-07	1.431E-07	8.758E-08	3.754E-08	1.238E-08	5.514E-09	3.213E-09	2.126E-09	
SE	4.894E-06	1.103E-06	3.345E-07	1.655E-07	1.008E-07	4.293E-08	1.400E-08	6.183E-09	3.584E-09	2.364E-09	
SSE	7.972E-06	1.800E-06	5.494E-07	2.730E-07	1.668E-07	7.129E-08	2.339E-08	1.038E-08	6.037E-09	3.989E-09	

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.120E-07	7.170E-08	3.682E-08	1.750E-08	6.287E-09	3.118E-09	1.836E-09	1.202E-09	8.459E-10	6.269E-10	4.831E-10
SSW	9.094E-08	3.075E-08	1.579E-08	7.507E-09	2.696E-09	1.337E-09	7.874E-10	5.156E-10	3.628E-10	2.688E-10	2.072E-10
SW	6.715E-08	2.271E-08	1.166E-08	5.543E-09	1.991E-09	9.874E-10	5.814E-10	3.807E-10	2.679E-10	1.985E-10	1.530E-10
WSW	7.480E-08	2.529E-08	1.299E-08	6.174E-09	2.218E-09	1.100E-09	6.476E-10	4.241E-10	2.984E-10	2.211E-10	1.704E-10
W	7.797E-08	2.637E-08	1.354E-08	6.436E-09	2.312E-09	1.147E-09	6.751E-10	4.420E-10	3.110E-10	2.305E-10	1.776E-10
WNW	7.692E-08	2.601E-08	1.336E-08	6.349E-09	2.281E-09	1.131E-09	6.660E-10	4.361E-10	3.068E-10	2.274E-10	1.752E-10
NW	1.734E-07	5.864E-08	3.011E-08	1.431E-08	5.142E-09	2.550E-09	1.501E-09	9.831E-10	6.918E-10	5.127E-10	3.951E-10
NNW	2.753E-07	9.309E-08	4.780E-08	2.272E-08	8.162E-09	4.048E-09	2.383E-09	1.561E-09	1.098E-09	8.138E-10	6.272E-10
N	3.470E-07	1.173E-07	6.024E-08	2.864E-08	1.029E-08	5.102E-09	3.004E-09	1.967E-09	1.384E-09	1.026E-09	7.905E-10
NNE	1.590E-07	5.376E-08	2.760E-08	1.312E-08	4.714E-09	2.338E-09	1.377E-09	9.013E-10	6.342E-10	4.700E-10	3.622E-10
NE	8.758E-08	2.962E-08	1.521E-08	7.229E-09	2.597E-09	1.288E-09	7.583E-10	4.965E-10	3.494E-10	2.589E-10	1.995E-10
ENE	7.965E-08	2.694E-08	1.383E-08	6.575E-09	2.362E-09	1.171E-09	6.896E-10	4.516E-10	3.177E-10	2.355E-10	1.815E-10
E	8.199E-08	2.773E-08	1.424E-08	6.768E-09	2.431E-09	1.206E-09	7.099E-10	4.648E-10	3.271E-10	2.424E-10	1.868E-10
ESE	1.116E-07	3.775E-08	1.938E-08	9.215E-09	3.310E-09	1.642E-09	9.666E-10	6.329E-10	4.453E-10	3.300E-10	2.543E-10
SE	1.685E-07	5.696E-08	2.925E-08	1.390E-08	4.995E-09	2.477E-09	1.558E-09	9.550E-10	6.720E-10	4.980E-10	3.838E-10
SSE	2.322E-07	7.853E-08	4.032E-08	1.917E-08	6.886E-09	3.415E-09	2.011E-09	1.317E-09	9.264E-10	6.866E-10	5.291E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	3.838E-10	1.705E-10	1.033E-10	5.220E-11	3.159E-11	2.118E-11	1.518E-11	1.140E-11	8.862E-12	7.079E-12	5.778E-12
SSW	1.646E-10	7.312E-11	4.429E-11	2.239E-11	1.355E-11	9.085E-12	6.510E-12	4.888E-12	3.801E-12	3.036E-12	2.478E-12
SW	1.215E-10	5.399E-11	3.271E-11	1.653E-11	1.001E-11	6.708E-12	4.807E-12	3.609E-12	2.806E-12	2.242E-12	1.830E-12
WSW	1.354E-10	6.014E-11	3.643E-11	1.841E-11	1.115E-11	7.473E-12	5.354E-12	4.021E-12	3.126E-12	2.497E-12	2.038E-12
W	1.411E-10	6.269E-11	3.798E-11	1.919E-11	1.162E-11	7.789E-12	5.581E-12	4.191E-12	3.259E-12	2.603E-12	2.125E-12
WNW	1.392E-10	6.184E-11	3.746E-11	1.894E-11	1.146E-11	7.684E-12	5.506E-12	4.134E-12	3.215E-12	2.568E-12	2.096E-12
NW	3.139E-10	1.394E-10	8.446E-11	4.269E-11	2.584E-11	1.732E-11	1.241E-11	9.321E-12	7.247E-12	5.789E-12	4.725E-12
NNW	4.982E-10	2.213E-10	1.341E-10	6.777E-11	4.102E-11	2.750E-11	1.971E-11	1.480E-11	1.151E-11	9.190E-12	7.501E-12
N	6.280E-10	2.790E-10	1.690E-10	8.542E-11	5.170E-11	3.466E-11	2.484E-11	1.865E-11	1.450E-11	1.158E-11	9.455E-12
NNE	2.877E-10	1.278E-10	7.743E-11	3.914E-11	2.369E-11	1.588E-11	1.138E-11	8.546E-12	6.644E-12	5.308E-12	4.332E-12
NE	1.585E-10	7.042E-11	4.266E-11	2.156E-11	1.305E-11	8.749E-12	6.269E-12	4.708E-12	3.660E-12	2.924E-12	2.386E-12
ENE	1.442E-10	6.404E-11	3.879E-11	1.961E-11	1.187E-11	7.957E-12	5.702E-12	4.281E-12	3.329E-12	2.659E-12	2.170E-12
E	1.484E-10	6.592E-11	3.993E-11	2.018E-11	1.222E-11	8.191E-12	5.869E-12	4.407E-12	3.427E-12	2.737E-12	2.234E-12
ESE	2.021E-10	8.976E-11	5.437E-11	2.748E-11	1.663E-11	1.115E-11	7.991E-12	6.001E-12	4.666E-12	3.727E-12	3.042E-12
SE	3.049E-10	1.354E-10	8.204E-11	4.147E-11	2.510E-11	1.683E-11	1.206E-11	9.054E-12	7.040E-12	5.624E-12	4.590E-12
SSE	4.203E-10	1.867E-10	1.131E-10	5.717E-11	3.460E-11	2.320E-11	1.662E-11	1.248E-11	9.706E-12	7.753E-12	6.328E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	3.599E-08	7.371E-09	1.924E-09	8.642E-10	4.889E-10	1.880E-10	5.439E-11	2.156E-11	1.151E-11	7.125E-12
SSW	1.543E-08	3.161E-09	8.253E-10	3.706E-10	2.097E-10	8.063E-11	2.333E-11	9.245E-12	4.937E-12	3.056E-12
SW	1.140E-08	2.334E-09	6.094E-10	2.737E-10	1.548E-10	5.954E-11	1.723E-11	6.827E-12	3.646E-12	2.257E-12
WSW	1.269E-08	2.600E-09	6.788E-10	3.049E-10	1.725E-10	6.632E-11	1.919E-11	7.605E-12	4.061E-12	2.514E-12
W	1.323E-08	2.710E-09	7.076E-10	3.178E-10	1.798E-10	6.914E-11	2.000E-11	7.927E-12	4.233E-12	2.620E-12
WNW	1.305E-08	2.674E-09	6.980E-10	3.135E-10	1.774E-10	6.820E-11	1.973E-11	7.820E-12	4.176E-12	2.585E-12
NW	2.943E-08	6.028E-09	1.574E-09	7.068E-10	3.998E-10	1.538E-10	4.448E-11	1.763E-11	9.415E-12	5.827E-12
NNW	4.672E-08	9.570E-09	2.498E-09	1.122E-09	6.347E-10	2.441E-10	7.061E-11	2.799E-11	1.495E-11	9.251E-12
N	5.888E-08	1.206E-08	3.149E-09	1.414E-09	8.000E-10	3.076E-10	8.900E-11	3.527E-11	1.884E-11	1.166E-11
NNE	2.698E-08	5.527E-09	1.443E-09	6.480E-10	3.666E-10	1.410E-10	4.078E-11	1.616E-11	8.631E-12	5.342E-12
NE	1.486E-08	3.044E-09	7.948E-10	3.570E-10	2.019E-10	7.766E-11	2.247E-11	8.904E-12	4.755E-12	2.943E-12
ENE	1.352E-08	2.769E-09	7.228E-10	3.246E-10	1.837E-10	7.063E-11	2.043E-11	8.098E-12	4.324E-12	2.677E-12
E	1.391E-08	2.850E-09	7.440E-10	3.342E-10	1.890E-10	7.270E-11	2.103E-11	8.336E-12	4.451E-12	2.755E-12
ESE	1.895E-08	3.881E-09	1.013E-09	4.550E-10	2.574E-10	9.899E-11	2.864E-11	1.135E-11	6.061E-12	3.751E-12
SE	2.859E-08	5.856E-09	1.529E-09	6.866E-10	3.884E-10	1.494E-10	4.321E-11	1.713E-11	9.145E-12	5.660E-12
SSE	3.941E-08	8.073E-09	2.107E-09	9.465E-10	5.355E-10	2.059E-10	5.957E-11	2.361E-11	1.261E-11	7.804E-12

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2004

CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
 ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
 NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

			UNDEPLETED		DEPLETED		
A	Site Boundary	S	.80	7.0E-06	7.0E-06	6.2E-06	3.1E-08
A	Site Boundary	SSW	.82	2.9E-06	2.9E-06	2.6E-06	1.2E-08
A	Site Boundary	SW	.97	1.5E-06	1.5E-06	1.3E-06	5.9E-09
A	Site Boundary	WSW	.93	1.5E-06	1.5E-06	1.3E-06	7.5E-09
A	Site Boundary	W	.91	1.5E-06	1.5E-06	1.3E-06	8.2E-09
A	Site Boundary	WNW	.94	1.4E-06	1.4E-06	1.2E-06	7.5E-09
A	Site Boundary	NW	.81	4.5E-06	4.5E-06	4.0E-06	2.5E-08
A	Site Boundary	NNW	.69	1.2E-05	1.1E-05	1.0E-05	5.5E-08
A	Site Boundary	N	.67	1.5E-05	1.5E-05	1.3E-05	7.2E-08
A	Site Boundary	NNE	.60	9.6E-06	9.6E-06	8.7E-06	4.0E-08
A	Site Boundary	NE	.62	5.2E-06	5.2E-06	4.7E-06	2.1E-08
A	Site Boundary	ENE	.59	5.7E-06	5.7E-06	5.1E-06	2.1E-08
A	Site Boundary	E	.53	5.9E-06	5.9E-06	5.4E-06	2.6E-08
A	Site Boundary	ESE	.54	7.9E-06	7.9E-06	7.2E-06	3.4E-08
A	Site Boundary	SE	.65	7.0E-06	7.0E-06	6.3E-06	3.7E-08
A	Site Boundary	SSE	.81	7.6E-06	7.5E-06	6.7E-06	3.3E-08
A	Nearest Res	SW	1.30	7.6E-07	7.6E-07	6.5E-07	2.8E-09
A	Nearest Res	WSW	1.30	6.9E-07	6.9E-07	5.9E-07	3.2E-09
A	Nearest Res	W	1.00	1.2E-06	1.2E-06	1.1E-06	6.4E-09
A	Nearest Res	WNW	1.70	3.6E-07	3.5E-07	3.0E-07	1.7E-09
A	Nearest Res	NW	.90	3.5E-06	3.5E-06	3.1E-06	1.9E-08
A	Nearest Res	NNW	1.90	1.2E-06	1.2E-06	1.0E-06	4.6E-09
A	Nearest Res	N	3.00	6.3E-07	6.3E-07	5.0E-07	2.0E-09
A	Nearest Res	ENE	1.70	6.2E-07	6.1E-07	5.2E-07	1.7E-09
A	Nearest Res	E	2.00	3.8E-07	3.8E-07	3.2E-07	1.2E-09
A	Nearest Res	ESE	2.30	4.1E-07	4.0E-07	3.3E-07	1.2E-09
A	Nearest Cow	NNW	3.50	3.8E-07	3.7E-07	2.9E-07	1.1E-09
A	Nearest Garde	SW	1.30	7.6E-07	7.6E-07	6.5E-07	2.8E-09
A	Nearest Garde	WSW	1.90	3.0E-07	3.0E-07	2.5E-07	1.2E-09
A	Nearest Garde	WNW	2.40	1.7E-07	1.7E-07	1.4E-07	7.3E-10
A	Nearest Garde	NW	2.90	2.8E-07	2.8E-07	2.2E-07	1.1E-09
A	Nearest Garde	NNW	1.90	1.2E-06	1.2E-06	1.0E-06	4.6E-09
A	Nearest Garde	ENE	2.80	2.3E-07	2.3E-07	1.8E-07	5.3E-10
A	Nearest Garde	E	2.00	3.8E-07	3.8E-07	3.2E-07	1.2E-09
A	Nearest Garde	ESE	2.30	4.1E-07	4.0E-07	3.3E-07	1.2E-09
A	Nearest Garde	SE	1.20	1.9E-06	1.9E-06	1.6E-06	8.7E-09

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**Atmospheric Diffusion Estimates**

**Elevated Releases**

**January-March 2004**

ERP ELEVATED STACK RELEASES - JAN-MAR 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.360E-09	3.557E-08	6.355E-08	6.707E-08	6.073E-08	4.969E-08	4.014E-08	3.280E-08	2.728E-08	3.094E-08	3.386E-08
SSW	3.207E-11	4.267E-09	1.823E-08	2.879E-08	3.352E-08	2.952E-08	2.461E-08	2.627E-08	2.652E-08	2.300E-08	2.025E-08
SW	3.207E-11	4.159E-09	3.295E-08	7.483E-08	1.165E-07	7.792E-08	5.560E-08	4.184E-08	3.282E-08	2.658E-08	2.209E-08
WSW	3.817E-09	1.430E-08	3.485E-08	6.971E-08	1.032E-07	6.399E-08	4.373E-08	3.199E-08	2.459E-08	1.961E-08	1.610E-08
W	7.754E-09	8.167E-08	1.913E-07	2.074E-07	1.709E-07	1.037E-07	6.991E-08	5.069E-08	3.870E-08	3.071E-08	2.511E-08
WNW	1.153E-08	4.736E-08	1.325E-07	1.738E-07	1.770E-07	1.046E-07	6.953E-08	5.206E-08	4.095E-08	3.227E-08	2.625E-08
NW	3.091E-08	2.873E-08	7.299E-08	1.365E-07	2.656E-07	1.606E-07	1.084E-07	8.069E-08	6.295E-08	4.992E-08	4.082E-08
NNW	5.050E-08	5.934E-08	7.359E-08	8.310E-08	1.147E-07	1.222E-07	1.234E-07	1.183E-07	1.120E-07	8.907E-08	7.302E-08
N	5.367E-08	7.371E-08	7.747E-08	6.819E-08	5.831E-08	4.998E-08	4.237E-08	3.543E-08	3.009E-08	2.593E-08	2.266E-08
NNE	1.002E-08	1.253E-08	1.829E-08	2.383E-08	2.942E-08	2.850E-08	2.563E-08	2.262E-08	1.995E-08	1.771E-08	1.586E-08
NE	3.744E-08	1.633E-08	1.494E-08	1.984E-08	2.409E-08	2.228E-08	1.929E-08	1.651E-08	1.422E-08	1.236E-08	1.087E-08
ENE	2.907E-11	5.935E-09	1.913E-08	2.455E-08	2.538E-08	2.195E-08	1.835E-08	1.538E-08	1.305E-08	1.124E-08	9.811E-09
E	3.207E-11	4.153E-09	1.583E-08	2.379E-08	2.728E-08	2.425E-08	2.047E-08	1.724E-08	1.468E-08	1.266E-08	1.106E-08
ESE	3.429E-11	3.218E-09	1.700E-08	2.867E-08	3.559E-08	3.277E-08	2.823E-08	2.408E-08	2.066E-08	1.790E-08	1.570E-08
SE	2.859E-09	1.796E-08	4.787E-08	6.825E-08	7.460E-08	6.401E-08	5.252E-08	4.316E-08	3.594E-08	3.038E-08	2.606E-08
SSE	6.520E-08	5.218E-08	6.097E-08	6.519E-08	6.559E-08	5.737E-08	4.842E-08	4.085E-08	3.481E-08	3.002E-08	2.623E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.039E-08	2.239E-08	1.475E-08	8.629E-09	6.291E-09	4.888E-09	3.838E-09	3.132E-09	2.662E-09	2.302E-09	2.005E-09
SSW	1.857E-08	1.350E-08	8.699E-09	4.938E-09	3.437E-09	2.543E-09	1.974E-09	1.596E-09	1.328E-09	1.130E-09	9.785E-10
SW	1.989E-08	1.346E-08	8.709E-09	4.961E-09	3.433E-09	2.567E-09	2.016E-09	1.628E-09	1.353E-09	1.151E-09	9.958E-10
WSW	1.398E-08	8.362E-09	5.649E-09	3.297E-09	2.193E-09	1.601E-09	1.240E-09	1.000E-09	8.310E-10	7.059E-10	6.104E-10
W	2.101E-08	1.112E-08	7.557E-09	4.526E-09	3.121E-09	2.280E-09	1.765E-09	1.422E-09	1.180E-09	1.002E-09	8.659E-10
WNW	2.213E-08	1.213E-08	8.159E-09	4.915E-09	3.369E-09	2.516E-09	1.989E-09	1.625E-09	1.359E-09	1.161E-09	1.008E-09
NW	3.455E-08	1.906E-08	1.285E-08	7.647E-09	5.163E-09	3.815E-09	3.009E-09	2.449E-09	2.047E-09	1.748E-09	1.518E-09
NNW	6.290E-08	3.680E-08	2.416E-08	1.410E-08	9.666E-09	7.223E-09	5.755E-09	4.749E-09	4.056E-09	3.496E-09	3.050E-09
N	2.010E-08	1.289E-08	1.089E-08	9.151E-09	8.018E-09	6.743E-09	5.324E-09	4.346E-09	3.644E-09	3.121E-09	2.718E-09
NNE	1.882E-08	2.995E-08	1.948E-08	1.123E-08	7.621E-09	5.655E-09	4.438E-09	3.618E-09	3.033E-09	2.597E-09	2.262E-09
NE	1.208E-08	1.701E-08	1.103E-08	6.335E-09	4.293E-09	3.181E-09	2.514E-09	2.059E-09	1.732E-09	1.481E-09	1.289E-09
ENE	1.043E-08	1.457E-08	9.586E-09	5.598E-09	3.833E-09	2.861E-09	2.339E-09	1.953E-09	1.638E-09	1.403E-09	1.222E-09
E	1.181E-08	1.542E-08	1.009E-08	5.850E-09	3.984E-09	2.961E-09	2.326E-09	1.897E-09	1.629E-09	1.417E-09	1.232E-09
ESE	1.639E-08	2.079E-08	1.391E-08	8.281E-09	5.733E-09	4.312E-09	3.419E-09	2.810E-09	2.372E-09	2.043E-09	1.788E-09
SE	2.266E-08	1.339E-08	9.899E-09	6.649E-09	4.729E-09	3.646E-09	2.960E-09	2.488E-09	2.075E-09	1.769E-09	1.534E-09
SSE	2.851E-08	3.557E-08	2.299E-08	1.314E-08	8.874E-09	6.560E-09	5.132E-09	4.174E-09	3.492E-09	2.986E-09	2.596E-09

DIRECTION FROM SITE	CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	5.890E-08	5.723E-08	3.975E-08	3.025E-08	3.171E-08	2.077E-08	8.949E-09	4.842E-09	3.155E-09	2.299E-09
SSW	1.982E-08	3.069E-08	2.659E-08	2.511E-08	2.044E-08	1.249E-08	5.107E-09	2.554E-09	1.602E-09	1.133E-09
SW	4.516E-08	9.011E-08	5.605E-08	3.302E-08	2.260E-08	1.278E-08	5.115E-09	2.577E-09	1.634E-09	1.153E-09
WSW	4.578E-08	7.832E-08	4.444E-08	2.481E-08	1.635E-08	8.404E-09	3.329E-09	1.615E-09	1.004E-09	7.076E-10
W	1.741E-07	1.491E-07	7.123E-08	3.908E-08	2.525E-08	1.173E-08	4.575E-09	2.298E-09	1.428E-09	1.004E-09
WNW	1.320E-07	1.441E-07	7.189E-08	4.082E-08	2.651E-08	1.259E-08	4.949E-09	2.533E-09	1.628E-09	1.163E-09
NW	9.137E-08	1.902E-07	1.112E-07	6.306E-08	4.119E-08	1.974E-08	7.698E-09	3.852E-09	2.456E-09	1.751E-09
NNW	7.465E-08	1.110E-07	1.210E-07	1.051E-07	7.402E-08	3.698E-08	1.437E-08	7.287E-09	4.772E-09	3.496E-09
N	7.251E-08	5.680E-08	4.162E-08	3.003E-08	2.268E-08	1.360E-08	9.035E-09	6.516E-09	4.358E-09	3.127E-09
NNE	1.947E-08	2.777E-08	2.519E-08	1.986E-08	1.750E-08	2.282E-08	1.146E-08	5.693E-09	3.629E-09	2.602E-09
NE	1.743E-08	2.234E-08	1.898E-08	1.417E-08	1.176E-08	1.326E-08	6.471E-09	3.211E-09	2.064E-09	1.484E-09
ENE	1.860E-08	2.367E-08	1.812E-08	1.303E-08	1.046E-08	1.143E-08	5.700E-09	2.911E-09	1.943E-09	1.405E-09
E	1.677E-08	2.516E-08	2.019E-08	1.464E-08	1.181E-08	1.225E-08	5.963E-09	2.980E-09	1.917E-09	1.411E-09
ESE	1.912E-08	3.280E-08	2.778E-08	2.059E-08	1.661E-08	1.675E-08	8.399E-09	4.334E-09	2.817E-09	2.046E-09
SE	5.028E-08	6.848E-08	5.184E-08	3.588E-08	2.608E-08	1.390E-08	6.518E-09	3.661E-09	2.466E-09	1.773E-09
SSE	6.089E-08	6.185E-08	4.778E-08	3.471E-08	2.820E-08	2.841E-08	1.343E-08	6.606E-09	4.188E-09	2.991E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.358E-09	3.555E-08	6.350E-08	6.700E-08	6.062E-08	4.958E-08	4.002E-08	3.269E-08	2.717E-08	3.081E-08	3.368E-08
SSW	3.205E-11	4.262E-09	1.821E-08	2.874E-08	3.344E-08	2.942E-08	2.451E-08	2.613E-08	2.635E-08	2.283E-08	2.008E-08
SW	3.205E-11	4.154E-09	3.290E-08	7.469E-08	1.162E-07	7.760E-08	5.531E-08	4.158E-08	3.258E-08	2.636E-08	2.188E-08
WSW	3.815E-09	1.429E-08	3.481E-08	6.958E-08	1.028E-07	6.374E-08	4.351E-08	3.180E-08	2.442E-08	1.945E-08	1.595E-08
W	7.750E-09	8.161E-08	1.911E-07	2.071E-07	1.705E-07	1.034E-07	6.965E-08	5.046E-08	3.850E-08	3.053E-08	2.493E-08
WNW	1.153E-08	4.728E-08	1.323E-07	1.735E-07	1.765E-07	1.042E-07	6.923E-08	5.180E-08	4.071E-08	3.205E-08	2.605E-08
NW	3.089E-08	2.870E-08	7.291E-08	1.363E-07	2.650E-07	1.601E-07	1.080E-07	8.035E-08	6.264E-08	4.964E-08	4.056E-08
NNW	5.048E-08	5.930E-08	7.351E-08	8.299E-08	1.145E-07	1.218E-07	1.230E-07	1.178E-07	1.115E-07	8.860E-08	7.258E-08
N	5.366E-08	7.367E-08	7.740E-08	6.811E-08	5.820E-08	4.985E-08	4.222E-08	3.528E-08	2.994E-08	2.579E-08	2.252E-08
NNE	1.002E-08	1.252E-08	1.827E-08	2.379E-08	2.935E-08	2.840E-08	2.552E-08	2.251E-08	1.984E-08	1.760E-08	1.574E-08
NE	3.739E-08	1.629E-08	1.491E-08	1.980E-08	2.403E-08	2.220E-08	1.921E-08	1.643E-08	1.414E-08	1.228E-08	1.079E-08
ENE	2.905E-11	5.921E-09	1.908E-08	2.448E-08	2.529E-08	2.185E-08	1.825E-08	1.528E-08	1.296E-08	1.114E-08	9.718E-09
E	3.205E-11	4.148E-09	1.581E-08	2.375E-08	2.723E-08	2.418E-08	2.041E-08	1.718E-08	1.461E-08	1.260E-08	1.100E-08
ESE	3.428E-11	3.216E-09	1.698E-08	2.864E-08	3.552E-08	3.268E-08	2.815E-08	2.399E-08	2.057E-08	1.781E-08	1.561E-08
SE	2.859E-09	1.796E-08	4.784E-08	6.819E-08	7.448E-08	6.388E-08	5.238E-08	4.302E-08	3.580E-08	3.025E-08	2.593E-08
SSE	6.519E-08	5.216E-08	6.093E-08	6.513E-08	6.548E-08	5.724E-08	4.829E-08	4.071E-08	3.466E-08	2.988E-08	2.609E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.021E-08	2.214E-08	1.452E-08	8.427E-09	6.084E-09	4.680E-09	3.642E-09	2.944E-09	2.479E-09	2.122E-09	1.832E-09
SSW	1.840E-08	1.332E-08	8.547E-09	4.810E-09	3.321E-09	2.437E-09	1.876E-09	1.504E-09	1.242E-09	1.048E-09	9.004E-10
SW	1.968E-08	1.326E-08	8.537E-09	4.817E-09	3.302E-09	2.446E-09	1.904E-09	1.523E-09	1.255E-09	1.058E-09	9.070E-10
WSW	1.384E-08	8.243E-09	5.543E-09	3.207E-09	2.113E-09	1.529E-09	1.174E-09	9.387E-10	7.730E-10	6.510E-10	5.580E-10
W	2.085E-08	1.099E-08	7.439E-09	4.420E-09	3.024E-09	2.191E-09	1.683E-09	1.345E-09	1.108E-09	9.332E-10	8.000E-10
WNW	2.194E-08	1.198E-08	8.024E-09	4.793E-09	3.257E-09	2.411E-09	1.890E-09	1.530E-09	1.269E-09	1.074E-09	9.248E-10
NW	3.431E-08	1.886E-08	1.267E-08	7.488E-09	5.021E-09	3.684E-09	2.886E-09	2.332E-09	1.936E-09	1.642E-09	1.417E-09
NNW	6.248E-08	3.643E-08	2.384E-08	1.383E-08	9.412E-09	6.987E-09	5.530E-09	4.533E-09	3.845E-09	3.293E-09	2.854E-09
N	1.996E-08	1.275E-08	1.074E-08	8.963E-09	7.805E-09	6.521E-09	5.115E-09	4.148E-09	3.455E-09	2.940E-09	2.545E-09
NNE	1.867E-08	2.960E-08	1.918E-08	1.096E-08	7.386E-09	5.438E-09	4.234E-09	3.425E-09	2.849E-09	2.421E-09	2.092E-09
NE	1.199E-08	1.684E-08	1.088E-08	6.207E-09	4.177E-09	3.075E-09	2.414E-09	1.964E-09	1.640E-09	1.394E-09	1.205E-09
ENE	1.032E-08	1.434E-08	9.391E-09	5.429E-09	3.681E-09	2.721E-09	2.203E-09	1.823E-09	1.514E-09	1.285E-09	1.109E-09
E	1.175E-08	1.529E-08	9.982E-09	5.755E-09	3.898E-09	2.881E-09	2.251E-09	1.827E-09	1.560E-09	1.349E-09	1.167E-09
ESE	1.629E-08	2.060E-08	1.373E-08	8.125E-09	5.589E-09	4.177E-09	3.290E-09	2.687E-09	2.254E-09	1.929E-09	1.678E-09
SE	2.253E-08	1.328E-08	9.789E-09	6.537E-09	4.622E-09	3.542E-09	2.858E-09	2.387E-09	1.979E-09	1.677E-09	1.445E-09
SSE	2.833E-08	3.513E-08	2.260E-08	1.281E-08	8.577E-09	6.286E-09	4.875E-09	3.931E-09	3.261E-09	2.764E-09	2.383E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	5.884E-08	5.713E-08	3.964E-08	3.014E-08	3.155E-08	2.055E-08	8.740E-09	4.639E-09	2.966E-09	2.120E-09	
SSW	1.979E-08	3.061E-08	2.647E-08	2.494E-08	2.027E-08	1.233E-08	4.979E-09	2.448E-09	1.511E-09	1.051E-09	
SW	4.509E-08	8.982E-08	5.576E-08	3.278E-08	2.239E-08	1.259E-08	4.970E-09	2.458E-09	1.530E-09	1.060E-09	
WSW	4.571E-08	7.807E-08	4.422E-08	2.464E-08	1.621E-08	8.287E-09	3.240E-09	1.543E-09	9.429E-10	6.527E-10	
W	1.739E-07	1.488E-07	7.096E-08	3.888E-08	2.508E-08	1.160E-08	4.470E-09	2.210E-09	1.351E-09	9.356E-10	
WNW	1.317E-07	1.437E-07	7.158E-08	4.058E-08	2.631E-08	1.243E-08	4.828E-09	2.428E-09	1.533E-09	1.076E-09	
NW	9.124E-08	1.898E-07	1.108E-07	6.275E-08	4.094E-08	1.954E-08	7.542E-09	3.721E-09	2.339E-09	1.645E-09	
NNW	7.457E-08	1.108E-07	1.206E-07	1.046E-07	7.359E-08	3.663E-08	1.409E-08	7.051E-09	4.556E-09	3.294E-09	
N	7.244E-08	5.669E-08	4.148E-08	2.988E-08	2.254E-08	1.346E-08	8.843E-09	6.301E-09	4.160E-09	2.946E-09	
NNE	1.945E-08	2.769E-08	2.508E-08	1.975E-08	1.738E-08	2.254E-08	1.120E-08	5.476E-09	3.437E-09	2.426E-09	
NE	1.739E-08	2.228E-08	1.890E-08	1.409E-08	1.168E-08	1.311E-08	6.344E-09	3.105E-09	1.969E-09	1.397E-09	
ENE	1.855E-08	2.358E-08	1.802E-08	1.293E-08	1.036E-08	1.125E-08	5.533E-09	2.770E-09	1.814E-09	1.287E-09	
E	1.675E-08	2.510E-08	2.012E-08	1.458E-08	1.175E-08	1.214E-08	5.869E-09	2.900E-09	1.846E-09	1.344E-09	
ESE	1.910E-08	3.273E-08	2.769E-08	2.050E-08	1.651E-08	1.659E-08	8.245E-09	4.199E-09	2.695E-09	1.932E-09	
SE	5.025E-08	6.837E-08	5.170E-08	3.575E-08	2.595E-08	1.378E-08	6.408E-09	3.556E-09	2.366E-09	1.681E-09	
SSE	6.085E-08	6.174E-08	4.764E-08	3.457E-08	2.804E-08	2.805E-08	1.310E-08	6.333E-09	3.946E-09	2.770E-09	

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ERP ELEVATED STACK RELEASES - JAN-MAR 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.360E-09	3.525E-08	6.248E-08	6.598E-08	5.955E-08	4.844E-08	3.888E-08	3.159E-08	2.613E-08	2.965E-08	3.249E-08	
SSW	3.206E-11	4.234E-09	1.809E-08	2.863E-08	3.311E-08	2.892E-08	2.392E-08	2.539E-08	2.554E-08	2.204E-08	1.933E-08	
SW	3.206E-11	4.126E-09	3.277E-08	7.460E-08	1.151E-07	7.619E-08	5.395E-08	4.034E-08	3.146E-08	2.536E-08	2.098E-08	
WSW	3.816E-09	1.417E-08	3.454E-08	6.936E-08	1.016E-07	6.242E-08	4.231E-08	3.074E-08	2.349E-08	1.863E-08	1.522E-08	
W	7.753E-09	8.055E-08	1.890E-07	2.040E-07	1.669E-07	1.004E-07	6.731E-08	4.853E-08	3.688E-08	2.915E-08	2.374E-08	
WNW	1.153E-08	4.695E-08	1.308E-07	1.711E-07	1.731E-07	1.013E-07	6.685E-08	4.980E-08	3.902E-08	3.058E-08	2.473E-08	
NW	3.090E-08	2.847E-08	7.197E-08	1.350E-07	2.627E-07	1.580E-07	1.062E-07	7.889E-08	6.141E-08	4.851E-08	3.947E-08	
NNW	5.049E-08	5.880E-08	7.221E-08	8.182E-08	1.133E-07	1.205E-07	1.217E-07	1.167E-07	1.105E-07	8.757E-08	7.147E-08	
N	5.366E-08	7.304E-08	7.598E-08	6.687E-08	5.710E-08	4.877E-08	4.118E-08	3.430E-08	2.902E-08	2.493E-08	2.172E-08	
NNE	1.002E-08	1.242E-08	1.806E-08	2.362E-08	2.907E-08	2.803E-08	2.510E-08	2.207E-08	1.941E-08	1.718E-08	1.535E-08	
NE	3.742E-08	1.617E-08	1.477E-08	1.971E-08	2.381E-08	2.187E-08	1.881E-08	1.602E-08	1.373E-08	1.188E-08	1.041E-08	
ENE	2.906E-11	5.882E-09	1.884E-08	2.420E-08	2.492E-08	2.142E-08	1.780E-08	1.484E-08	1.253E-08	1.074E-08	9.335E-09	
E	3.206E-11	4.120E-09	1.569E-08	2.363E-08	2.695E-08	2.378E-08	1.995E-08	1.671E-08	1.414E-08	1.214E-08	1.057E-08	
ESE	3.429E-11	3.197E-09	1.691E-08	2.857E-08	3.523E-08	3.221E-08	2.758E-08	2.340E-08	1.998E-08	1.724E-08	1.506E-08	
SE	2.859E-09	1.782E-08	4.747E-08	6.786E-08	7.370E-08	6.273E-08	5.107E-08	4.165E-08	3.444E-08	2.894E-08	2.468E-08	
SSE	6.520E-08	5.172E-08	6.001E-08	6.435E-08	6.457E-08	5.618E-08	4.718E-08	3.961E-08	3.360E-08	2.887E-08	2.513E-08	

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.911E-08	2.112E-08	1.346E-08	7.371E-09	4.982E-09	3.640E-09	2.729E-09	2.136E-09	1.751E-09	1.468E-09	1.243E-09	
SSW	1.769E-08	1.265E-08	7.886E-09	4.195E-09	2.739E-09	1.945E-09	1.457E-09	1.140E-09	9.204E-10	7.615E-10	6.423E-10	
SW	1.885E-08	1.256E-08	7.861E-09	4.194E-09	2.701E-09	1.905E-09	1.439E-09	1.123E-09	9.047E-10	7.470E-10	6.288E-10	
WSW	1.318E-08	7.692E-09	5.038E-09	2.785E-09	1.768E-09	1.242E-09	9.286E-10	7.256E-10	5.854E-10	4.840E-10	4.079E-10	
W	1.980E-08	1.032E-08	6.885E-09	3.885E-09	2.526E-09	1.774E-09	1.326E-09	1.035E-09	8.349E-10	6.899E-10	5.812E-10	
WNW	2.073E-08	1.102E-08	7.183E-09	4.051E-09	2.576E-09	1.820E-09	1.383E-09	1.091E-09	8.831E-10	7.317E-10	6.178E-10	
NW	3.324E-08	1.777E-08	1.157E-08	6.450E-09	4.119E-09	2.904E-09	2.207E-09	1.738E-09	1.410E-09	1.171E-09	9.912E-10	
NNW	6.126E-08	3.473E-08	2.200E-08	1.191E-08	7.471E-09	5.184E-09	3.890E-09	3.070E-09	2.534E-09	2.118E-09	1.795E-09	
N	1.921E-08	1.220E-08	1.030E-08	8.679E-09	7.431E-09	5.957E-09	4.562E-09	3.623E-09	2.961E-09	2.478E-09	2.111E-09	
NNE	1.827E-08	2.902E-08	1.823E-08	9.879E-09	6.335E-09	4.479E-09	3.369E-09	2.644E-09	2.141E-09	1.775E-09	1.500E-09	
NE	1.159E-08	1.634E-08	1.024E-08	5.552E-09	3.579E-09	2.543E-09	1.940E-09	1.540E-09	1.259E-09	1.049E-09	8.906E-10	
ENE	9.938E-09	1.398E-08	8.893E-09	4.843E-09	3.062E-09	2.136E-09	1.645E-09	1.314E-09	1.063E-09	8.812E-10	7.441E-10	
E	1.130E-08	1.481E-08	9.377E-09	5.077E-09	3.198E-09	2.226E-09	1.650E-09	1.279E-09	1.046E-09	8.754E-10	7.392E-10	
ESE	1.573E-08	2.005E-08	1.298E-08	7.219E-09	4.619E-09	3.251E-09	2.431E-09	1.896E-09	1.525E-09	1.256E-09	1.055E-09	
SE	2.134E-08	1.234E-08	9.009E-09	5.963E-09	4.190E-09	3.204E-09	2.586E-09	2.154E-09	1.752E-09	1.460E-09	1.239E-09	
SSE	2.735E-08	3.407E-08	2.126E-08	1.143E-08	7.286E-09	5.130E-09	3.844E-09	3.008E-09	2.429E-09	2.010E-09	1.694E-09	

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE											
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50		
S	5.799E-08	5.604E-08	3.851E-08	2.903E-08	3.039E-08	1.949E-08	7.663E-09	3.634E-09	2.159E-09	1.468E-09		
SSW	1.969E-08	3.025E-08	2.584E-08	2.416E-08	1.952E-08	1.165E-08	4.368E-09	1.962E-09	1.147E-09	7.645E-10		
SW	4.500E-08	8.880E-08	5.444E-08	3.167E-08	2.149E-08	1.187E-08	4.345E-09	1.931E-09	1.130E-09	7.500E-10		
WSW	4.549E-08	7.703E-08	4.305E-08	2.371E-08	1.548E-08	7.732E-09	2.834E-09	1.257E-09	7.302E-10	4.859E-10		
W	1.716E-07	1.456E-07	6.863E-08	3.726E-08	2.388E-08	1.090E-08	3.948E-09	1.795E-09	1.042E-09	6.926E-10		
WNW	1.301E-07	1.407E-07	6.921E-08	3.888E-08	2.498E-08	1.147E-08	4.091E-09	1.847E-09	1.095E-09	7.344E-10		
NW	9.033E-08	1.878E-07	1.091E-07	6.149E-08	3.984E-08	1.845E-08	6.552E-09	2.949E-09	1.747E-09	1.175E-09		
NNW	7.350E-08	1.095E-07	1.193E-07	1.035E-07	7.246E-08	3.497E-08	1.218E-08	5.276E-09	3.100E-09	2.121E-09		
N	7.128E-08	5.557E-08	4.045E-08	2.897E-08	2.174E-08	1.291E-08	8.485E-09	5.792E-09	3.639E-09	2.485E-09		
NNE	1.928E-08	2.740E-08	2.467E-08	1.932E-08	1.697E-08	2.183E-08	1.016E-08	4.530E-09	2.659E-09	1.782E-09		
NE	1.728E-08	2.203E-08	1.851E-08	1.368E-08	1.129E-08	1.257E-08	5.717E-09	2.578E-09	1.547E-09	1.053E-09		
ENE	1.834E-08	2.320E-08	1.758E-08	1.251E-08	9.974E-09	1.082E-08	4.951E-09	2.186E-09	1.313E-09	8.844E-10		
E	1.665E-08	2.480E-08	1.967E-08	1.411E-08	1.131E-08	1.161E-08	5.197E-09	2.255E-09	1.296E-09	8.756E-10		
ESE	1.905E-08	3.241E-08	2.714E-08	1.991E-08	1.595E-08	1.595E-08	7.344E-09	3.288E-09	1.907E-09	1.261E-09		
SE	4.994E-08	6.753E-08	5.041E-08	3.440E-08	2.470E-08	1.286E-08	5.852E-09	3.220E-09	2.124E-09	1.465E-09		
SSE	6.010E-08	6.080E-08	4.655E-08	3.351E-08	2.706E-08	2.688E-08	1.177E-08	5.191E-09	3.026E-09	2.017E-09		

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ERP ELEVATED STACK RELEASES - JAN-MAR 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS *****												
DIRECTION FROM SITE	DISTANCES IN MILES											
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50	
S	4.492E-09	3.846E-09	3.554E-09	2.618E-09	1.346E-09	8.438E-10	5.770E-10	4.170E-10	3.132E-10	2.566E-10	2.290E-10	
SSW	3.235E-10	5.819E-10	9.664E-10	9.385E-10	5.692E-10	3.782E-10	2.660E-10	1.950E-10	1.856E-10	1.403E-10	1.098E-10	
SW	3.089E-10	4.944E-10	7.800E-10	7.454E-10	8.620E-10	4.696E-10	2.909E-10	1.975E-10	1.427E-10	1.079E-10	8.445E-11	
WSW	8.061E-10	7.592E-10	7.985E-10	1.130E-09	6.330E-10	3.421E-10	2.111E-10	1.430E-10	1.032E-10	7.798E-11	6.102E-11	
W	1.610E-09	5.125E-09	4.262E-09	2.647E-09	1.240E-09	6.641E-10	4.076E-10	2.749E-10	1.977E-10	1.490E-10	1.163E-10	
WNW	1.861E-09	1.655E-09	3.870E-09	2.510E-09	1.517E-09	7.601E-10	4.501E-10	2.987E-10	2.173E-10	1.664E-10	1.344E-10	
NW	2.616E-09	2.104E-09	1.753E-09	2.140E-09	1.247E-09	6.246E-10	3.760E-10	2.577E-10	1.954E-10	1.602E-10	1.394E-10	
NNW	5.200E-09	4.017E-09	3.099E-09	1.958E-09	1.348E-09	7.212E-10	4.485E-10	3.860E-10	3.038E-10	2.595E-10	2.347E-10	
N	6.797E-09	5.448E-09	4.509E-09	3.044E-09	1.459E-09	8.890E-10	5.988E-10	4.293E-10	3.212E-10	2.481E-10	1.964E-10	
NNE	1.334E-09	1.207E-09	1.207E-09	9.371E-10	5.002E-10	3.182E-10	2.192E-10	1.590E-10	1.196E-10	9.262E-11	7.334E-11	
NE	5.582E-10	6.308E-10	7.978E-10	7.012E-10	4.039E-10	2.640E-10	1.842E-10	1.345E-10	1.016E-10	7.874E-11	6.236E-11	
ENE	5.582E-10	6.308E-10	7.978E-10	7.012E-10	4.039E-10	2.640E-10	1.842E-10	1.345E-10	1.016E-10	7.874E-11	6.236E-11	
E	3.156E-10	5.342E-10	8.648E-10	8.332E-10	5.034E-10	3.341E-10	2.349E-10	1.721E-10	1.302E-10	1.010E-10	8.000E-11	
ESE	3.394E-10	6.774E-10	1.170E-09	1.149E-09	7.007E-10	4.664E-10	3.283E-10	2.408E-10	1.822E-10	1.414E-10	1.120E-10	
SE	3.052E-09	3.362E-09	4.159E-09	3.620E-09	2.074E-09	1.353E-09	9.432E-10	6.884E-10	5.197E-10	4.028E-10	3.190E-10	
SSE	6.833E-09	5.662E-09	4.967E-09	3.518E-09	1.755E-09	1.087E-09	7.390E-10	5.323E-10	3.992E-10	3.086E-10	2.443E-10	

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	1.842E-10	1.403E-10	9.784E-11	5.784E-11	3.689E-11	2.527E-11	1.809E-11	1.357E-11	1.058E-11	8.452E-12	6.898E-12
SSW	8.856E-11	6.234E-11	4.248E-11	2.452E-11	1.610E-11	1.122E-11	8.038E-12	6.036E-12	4.718E-12	3.769E-12	3.076E-12
SW	6.821E-11	5.327E-11	3.723E-11	2.196E-11	1.392E-11	9.308E-12	6.911E-12	5.189E-12	4.035E-12	3.223E-12	2.631E-12
WSW	4.908E-11	3.411E-11	2.323E-11	1.493E-11	9.037E-12	6.060E-12	4.382E-12	3.290E-12	2.558E-12	2.044E-12	1.668E-12
W	9.344E-11	4.188E-11	4.535E-11	2.636E-11	1.773E-11	1.194E-11	8.558E-12	6.426E-12	4.997E-12	3.991E-12	3.258E-12
WNW	1.139E-10	6.458E-11	4.471E-11	2.625E-11	1.719E-11	1.168E-11	8.321E-12	6.262E-12	4.865E-12	3.886E-12	3.172E-12
NW	1.268E-10	8.884E-11	6.768E-11	3.970E-11	2.426E-11	1.628E-11	1.162E-11	8.723E-12	6.782E-12	5.418E-12	4.422E-12
NNW	2.207E-10	1.677E-10	1.316E-10	8.497E-11	5.519E-11	3.671E-11	2.213E-11	1.605E-11	1.227E-11	9.803E-12	8.002E-12
N	1.586E-10	7.570E-11	4.654E-11	2.498E-11	6.303E-11	3.741E-11	2.670E-11	2.005E-11	1.559E-11	1.245E-11	1.016E-11
NNE	5.916E-11	1.551E-10	9.635E-11	5.014E-11	3.062E-11	2.048E-11	1.462E-11	1.093E-11	8.468E-12	6.743E-12	5.489E-12
NE	5.026E-11	1.048E-10	6.400E-11	3.270E-11	1.987E-11	1.333E-11	9.633E-12	7.241E-12	5.635E-12	4.505E-12	3.677E-12
ENE	5.026E-11	6.324E-11	4.673E-11	2.883E-11	1.846E-11	1.224E-11	8.605E-12	5.936E-12	4.618E-12	3.692E-12	3.016E-12
E	6.445E-11	8.657E-11	6.454E-11	4.007E-11	2.566E-11	1.699E-11	1.191E-11	8.713E-12	6.629E-12	5.097E-12	4.162E-12
ESE	9.018E-11	1.263E-10	9.469E-11	5.903E-11	3.784E-11	2.503E-11	1.753E-11	1.282E-11	9.743E-12	7.635E-12	6.130E-12
SE	2.571E-10	1.220E-10	7.451E-11	3.937E-11	2.411E-11	1.660E-11	1.237E-11	1.959E-11	1.511E-11	1.202E-11	9.787E-12
SSE	1.972E-10	2.747E-10	1.683E-10	8.621E-11	5.240E-11	3.510E-11	2.511E-11	1.882E-11	1.461E-11	1.165E-11	9.502E-12

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS *****											
DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	3.203E-09	1.405E-09	5.842E-10	3.213E-10	2.206E-10	1.312E-10	5.742E-11	2.550E-11	1.372E-11	8.507E-12	
SSW	8.685E-10	5.663E-10	2.675E-10	1.710E-10	1.110E-10	5.934E-11	2.477E-11	1.125E-11	6.106E-12	3.793E-12	
SW	7.012E-10	6.617E-10	3.012E-10	1.451E-10	8.538E-11	4.946E-11	2.178E-11	9.578E-12	5.242E-12	3.244E-12	
WSW	9.370E-10	6.141E-10	2.188E-10	1.050E-10	6.162E-11	3.260E-11	1.416E-11	6.182E-12	3.323E-12	2.057E-12	
W	3.736E-09	1.297E-09	4.229E-10	2.012E-10	1.175E-10	5.488E-11	2.675E-11	1.213E-11	6.491E-12	4.018E-12	
WNW	2.773E-09	1.401E-09	4.722E-10	2.212E-10	1.363E-10	6.671E-11	2.632E-11	1.181E-11	6.318E-12	3.912E-12	
NW	2.003E-09	1.169E-09	3.950E-10	1.998E-10	1.409E-10	8.786E-11	3.906E-11	1.654E-11	8.811E-12	5.453E-12	
NNW	2.796E-09	1.205E-09	4.962E-10	3.104E-10	2.369E-10	1.634E-10	8.209E-11	3.581E-11	1.635E-11	9.867E-12	
N	4.067E-09	1.558E-09	6.084E-10	3.242E-10	1.977E-10	8.117E-11	4.668E-11	3.996E-11	2.025E-11	1.253E-11	
NNE	1.087E-09	5.164E-10	2.215E-10	1.206E-10	7.380E-11	1.077E-10	5.173E-11	2.084E-11	1.105E-11	6.790E-12	
NE	7.178E-10	4.078E-10	1.856E-10	1.023E-10	6.273E-11	7.455E-11	3.395E-11	1.360E-11	7.313E-12	4.533E-12	
ENE	7.178E-10	4.078E-10	1.856E-10	1.023E-10	6.273E-11	5.301E-11	2.820E-11	1.245E-11	6.196E-12	3.716E-12	
E	7.773E-10	5.014E-10	2.362E-10	1.311E-10	8.047E-11	7.187E-11	3.911E-11	1.727E-11	8.832E-12	5.204E-12	
ESE	1.051E-09	6.962E-10	3.301E-10	1.834E-10	1.126E-10	1.042E-10	5.754E-11	2.545E-11	1.299E-11	7.702E-12	
SE	3.742E-09	2.097E-09	9.505E-10	5.234E-10	3.209E-10	1.309E-10	4.040E-11	1.691E-11	1.582E-11	1.211E-11	
SSE	4.477E-09	1.850E-09	7.492E-10	4.027E-10	2.459E-10	2.102E-10	8.942E-11	3.571E-11	1.901E-11	1.173E-11	

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ERP ELEVATED STACK RELEASES - JAN-MAR 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED
A	Site Boundary S	.80	6.5E-08	6.5E-08	6.4E-08
A	Site Boundary SSW	.82	2.2E-08	2.2E-08	2.2E-08
A	Site Boundary SW	.97	7.1E-08	7.1E-08	7.1E-08
A	Site Boundary WSW	.93	6.0E-08	5.9E-08	5.9E-08
A	Site Boundary W	.91	2.1E-07	2.1E-07	2.0E-07
A	Site Boundary WNW	.94	1.7E-07	1.7E-07	1.6E-07
A	Site Boundary NW	.81	8.6E-08	8.6E-08	8.5E-08
A	Site Boundary NNW	.69	6.8E-08	6.8E-08	6.7E-08
A	Site Boundary N	.67	7.5E-08	7.5E-08	7.3E-08
A	Site Boundary NNE	.60	1.3E-08	1.3E-08	1.3E-08
A	Site Boundary NE	.62	1.2E-08	1.2E-08	1.2E-08
A	Site Boundary ENE	.59	1.0E-08	1.0E-08	1.0E-08
A	Site Boundary E	.53	4.9E-09	4.9E-09	4.9E-09
A	Site Boundary ESE	.54	4.4E-09	4.4E-09	4.4E-09
A	Site Boundary SE	.65	3.3E-08	3.3E-08	3.3E-08
A	Site Boundary SSE	.81	6.1E-08	6.1E-08	6.0E-08
A	Nearest Res SW	1.30	1.1E-07	1.1E-07	1.1E-07
A	Nearest Res WSW	1.30	9.7E-08	9.7E-08	9.6E-08
A	Nearest Res W	1.00	2.1E-07	2.1E-07	2.0E-07
A	Nearest Res WNW	1.70	1.4E-07	1.4E-07	1.4E-07
A	Nearest Res NW	.90	1.1E-07	1.1E-07	1.1E-07
A	Nearest Res NNW	1.90	1.2E-07	1.2E-07	1.2E-07
A	Nearest Res N	3.00	3.5E-08	3.5E-08	3.4E-08
A	Nearest Res ENE	1.70	2.4E-08	2.4E-08	2.4E-08
A	Nearest Res E	2.00	2.4E-08	2.4E-08	2.4E-08
A	Nearest Res ESE	2.30	3.0E-08	3.0E-08	2.9E-08
A	Nearest Res NNW	3.50	1.1E-07	1.1E-07	1.1E-07
A	Nearest Res SW	1.30	1.1E-07	1.1E-07	1.1E-07
A	Nearest Res WSW	1.90	7.0E-08	7.0E-08	6.8E-08
A	Nearest Res WNW	2.40	7.5E-08	7.5E-08	7.2E-08
A	Nearest Res NW	2.90	8.5E-08	8.5E-08	8.3E-08
A	Nearest Res NNW	1.90	1.2E-07	1.2E-07	1.2E-07
A	Nearest Res ENE	2.80	1.6E-08	1.6E-08	1.6E-08
A	Nearest Res E	2.00	2.4E-08	2.4E-08	2.4E-08
A	Nearest Res ESE	2.30	3.0E-08	3.0E-08	2.9E-08
A	Nearest Res SE	1.20	7.5E-08	7.5E-08	7.4E-08
A	MAXIMUM CHI/Q S	1.00	6.7E-08	6.7E-08	6.6E-08
A	MAXIMUM CHI/Q SSW	1.50	3.4E-08	3.3E-08	3.3E-08
A	MAXIMUM CHI/Q SW	1.50	1.2E-07	1.2E-07	1.2E-07
A	MAXIMUM CHI/Q WSW	1.50	1.0E-07	1.0E-07	1.0E-07
A	MAXIMUM CHI/Q W	1.00	2.1E-07	2.1E-07	2.0E-07
A	MAXIMUM CHI/Q WNW	1.50	1.8E-07	1.8E-07	1.7E-07
A	MAXIMUM CHI/Q NW	1.50	2.7E-07	2.6E-07	2.6E-07
A	MAXIMUM CHI/Q NNW	2.50	1.2E-07	1.2E-07	1.2E-07
A	MAXIMUM CHI/Q N	.75	7.7E-08	7.7E-08	7.5E-08
A	MAXIMUM CHI/Q NNE	7.50	3.0E-08	3.0E-08	2.9E-08
A	MAXIMUM CHI/Q NE	.25	2.9E-08	2.9E-08	2.9E-08
A	MAXIMUM CHI/Q ENE	1.50	2.5E-08	2.5E-08	2.5E-08
A	MAXIMUM CHI/Q E	1.50	2.7E-08	2.7E-08	2.7E-08
A	MAXIMUM CHI/Q ESE	1.50	3.6E-08	3.6E-08	3.5E-08
A	MAXIMUM CHI/Q SE	1.50	7.5E-08	7.4E-08	7.4E-08
A	MAXIMUM CHI/Q SSE	1.50	6.6E-08	6.5E-08	6.4E-08

**Atmospheric Diffusion Estimates**

**Elevated Releases**

April-June 2004

ERP ELEVATED STACK RELEASES - APR-JUN 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.750E-08	1.043E-07	1.266E-07	1.182E-07	1.035E-07	8.571E-08	7.019E-08	5.805E-08	4.876E-08	5.703E-08	6.335E-08
SSW	8.755E-09	2.745E-08	4.376E-08	4.674E-08	4.547E-08	3.929E-08	3.298E-08	3.664E-08	3.846E-08	3.386E-08	3.019E-08
SW	3.620E-09	1.861E-08	5.108E-08	9.207E-08	1.296E-07	8.496E-08	5.987E-08	4.467E-08	3.480E-08	2.804E-08	2.319E-08
WSW	1.331E-08	1.372E-08	4.561E-08	1.018E-07	1.745E-07	1.109E-07	7.696E-08	5.693E-08	4.413E-08	3.543E-08	2.925E-08
W	4.855E-08	6.502E-08	1.846E-07	2.087E-07	1.695E-07	1.021E-07	6.858E-08	4.959E-08	3.779E-08	2.995E-08	2.446E-08
WNW	9.291E-08	4.111E-08	9.786E-08	1.679E-07	2.038E-07	1.240E-07	8.404E-08	6.406E-08	5.114E-08	4.062E-08	3.327E-08
NW	5.855E-08	6.913E-08	9.383E-08	1.480E-07	2.489E-07	1.482E-07	9.933E-08	7.383E-08	5.775E-08	4.587E-08	3.758E-08
NNW	7.726E-08	1.375E-07	1.814E-07	1.867E-07	1.919E-07	1.673E-07	1.476E-07	1.323E-07	1.227E-07	9.724E-08	7.951E-08
N	2.712E-07	2.342E-07	2.071E-07	1.595E-07	1.161E-07	9.066E-08	7.248E-08	5.835E-08	4.814E-08	4.056E-08	3.477E-08
NNE	1.639E-07	1.722E-07	1.509E-07	1.122E-07	7.947E-08	6.094E-08	4.832E-08	3.932E-08	3.272E-08	2.775E-08	2.393E-08
NE	7.705E-08	5.933E-08	5.684E-08	4.550E-08	3.498E-08	2.819E-08	2.315E-08	1.934E-08	1.643E-08	1.418E-08	1.240E-08
ENE	5.278E-09	2.864E-08	3.275E-08	2.770E-08	2.174E-08	1.721E-08	1.378E-08	1.123E-08	9.332E-09	7.889E-09	6.777E-09
E	4.202E-11	7.238E-09	2.075E-08	2.462E-08	2.321E-08	1.905E-08	1.539E-08	1.258E-08	1.048E-08	8.881E-09	7.652E-09
ESE	1.567E-10	1.060E-08	2.572E-08	3.159E-08	3.139E-08	2.620E-08	2.125E-08	1.735E-08	1.439E-08	1.213E-08	1.038E-08
SE	3.818E-10	2.166E-08	3.710E-08	3.490E-08	2.887E-08	2.333E-08	1.895E-08	1.565E-08	1.317E-08	1.128E-08	9.803E-09
SSE	4.436E-08	8.755E-08	1.064E-07	9.124E-08	7.020E-08	5.454E-08	4.320E-08	3.505E-08	2.910E-08	2.464E-08	2.123E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	5.651E-08	3.656E-08	2.362E-08	1.344E-08	9.266E-09	6.912E-09	5.371E-09	4.343E-09	3.631E-09	3.099E-09	2.683E-09
SSW	2.809E-08	2.191E-08	1.428E-08	8.231E-09	5.489E-09	4.438E-09	3.466E-09	2.815E-09	2.354E-09	2.011E-09	1.747E-09
SW	2.069E-08	1.350E-08	8.697E-09	4.929E-09	3.391E-09	2.529E-09	1.988E-09	1.603E-09	1.331E-09	1.131E-09	9.774E-10
WSW	2.556E-08	1.540E-08	1.039E-08	6.060E-09	4.041E-09	2.957E-09	2.294E-09	1.852E-09	1.540E-09	1.309E-09	1.132E-09
W	2.046E-08	1.080E-08	7.381E-09	4.498E-09	3.162E-09	2.313E-09	1.790E-09	1.443E-09	1.198E-09	1.018E-09	8.795E-10
WNW	2.825E-08	1.593E-08	1.092E-08	6.734E-09	4.648E-09	3.489E-09	2.774E-09	2.276E-09	1.908E-09	1.630E-09	1.417E-09
NW	3.197E-08	1.816E-08	1.260E-08	7.841E-09	5.333E-09	3.964E-09	3.184E-09	2.614E-09	2.192E-09	1.878E-09	1.636E-09
NNW	6.847E-08	4.039E-08	2.646E-08	1.542E-08	1.057E-08	7.903E-09	6.319E-09	5.230E-09	4.497E-09	3.890E-09	3.394E-09
N	3.036E-08	1.843E-08	1.460E-08	1.148E-08	1.005E-08	8.591E-09	6.803E-09	5.564E-09	4.667E-09	4.000E-09	3.486E-09
NNE	2.510E-08	3.012E-08	1.947E-08	1.116E-08	7.572E-09	5.618E-09	4.409E-09	3.596E-09	3.016E-09	2.585E-09	2.252E-09
NE	1.360E-08	1.931E-08	1.255E-08	7.242E-09	4.934E-09	3.673E-09	2.920E-09	2.403E-09	2.032E-09	1.742E-09	1.518E-09
ENE	6.806E-09	9.890E-09	6.671E-09	4.029E-09	2.823E-09	2.145E-09	1.854E-09	1.613E-09	1.363E-09	1.175E-09	1.029E-09
E	7.850E-09	1.064E-08	7.044E-09	4.151E-09	2.863E-09	2.149E-09	1.702E-09	1.398E-09	1.228E-09	1.088E-09	9.497E-10
ESE	1.013E-08	9.068E-09	5.890E-09	3.377E-09	2.284E-09	1.688E-09	1.320E-09	1.073E-09	8.971E-10	7.664E-10	6.659E-10
SE	8.633E-09	5.403E-09	4.344E-09	3.326E-09	2.493E-09	1.985E-09	1.642E-09	1.395E-09	1.173E-09	1.006E-09	8.773E-10
SSE	2.251E-08	2.936E-08	1.899E-08	1.088E-08	7.379E-09	5.473E-09	4.294E-09	3.500E-09	2.935E-09	2.514E-09	2.190E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.179E-07	9.887E-08	6.947E-08	5.456E-08	5.894E-08	3.524E-08	1.385E-08	6.923E-09	4.366E-09	3.102E-09
SSW	4.146E-08	4.300E-08	3.613E-08	3.619E-08	3.050E-08	1.989E-08	8.533E-09	4.436E-09	2.825E-09	2.015E-09
SW	6.208E-08	1.014E-07	6.048E-08	3.504E-08	2.370E-08	1.296E-08	5.083E-09	2.542E-09	1.609E-09	1.133E-09
WSW	6.349E-08	1.301E-07	7.799E-08	4.448E-08	2.971E-08	1.543E-08	6.124E-09	2.981E-09	1.859E-09	1.312E-09
W	1.687E-07	1.483E-07	6.993E-08	3.817E-08	2.460E-08	1.143E-08	4.544E-09	2.330E-09	1.449E-09	1.020E-09
WNW	1.164E-07	1.604E-07	8.671E-08	5.082E-08	3.359E-08	1.644E-08	6.736E-09	3.512E-09	2.278E-09	1.633E-09
NW	1.124E-07	1.817E-07	1.022E-07	5.782E-08	3.796E-08	1.876E-08	7.784E-09	4.017E-09	2.616E-09	1.881E-09
NNW	1.740E-07	1.798E-07	1.467E-07	1.158E-07	8.068E-08	4.044E-08	1.572E-08	7.981E-09	5.262E-09	3.886E-09
N	1.920E-07	1.144E-07	7.168E-08	4.817E-08	3.485E-08	1.938E-08	1.154E-08	8.266E-09	5.576E-09	4.007E-09
NNE	1.385E-07	7.851E-08	4.808E-08	3.271E-08	2.549E-08	2.427E-08	1.141E-08	5.656E-09	3.608E-09	2.589E-09
NE	5.235E-08	3.430E-08	2.297E-08	1.640E-08	1.337E-08	1.504E-08	7.396E-09	3.708E-09	2.409E-09	1.745E-09
ENE	2.959E-08	2.105E-08	1.368E-08	9.325E-09	7.117E-09	7.774E-09	4.080E-09	2.209E-09	1.586E-09	1.177E-09
E	1.947E-08	2.168E-08	1.524E-08	1.047E-08	8.090E-09	8.422E-09	4.222E-09	2.161E-09	1.420E-09	1.078E-09
ESE	2.497E-08	2.913E-08	2.101E-08	1.437E-08	1.081E-08	7.892E-09	3.449E-09	1.700E-09	1.077E-09	7.679E-10
SE	3.269E-08	2.775E-08	1.880E-08	1.316E-08	9.807E-09	5.650E-09	3.182E-09	1.983E-09	1.381E-09	1.008E-09
SSE	9.546E-08	6.791E-08	4.297E-08	2.910E-08	2.272E-08	2.323E-08	1.113E-08	5.510E-09	3.512E-09	2.518E-09

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ERP ELEVATED STACK RELEASES - APR-JUN 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.749E-08	1.042E-07	1.264E-07	1.180E-07	1.033E-07	8.542E-08	6.989E-08	5.774E-08	4.846E-08	5.661E-08	6.281E-08	
SSW	8.753E-09	2.743E-08	4.371E-08	4.666E-08	4.535E-08	3.915E-08	3.284E-08	3.645E-08	3.822E-08	3.362E-08	2.995E-08	
SW	3.620E-09	1.860E-08	5.102E-08	9.192E-08	1.293E-07	8.465E-08	5.960E-08	4.443E-08	3.458E-08	2.783E-08	2.300E-08	
WSW	1.330E-08	1.372E-08	4.557E-08	1.016E-07	1.740E-07	1.104E-07	7.656E-08	5.657E-08	4.379E-08	3.512E-08	2.895E-08	
W	4.854E-08	6.497E-08	1.844E-07	2.084E-07	1.690E-07	1.018E-07	6.829E-08	4.933E-08	3.756E-08	2.974E-08	2.426E-08	
WNW	9.287E-08	4.107E-08	9.773E-08	1.676E-07	2.032E-07	1.235E-07	8.359E-08	6.364E-08	5.074E-08	4.026E-08	3.294E-08	
NW	5.853E-08	6.908E-08	9.372E-08	1.478E-07	2.482E-07	1.476E-07	9.891E-08	7.345E-08	5.740E-08	4.556E-08	3.729E-08	
NNW	7.725E-08	1.375E-07	1.813E-07	1.864E-07	1.915E-07	1.669E-07	1.471E-07	1.317E-07	1.221E-07	9.663E-08	7.895E-08	
N	2.711E-07	2.341E-07	2.069E-07	1.593E-07	1.159E-07	9.047E-08	7.228E-08	5.816E-08	4.796E-08	4.038E-08	3.460E-08	
NNE	1.638E-07	1.721E-07	1.508E-07	1.121E-07	7.930E-08	6.076E-08	4.813E-08	3.913E-08	3.253E-08	2.757E-08	2.375E-08	
NE	7.695E-08	5.923E-08	5.674E-08	4.540E-08	3.486E-08	2.806E-08	2.302E-08	1.921E-08	1.630E-08	1.405E-08	1.227E-08	
ENE	5.274E-09	2.861E-08	3.270E-08	2.765E-08	2.168E-08	1.716E-08	1.372E-08	1.117E-08	9.274E-09	7.834E-09	6.723E-09	
E	4.200E-11	7.224E-09	2.070E-08	2.456E-08	2.314E-08	1.898E-08	1.532E-08	1.252E-08	1.042E-08	8.827E-09	7.601E-09	
ESE	1.566E-10	1.060E-08	2.569E-08	3.156E-08	3.134E-08	2.614E-08	2.119E-08	1.729E-08	1.433E-08	1.207E-08	1.033E-08	
SE	3.817E-10	2.165E-08	3.707E-08	3.486E-08	2.882E-08	2.326E-08	1.888E-08	1.559E-08	1.311E-08	1.121E-08	9.739E-09	
SSE	4.436E-08	8.751E-08	1.063E-07	9.114E-08	7.008E-08	5.441E-08	4.307E-08	3.492E-08	2.896E-08	2.451E-08	2.111E-08	

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	5.596E-08	3.602E-08	2.315E-08	1.304E-08	8.898E-09	6.571E-09	5.055E-09	4.048E-09	3.351E-09	2.831E-09	2.428E-09	
SSW	2.783E-08	2.157E-08	1.398E-08	7.969E-09	5.631E-09	4.191E-09	3.235E-09	2.597E-09	2.147E-09	1.812E-09	1.557E-09	
SW	2.050E-08	1.332E-08	8.538E-09	4.794E-09	3.268E-09	2.414E-09	1.880E-09	1.502E-09	1.236E-09	1.040E-09	8.909E-10	
WSW	2.527E-08	1.513E-08	1.014E-08	5.838E-09	3.844E-09	2.778E-09	2.128E-09	1.697E-09	1.393E-09	1.170E-09	9.992E-10	
W	2.027E-08	1.066E-08	7.246E-09	4.373E-09	3.044E-09	2.206E-09	1.691E-09	1.350E-09	1.110E-09	9.340E-10	7.996E-10	
WNW	2.793E-08	1.564E-08	1.065E-08	6.478E-09	4.409E-09	3.264E-09	2.558E-09	2.069E-09	1.711E-09	1.442E-09	1.236E-09	
NW	3.170E-08	1.792E-08	1.238E-08	7.633E-09	5.145E-09	3.791E-09	3.017E-09	2.454E-09	2.040E-09	1.732E-09	1.495E-09	
NNW	6.792E-08	3.987E-08	2.601E-08	1.502E-08	1.020E-08	7.560E-09	5.988E-09	4.911E-09	4.181E-09	3.582E-09	3.097E-09	
N	3.019E-08	1.827E-08	1.443E-08	1.127E-08	9.775E-09	8.270E-09	6.496E-09	5.271E-09	4.387E-09	3.730E-09	3.225E-09	
NNE	2.489E-08	2.974E-08	1.914E-08	1.087E-08	7.315E-09	5.381E-09	4.187E-09	3.386E-09	2.816E-09	2.392E-09	2.067E-09	
NE	1.345E-08	1.900E-08	1.229E-08	7.017E-09	4.732E-09	3.486E-09	2.743E-09	2.234E-09	1.870E-09	1.587E-09	1.369E-09	
ENE	6.743E-09	9.666E-09	6.465E-09	3.837E-09	2.642E-09	1.972E-09	1.670E-09	1.425E-09	1.182E-09	1.001E-09	8.615E-10	
E	7.794E-09	1.049E-08	6.909E-09	4.028E-09	2.748E-09	2.040E-09	1.598E-09	1.298E-09	1.125E-09	9.834E-10	8.489E-10	
ESE	1.007E-08	8.984E-09	5.817E-09	3.314E-09	2.227E-09	1.636E-09	1.271E-09	1.026E-09	8.525E-10	7.236E-10	6.247E-10	
SE	8.570E-09	5.341E-09	4.275E-09	3.241E-09	2.406E-09	1.897E-09	1.554E-09	1.308E-09	1.089E-09	9.258E-10	8.000E-10	
SSE	2.235E-08	2.897E-08	1.864E-08	1.058E-08	7.109E-09	5.223E-09	4.058E-09	3.277E-09	2.722E-09	2.309E-09	1.992E-09	

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE											
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50		
S	1.178E-07	9.862E-08	6.917E-08	5.422E-08	5.844E-08	3.473E-08	1.345E-08	6.585E-09	4.070E-09	2.836E-09		
SSW	4.140E-08	4.288E-08	3.596E-08	3.596E-08	3.025E-08	1.959E-08	8.265E-09	4.193E-09	2.608E-09	1.817E-09		
SW	6.199E-08	1.011E-07	6.021E-08	3.482E-08	2.351E-08	1.279E-08	4.948E-09	2.428E-09	1.509E-09	1.043E-09		
WSW	6.340E-08	1.296E-07	7.759E-08	4.414E-08	2.941E-08	1.516E-08	5.907E-09	2.802E-09	1.704E-09	1.173E-09		
W	1.685E-07	1.479E-07	6.964E-08	3.794E-08	2.441E-08	1.128E-08	4.421E-09	2.223E-09	1.356E-09	9.365E-10		
WNW	1.162E-07	1.599E-07	8.626E-08	5.043E-08	3.325E-08	1.615E-08	6.485E-09	3.287E-09	2.073E-09	1.445E-09		
NW	1.123E-07	1.812E-07	1.017E-07	5.747E-08	3.767E-08	1.852E-08	7.582E-09	3.842E-09	2.457E-09	1.735E-09		
NNW	1.738E-07	1.794E-07	1.462E-07	1.151E-07	8.010E-08	3.994E-08	1.532E-08	7.636E-09	4.940E-09	3.580E-09		
N	1.918E-07	1.142E-07	7.148E-08	4.798E-08	3.468E-08	1.921E-08	1.131E-08	7.962E-09	5.284E-09	3.738E-09		
NNE	1.383E-07	7.834E-08	4.790E-08	3.253E-08	2.531E-08	2.395E-08	1.113E-08	5.419E-09	3.398E-09	2.397E-09		
NE	5.225E-08	3.418E-08	2.284E-08	1.627E-08	1.324E-08	1.479E-08	7.173E-09	3.521E-09	2.241E-09	1.590E-09		
ENE	2.955E-08	2.100E-08	1.362E-08	9.268E-09	7.059E-09	7.594E-09	3.890E-09	2.030E-09	1.403E-09	1.003E-09		
E	1.942E-08	2.161E-08	1.518E-08	1.041E-08	8.036E-09	8.300E-09	4.100E-09	2.052E-09	1.317E-09	9.754E-10		
ESE	2.494E-08	2.908E-08	2.095E-08	1.431E-08	1.075E-08	7.818E-09	3.387E-09	1.647E-09	1.030E-09	7.251E-10		
SE	3.266E-08	2.769E-08	1.873E-08	1.309E-08	9.742E-09	5.585E-09	3.099E-09	1.895E-09	1.295E-09	9.276E-10		
SSE	9.538E-08	6.780E-08	4.283E-08	2.897E-08	2.258E-08	2.291E-08	1.083E-08	5.260E-09	3.289E-09	2.314E-09		

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ERP ELEVATED STACK RELEASES - APR-JUN 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) SECTOR	DISTANCE IN MILES FROM THE SITE										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	4.750E-08	1.033E-07	1.242E-07	1.160E-07	1.014E-07	8.350E-08	6.798E-08	5.591E-08	4.671E-08	5.470E-08	6.087E-08
SSW	8.754E-09	2.720E-08	4.300E-08	4.598E-08	4.463E-08	3.837E-08	3.203E-08	3.553E-08	3.726E-08	3.271E-08	2.909E-08
SW	3.620E-09	1.845E-08	5.054E-08	9.152E-08	1.278E-07	8.293E-08	5.797E-08	4.295E-08	3.326E-08	2.665E-08	2.194E-08
WSW	1.331E-08	1.360E-08	4.530E-08	1.013E-07	1.723E-07	1.087E-07	7.506E-08	5.526E-08	4.266E-08	3.414E-08	2.809E-08
W	4.855E-08	6.437E-08	1.830E-07	2.055E-07	1.651E-07	9.854E-08	6.566E-08	4.716E-08	3.573E-08	2.817E-08	2.289E-08
WNW	9.289E-08	4.077E-08	9.738E-08	1.664E-07	2.002E-07	1.206E-07	8.113E-08	6.152E-08	4.891E-08	3.864E-08	3.145E-08
NW	5.855E-08	6.850E-08	9.227E-08	1.463E-07	2.459E-07	1.454E-07	9.701E-08	7.185E-08	5.605E-08	4.433E-08	3.614E-08
NNW	7.726E-08	1.363E-07	1.780E-07	1.834E-07	1.883E-07	1.634E-07	1.437E-07	1.287E-07	1.194E-07	9.419E-08	7.662E-08
N	2.712E-07	2.321E-07	2.027E-07	1.557E-07	1.130E-07	8.790E-08	6.994E-08	5.602E-08	4.601E-08	3.859E-08	3.296E-08
NNE	1.638E-07	1.706E-07	1.476E-07	1.094E-07	7.720E-08	5.898E-08	4.656E-08	3.772E-08	3.125E-08	2.640E-08	2.268E-08
NE	7.702E-08	5.877E-08	5.559E-08	4.432E-08	3.397E-08	2.729E-08	2.234E-08	1.860E-08	1.575E-08	1.354E-08	1.181E-08
ENE	5.277E-09	2.838E-08	3.209E-08	2.710E-08	2.122E-08	1.672E-08	1.332E-08	1.080E-08	8.923E-09	7.508E-09	6.420E-09
E	4.201E-11	7.173E-09	2.041E-08	2.423E-08	2.274E-08	1.855E-08	1.489E-08	1.210E-08	1.002E-08	8.448E-09	7.245E-09
ESE	1.567E-10	1.051E-08	2.537E-08	3.123E-08	3.089E-08	2.560E-08	2.061E-08	1.671E-08	1.376E-08	1.153E-08	9.816E-09
SE	3.818E-10	2.147E-08	3.638E-08	3.416E-08	2.818E-08	2.267E-08	1.833E-08	1.507E-08	1.263E-08	1.077E-08	9.331E-09
SSE	4.436E-08	8.676E-08	1.042E-07	8.922E-08	6.844E-08	5.292E-08	4.169E-08	3.365E-08	2.780E-08	2.343E-08	2.011E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED) SECTOR	DISTANCE IN MILES FROM THE SITE										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	5.417E-08	3.435E-08	2.147E-08	1.143E-08	7.320E-09	5.145E-09	3.832E-09	2.982E-09	2.408E-09	1.993E-09	1.678E-09
SSW	2.703E-08	2.078E-08	1.309E-08	7.039E-09	4.677E-09	3.377E-09	2.541E-09	1.995E-09	1.617E-09	1.341E-09	1.134E-09
SW	1.952E-08	1.251E-08	7.805E-09	4.149E-09	2.665E-09	1.875E-09	1.418E-09	1.105E-09	8.889E-10	7.331E-10	6.165E-10
WSW	2.449E-08	1.442E-08	9.408E-09	5.187E-09	3.299E-09	2.318E-09	1.735E-09	1.356E-09	1.094E-09	9.040E-10	7.616E-10
W	1.906E-08	9.869E-09	6.623E-09	3.820E-09	2.538E-09	1.784E-09	1.333E-09	1.040E-09	8.388E-10	6.930E-10	5.837E-10
WNW	2.656E-08	1.451E-08	9.628E-09	5.550E-09	3.544E-09	2.493E-09	1.896E-09	1.499E-09	1.214E-09	1.005E-09	8.472E-10
NW	3.059E-08	1.684E-08	1.130E-08	6.576E-09	4.189E-09	2.945E-09	2.271E-09	1.801E-09	1.464E-09	1.217E-09	1.032E-09
NNW	6.565E-08	3.759E-08	2.379E-08	1.290E-08	8.142E-09	5.676E-09	4.270E-09	3.366E-09	2.790E-09	2.337E-09	1.979E-09
N	2.866E-08	1.715E-08	1.352E-08	1.064E-08	9.146E-09	7.473E-09	5.736E-09	4.561E-09	3.727E-09	3.117E-09	2.655E-09
NNE	2.383E-08	2.868E-08	1.791E-08	9.655E-09	6.180E-09	4.364E-09	3.279E-09	2.571E-09	2.080E-09	1.724E-09	1.456E-09
NE	1.300E-08	1.854E-08	1.164E-08	6.297E-09	4.021E-09	2.833E-09	2.158E-09	1.716E-09	1.406E-09	1.171E-09	9.938E-10
ENE	6.442E-09	9.458E-09	6.168E-09	3.470E-09	2.240E-09	1.586E-09	1.287E-09	1.061E-09	8.558E-10	7.069E-10	5.948E-10
E	7.434E-09	1.017E-08	6.513E-09	3.584E-09	2.285E-09	1.604E-09	1.197E-09	9.322E-10	7.783E-10	6.600E-10	5.560E-10
ESE	9.553E-09	8.505E-09	5.356E-09	2.890E-09	1.830E-09	1.278E-09	9.506E-10	7.384E-10	5.921E-10	4.865E-10	4.076E-10
SE	8.192E-09	5.067E-09	4.061E-09	3.104E-09	2.312E-09	1.832E-09	1.510E-09	1.272E-09	1.041E-09	8.723E-10	7.437E-10
SSE	2.136E-08	2.800E-08	1.749E-08	9.420E-09	6.023E-09	4.250E-09	3.191E-09	2.501E-09	2.023E-09	1.675E-09	1.414E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	1.159E-07	9.668E-08	6.729E-08	5.238E-08	5.656E-08	3.303E-08	1.183E-08	5.200E-09	3.006E-09	1.999E-09	
SSW	4.081E-08	4.215E-08	3.512E-08	3.503E-08	2.940E-08	1.875E-08	7.333E-09	3.389E-09	2.007E-09	1.346E-09	
SW	6.162E-08	9.979E-08	5.862E-08	3.351E-08	2.244E-08	1.198E-08	4.302E-09	1.903E-09	1.112E-09	7.361E-10	
WSW	6.316E-08	1.283E-07	7.612E-08	4.302E-08	2.855E-08	1.443E-08	5.286E-09	2.347E-09	1.364E-09	9.075E-10	
W	1.666E-07	1.445E-07	6.703E-08	3.611E-08	2.033E-08	1.047E-08	3.873E-09	1.804E-09	1.047E-09	6.957E-10	
WNW	1.155E-07	1.573E-07	8.382E-08	4.860E-08	3.177E-08	1.502E-08	5.565E-09	2.534E-09	1.504E-09	1.008E-09	
NW	1.110E-07	1.791E-07	9.985E-08	5.610E-08	3.651E-08	1.743E-08	6.565E-09	3.007E-09	1.807E-09	1.222E-09	
NNW	1.711E-07	1.761E-07	1.429E-07	1.124E-07	7.776E-08	3.769E-08	1.320E-08	5.771E-09	3.405E-09	2.338E-09	
N	1.884E-07	1.113E-07	6.916E-08	4.604E-08	3.303E-08	1.809E-08	1.062E-08	7.224E-09	4.579E-09	3.126E-09	
NNE	1.357E-07	7.625E-08	4.634E-08	3.125E-08	2.421E-08	2.282E-08	9.946E-09	4.414E-09	2.586E-09	1.730E-09	
NE	5.129E-08	3.330E-08	2.216E-08	1.572E-08	1.277E-08	1.424E-08	6.473E-09	2.880E-09	1.724E-09	1.175E-09	
ENE	2.904E-08	2.053E-08	1.322E-08	8.919E-09	6.750E-09	7.326E-09	3.523E-09	1.641E-09	1.047E-09	7.095E-10	
E	1.916E-08	2.121E-08	1.475E-08	1.001E-08	7.671E-09	7.937E-09	3.657E-09	1.623E-09	9.493E-10	6.566E-10	
ESE	2.467E-08	2.862E-08	2.038E-08	1.375E-08	1.023E-08	7.338E-09	2.967E-09	1.294E-09	7.433E-10	4.886E-10	
SE	3.208E-08	2.706E-08	1.819E-08	1.262E-08	9.336E-09	5.314E-09	2.965E-09	1.831E-09	1.252E-09	8.747E-10	
SSE	9.368E-08	6.616E-08	4.147E-08	2.781E-08	2.156E-08	2.185E-08	9.704E-09	4.299E-09	2.516E-09	1.682E-09	

B291

ERP ELEVATED STACK RELEASES - APR-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	8.654E-09	7.050E-09	6.008E-09	4.158E-09	2.035E-09	1.251E-09	8.469E-10	6.087E-10	4.560E-10	3.676E-10	3.304E-10
SSW	2.896E-09	2.416E-09	2.144E-09	1.532E-09	7.698E-10	4.784E-10	3.256E-10	2.347E-10	2.156E-10	1.630E-10	1.276E-10
SW	1.861E-09	1.648E-09	1.599E-09	1.218E-09	1.129E-09	6.102E-10	3.769E-10	2.555E-10	1.845E-10	1.395E-10	1.092E-10
WSW	1.086E-09	1.079E-09	1.206E-09	1.978E-09	1.025E-09	5.544E-10	3.423E-10	2.319E-10	1.673E-10	1.265E-10	9.896E-11
W	1.354E-09	5.011E-09	4.259E-09	2.632E-09	1.222E-09	6.586E-10	4.062E-10	2.757E-10	1.999E-10	1.522E-10	1.203E-10
WNW	1.864E-09	1.664E-09	3.413E-09	2.533E-09	1.461E-09	7.412E-10	4.411E-10	2.934E-10	2.197E-10	1.674E-10	1.343E-10
NW	4.412E-09	3.354E-09	2.504E-09	2.315E-09	1.250E-09	6.266E-10	3.767E-10	2.568E-10	1.928E-10	1.560E-10	1.336E-10
NNW	1.351E-08	1.035E-08	7.853E-09	4.880E-09	3.286E-09	1.750E-09	1.077E-09	8.357E-10	6.051E-10	4.682E-10	3.817E-10
N	2.722E-08	2.055E-08	1.511E-08	9.084E-09	3.886E-09	2.245E-09	1.468E-09	1.036E-09	7.684E-10	5.914E-10	4.681E-10
NNE	1.477E-08	1.113E-08	8.145E-09	4.870E-09	2.071E-09	1.193E-09	7.787E-10	5.488E-10	4.070E-10	3.132E-10	2.479E-10
NE	3.380E-09	2.602E-09	1.993E-09	1.251E-09	5.598E-10	3.307E-10	2.191E-10	1.556E-10	1.159E-10	8.932E-11	7.071E-11
ENE	1.318E-09	1.112E-09	1.004E-09	7.268E-10	3.688E-10	2.301E-10	1.570E-10	1.133E-10	8.502E-11	6.575E-11	5.206E-11
E	5.571E-10	6.231E-10	7.812E-10	6.840E-10	3.932E-10	2.568E-10	1.791E-10	1.308E-10	9.873E-11	7.654E-11	6.061E-11
ESE	1.361E-09	1.367E-09	1.546E-09	1.289E-09	7.197E-10	4.654E-10	3.232E-10	2.353E-10	1.775E-10	1.375E-10	1.089E-10
SE	3.650E-09	2.866E-09	2.282E-09	1.487E-09	6.906E-10	4.150E-10	2.775E-10	1.981E-10	1.479E-10	1.141E-10	9.036E-11
SSE	1.041E-08	8.061E-09	6.251E-09	3.971E-09	1.799E-09	1.069E-09	7.104E-10	5.055E-10	3.768E-10	2.905E-10	2.300E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	2.659E-10	1.952E-10	1.352E-10	7.957E-11	5.088E-11	3.421E-11	2.451E-11	1.840E-11	1.476E-11	1.172E-11	9.571E-12
SSW	1.030E-10	8.610E-11	6.132E-11	3.688E-11	2.193E-11	1.546E-11	1.108E-11	8.317E-12	6.491E-12	5.185E-12	4.232E-12
SW	8.814E-11	6.159E-11	4.202E-11	2.437E-11	1.548E-11	1.081E-11	7.982E-12	5.994E-12	4.660E-12	3.723E-12	3.039E-12
WSW	8.045E-11	6.147E-11	4.293E-11	2.721E-11	1.647E-11	1.104E-11	7.914E-12	5.942E-12	4.620E-12	3.691E-12	3.012E-12
W	9.798E-11	4.665E-11	4.076E-11	2.375E-11	1.665E-11	1.116E-11	8.000E-12	6.007E-12	4.671E-12	3.731E-12	3.045E-12
WNW	1.129E-10	6.233E-11	4.252E-11	2.467E-11	1.627E-11	1.141E-11	7.974E-12	5.989E-12	4.705E-12	3.758E-12	3.068E-12
NW	1.196E-10	8.014E-11	6.000E-11	3.550E-11	2.178E-11	1.459E-11	1.039E-11	7.802E-12	6.091E-12	4.865E-12	3.971E-12
NNW	3.255E-10	1.885E-10	1.321E-10	7.885E-11	5.089E-11	3.451E-11	2.479E-11	1.803E-11	1.405E-11	1.122E-11	9.159E-12
N	3.789E-10	1.818E-10	1.124E-10	6.119E-11	8.518E-11	5.706E-11	4.090E-11	3.072E-11	2.389E-11	1.909E-11	1.558E-11
NNE	2.007E-10	2.194E-10	1.351E-10	6.977E-11	4.258E-11	2.856E-11	2.046E-11	1.535E-11	1.193E-11	9.525E-12	7.774E-12
NE	5.718E-11	8.724E-11	5.505E-11	2.928E-11	1.810E-11	1.218E-11	8.480E-12	6.351E-12	4.947E-12	3.961E-12	3.233E-12
ENE	4.202E-11	3.810E-11	2.658E-11	1.572E-11	1.004E-11	6.734E-12	4.799E-12	3.697E-12	2.884E-12	2.315E-12	1.897E-12
E	4.885E-11	5.187E-11	3.719E-11	2.242E-11	1.429E-11	9.495E-12	6.696E-12	4.932E-12	3.776E-12	3.111E-12	2.539E-12
ESE	8.779E-11	6.816E-11	4.539E-11	2.573E-11	1.620E-11	1.086E-11	7.745E-12	5.783E-12	4.479E-12	3.575E-12	2.920E-12
SE	7.302E-11	3.489E-11	2.148E-11	1.159E-11	7.317E-12	5.199E-12	4.009E-12	8.466E-12	6.524E-12	5.190E-12	4.225E-12
SSE	1.860E-10	2.079E-10	1.280E-10	6.599E-11	4.018E-11	2.690E-11	1.923E-11	1.440E-11	1.117E-11	8.906E-12	7.258E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	5.417E-09	2.159E-09	8.594E-10	4.660E-10	3.176E-10	1.842E-10	7.917E-11	3.478E-11	1.876E-11	1.183E-11
SSW	1.933E-09	8.097E-10	3.300E-10	2.010E-10	1.290E-10	7.884E-11	3.567E-11	1.543E-11	8.409E-12	5.219E-12
SW	1.440E-09	9.181E-10	3.906E-10	1.876E-10	1.104E-10	5.879E-11	2.434E-11	1.092E-11	6.054E-12	3.747E-12
WSW	1.521E-09	1.028E-09	3.547E-10	1.702E-10	1.003E-10	5.745E-11	2.593E-11	1.124E-11	6.002E-12	3.715E-12
W	3.703E-09	1.285E-09	4.213E-10	2.034E-10	1.215E-10	5.544E-11	2.438E-11	1.136E-11	6.067E-12	3.755E-12
WNW	2.633E-09	1.379E-09	4.620E-10	2.208E-10	1.362E-10	6.476E-11	2.491E-11	1.133E-11	6.067E-12	3.783E-12
NW	2.609E-09	1.210E-09	3.954E-10	1.971E-10	1.351E-10	7.995E-11	3.485E-11	1.483E-11	7.890E-12	4.897E-12
NNW	7.087E-09	2.958E-09	1.160E-09	6.188E-10	3.865E-10	1.939E-10	7.826E-11	3.499E-11	1.844E-11	1.129E-11
N	1.364E-08	4.312E-09	1.502E-09	7.773E-10	4.716E-10	1.948E-10	8.324E-11	5.810E-11	3.102E-11	1.921E-11
NNE	7.352E-09	2.303E-09	7.972E-10	4.118E-10	2.497E-10	1.778E-10	7.221E-11	2.906E-11	1.550E-11	9.588E-12
NE	1.798E-09	6.115E-10	2.235E-10	1.171E-10	7.121E-11	6.625E-11	3.004E-11	1.228E-11	6.424E-12	3.983E-12
ENE	9.048E-10	3.867E-10	1.590E-10	8.575E-11	5.240E-11	3.385E-11	1.561E-11	6.840E-12	3.702E-12	2.329E-12
E	7.029E-10	3.972E-10	1.805E-10	9.943E-11	6.097E-11	4.468E-11	2.209E-11	9.653E-12	4.995E-12	3.096E-12
ESE	1.392E-09	7.331E-10	3.260E-10	1.788E-10	1.096E-10	6.240E-11	2.586E-11	1.104E-11	5.847E-12	3.600E-12
SE	2.058E-09	7.452E-10	2.824E-10	1.494E-10	9.098E-11	3.741E-11	1.189E-11	5.288E-12	6.453E-12	5.228E-12
SSE	5.640E-09	1.957E-09	7.241E-10	3.807E-10	2.316E-10	1.675E-10	6.831E-11	2.738E-11	1.455E-11	8.967E-12

B292

ERP ELEVATED STACK RELEASES - APR-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY 8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED
A	Site Boundary S	.80	1.2E-07	1.2E-07	1.2E-07 5.6E-09
A	Site Boundary SSW	.82	4.5E-08	4.5E-08	4.4E-08 2.0E-09
A	Site Boundary SW	.97	8.8E-08	8.8E-08	8.8E-08 1.3E-09
A	Site Boundary WSW	.93	8.5E-08	8.5E-08	8.4E-08 1.7E-09
A	Site Boundary W	.91	2.1E-07	2.1E-07	2.0E-07 3.1E-09
A	Site Boundary WNW	.94	1.5E-07	1.5E-07	1.5E-07 2.8E-09
A	Site Boundary NW	.81	1.0E-07	1.0E-07	1.0E-07 2.2E-09
A	Site Boundary NNW	.69	1.7E-07	1.7E-07	1.7E-07 8.3E-09
A	Site Boundary N	.67	2.1E-07	2.1E-07	2.0E-07 1.6E-08
A	Site Boundary NNE	.60	1.6E-07	1.6E-07	1.6E-07 9.7E-09
A	Site Boundary NE	.62	5.5E-08	5.5E-08	5.4E-08 2.3E-09
A	Site Boundary ENE	.59	3.1E-08	3.1E-08	3.0E-08 1.1E-09
A	Site Boundary E	.53	8.5E-09	8.5E-09	8.5E-09 6.4E-10
A	Site Boundary ESE	.54	1.3E-08	1.3E-08	1.3E-08 1.4E-09
A	Site Boundary SE	.65	3.2E-08	3.2E-08	3.2E-08 2.5E-09
A	Site Boundary SSE	.81	1.0E-07	1.0E-07	1.0E-07 5.6E-09
A	Nearest Res SW	1.30	1.2E-07	1.2E-07	1.2E-07 1.5E-09
A	Nearest Res WSW	1.30	1.6E-07	1.6E-07	1.5E-07 1.4E-09
A	Nearest Res W	1.00	2.1E-07	2.1E-07	2.1E-07 2.6E-09
A	Nearest Res WNW	1.70	1.6E-07	1.6E-07	1.6E-07 1.1E-09
A	Nearest Res NW	.90	1.2E-07	1.2E-07	1.2E-07 2.4E-09
A	Nearest Res NNW	1.90	1.7E-07	1.7E-07	1.7E-07 2.0E-09
A	Nearest Res N	3.00	5.8E-08	5.8E-08	5.6E-08 1.0E-09
A	Nearest Res ENE	1.70	2.0E-08	2.0E-08	1.9E-08 3.0E-10
A	Nearest Res E	2.00	1.9E-08	1.9E-08	1.9E-08 2.6E-10
A	Nearest Res ESE	2.30	2.3E-08	2.3E-08	2.2E-08 3.7E-10
A	Nearest Res NNW	3.50	1.2E-07	1.2E-07	1.2E-07 6.1E-10
A	Nearest Garde SW	1.30	1.2E-07	1.2E-07	1.2E-07 1.5E-09
A	Nearest Garde WSW	1.90	1.2E-07	1.2E-07	1.2E-07 6.2E-10
A	Nearest Garde WNW	2.40	9.0E-08	9.0E-08	8.7E-08 4.8E-10
A	Nearest Garde NW	2.90	7.8E-08	7.8E-08	7.6E-08 2.7E-10
A	Nearest Garde NNW	1.90	1.7E-07	1.7E-07	1.7E-07 2.0E-09
A	Nearest Garde ENE	2.80	1.2E-08	1.2E-08	1.2E-08 1.3E-10
A	Nearest Garde E	2.00	1.9E-08	1.9E-08	1.9E-08 2.6E-10
A	Nearest Garde ESE	2.30	2.3E-08	2.3E-08	2.2E-08 3.7E-10
A	Nearest Garde SE	1.20	3.3E-08	3.2E-08	3.2E-08 1.1E-09
A	MAXIMUM CHI/Q S	.75	1.3E-07	1.3E-07	1.2E-07 6.0E-09
A	MAXIMUM CHI/Q SSW	1.00	4.7E-08	4.7E-08	4.6E-08 1.5E-09
A	MAXIMUM CHI/Q SW	1.50	1.3E-07	1.3E-07	1.3E-07 1.1E-09
A	MAXIMUM CHI/Q WSW	1.50	1.7E-07	1.7E-07	1.7E-07 1.0E-09
A	MAXIMUM CHI/Q W	1.00	2.1E-07	2.1E-07	2.1E-07 2.6E-09
A	MAXIMUM CHI/Q WNW	1.50	2.0E-07	2.0E-07	2.0E-07 1.5E-09
A	MAXIMUM CHI/Q NW	1.50	2.5E-07	2.5E-07	2.5E-07 1.3E-09
A	MAXIMUM CHI/Q NNW	1.50	1.9E-07	1.9E-07	1.9E-07 3.3E-09
A	MAXIMUM CHI/Q N	.25	2.2E-07	2.2E-07	2.2E-07 2.7E-08
A	MAXIMUM CHI/Q NNE	.50	1.6E-07	1.6E-07	1.6E-07 1.1E-08
A	MAXIMUM CHI/Q NE	.25	6.0E-08	5.9E-08	5.9E-08 3.4E-09
A	MAXIMUM CHI/Q ENE	.75	3.3E-08	3.3E-08	3.2E-08 1.0E-09
A	MAXIMUM CHI/Q E	1.00	2.5E-08	2.5E-08	2.4E-08 6.8E-10
A	MAXIMUM CHI/Q ESE	1.00	3.2E-08	3.2E-08	3.1E-08 1.3E-09
A	MAXIMUM CHI/Q SE	.75	3.7E-08	3.7E-08	3.6E-08 2.3E-09
A	MAXIMUM CHI/Q SSE	.75	1.1E-07	1.1E-07	1.0E-07 6.3E-09

**Atmospheric Diffusion Estimates**

**Elevated Releases**

January-June 2004

ERP ELEVATED STACK RELEASES - JAN-JUN 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.843E-08	6.990E-08	9.505E-08	9.263E-08	8.213E-08	6.769E-08	5.516E-08	4.542E-08	3.802E-08	4.398E-08	4.860E-08
SSW	4.392E-09	1.585E-08	3.099E-08	3.776E-08	3.949E-08	3.440E-08	2.880E-08	3.146E-08	3.249E-08	2.843E-08	2.522E-08
SW	1.826E-09	1.138E-08	4.201E-08	8.345E-08	1.231E-07	8.144E-08	5.773E-08	4.326E-08	3.381E-08	2.731E-08	2.264E-08
WSW	8.561E-09	1.401E-08	4.023E-08	8.574E-08	1.388E-07	8.743E-08	6.034E-08	4.446E-08	3.436E-08	2.752E-08	2.267E-08
W	2.815E-08	7.335E-08	1.880E-07	2.081E-07	1.702E-07	1.029E-07	6.925E-08	5.014E-08	3.825E-08	3.033E-08	2.478E-08
WNW	5.221E-08	4.423E-08	1.152E-07	1.709E-07	1.904E-07	1.143E-07	7.678E-08	5.806E-08	4.604E-08	3.645E-08	2.976E-08
NW	4.473E-08	4.892E-08	8.341E-08	1.422E-07	2.572E-07	1.544E-07	1.039E-07	7.726E-08	6.035E-08	4.790E-08	3.920E-08
NNW	6.388E-08	9.843E-08	1.275E-07	1.349E-07	1.533E-07	1.447E-07	1.355E-07	1.253E-07	1.174E-07	9.316E-08	7.626E-08
N	1.624E-07	1.539E-07	1.423E-07	1.138E-07	8.718E-08	7.032E-08	5.742E-08	4.689E-08	3.911E-08	3.324E-08	2.872E-08
NNE	8.693E-08	9.235E-08	8.459E-08	6.801E-08	5.444E-08	4.472E-08	3.697E-08	3.097E-08	2.633E-08	2.273E-08	1.989E-08
NE	5.724E-08	3.783E-08	3.589E-08	3.267E-08	2.953E-08	2.523E-08	2.122E-08	1.793E-08	1.532E-08	1.327E-08	1.164E-08
ENE	2.653E-09	1.729E-08	2.594E-08	2.612E-08	2.356E-08	1.958E-08	1.606E-08	1.331E-08	1.119E-08	9.564E-09	8.294E-09
E	3.704E-11	5.695E-09	1.829E-08	2.421E-08	2.525E-08	2.165E-08	1.793E-08	1.491E-08	1.258E-08	1.077E-08	9.357E-09
ESE	9.547E-11	6.911E-09	2.136E-08	3.013E-08	3.349E-08	2.949E-08	2.474E-08	2.072E-08	1.752E-08	1.502E-08	1.304E-08
SE	1.621E-09	1.981E-08	4.249E-08	5.158E-08	5.174E-08	4.367E-08	3.547E-08	2.941E-08	2.456E-08	2.083E-08	1.794E-08
SSE	5.478E-08	6.986E-08	8.366E-08	7.821E-08	6.789E-08	5.595E-08	4.581E-08	3.795E-08	3.195E-08	2.733E-08	2.373E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.345E-08	2.947E-08	1.918E-08	1.104E-08	7.778E-09	5.900E-09	4.604E-09	3.737E-09	3.147E-09	2.700E-09	2.344E-09
SSW	2.333E-08	1.771E-08	1.149E-08	6.584E-09	4.663E-09	3.490E-09	2.720E-09	2.205E-09	1.841E-09	1.570E-09	1.363E-09
SW	2.029E-08	1.348E-08	8.703E-09	4.945E-09	3.412E-09	2.548E-09	2.002E-09	1.615E-09	1.342E-09	1.141E-09	9.866E-10
WSW	1.976E-08	1.188E-08	8.018E-09	4.678E-09	3.116E-09	2.279E-09	1.767E-09	1.426E-09	1.185E-09	1.007E-09	8.711E-10
W	2.074E-08	1.096E-08	7.469E-09	4.512E-09	3.141E-09	2.297E-09	1.778E-09	1.433E-09	1.189E-09	1.010E-09	8.727E-10
WNW	2.519E-08	1.403E-08	9.537E-09	5.824E-09	4.008E-09	3.002E-09	2.381E-09	1.950E-09	1.634E-09	1.395E-09	1.212E-09
NW	3.326E-08	1.861E-08	1.272E-08	7.744E-09	5.248E-09	3.889E-09	3.097E-09	2.532E-09	2.119E-09	1.813E-09	1.577E-09
NNW	6.568E-08	3.859E-08	2.531E-08	1.476E-08	1.012E-08	7.563E-09	6.037E-09	4.990E-09	4.276E-09	3.693E-09	3.222E-09
N	2.523E-08	1.566E-08	1.275E-08	1.032E-08	9.036E-09	7.667E-09	6.063E-09	4.955E-09	4.155E-09	3.560E-09	3.102E-09
NNE	2.196E-08	3.004E-08	1.948E-08	1.119E-08	7.597E-09	5.637E-09	4.423E-09	3.607E-09	3.025E-09	2.591E-09	2.257E-09
NE	1.284E-08	1.816E-08	1.179E-08	6.788E-09	4.613E-09	3.427E-09	2.717E-09	2.231E-09	1.882E-09	1.612E-09	1.404E-09
ENE	8.620E-09	1.223E-08	8.129E-09	4.813E-09	3.328E-09	2.503E-09	2.096E-09	1.783E-09	1.500E-09	1.289E-09	1.126E-09
E	9.833E-09	1.303E-08	8.569E-09	5.001E-09	3.424E-09	2.555E-09	2.014E-09	1.648E-09	1.428E-09	1.252E-09	1.091E-09
ESE	1.326E-08	1.493E-08	9.900E-09	5.829E-09	4.009E-09	3.001E-09	2.370E-09	1.942E-09	1.635E-09	1.405E-09	1.227E-09
SE	1.565E-08	9.398E-09	7.122E-09	4.988E-09	3.611E-09	2.816E-09	2.301E-09	1.942E-09	1.624E-09	1.388E-09	1.206E-09
SSE	2.551E-08	3.247E-08	2.099E-08	1.201E-08	8.127E-09	6.017E-09	4.713E-09	3.837E-09	3.214E-09	2.750E-09	2.393E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	8.839E-08	7.805E-08	5.461E-08	4.241E-08	4.532E-08	2.800E-08	1.140E-08	5.883E-09	3.760E-09	2.700E-09	
SSW	3.064E-08	3.685E-08	3.136E-08	3.065E-08	2.547E-08	1.619E-08	6.820E-09	3.495E-09	2.213E-09	1.573E-09	
SW	5.362E-08	9.577E-08	5.826E-08	3.403E-08	2.315E-08	1.287E-08	5.099E-09	2.560E-09	1.622E-09	1.143E-09	
WSW	5.463E-08	1.042E-07	6.121E-08	3.464E-08	2.303E-08	1.192E-08	4.726E-09	2.297E-09	1.432E-09	1.010E-09	
W	1.714E-07	1.487E-07	7.058E-08	3.863E-08	2.493E-08	1.158E-08	4.560E-09	2.314E-09	1.439E-09	1.012E-09	
WNW	1.242E-07	1.522E-07	7.930E-08	4.582E-08	3.005E-08	1.451E-08	5.842E-09	3.022E-09	1.953E-09	1.398E-09	
NW	1.019E-07	1.860E-07	1.067E-07	6.044E-08	3.958E-08	1.925E-08	7.741E-09	3.935E-09	2.536E-09	1.816E-09	
NNW	1.243E-07	1.454E-07	1.339E-07	1.104E-07	7.735E-08	3.871E-08	1.504E-08	7.634E-09	5.017E-09	3.691E-09	
N	1.322E-07	8.561E-08	5.665E-08	3.910E-08	2.877E-08	1.649E-08	1.029E-08	7.390E-09	4.967E-09	3.567E-09	
NNE	7.895E-08	5.313E-08	3.663E-08	2.628E-08	2.150E-08	2.355E-08	1.144E-08	5.674E-09	3.618E-09	2.596E-09	
NE	3.489E-08	2.832E-08	2.097E-08	1.528E-08	1.257E-08	1.415E-08	6.933E-09	3.459E-09	2.237E-09	1.615E-09	
ENE	2.410E-08	2.236E-08	1.590E-08	1.118E-08	8.791E-09	9.605E-09	4.890E-09	2.560E-09	1.765E-09	1.291E-09	
E	1.812E-08	2.342E-08	1.772E-08	1.256E-08	9.952E-09	1.034E-08	5.093E-09	2.570E-09	1.669E-09	1.245E-09	
ESE	2.205E-08	3.096E-08	2.440E-08	1.748E-08	1.371E-08	1.232E-08	5.925E-09	3.017E-09	1.947E-09	1.407E-09	
SE	4.149E-08	4.812E-08	3.532E-08	2.452E-08	1.795E-08	9.775E-09	4.850E-09	2.822E-09	1.923E-09	1.390E-09	
SSE	7.817E-08	6.488E-08	4.537E-08	3.191E-08	2.546E-08	2.582E-08	1.228E-08	6.058E-09	3.850E-09	2.755E-09	

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ERP ELEVATED STACK RELEASES - JAN-JUN 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.842E-08	6.986E-08	9.496E-08	9.251E-08	8.195E-08	6.749E-08	5.495E-08	4.521E-08	3.781E-08	4.371E-08	4.824E-08
SSW	4.391E-09	1.584E-08	3.096E-08	3.770E-08	3.939E-08	3.428E-08	2.867E-08	3.129E-08	3.228E-08	2.822E-08	2.501E-08
SW	1.825E-09	1.138E-08	4.196E-08	8.330E-08	1.227E-07	8.113E-08	5.746E-08	4.300E-08	3.358E-08	2.710E-08	2.244E-08
WSW	8.558E-09	1.400E-08	4.019E-08	8.560E-08	1.384E-07	8.707E-08	6.003E-08	4.418E-08	3.410E-08	2.729E-08	2.245E-08
W	2.814E-08	7.329E-08	1.878E-07	2.078E-07	1.698E-07	1.026E-07	6.897E-08	4.989E-08	3.803E-08	3.013E-08	2.460E-08
WNW	5.219E-08	4.418E-08	1.150E-07	1.705E-07	1.899E-07	1.139E-07	7.641E-08	5.772E-08	4.572E-08	3.616E-08	2.949E-08
NW	4.471E-08	4.889E-08	8.331E-08	1.420E-07	2.566E-07	1.539E-07	1.034E-07	7.690E-08	6.002E-08	4.760E-08	3.892E-08
NNW	6.386E-08	9.837E-08	1.274E-07	1.347E-07	1.530E-07	1.444E-07	1.350E-07	1.248E-07	1.168E-07	9.262E-08	7.576E-08
N	1.624E-07	1.539E-07	1.421E-07	1.137E-07	8.703E-08	7.015E-08	5.725E-08	4.672E-08	3.894E-08	3.308E-08	2.856E-08
NNE	8.687E-08	9.227E-08	8.450E-08	6.792E-08	5.432E-08	4.458E-08	3.682E-08	3.082E-08	2.619E-08	2.258E-08	1.975E-08
NE	5.716E-08	3.775E-08	3.582E-08	3.260E-08	2.945E-08	2.513E-08	2.111E-08	1.782E-08	1.522E-08	1.316E-08	1.153E-08
ENE	2.651E-09	1.726E-08	2.589E-08	2.606E-08	2.349E-08	1.950E-08	1.599E-08	1.323E-08	1.112E-08	9.489E-09	8.221E-09
E	3.702E-11	5.686E-09	1.826E-08	2.416E-08	2.518E-08	2.158E-08	1.787E-08	1.485E-08	1.252E-08	1.071E-08	9.302E-09
ESE	9.544E-11	6.907E-09	2.134E-08	3.010E-08	3.343E-08	2.941E-08	2.467E-08	2.064E-08	1.745E-08	1.494E-08	1.297E-08
SE	1.621E-09	1.981E-08	4.246E-08	5.153E-08	5.166E-08	4.358E-08	3.564E-08	2.931E-08	2.446E-08	2.073E-08	1.784E-08
SSE	5.477E-08	6.983E-08	8.360E-08	7.813E-08	6.778E-08	5.582E-08	4.568E-08	3.782E-08	3.181E-08	2.719E-08	2.360E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.308E-08	2.908E-08	1.883E-08	1.073E-08	7.491E-09	5.625E-09	4.348E-09	3.496E-09	2.915E-09	2.477E-09	2.130E-09
SSW	2.312E-08	1.745E-08	1.126E-08	6.389E-09	4.476E-09	3.314E-09	2.556E-09	2.051E-09	1.694E-09	1.430E-09	1.228E-09
SW	2.009E-08	1.329E-08	8.538E-09	4.805E-09	3.285E-09	2.430E-09	1.892E-09	1.513E-09	1.246E-09	1.049E-09	8.989E-10
WSW	1.955E-08	1.168E-08	7.840E-09	4.522E-09	2.978E-09	2.153E-09	1.651E-09	1.318E-09	1.083E-09	9.102E-10	7.785E-10
W	2.056E-08	1.082E-08	7.343E-09	4.397E-09	3.034E-09	2.199E-09	1.687E-09	1.348E-09	1.109E-09	9.336E-10	7.998E-10
WNW	2.494E-08	1.381E-08	9.336E-09	5.635E-09	3.833E-09	2.837E-09	2.224E-09	1.800E-09	1.490E-09	1.258E-09	1.080E-09
NW	3.300E-08	1.839E-08	1.252E-08	7.560E-09	5.083E-09	3.737E-09	2.951E-09	2.393E-09	1.988E-09	1.687E-09	1.456E-09
NNW	6.520E-08	3.815E-08	2.493E-08	1.442E-08	9.808E-09	7.273E-09	5.759E-09	4.722E-09	4.013E-09	3.437E-09	2.975E-09
N	2.507E-08	1.551E-08	1.259E-08	1.012E-08	8.790E-09	7.395E-09	5.805E-09	4.710E-09	3.921E-09	3.335E-09	2.885E-09
NNE	2.178E-08	2.967E-08	1.916E-08	1.092E-08	7.350E-09	5.410E-09	4.210E-09	3.405E-09	2.833E-09	2.407E-09	2.079E-09
NE	1.272E-08	1.792E-08	1.159E-08	6.612E-09	4.455E-09	3.280E-09	2.578E-09	2.099E-09	1.755E-09	1.490E-09	1.287E-09
ENE	8.534E-09	1.200E-08	7.928E-09	4.633E-09	3.162E-09	2.346E-09	1.937E-09	1.624E-09	1.348E-09	1.143E-09	9.851E-10
E	9.771E-09	1.289E-08	8.446E-09	4.892E-09	3.323E-09	2.461E-09	1.924E-09	1.562E-09	1.342E-09	1.166E-09	1.008E-09
ESE	1.318E-08	1.479E-08	9.776E-09	5.720E-09	3.909E-09	2.907E-09	2.281E-09	1.857E-09	1.553E-09	1.326E-09	1.151E-09
SE	1.555E-08	9.311E-09	7.032E-09	4.889E-09	3.514E-09	2.720E-09	2.206E-09	1.847E-09	1.534E-09	1.301E-09	1.123E-09
SSE	2.534E-08	3.205E-08	2.062E-08	1.169E-08	7.843E-09	5.754E-09	4.467E-09	3.604E-09	2.991E-09	2.537E-09	2.188E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	8.830E-08	7.787E-08	5.440E-08	4.217E-08	4.499E-08	2.764E-08	1.109E-08	5.612E-09	3.518E-09	2.478E-09
SSW	3.059E-08	3.674E-08	3.121E-08	3.045E-08	2.526E-08	1.596E-08	6.621E-09	3.320E-09	2.059E-09	1.434E-09
SW	5.354E-08	9.548E-08	5.799E-08	3.380E-08	2.295E-08	1.269E-08	4.959E-09	2.443E-09	1.519E-09	1.052E-09
WSW	5.455E-08	1.039E-07	6.090E-08	3.438E-08	2.281E-08	1.172E-08	4.573E-09	2.173E-09	1.324E-09	9.126E-10
W	1.712E-07	1.483E-07	7.030E-08	3.841E-08	2.474E-08	1.144E-08	4.446E-09	2.217E-09	1.354E-09	9.361E-10
WNW	1.239E-07	1.518E-07	7.892E-08	4.551E-08	2.978E-08	1.429E-08	5.657E-09	2.857E-09	1.803E-09	1.261E-09
NW	1.018E-07	1.855E-07	1.063E-07	6.011E-08	3.930E-08	1.903E-08	7.562E-09	3.782E-09	2.398E-09	1.690E-09
NNW	1.242E-07	1.451E-07	1.334E-07	1.099E-07	7.684E-08	3.828E-08	1.471E-08	7.343E-09	4.748E-09	3.437E-09
N	1.321E-07	8.546E-08	5.648E-08	3.893E-08	2.861E-08	1.634E-08	1.008E-08	7.131E-09	4.722E-09	3.342E-09
NNE	7.886E-08	5.301E-08	3.649E-08	2.614E-08	2.134E-08	2.324E-08	1.116E-08	5.447E-09	3.417E-09	2.412E-09
NE	3.482E-08	2.823E-08	2.087E-08	1.518E-08	1.246E-08	1.395E-08	6.758E-09	3.313E-09	2.105E-09	1.493E-09
ENE	2.405E-08	2.229E-08	1.582E-08	1.110E-08	8.713E-09	9.422E-09	4.711E-09	2.400E-09	1.608E-09	1.145E-09
E	1.808E-08	2.335E-08	1.765E-08	1.250E-08	9.893E-09	1.022E-08	4.984E-09	2.476E-09	1.582E-09	1.160E-09
ESE	2.202E-08	3.090E-08	2.432E-08	1.741E-08	1.363E-08	1.220E-08	5.816E-09	2.924E-09	1.862E-09	1.329E-09
SE	4.146E-08	4.804E-08	3.522E-08	2.442E-08	1.785E-08	9.686E-09	4.754E-09	2.726E-09	1.831E-09	1.304E-09
SSE	7.811E-08	6.477E-08	4.524E-08	3.177E-08	2.531E-08	2.548E-08	1.197E-08	5.796E-09	3.617E-09	2.542E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	2.843E-08	6.928E-08	9.332E-08	9.099E-08	8.046E-08	6.596E-08	5.343E-08	4.374E-08	3.642E-08	4.217E-08	4.668E-08
SSW	4.392E-09	1.571E-08	3.054E-08	3.730E-08	3.887E-08	3.364E-08	2.797E-08	3.046E-08	3.140E-08	2.737E-08	2.421E-08
SW	1.826E-09	1.129E-08	4.165E-08	8.306E-08	1.214E-07	7.956E-08	5.596E-08	4.164E-08	3.236E-08	2.600E-08	2.146E-08
WSW	8.560E-09	1.389E-08	3.992E-08	8.534E-08	1.370E-07	8.557E-08	5.868E-08	4.300E-08	3.307E-08	2.638E-08	2.165E-08
W	2.815E-08	7.246E-08	1.860E-07	2.047E-07	1.660E-07	9.949E-08	6.648E-08	4.785E-08	3.631E-08	2.866E-08	2.331E-08
WNW	5.220E-08	4.386E-08	1.141E-07	1.687E-07	1.866E-07	1.110E-07	7.399E-08	5.566E-08	4.396E-08	3.461E-08	2.809E-08
NW	4.472E-08	4.848E-08	8.212E-08	1.407E-07	2.543E-07	1.517E-07	1.016E-07	7.537E-08	5.873E-08	4.642E-08	3.781E-08
NNW	6.387E-08	9.753E-08	1.251E-07	1.326E-07	1.508E-07	1.419E-07	1.327E-07	1.227E-07	1.150E-07	9.088E-08	7.404E-08
N	1.624E-07	1.525E-07	1.393E-07	1.113E-07	8.504E-08	6.833E-08	5.555E-08	4.516E-08	3.751E-08	3.176E-08	2.734E-08
NNE	8.691E-08	9.151E-08	8.283E-08	6.648E-08	5.313E-08	4.350E-08	3.583E-08	2.989E-08	2.533E-08	2.179E-08	1.901E-08
NE	5.722E-08	3.747E-08	3.517E-08	3.201E-08	2.889E-08	2.458E-08	2.058E-08	1.731E-08	1.474E-08	1.271E-08	1.111E-08
ENE	2.652E-09	1.713E-08	2.546E-08	2.565E-08	2.307E-08	1.907E-08	1.556E-08	1.282E-08	1.073E-08	9.123E-09	7.878E-09
E	3.704E-11	5.646E-09	1.805E-08	2.393E-08	2.484E-08	2.117E-08	1.742E-08	1.440E-08	1.208E-08	1.030E-08	8.907E-09
ESE	9.546E-11	6.855E-09	2.114E-08	2.990E-08	3.066E-08	2.891E-08	2.410E-08	2.006E-08	1.687E-08	1.439E-08	1.244E-08
SE	1.621E-09	1.964E-08	4.192E-08	5.101E-08	5.095E-08	4.271E-08	3.470E-08	2.837E-08	2.354E-08	1.986E-08	1.701E-08
SSE	5.478E-08	6.924E-08	8.211E-08	7.678E-08	6.651E-08	5.455E-08	4.444E-08	3.663E-08	3.070E-08	2.615E-08	2.262E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.163E-08	2.773E-08	1.746E-08	9.401E-09	6.151E-09	4.392E-09	3.280E-09	2.559E-09	2.079E-09	1.730E-09	1.460E-09
SSW	2.236E-08	1.671E-08	1.049E-08	5.617E-09	3.708E-09	2.661E-09	1.999E-09	1.567E-09	1.269E-09	1.051E-09	8.881E-10
SW	1.919E-08	1.254E-08	7.833E-09	4.172E-09	2.683E-09	1.890E-09	1.429E-09	1.114E-09	8.968E-10	7.401E-10	6.226E-10
WSW	1.883E-08	1.106E-08	7.223E-09	3.986E-09	2.534E-09	1.780E-09	1.332E-09	1.041E-09	8.395E-10	6.939E-10	5.847E-10
W	1.943E-08	1.009E-08	6.754E-09	3.852E-09	2.532E-09	1.779E-09	1.329E-09	1.038E-09	8.368E-10	6.915E-10	5.825E-10
WNW	2.364E-08	1.277E-08	8.405E-09	4.800E-09	3.060E-09	2.156E-09	1.639E-09	1.295E-09	1.049E-09	8.682E-10	7.325E-10
NW	3.191E-08	1.731E-08	1.144E-08	6.513E-09	4.154E-09	2.924E-09	2.239E-09	1.770E-09	1.437E-09	1.194E-09	1.011E-09
NNW	6.345E-08	3.616E-08	2.290E-08	1.240E-08	7.807E-09	5.430E-09	4.080E-09	3.218E-09	2.662E-09	2.227E-09	1.887E-09
N	2.394E-08	1.467E-08	1.191E-08	9.659E-09	8.288E-09	6.715E-09	5.149E-09	4.091E-09	3.344E-09	2.797E-09	2.383E-09
NNE	2.105E-08	2.885E-08	1.807E-08	9.767E-09	6.257E-09	4.421E-09	3.324E-09	2.608E-09	2.111E-09	1.750E-09	1.478E-09
NE	1.230E-08	1.744E-08	1.094E-08	5.925E-09	3.800E-09	2.688E-09	2.049E-09	1.628E-09	1.333E-09	1.110E-09	9.422E-10
ENE	8.190E-09	1.172E-08	7.531E-09	4.157E-09	2.651E-09	1.861E-09	1.466E-09	1.188E-09	9.596E-10	7.941E-10	6.695E-10
E	9.367E-09	1.249E-08	7.945E-09	4.331E-09	2.741E-09	1.915E-09	1.424E-09	1.105E-09	9.124E-10	7.677E-10	6.476E-10
ESE	1.264E-08	1.428E-08	9.169E-09	5.055E-09	3.225E-09	2.265E-09	1.691E-09	1.317E-09	1.059E-09	8.716E-10	7.312E-10
SE	1.477E-08	8.707E-09	6.536E-09	4.534E-09	3.251E-09	2.518E-09	2.048E-09	1.713E-09	1.397E-09	1.166E-09	9.914E-10
SSE	2.435E-08	3.104E-08	1.937E-08	1.042E-08	6.655E-09	4.690E-09	3.518E-09	2.754E-09	2.226E-09	1.843E-09	1.554E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	8.694E-08	7.636E-08	5.290E-08	4.070E-08	4.347E-08	2.626E-08	9.748E-09	4.416E-09	2.582E-09	1.734E-09
SSW	3.025E-08	3.620E-08	3.048E-08	2.960E-08	2.446E-08	1.520E-08	5.850E-09	2.675E-09	1.577E-09	1.055E-09
SW	5.331E-08	9.429E-08	5.653E-08	3.259E-08	2.196E-08	1.192E-08	4.323E-09	1.917E-09	1.121E-09	7.430E-10
WSW	5.432E-08	1.027E-07	5.958E-08	3.336E-08	2.201E-08	1.108E-08	4.060E-09	1.802E-09	1.047E-09	6.966E-10
W	1.691E-07	1.450E-07	6.783E-08	3.669E-08	2.346E-08	1.068E-08	3.910E-09	1.800E-09	1.045E-09	6.942E-10
WNW	1.228E-07	1.490E-07	7.652E-08	4.374E-08	2.837E-08	1.324E-08	4.828E-09	2.190E-09	1.299E-09	8.714E-10
NW	1.007E-07	1.835E-07	1.045E-07	5.880E-08	3.818E-08	1.794E-08	6.559E-09	2.978E-09	1.777E-09	1.198E-09
NNW	1.223E-07	1.428E-07	1.311E-07	1.080E-07	7.511E-08	3.633E-08	1.269E-08	5.524E-09	3.253E-09	2.230E-09
N	1.298E-07	8.344E-08	5.480E-08	3.750E-08	2.739E-08	1.550E-08	9.550E-09	6.508E-09	4.109E-09	2.806E-09
NNE	7.749E-08	5.182E-08	3.550E-08	2.529E-08	2.059E-08	1.233E-08	1.005E-08	4.472E-09	2.623E-09	1.756E-09
NE	3.428E-08	2.767E-08	2.034E-08	1.470E-08	1.203E-08	1.341E-08	6.095E-09	2.729E-09	1.636E-09	1.114E-09
ENE	2.369E-08	2.187E-08	1.540E-08	1.071E-08	8.362E-09	9.073E-09	4.237E-09	1.914E-09	1.180E-09	7.970E-10
E	1.791E-08	2.301E-08	1.721E-08	1.206E-08	9.489E-09	9.776E-09	4.428E-09	1.939E-09	1.123E-09	7.661E-10
ESE	2.186E-08	3.051E-08	2.376E-08	1.683E-08	1.309E-08	1.164E-08	5.156E-09	2.291E-09	1.325E-09	8.750E-10
SE	4.101E-08	4.730E-08	3.430E-08	2.352E-08	1.702E-08	9.089E-09	4.409E-09	2.526E-09	1.688E-09	1.170E-09
SSE	7.688E-08	6.348E-08	4.401E-08	3.066E-08	2.431E-08	2.437E-08	1.074E-08	4.745E-09	2.771E-09	1.849E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	6.572E-09	5.448E-09	4.781E-09	3.388E-09	1.690E-09	1.048E-09	7.119E-10	5.128E-10	3.846E-10	3.121E-10	2.797E-10
SSW	1.609E-09	1.499E-09	1.555E-09	1.235E-09	6.694E-10	4.283E-10	2.958E-10	2.148E-10	2.006E-10	1.516E-10	1.187E-10
SW	1.085E-09	1.071E-09	1.189E-09	9.815E-10	9.954E-10	5.399E-10	3.339E-10	2.265E-10	1.636E-10	1.237E-10	9.681E-11
WSW	9.462E-10	9.191E-10	1.002E-09	1.554E-09	8.288E-10	4.483E-10	2.767E-10	1.874E-10	1.353E-10	1.022E-10	7.999E-11
W	1.482E-09	5.068E-09	4.261E-09	2.640E-09	1.231E-09	6.613E-10	4.069E-10	2.753E-10	1.988E-10	1.506E-10	1.183E-10
WNW	1.863E-09	1.659E-09	3.642E-09	2.522E-09	1.489E-09	7.507E-10	4.456E-10	2.960E-10	2.185E-10	1.669E-10	1.343E-10
NW	3.514E-09	2.729E-09	2.128E-09	2.228E-09	1.249E-09	6.256E-10	3.764E-10	2.573E-10	1.941E-10	1.581E-10	1.365E-10
NNW	9.354E-09	7.183E-09	5.475E-09	3.419E-09	2.317E-09	1.236E-09	7.626E-10	6.108E-10	4.544E-10	3.638E-10	3.082E-10
N	1.701E-08	1.300E-08	9.810E-09	6.063E-09	2.672E-09	1.567E-09	1.033E-09	7.324E-10	5.448E-10	4.197E-10	3.322E-10
NNE	8.052E-09	6.167E-09	4.675E-09	2.903E-09	1.285E-09	7.554E-10	4.989E-10	3.538E-10	2.633E-10	2.029E-10	1.606E-10
NE	1.969E-09	1.616E-09	1.395E-09	9.759E-10	4.819E-10	2.973E-10	2.016E-10	1.451E-10	1.087E-10	8.403E-11	6.653E-11
ENE	9.382E-10	8.714E-10	9.008E-10	7.140E-10	3.864E-10	2.471E-10	1.706E-10	1.239E-10	9.330E-11	7.225E-11	5.721E-11
E	4.363E-10	5.787E-10	8.230E-10	7.586E-10	4.483E-10	2.954E-10	2.070E-10	1.515E-10	1.145E-10	8.878E-11	7.030E-11
ESE	8.501E-10	1.022E-09	1.358E-09	1.219E-09	7.102E-10	4.659E-10	3.257E-10	2.381E-10	1.798E-10	1.394E-10	1.104E-10
SE	3.351E-09	3.114E-09	3.221E-09	2.554E-09	1.382E-09	8.840E-10	6.104E-10	4.433E-10	3.338E-10	2.585E-10	2.047E-10
SSE	8.620E-09	6.861E-09	5.609E-09	3.745E-09	1.777E-09	1.078E-09	7.247E-10	5.189E-10	3.880E-10	2.996E-10	2.372E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	2.251E-10	1.678E-10	1.165E-10	6.870E-11	4.389E-11	2.974E-11	2.130E-11	1.598E-11	1.267E-11	1.009E-11	8.234E-12
SSW	9.577E-11	7.422E-11	5.189E-11	3.070E-11	1.901E-11	1.334E-11	9.556E-12	7.176E-12	5.604E-12	4.477E-12	3.654E-12
SW	7.817E-11	5.743E-11	3.962E-11	2.317E-11	1.470E-11	1.006E-11	7.447E-12	5.592E-12	4.348E-12	3.473E-12	2.835E-12
WSW	6.476E-11	4.779E-11	3.308E-11	2.107E-11	1.275E-11	8.551E-12	6.147E-12	4.616E-12	3.589E-12	2.867E-12	2.340E-12
W	9.571E-11	4.427E-11	4.306E-11	2.506E-11	1.719E-11	1.155E-11	8.279E-12	6.217E-12	4.834E-12	3.861E-12	3.152E-12
WNW	1.134E-10	6.346E-11	4.361E-11	2.546E-11	1.673E-11	1.154E-11	8.147E-12	6.126E-12	4.785E-12	3.822E-12	3.120E-12
NW	1.232E-10	8.449E-11	6.384E-11	3.760E-11	2.302E-11	1.544E-11	1.100E-11	8.263E-12	6.437E-12	5.142E-12	4.197E-12
NNW	2.731E-10	1.781E-10	1.318E-10	8.191E-11	5.304E-11	3.561E-11	2.346E-11	1.704E-11	1.316E-11	1.051E-11	8.580E-12
N	2.687E-10	1.287E-10	7.948E-11	4.308E-11	7.410E-11	4.724E-11	3.380E-11	2.538E-11	1.974E-11	1.577E-11	1.287E-11
NNE	1.299E-10	1.873E-10	1.157E-10	5.996E-11	3.660E-11	2.452E-11	1.754E-11	1.314E-11	1.020E-11	8.134E-12	6.631E-12
NE	5.372E-11	9.603E-11	5.952E-11	3.099E-11	1.899E-11	1.275E-11	9.057E-12	6.796E-12	5.291E-12	4.233E-12	3.455E-12
ENE	4.614E-11	5.067E-11	3.665E-11	2.228E-11	1.425E-11	9.489E-12	6.702E-12	4.817E-12	3.751E-12	3.004E-12	2.457E-12
E	5.665E-11	6.923E-11	5.087E-11	3.125E-11	1.998E-11	1.324E-11	9.303E-12	6.823E-12	5.202E-12	4.104E-12	3.351E-12
ESE	8.899E-11	9.723E-11	7.005E-11	4.238E-11	2.702E-11	1.795E-11	1.264E-11	9.301E-12	7.111E-12	5.606E-12	4.525E-12
SE	1.651E-10	7.845E-11	4.800E-11	2.548E-11	1.572E-11	1.090E-11	8.190E-12	1.403E-11	1.082E-11	8.606E-12	7.007E-12
SSE	1.916E-10	2.413E-10	1.482E-10	7.611E-11	4.629E-11	3.100E-11	2.217E-11	1.661E-11	1.289E-11	1.028E-11	8.380E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.310E-09	1.782E-09	7.218E-10	3.936E-10	2.691E-10	1.577E-10	6.830E-11	3.014E-11	1.624E-11	1.017E-11
SSW	1.400E-09	6.880E-10	2.987E-10	1.860E-10	1.200E-10	6.909E-11	3.021E-11	1.334E-11	7.257E-12	4.506E-12
SW	1.071E-09	7.899E-10	3.459E-10	1.664E-10	9.787E-11	5.412E-11	2.306E-11	1.025E-11	5.648E-12	3.496E-12
WSW	1.229E-09	8.208E-10	2.867E-10	1.376E-10	8.094E-11	4.502E-11	2.004E-11	8.710E-12	4.662E-12	2.886E-12
W	3.720E-09	1.291E-09	4.221E-10	2.023E-10	1.195E-10	5.516E-11	2.556E-11	1.175E-11	6.279E-12	3.886E-12
WNW	2.703E-09	1.390E-09	4.671E-10	2.210E-10	1.362E-10	6.574E-11	2.562E-11	1.157E-11	6.193E-12	3.847E-12
NW	2.306E-09	1.189E-09	3.952E-10	1.984E-10	1.380E-10	8.391E-11	3.695E-11	1.569E-11	8.350E-12	5.175E-12
NNW	4.941E-09	2.081E-09	8.280E-10	4.646E-10	3.117E-10	1.786E-10	8.018E-11	3.540E-11	1.739E-11	1.058E-11
N	8.853E-09	2.934E-09	1.055E-09	5.507E-10	3.346E-10	1.380E-10	6.496E-11	4.902E-11	2.564E-11	1.587E-11
NNE	4.219E-09	1.409E-09	5.093E-10	2.661E-10	1.617E-10	1.427E-10	6.197E-11	2.495E-11	1.328E-11	8.188E-12
NE	1.258E-09	5.096E-10	2.045E-10	1.097E-10	6.697E-11	7.040E-11	3.200E-11	1.294E-11	6.869E-12	4.258E-12
ENE	8.112E-10	3.973E-10	1.723E-10	9.402E-11	5.757E-11	4.343E-11	2.190E-11	9.644E-12	4.949E-12	3.023E-12
E	7.401E-10	4.493E-10	2.084E-10	1.153E-10	7.072E-11	5.827E-11	3.060E-11	1.346E-11	6.914E-12	4.151E-12
ESE	1.221E-09	7.146E-10	3.280E-10	1.811E-10	1.111E-10	8.332E-11	4.170E-11	1.824E-11	9.421E-12	5.652E-12
SE	2.901E-09	1.421E-09	6.165E-10	3.364E-10	2.060E-10	8.417E-11	2.615E-11	1.110E-11	1.114E-11	8.670E-12
SSE	5.059E-09	1.904E-09	7.367E-10	3.917E-10	2.388E-10	1.889E-10	7.887E-11	3.155E-11	1.678E-11	1.035E-11

B298

ERP ELEVATED STACK RELEASES - JAN-JUN 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST

RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	DEPLETED			
A	Site Boundary	S	.80	9.5E-08	9.5E-08	9.3E-08	4.5E-09
A	Site Boundary	SSW	.82	3.3E-08	3.3E-08	3.3E-08	1.5E-09
A	Site Boundary	SW	.97	8.0E-08	7.9E-08	7.9E-08	1.0E-09
A	Site Boundary	WSW	.93	7.2E-08	7.2E-08	7.2E-08	1.2E-09
A	Site Boundary	W	.91	2.1E-07	2.1E-07	2.0E-07	3.1E-09
A	Site Boundary	WNW	.94	1.6E-07	1.6E-07	1.6E-07	2.8E-09
A	Site Boundary	NW	.81	9.4E-08	9.4E-08	9.3E-08	1.9E-09
A	Site Boundary	NNW	.69	1.2E-07	1.2E-07	1.2E-07	5.8E-09
A	Site Boundary	N	.67	1.4E-07	1.4E-07	1.4E-07	1.1E-08
A	Site Boundary	NNE	.60	8.6E-08	8.6E-08	8.4E-08	5.5E-09
A	Site Boundary	NE	.62	3.3E-08	3.3E-08	3.3E-08	1.5E-09
A	Site Boundary	ENE	.59	2.0E-08	2.0E-08	2.0E-08	8.7E-10
A	Site Boundary	E	.53	6.7E-09	6.7E-09	6.7E-09	6.0E-10
A	Site Boundary	ESE	.54	8.5E-09	8.5E-09	8.5E-09	1.1E-09
A	Site Boundary	SE	.65	3.3E-08	3.3E-08	3.2E-08	3.1E-09
A	Site Boundary	SSE	.81	8.2E-08	8.2E-08	8.0E-08	5.1E-09
A	Nearest Res	SW	1.30	1.2E-07	1.2E-07	1.1E-07	1.3E-09
A	Nearest Res	WSW	1.30	1.3E-07	1.3E-07	1.3E-07	1.1E-09
A	Nearest Res	W	1.00	2.1E-07	2.1E-07	2.0E-07	2.6E-09
A	Nearest Res	WNW	1.70	1.5E-07	1.5E-07	1.5E-07	1.1E-09
A	Nearest Res	NW	.90	1.1E-07	1.1E-07	1.1E-07	2.4E-09
A	Nearest Res	NNW	1.90	1.5E-07	1.5E-07	1.4E-07	1.4E-09
A	Nearest Res	N	3.00	4.7E-08	4.7E-08	4.5E-08	7.3E-10
A	Nearest Res	ENE	1.70	2.2E-08	2.2E-08	2.1E-08	3.2E-10
A	Nearest Res	E	2.00	2.2E-08	2.2E-08	2.1E-08	3.0E-10
A	Nearest Res	ESE	2.30	2.7E-08	2.7E-08	2.6E-08	3.7E-10
A	Nearest Cow	NNW	3.50	1.2E-07	1.2E-07	1.1E-07	4.5E-10
A	Nearest Garde	SW	1.30	1.2E-07	1.2E-07	1.1E-07	1.3E-09
A	Nearest Garde	WSW	1.90	9.5E-08	9.5E-08	9.3E-08	5.0E-10
A	Nearest Garde	WNW	2.40	8.3E-08	8.2E-08	8.0E-08	4.9E-10
A	Nearest Garde	NW	2.90	8.2E-08	8.1E-08	8.0E-08	2.8E-10
A	Nearest Garde	NNW	1.90	1.5E-07	1.5E-07	1.4E-07	1.4E-09
A	Nearest Garde	ENE	2.80	1.4E-08	1.4E-08	1.4E-08	1.4E-10
A	Nearest Garde	E	2.00	2.2E-08	2.2E-08	2.1E-08	3.0E-10
A	Nearest Garde	ESE	2.30	2.7E-08	2.7E-08	2.6E-08	3.7E-10
A	Nearest Garde	SE	1.20	5.4E-08	5.4E-08	5.3E-08	1.9E-09
A	MAXIMUM CHI/Q	S	.75	9.5E-08	9.5E-08	9.3E-08	4.8E-09
A	MAXIMUM CHI/Q	SSW	1.50	3.9E-08	3.9E-08	3.9E-08	6.7E-10
A	MAXIMUM CHI/Q	SW	1.50	1.2E-07	1.2E-07	1.2E-07	1.0E-09
A	MAXIMUM CHI/Q	WSW	1.50	1.4E-07	1.4E-07	1.4E-07	8.3E-10
A	MAXIMUM CHI/Q	W	1.00	2.1E-07	2.1E-07	2.0E-07	2.6E-09
A	MAXIMUM CHI/Q	WNW	1.50	1.9E-07	1.9E-07	1.9E-07	1.5E-09
A	MAXIMUM CHI/Q	NW	1.50	2.6E-07	2.6E-07	2.5E-07	1.2E-09
A	MAXIMUM CHI/Q	NNW	1.50	1.5E-07	1.5E-07	1.5E-07	2.3E-09
A	MAXIMUM CHI/Q	N	.25	1.3E-07	1.3E-07	1.3E-07	1.7E-08
A	MAXIMUM CHI/Q	NNE	.50	8.8E-08	8.8E-08	8.7E-08	6.2E-09
A	MAXIMUM CHI/Q	NE	.25	4.4E-08	4.4E-08	4.4E-08	2.0E-09
A	MAXIMUM CHI/Q	ENE	1.00	2.6E-08	2.6E-08	2.6E-08	7.1E-10
A	MAXIMUM CHI/Q	E	1.50	2.5E-08	2.5E-08	2.5E-08	4.5E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.3E-08	3.3E-08	3.3E-08	7.1E-10
A	MAXIMUM CHI/Q	SE	1.50	5.2E-08	5.2E-08	5.1E-08	1.4E-09
A	MAXIMUM CHI/Q	SSE	.75	8.3E-08	8.3E-08	8.2E-08	5.6E-09

**Atmospheric Diffusion Estimates**

**Elevated Releases**

**July-September 2004**

ERP ELEVATED STACK RELEASES - JUL-SEP 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.974E-11	9.321E-09	3.426E-08	5.413E-08	6.673E-08	6.139E-08	5.270E-08	4.470E-08	3.812E-08	4.538E-08	5.053E-08
SSW	1.052E-10	1.467E-08	4.352E-08	5.841E-08	6.437E-08	5.719E-08	4.838E-08	5.332E-08	5.516E-08	4.827E-08	4.278E-08
SW	1.971E-09	1.554E-08	4.576E-08	8.367E-08	1.299E-07	8.813E-08	6.367E-08	4.843E-08	3.834E-08	3.130E-08	2.619E-08
WSW	4.529E-08	1.381E-08	3.351E-08	9.273E-08	1.820E-07	1.196E-07	8.501E-08	6.405E-08	5.038E-08	4.096E-08	3.417E-08
W	6.471E-08	4.731E-08	1.211E-07	1.488E-07	1.531E-07	1.004E-07	7.138E-08	5.384E-08	4.240E-08	3.450E-08	2.880E-08
WNW	1.317E-07	7.700E-08	1.271E-07	1.910E-07	2.765E-07	1.768E-07	1.236E-07	9.731E-08	7.914E-08	6.332E-08	5.214E-08
NW	1.487E-07	1.824E-07	2.351E-07	3.113E-07	4.349E-07	2.544E-07	1.681E-07	1.227E-07	9.428E-08	7.414E-08	6.019E-08
NNW	3.475E-07	3.280E-07	3.250E-07	2.959E-07	3.048E-07	2.800E-07	2.537E-07	2.225E-07	1.940E-07	1.523E-07	1.236E-07
N	4.140E-07	3.665E-07	2.831E-07	1.997E-07	1.403E-07	1.121E-07	9.224E-08	7.597E-08	6.385E-08	5.461E-08	4.741E-08
NNE	2.368E-07	1.314E-07	8.329E-08	6.417E-08	5.674E-08	4.931E-08	4.203E-08	3.584E-08	3.082E-08	2.678E-08	2.355E-08
NE	2.617E-07	1.187E-07	6.669E-08	4.893E-08	4.007E-08	3.251E-08	2.641E-08	2.178E-08	1.828E-08	1.561E-08	1.354E-08
ENE	3.078E-07	1.272E-07	5.611E-08	3.618E-08	2.841E-08	2.251E-08	1.800E-08	1.468E-08	1.223E-08	1.038E-08	8.970E-09
E	1.404E-07	5.650E-08	2.779E-08	1.895E-08	1.547E-08	1.278E-08	1.057E-08	8.832E-09	7.493E-09	6.452E-09	5.634E-09
ESE	1.350E-07	7.996E-08	5.173E-08	3.415E-08	2.347E-08	1.813E-08	1.456E-08	1.200E-08	1.011E-08	8.678E-09	7.568E-09
SE	4.964E-08	2.508E-08	2.794E-08	2.997E-08	3.010E-08	2.627E-08	2.216E-08	1.870E-08	1.594E-08	1.375E-08	1.201E-08
SSE	3.483E-09	2.525E-08	4.074E-08	4.391E-08	4.237E-08	3.611E-08	2.996E-08	2.494E-08	2.102E-08	1.797E-08	1.558E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.524E-08	3.085E-08	2.010E-08	1.156E-08	8.144E-09	6.175E-09	4.812E-09	3.901E-09	3.282E-09	2.814E-09	2.441E-09
SSW	3.951E-08	3.039E-08	1.977E-08	1.137E-08	8.146E-09	6.147E-09	4.793E-09	3.888E-09	3.249E-09	2.772E-09	2.407E-09
SW	2.399E-08	1.758E-08	1.152E-08	6.687E-09	4.745E-09	3.618E-09	2.903E-09	2.356E-09	1.967E-09	1.679E-09	1.458E-09
WSW	3.049E-08	2.021E-08	1.433E-08	8.831E-09	5.960E-09	4.403E-09	3.443E-09	2.797E-09	2.339E-09	1.998E-09	1.736E-09
W	2.454E-08	1.380E-08	1.007E-08	6.596E-09	4.829E-09	3.585E-09	2.804E-09	2.281E-09	1.908E-09	1.631E-09	1.418E-09
WNW	4.446E-08	2.509E-08	1.703E-08	1.025E-08	7.012E-09	5.223E-09	4.114E-09	3.356E-09	2.808E-09	2.398E-09	2.083E-09
NW	5.057E-08	2.721E-08	1.806E-08	1.057E-08	7.094E-09	5.219E-09	4.098E-09	3.327E-09	2.774E-09	2.364E-09	2.050E-09
NNW	1.045E-07	5.732E-08	3.707E-08	2.122E-08	1.437E-08	1.064E-08	8.377E-09	6.845E-09	5.772E-09	4.945E-09	4.298E-09
N	4.184E-08	2.632E-08	2.134E-08	1.583E-08	1.206E-08	9.320E-09	7.281E-09	5.905E-09	4.927E-09	4.201E-09	3.645E-09
NNE	2.584E-08	3.036E-08	1.960E-08	1.119E-08	7.548E-09	5.575E-09	4.359E-09	3.543E-09	2.963E-09	2.532E-09	2.200E-09
NE	1.443E-08	1.866E-08	1.210E-08	6.951E-09	4.717E-09	3.500E-09	2.768E-09	2.268E-09	1.912E-09	1.637E-09	1.425E-09
ENE	9.129E-09	1.067E-08	7.013E-09	4.093E-09	2.803E-09	2.093E-09	1.694E-09	1.408E-09	1.182E-09	1.014E-09	8.840E-10
E	5.900E-09	6.397E-09	4.156E-09	2.387E-09	1.617E-09	1.197E-09	9.377E-10	7.633E-10	6.454E-10	5.553E-10	4.826E-10
ESE	7.868E-09	9.914E-09	6.631E-09	3.947E-09	2.735E-09	2.058E-09	1.632E-09	1.342E-09	1.133E-09	9.760E-10	8.543E-10
SE	1.060E-08	6.636E-09	5.212E-09	3.766E-09	2.742E-09	2.134E-09	1.733E-09	1.450E-09	1.213E-09	1.037E-09	9.008E-10
SSE	1.637E-08	1.830E-08	1.176E-08	6.665E-09	4.480E-09	3.299E-09	2.572E-09	2.087E-09	1.742E-09	1.486E-09	1.290E-09

DIRECTION FROM SITE	CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT											
	.5-1	1-2	2-3	3-4	SEGMENT BOUNDARIES IN MILES FROM THE SITE							
				4-5	5-10	10-20	20-30	30-40	40-50			
S	3.755E-08	6.156E-08	5.182E-08	4.276E-08	4.704E-08	2.927E-08	1.194E-08	6.155E-09	3.926E-09	2.815E-09		
SSW	4.373E-08	5.985E-08	5.271E-08	5.201E-08	4.320E-08	2.770E-08	1.181E-08	6.138E-09	3.903E-09	2.778E-09		
SW	5.590E-08	1.011E-07	6.410E-08	3.854E-08	2.689E-08	1.631E-08	6.899E-09	3.633E-09	2.364E-09	1.682E-09		
WSW	5.545E-08	1.344E-07	8.585E-08	5.070E-08	3.482E-08	1.988E-08	8.776E-09	4.434E-09	2.807E-09	2.002E-09		
W	1.170E-07	1.287E-07	7.209E-08	4.266E-08	2.891E-08	1.453E-08	6.582E-09	3.604E-09	2.288E-09	1.635E-09		
WNW	1.444E-07	2.132E-07	1.272E-07	7.830E-08	5.261E-08	2.582E-08	1.032E-08	5.257E-09	3.364E-09	2.403E-09		
NW	2.572E-07	3.272E-07	1.730E-07	9.473E-08	6.076E-08	2.834E-08	1.069E-08	5.271E-09	3.337E-09	2.369E-09		
NNW	3.127E-07	2.918E-07	2.482E-07	1.863E-07	1.251E-07	5.882E-08	2.170E-08	1.073E-08	6.874E-09	4.950E-09		
N	2.646E-07	1.410E-07	9.103E-08	6.380E-08	4.748E-08	2.756E-08	1.538E-08	9.235E-09	5.925E-09	4.210E-09		
NNE	8.549E-08	5.509E-08	4.150E-08	3.071E-08	2.535E-08	2.458E-08	1.144E-08	5.615E-09	3.555E-09	2.537E-09		
NE	7.036E-08	3.868E-08	2.618E-08	1.826E-08	1.449E-08	1.480E-08	7.102E-09	3.532E-09	2.275E-09	1.640E-09		
ENE	6.305E-08	2.751E-08	1.788E-08	1.223E-08	9.448E-09	8.702E-09	4.169E-09	2.123E-09	1.404E-09	1.016E-09		
E	3.024E-08	1.505E-08	1.046E-08	7.479E-09	5.975E-09	5.291E-09	2.438E-09	1.205E-09	7.682E-10	5.551E-10		
ESE	5.019E-08	2.347E-08	1.449E-08	1.010E-08	8.008E-09	8.000E-09	4.005E-09	2.069E-09	1.345E-09	9.774E-10		
SE	2.820E-08	2.837E-08	2.187E-08	1.589E-08	1.200E-08	6.885E-09	3.632E-09	2.136E-09	1.441E-09	1.039E-09		
SSE	3.871E-08	3.993E-08	2.959E-08	2.098E-08	1.658E-08	1.496E-08	6.825E-09	3.323E-09	2.094E-09	1.489E-09		

B301

ERP ELEVATED STACK RELEASES - JUL-SEP 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.970E-11	9.314E-09	3.421E-08	5.403E-08	6.653E-08	6.114E-08	5.242E-08	4.442E-08	3.784E-08	4.501E-08	5.007E-08	
SSW	1.051E-10	1.464E-08	4.343E-08	5.826E-08	6.414E-08	5.692E-08	4.810E-08	5.294E-08	5.469E-08	4.779E-08	4.230E-08	
SW	1.971E-09	1.553E-08	4.570E-08	8.350E-08	1.295E-07	8.775E-08	6.332E-08	4.811E-08	3.804E-08	3.102E-08	2.592E-08	
WSW	4.527E-08	1.380E-08	3.346E-08	9.252E-08	1.813E-07	1.190E-07	8.448E-08	6.356E-08	4.993E-08	4.054E-08	3.377E-08	
W	6.469E-08	4.727E-08	1.209E-07	1.486E-07	1.526E-07	9.991E-08	7.097E-08	5.346E-08	4.205E-08	3.417E-08	2.849E-08	
WNW	1.316E-07	7.694E-08	1.269E-07	1.907E-07	2.756E-07	1.759E-07	1.228E-07	9.657E-08	7.842E-08	6.267E-08	5.153E-08	
NW	1.487E-07	1.823E-07	2.348E-07	3.108E-07	4.337E-07	2.535E-07	1.674E-07	1.220E-07	9.365E-08	7.357E-08	5.967E-08	
NNW	3.472E-07	3.275E-07	3.244E-07	2.953E-07	3.040E-07	2.790E-07	2.526E-07	2.213E-07	1.927E-07	1.512E-07	1.225E-07	
N	4.136E-07	3.661E-07	2.827E-07	1.993E-07	1.399E-07	1.117E-07	9.189E-08	7.562E-08	6.351E-08	5.428E-08	4.709E-08	
NNE	2.365E-07	1.312E-07	8.313E-08	6.402E-08	5.655E-08	4.909E-08	4.180E-08	3.560E-08	3.058E-08	2.655E-08	2.332E-08	
NE	2.614E-07	1.185E-07	6.655E-08	4.882E-08	3.994E-08	3.237E-08	2.627E-08	2.164E-08	1.815E-08	1.548E-08	1.342E-08	
ENE	3.074E-07	1.269E-07	5.594E-08	3.606E-08	2.830E-08	2.240E-08	1.789E-08	1.458E-08	1.213E-08	1.029E-08	8.876E-09	
E	1.403E-07	5.639E-08	2.773E-08	1.890E-08	1.541E-08	1.272E-08	1.050E-08	8.765E-09	7.427E-09	6.388E-09	5.571E-09	
ESE	1.349E-07	7.980E-08	5.161E-08	3.406E-08	2.338E-08	1.804E-08	1.447E-08	1.192E-08	1.003E-08	8.599E-09	7.491E-09	
SE	4.962E-08	2.506E-08	2.790E-08	2.992E-08	3.003E-08	2.618E-08	2.207E-08	1.860E-08	1.584E-08	1.365E-08	1.191E-08	
SSE	3.482E-09	2.523E-08	4.071E-08	4.385E-08	4.226E-08	3.598E-08	2.981E-08	2.479E-08	2.087E-08	1.782E-08	1.543E-08	

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)	DISTANCE IN MILES FROM THE SITE											
	SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.478E-08	3.039E-08	1.970E-08	1.122E-08	7.829E-09	5.878E-09	4.537E-09	3.643E-09	3.036E-09	2.579E-09	2.215E-09	
SSW	3.901E-08	2.972E-08	1.919E-08	1.087E-08	7.649E-09	5.674E-09	4.353E-09	3.474E-09	2.856E-09	2.398E-09	2.048E-09	
SW	2.371E-08	1.721E-08	1.120E-08	6.403E-09	4.469E-09	3.351E-09	2.643E-09	2.111E-09	1.735E-09	1.457E-09	1.245E-09	
WSW	3.009E-08	1.978E-08	1.390E-08	8.426E-09	5.596E-09	4.068E-09	3.130E-09	2.503E-09	2.059E-09	1.731E-09	1.480E-09	
W	2.424E-08	1.355E-08	9.815E-09	6.341E-09	4.578E-09	3.353E-09	2.588E-09	2.077E-09	1.715E-09	1.447E-09	1.242E-09	
WNW	4.387E-08	2.459E-08	1.657E-08	9.830E-09	6.629E-09	4.868E-09	3.780E-09	3.040E-09	2.508E-09	2.112E-09	1.810E-09	
NW	5.008E-08	2.681E-08	1.771E-08	1.026E-08	6.816E-09	4.965E-09	3.860E-09	3.103E-09	2.562E-09	2.163E-09	1.857E-09	
NNW	1.036E-07	5.649E-08	3.635E-08	2.060E-08	1.381E-08	1.013E-08	7.892E-09	6.384E-09	5.329E-09	4.521E-09	3.891E-09	
N	4.153E-08	2.604E-08	2.104E-08	1.550E-08	1.173E-08	9.002E-09	6.983E-09	5.625E-09	4.660E-09	3.947E-09	3.400E-09	
NNE	2.557E-08	2.986E-08	1.917E-08	1.081E-08	7.212E-09	5.266E-09	4.069E-09	3.270E-09	2.703E-09	2.283E-09	1.961E-09	
NE	1.428E-08	1.832E-08	1.181E-08	6.698E-09	4.488E-09	3.289E-09	2.568E-09	2.078E-09	1.730E-09	1.462E-09	1.257E-09	
ENE	9.025E-09	1.048E-08	6.851E-09	3.949E-09	2.671E-09	1.970E-09	1.576E-09	1.294E-09	1.073E-09	9.084E-10	7.824E-10	
E	5.830E-09	6.302E-09	4.075E-09	2.318E-09	1.555E-09	1.141E-09	8.849E-10	7.134E-10	5.977E-10	5.096E-10	4.388E-10	
ESE	7.778E-09	9.712E-09	6.449E-09	3.784E-09	2.585E-09	1.917E-09	1.499E-09	1.215E-09	1.011E-09	8.590E-10	7.414E-10	
SE	1.051E-08	6.540E-09	5.108E-09	3.647E-09	2.625E-09	2.019E-09	1.621E-09	1.341E-09	1.109E-09	9.370E-10	8.052E-10	
SSE	1.619E-08	1.798E-08	1.148E-08	6.435E-09	4.275E-09	3.112E-09	2.399E-09	1.924E-09	1.588E-09	1.339E-09	1.149E-09	

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE											
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50		
S	3.749E-08	6.136E-08	5.155E-08	4.245E-08	4.661E-08	2.884E-08	1.160E-08	5.862E-09	3.667E-09	2.580E-09		
SSW	4.362E-08	5.962E-08	5.238E-08	5.156E-08	4.271E-08	2.711E-08	1.129E-08	5.672E-09	3.490E-09	2.404E-09		
SW	5.580E-08	1.007E-07	6.375E-08	3.824E-08	2.661E-08	1.599E-08	6.610E-09	3.366E-09	2.120E-09	1.461E-09		
WSW	5.534E-08	1.339E-07	8.532E-08	5.025E-08	3.441E-08	1.946E-08	8.385E-09	4.100E-09	2.513E-09	1.735E-09		
W	1.168E-07	1.283E-07	7.169E-08	4.231E-08	2.860E-08	1.427E-08	6.329E-09	3.374E-09	2.085E-09	1.450E-09		
WNW	1.442E-07	2.124E-07	1.265E-07	7.761E-08	5.199E-08	2.531E-08	9.905E-09	4.903E-09	3.049E-09	2.118E-09		
NW	2.569E-07	3.263E-07	1.722E-07	9.411E-08	6.023E-08	2.794E-08	1.038E-08	5.017E-09	3.113E-09	2.168E-09		
NNW	3.122E-07	2.910E-07	2.471E-07	1.851E-07	1.240E-07	5.800E-08	2.108E-08	1.022E-08	6.413E-09	4.527E-09		
N	2.642E-07	1.406E-07	9.068E-08	6.346E-08	4.716E-08	2.726E-08	1.506E-08	8.922E-09	5.645E-09	3.956E-09		
NNE	8.533E-08	5.490E-08	4.127E-08	3.048E-08	2.511E-08	2.415E-08	1.107E-08	5.306E-09	3.282E-09	2.288E-09		
NE	7.021E-08	3.855E-08	2.605E-08	1.813E-08	1.435E-08	1.453E-08	6.851E-09	3.320E-09	2.085E-09	1.466E-09		
ENE	6.287E-08	2.740E-08	1.777E-08	1.213E-08	9.350E-09	8.545E-09	4.026E-09	1.999E-09	1.290E-09	9.104E-10		
E	3.017E-08	1.499E-08	1.040E-08	7.413E-09	5.909E-09	5.207E-09	2.369E-09	1.149E-09	7.183E-10	5.095E-10		
ESE	5.007E-08	2.338E-08	1.440E-08	1.002E-08	7.925E-09	7.832E-09	3.843E-09	1.928E-09	1.219E-09	8.605E-10		
SE	2.817E-08	2.830E-08	2.178E-08	1.579E-08	1.190E-08	6.785E-09	3.517E-09	2.021E-09	1.332E-09	9.391E-10		
SSE	3.866E-08	3.982E-08	2.945E-08	2.083E-08	1.642E-08	1.470E-08	6.597E-09	3.137E-09	1.932E-09	1.343E-09		

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ERP ELEVATED STACK RELEASES - JUL-SEP 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	9.973E-11	9.246E-09	3.395E-08	5.379E-08	6.593E-08	6.021E-08	5.132E-08	4.325E-08	3.667E-08	4.364E-08	4.863E-08
SSW	1.052E-10	1.454E-08	4.290E-08	5.770E-08	6.333E-08	5.590E-08	4.698E-08	5.161E-08	5.327E-08	4.643E-08	4.102E-08
SW	1.971E-09	1.540E-08	4.522E-08	8.308E-08	1.283E-07	8.629E-08	6.194E-08	4.686E-08	3.692E-08	3.002E-08	2.504E-08
WSW	4.529E-08	1.369E-08	3.340E-08	9.257E-08	1.800E-07	1.175E-07	8.306E-08	6.231E-08	4.883E-08	3.957E-08	3.292E-08
W	6.471E-08	4.670E-08	1.199E-07	1.467E-07	1.503E-07	9.806E-08	6.950E-08	5.227E-08	4.107E-08	3.335E-08	2.778E-08
WNW	1.317E-07	7.634E-08	1.258E-07	1.888E-07	2.726E-07	1.734E-07	1.207E-07	9.487E-08	7.702E-08	6.140E-08	5.034E-08
NW	1.487E-07	1.807E-07	2.310E-07	3.069E-07	4.279E-07	2.483E-07	1.630E-07	1.184E-07	9.063E-08	7.090E-08	5.723E-08
NNW	3.474E-07	3.249E-07	3.182E-07	2.898E-07	2.989E-07	2.740E-07	2.481E-07	2.174E-07	1.894E-07	1.480E-07	1.195E-07
N	4.139E-07	3.631E-07	2.768E-07	1.944E-07	1.362E-07	1.086E-07	8.916E-08	7.320E-08	6.134E-08	5.231E-08	4.529E-08
NNE	2.367E-07	1.302E-07	8.153E-08	6.279E-08	5.549E-08	4.806E-08	4.079E-08	3.463E-08	2.966E-08	2.569E-08	2.251E-08
NE	2.616E-07	1.176E-07	6.526E-08	4.783E-08	3.907E-08	3.153E-08	2.546E-08	2.087E-08	1.742E-08	1.480E-08	1.278E-08
ENE	3.077E-07	1.260E-07	5.486E-08	3.532E-08	2.765E-08	2.176E-08	1.728E-08	1.400E-08	1.158E-08	9.777E-09	8.398E-09
E	1.404E-07	5.596E-08	2.717E-08	1.849E-08	1.506E-08	1.238E-08	1.018E-08	8.464E-09	7.145E-09	6.124E-09	5.325E-09
ESE	1.350E-07	7.919E-08	5.054E-08	3.320E-08	2.274E-08	1.751E-08	1.400E-08	1.149E-08	9.645E-09	8.248E-09	7.169E-09
SE	4.964E-08	2.485E-08	2.748E-08	2.954E-08	2.958E-08	2.567E-08	2.154E-08	1.808E-08	1.534E-08	1.317E-08	1.146E-08
SSE	3.483E-09	2.502E-08	4.007E-08	4.325E-08	4.161E-08	3.525E-08	2.905E-08	2.404E-08	2.015E-08	1.713E-08	1.478E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.343E-08	2.906E-08	1.831E-08	9.858E-09	6.446E-09	4.597E-09	3.423E-09	2.663E-09	2.164E-09	1.800E-09	1.518E-09
SSW	3.782E-08	2.865E-08	1.802E-08	9.674E-09	6.428E-09	4.637E-09	3.478E-09	2.724E-09	2.203E-09	1.823E-09	1.538E-09
SW	2.290E-08	1.655E-08	1.049E-08	5.681E-09	3.727E-09	2.660E-09	2.046E-09	1.601E-09	1.292E-09	1.069E-09	9.007E-10
WSW	2.934E-08	1.905E-08	1.306E-08	7.609E-09	4.897E-09	3.472E-09	2.618E-09	2.057E-09	1.668E-09	1.384E-09	1.170E-09
W	2.363E-08	1.319E-08	9.524E-09	5.852E-09	4.003E-09	2.855E-09	2.155E-09	1.697E-09	1.378E-09	1.145E-09	9.701E-10
WNW	4.271E-08	2.334E-08	1.529E-08	8.539E-09	5.360E-09	3.735E-09	2.805E-09	2.205E-09	1.783E-09	1.475E-09	1.243E-09
NW	4.781E-08	2.491E-08	1.599E-08	8.768E-09	5.534E-09	3.864E-09	2.912E-09	2.284E-09	1.845E-09	1.527E-09	1.288E-09
NNW	1.005E-07	5.337E-08	3.331E-08	1.772E-08	1.104E-08	7.619E-09	5.653E-09	4.411E-09	3.583E-09	2.972E-09	2.505E-09
N	3.987E-08	2.483E-08	2.008E-08	1.483E-08	1.098E-08	8.076E-09	6.110E-09	4.814E-09	3.911E-09	3.253E-09	2.758E-09
NNE	2.476E-08	2.900E-08	1.808E-08	9.682E-09	6.138E-09	4.300E-09	3.208E-09	2.499E-09	2.010E-09	1.657E-09	1.392E-09
NE	1.365E-08	1.773E-08	1.110E-08	5.985E-09	3.815E-09	2.684E-09	2.031E-09	1.606E-09	1.310E-09	1.089E-09	9.219E-10
ENE	8.551E-09	1.007E-08	6.395E-09	3.482E-09	2.210E-09	1.547E-09	1.183E-09	9.379E-10	7.579E-10	6.271E-10	5.286E-10
E	5.586E-09	6.067E-09	3.809E-09	2.042E-09	1.282E-09	8.903E-10	6.589E-10	5.090E-10	4.102E-10	3.385E-10	2.844E-10
ESE	7.469E-09	9.498E-09	6.137E-09	3.401E-09	2.173E-09	1.527E-09	1.140E-09	8.861E-10	7.107E-10	5.837E-10	4.884E-10
SE	1.008E-08	6.227E-09	4.861E-09	3.487E-09	2.516E-09	1.943E-09	1.569E-09	1.301E-09	1.063E-09	8.882E-10	7.555E-10
SSE	1.553E-08	1.732E-08	1.075E-08	5.701E-09	3.576E-09	2.483E-09	1.839E-09	1.423E-09	1.138E-09	9.334E-10	7.805E-10

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	3.728E-08	6.069E-08	5.046E-08	4.121E-08	4.523E-08	2.748E-08	1.022E-08	4.621E-09	2.690E-09	1.804E-09
SSW	4.318E-08	5.878E-08	5.121E-08	5.019E-08	4.144E-08	2.596E-08	1.009E-08	4.651E-09	2.741E-09	1.830E-09
SW	5.542E-08	9.957E-08	6.240E-08	3.713E-08	2.572E-08	1.527E-08	5.882E-09	2.699E-09	1.610E-09	1.073E-09
WSW	5.532E-08	1.328E-07	8.394E-08	4.916E-08	3.356E-08	1.867E-08	7.615E-09	3.510E-09	2.069E-09	1.389E-09
W	1.155E-07	1.263E-07	7.023E-08	4.133E-08	2.789E-08	1.388E-08	5.847E-09	2.881E-09	1.706E-09	1.149E-09
WNW	1.428E-07	2.099E-07	1.244E-07	7.617E-08	5.079E-08	2.407E-08	8.627E-09	3.796E-09	2.216E-09	1.480E-09
NW	2.536E-07	3.212E-07	1.679E-07	9.105E-07	5.779E-07	2.603E-08	8.935E-09	3.928E-09	2.296E-09	1.533E-09
NNW	3.071E-07	2.858E-07	2.427E-07	1.816E-07	1.209E-07	5.493E-08	1.822E-08	7.745E-09	4.451E-09	2.980E-09
N	2.593E-07	1.369E-07	8.797E-08	6.129E-08	4.536E-08	2.606E-08	1.428E-08	8.064E-09	4.840E-09	3.264E-09
NNE	8.402E-08	5.381E-08	4.027E-08	2.957E-08	2.428E-08	2.321E-08	9.974E-09	4.353E-09	2.515E-09	1.663E-09
NE	6.915E-08	3.766E-08	2.524E-08	1.741E-08	1.370E-08	1.388E-08	6.157E-09	2.724E-09	1.615E-09	1.093E-09
ENE	6.198E-08	2.674E-08	1.716E-08	1.159E-08	8.864E-09	8.100E-09	3.564E-09	1.578E-09	9.392E-10	6.294E-10
E	2.971E-08	1.463E-08	1.008E-08	7.133E-09	5.658E-09	4.956E-09	2.097E-09	9.023E-10	5.142E-10	3.397E-10
ESE	4.920E-08	2.274E-08	1.393E-08	9.641E-09	7.600E-09	7.553E-09	3.463E-09	1.544E-09	8.917E-10	5.861E-10
SE	2.781E-08	2.783E-08	2.126E-08	1.530E-08	1.146E-08	6.477E-09	3.361E-09	1.946E-09	1.287E-09	8.907E-10
SSE	3.814E-08	3.915E-08	2.870E-08	2.011E-08	1.575E-08	1.400E-08	5.877E-09	2.517E-09	1.434E-09	9.375E-10

B303

ERP ELEVATED STACK RELEASES - JUL-SEP 2004  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	8.737E-10	1.202E-09	1.748E-09	1.625E-09	9.643E-10	6.363E-10	4.462E-10	3.265E-10	2.469E-10	1.925E-10	1.842E-10
SSW	1.105E-09	1.242E-09	1.564E-09	1.372E-09	7.897E-10	5.159E-10	3.600E-10	2.628E-10	2.465E-10	1.865E-10	1.460E-10
SW	1.064E-09	9.979E-10	1.044E-09	8.333E-10	8.027E-10	4.365E-10	2.706E-10	1.838E-10	1.329E-10	1.006E-10	7.875E-11
WSW	1.060E-09	9.742E-10	9.935E-10	1.068E-09	7.581E-10	4.094E-10	2.526E-10	1.710E-10	1.234E-10	9.328E-11	7.300E-11
W	1.566E-09	3.546E-09	2.734E-09	1.628E-09	7.266E-10	3.909E-10	2.408E-10	1.629E-10	1.176E-10	8.884E-11	6.954E-11
WNW	3.882E-09	3.092E-09	4.566E-09	2.964E-09	1.623E-09	8.191E-10	4.891E-10	3.297E-10	2.478E-10	1.942E-10	1.608E-10
NW	1.208E-08	9.190E-09	6.868E-09	6.414E-09	3.450E-09	1.720E-09	1.021E-09	6.802E-10	4.932E-10	3.825E-10	3.125E-10
NNW	1.954E-08	1.489E-08	1.117E-08	6.860E-09	4.494E-09	2.389E-09	1.473E-09	1.159E-09	8.553E-10	6.760E-10	5.644E-10
N	2.438E-08	1.832E-08	1.333E-08	7.923E-09	3.346E-09	1.920E-09	1.251E-09	8.808E-10	6.528E-10	5.021E-10	3.974E-10
NNE	5.409E-09	4.171E-09	3.205E-09	2.019E-09	9.066E-10	5.364E-10	3.556E-10	2.528E-10	1.883E-10	1.451E-10	1.149E-10
NE	5.397E-09	4.100E-09	3.054E-09	1.862E-09	8.088E-10	4.709E-10	3.093E-10	2.188E-10	1.625E-10	1.251E-10	9.906E-11
ENE	3.344E-09	2.553E-09	1.924E-09	1.187E-09	5.219E-10	3.057E-10	2.015E-10	1.428E-10	1.062E-10	8.181E-11	6.476E-11
E	2.308E-09	1.729E-09	1.249E-09	7.359E-10	3.078E-10	1.758E-10	1.142E-10	8.026E-11	5.943E-11	4.570E-11	3.617E-11
ESE	4.098E-09	3.038E-09	2.144E-09	1.229E-09	4.978E-10	2.794E-10	1.796E-10	1.255E-10	9.262E-11	7.113E-11	5.629E-11
SE	2.090E-09	1.767E-09	1.601E-09	1.162E-09	5.910E-10	3.691E-10	2.518E-10	1.818E-10	1.365E-10	1.055E-10	8.356E-11
SSE	2.621E-09	2.258E-09	2.106E-09	1.562E-09	8.067E-10	5.069E-10	3.469E-10	2.508E-10	1.885E-10	1.458E-10	1.154E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	1.481E-10	1.297E-10	9.286E-11	5.590E-11	3.561E-11	2.281E-11	1.631E-11	1.222E-11	9.719E-12	7.750E-12	6.328E-12
SSW	1.184E-10	9.247E-11	6.468E-11	3.823E-11	2.315E-11	1.655E-11	1.187E-11	8.924E-12	6.997E-12	5.589E-12	4.562E-12
SW	6.397E-11	5.768E-11	4.161E-11	2.523E-11	1.614E-11	1.007E-11	7.440E-12	5.587E-12	4.344E-12	3.470E-12	2.832E-12
WSW	6.022E-11	5.590E-11	4.076E-11	2.484E-11	1.503E-11	1.008E-11	7.261E-12	5.452E-12	4.239E-12	3.386E-12	2.764E-12
W	5.595E-11	2.521E-11	3.694E-11	2.405E-11	1.443E-11	9.675E-12	6.933E-12	5.206E-12	4.047E-12	3.233E-12	2.639E-12
WNW	1.426E-10	8.882E-11	6.441E-11	3.936E-11	2.533E-11	1.659E-11	1.139E-11	8.553E-12	6.650E-12	5.312E-12	4.336E-12
NW	2.670E-10	1.555E-10	1.093E-10	6.824E-11	4.168E-11	2.795E-11	2.002E-11	1.503E-11	1.171E-11	9.357E-12	7.637E-12
NNW	4.932E-10	3.084E-10	2.242E-10	1.376E-10	8.911E-11	6.010E-11	4.052E-11	2.948E-11	2.302E-11	1.842E-11	1.505E-11
N	3.218E-10	1.545E-10	9.563E-11	5.219E-11	1.059E-10	6.364E-11	4.567E-11	3.434E-11	2.673E-11	2.138E-11	1.747E-11
NNE	9.291E-11	1.394E-10	8.807E-11	4.695E-11	2.904E-11	1.955E-11	1.403E-11	1.054E-11	8.188E-12	6.550E-12	5.352E-12
NE	8.016E-11	9.519E-11	5.893E-11	3.075E-11	1.893E-11	1.278E-11	9.454E-12	7.073E-12	5.519E-12	4.352E-12	3.552E-12
ENE	5.239E-11	4.618E-11	3.238E-11	1.934E-11	1.246E-11	8.448E-12	6.087E-12	4.309E-12	3.396E-12	2.755E-12	2.278E-12
E	2.929E-11	3.064E-11	2.234E-11	1.376E-11	8.936E-12	6.045E-12	4.336E-12	3.245E-12	2.514E-12	1.823E-12	1.500E-12
ESE	4.562E-11	4.553E-11	3.302E-11	2.030E-11	1.322E-11	8.986E-12	6.473E-12	4.867E-12	3.783E-12	3.033E-12	2.482E-12
SE	6.744E-11	3.211E-11	1.969E-11	1.052E-11	6.549E-12	4.594E-12	3.500E-12	6.819E-12	5.267E-12	4.194E-12	3.420E-12
SSE	9.315E-11	9.568E-11	6.043E-11	3.206E-11	1.969E-11	1.315E-11	9.368E-12	6.986E-12	5.401E-12	4.294E-12	3.491E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.572E-09	9.653E-10	4.490E-10	2.489E-10	1.733E-10	1.174E-10	5.510E-11	2.362E-11	1.244E-11	7.807E-12
SSW	1.407E-09	7.975E-10	3.627E-10	2.283E-10	1.478E-10	8.589E-11	3.741E-11	1.644E-11	9.032E-12	5.626E-12
SW	9.400E-10	6.467E-10	2.801E-10	1.352E-10	7.974E-11	5.193E-11	2.483E-11	1.064E-11	5.643E-12	3.493E-12
WSW	1.022E-09	6.719E-10	2.618E-10	1.256E-10	7.427E-11	5.013E-11	2.402E-11	1.027E-11	5.507E-12	3.409E-12
W	2.423E-09	7.778E-10	2.497E-10	1.196E-10	7.022E-11	3.725E-11	2.264E-11	9.846E-12	5.258E-12	3.254E-12
WNW	3.526E-09	1.564E-09	5.133E-10	2.508E-10	1.640E-10	8.993E-11	3.869E-11	1.684E-11	8.639E-12	5.347E-12
NW	7.182E-09	3.340E-09	1.071E-09	5.045E-10	3.164E-10	1.598E-10	6.556E-11	2.844E-11	1.519E-11	9.418E-12
NNW	1.008E-08	4.084E-09	1.592E-09	8.739E-10	5.711E-10	3.120E-10	1.353E-10	6.000E-11	3.017E-11	1.853E-11
N	1.204E-08	3.729E-09	1.281E-09	6.605E-10	4.004E-10	1.655E-10	8.569E-11	6.771E-11	3.468E-11	2.152E-11
NNE	2.892E-09	9.892E-10	3.627E-10	1.903E-10	1.157E-10	1.063E-10	4.813E-11	1.987E-11	1.064E-11	6.592E-12
NE	2.757E-09	8.927E-10	3.162E-10	1.643E-10	9.979E-11	7.573E-11	3.176E-11	1.309E-11	7.161E-12	4.402E-12
ENE	1.736E-09	5.735E-10	2.058E-10	1.074E-10	6.523E-11	4.143E-11	1.918E-11	8.574E-12	4.469E-12	2.768E-12
E	1.128E-09	3.443E-10	1.171E-10	6.015E-11	3.645E-11	2.665E-11	1.352E-11	6.132E-12	3.278E-12	1.908E-12
ESE	1.936E-09	5.632E-10	1.845E-10	9.381E-11	5.673E-11	3.999E-11	1.998E-11	9.111E-12	4.913E-12	3.051E-12
SE	1.443E-09	6.193E-10	2.551E-10	1.376E-10	8.410E-11	3.444E-11	1.079E-11	4.678E-12	5.279E-12	4.225E-12
SSE	1.898E-09	8.412E-10	3.511E-10	1.900E-10	1.162E-10	7.945E-11	3.286E-11	1.338E-11	7.063E-12	4.325E-12

B304

ERP ELEVATED STACK RELEASES - JUL-SEP 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY 8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	3.9E-08	3.9E-08	3.9E-08	1.8E-09
A	Site Boundary	SSW	.82	4.9E-08	4.9E-08	4.8E-08	1.5E-09
A	Site Boundary	SW	.97	8.0E-08	8.0E-08	7.9E-08	8.6E-10
A	Site Boundary	WSW	.93	7.4E-08	7.4E-08	7.4E-08	9.8E-10
A	Site Boundary	W	.91	1.4E-07	1.4E-07	1.4E-07	1.9E-09
A	Site Boundary	WNW	.94	1.7E-07	1.7E-07	1.7E-07	3.4E-09
A	Site Boundary	NW	.81	2.5E-07	2.5E-07	2.4E-07	6.1E-09
A	Site Boundary	NNW	.69	3.1E-07	3.1E-07	3.1E-07	1.2E-08
A	Site Boundary	N	.67	2.9E-07	2.9E-07	2.9E-07	1.5E-08
A	Site Boundary	NNE	.60	9.5E-08	9.5E-08	9.4E-08	3.7E-09
A	Site Boundary	NE	.62	7.5E-08	7.5E-08	7.3E-08	3.5E-09
A	Site Boundary	ENE	.59	7.8E-08	7.7E-08	7.6E-08	2.3E-09
A	Site Boundary	E	.53	4.4E-08	4.4E-08	4.3E-08	1.7E-09
A	Site Boundary	ESE	.54	6.7E-08	6.7E-08	6.6E-08	2.9E-09
A	Site Boundary	SE	.65	2.4E-08	2.4E-08	2.4E-08	1.6E-09
A	Site Boundary	SSE	.81	4.2E-08	4.2E-08	4.1E-08	2.0E-09
A	Nearest Res	SW	1.30	1.2E-07	1.2E-07	1.2E-07	1.1E-09
A	Nearest Res	WSW	1.30	1.6E-07	1.5E-07	1.5E-07	1.0E-09
A	Nearest Res	W	1.00	1.5E-07	1.5E-07	1.5E-07	1.6E-09
A	Nearest Res	WNW	1.70	2.3E-07	2.3E-07	2.2E-07	1.2E-09
A	Nearest Res	NW	.90	2.7E-07	2.7E-07	2.7E-07	7.4E-09
A	Nearest Res	NNW	1.90	2.8E-07	2.8E-07	2.8E-07	2.7E-09
A	Nearest Res	N	3.00	7.6E-08	7.6E-08	7.3E-08	8.8E-10
A	Nearest Res	ENE	1.70	2.5E-08	2.5E-08	2.5E-08	4.0E-10
A	Nearest Res	E	2.00	1.3E-08	1.3E-08	1.2E-08	1.8E-10
A	Nearest Res	ESE	2.30	1.6E-08	1.6E-08	1.5E-08	2.1E-10
A	Nearest Cow	NNW	3.50	1.9E-07	1.9E-07	1.9E-07	8.6E-10
A	Nearest Garde	SW	1.30	1.2E-07	1.2E-07	1.2E-07	1.1E-09
A	Nearest Garde	WSW	1.90	1.3E-07	1.3E-07	1.3E-07	4.6E-10
A	Nearest Garde	WNW	2.40	1.3E-07	1.3E-07	1.3E-07	5.4E-10
A	Nearest Garde	NW	2.90	1.3E-07	1.3E-07	1.3E-07	7.3E-10
A	Nearest Garde	NNW	1.90	2.8E-07	2.8E-07	2.8E-07	2.7E-09
A	Nearest Garde	ENE	2.80	1.6E-08	1.6E-08	1.5E-08	1.6E-10
A	Nearest Garde	E	2.00	1.3E-08	1.3E-08	1.2E-08	1.8E-10
A	Nearest Garde	ESE	2.30	1.6E-08	1.6E-08	1.5E-08	2.1E-10
A	Nearest Garde	SE	1.20	3.1E-08	3.1E-08	3.0E-08	8.6E-10
A	MAXIMUM CHI/Q	S	1.50	6.7E-08	6.7E-08	6.6E-08	9.6E-10
A	MAXIMUM CHI/Q	SSW	1.50	6.4E-08	6.4E-08	6.3E-08	7.9E-10
A	MAXIMUM CHI/Q	SW	1.50	1.3E-07	1.3E-07	1.3E-07	8.0E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.8E-07	1.8E-07	1.8E-07	7.6E-10
A	MAXIMUM CHI/Q	W	1.50	1.5E-07	1.5E-07	1.5E-07	7.3E-10
A	MAXIMUM CHI/Q	WNW	1.50	2.8E-07	2.8E-07	2.7E-07	1.6E-09
A	MAXIMUM CHI/Q	NW	1.50	4.3E-07	4.3E-07	4.3E-07	3.5E-09
A	MAXIMUM CHI/Q	NNW	.25	2.8E-07	2.8E-07	2.8E-07	2.0E-08
A	MAXIMUM CHI/Q	N	.25	3.3E-07	3.3E-07	3.3E-07	2.4E-08
A	MAXIMUM CHI/Q	NNE	.25	1.8E-07	1.8E-07	1.8E-07	5.4E-09
A	MAXIMUM CHI/Q	NE	.25	2.0E-07	2.0E-07	2.0E-07	5.4E-09
A	MAXIMUM CHI/Q	ENE	.25	2.4E-07	2.4E-07	2.4E-07	3.3E-09
A	MAXIMUM CHI/Q	E	.25	1.1E-07	1.1E-07	1.1E-07	2.3E-09
A	MAXIMUM CHI/Q	ESE	.25	1.0E-07	1.0E-07	1.0E-07	4.1E-09
A	MAXIMUM CHI/Q	SE	.25	3.8E-08	3.8E-08	3.8E-08	2.1E-09
A	MAXIMUM CHI/Q	SSE	1.00	4.4E-08	4.4E-08	4.3E-08	1.6E-09



**Atmospheric Diffusion Estimates**

**Elevated Releases**

October-December 2004

ERP ELEVATED STACK RELEASES - OCT-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.394E-09	2.383E-08	5.165E-08	6.071E-08	5.734E-08	4.633E-08	3.671E-08	2.946E-08	2.412E-08	2.558E-08	2.609E-08
SSW	2.895E-11	2.224E-09	1.197E-08	2.043E-08	2.546E-08	2.346E-08	2.023E-08	2.309E-08	2.433E-08	2.140E-08	1.908E-08
SW	7.940E-08	5.557E-08	4.574E-08	5.554E-08	7.602E-08	5.063E-08	3.624E-08	2.744E-08	2.169E-08	1.771E-08	1.485E-08
WSW	2.898E-07	2.964E-07	2.506E-07	1.987E-07	1.684E-07	9.789E-08	6.457E-08	4.622E-08	3.501E-08	2.765E-08	2.253E-08
W	3.152E-07	2.176E-07	2.300E-07	1.993E-07	1.416E-07	8.392E-08	5.607E-08	4.055E-08	3.098E-08	2.464E-08	2.021E-08
WNW	7.816E-08	1.075E-07	2.270E-07	2.896E-07	2.941E-07	1.754E-07	1.179E-07	9.000E-08	7.239E-08	5.762E-08	4.730E-08
NW	1.949E-07	1.732E-07	1.971E-07	2.496E-07	3.091E-07	1.792E-07	1.182E-07	8.641E-08	6.669E-08	5.258E-08	4.281E-08
NNW	1.934E-07	8.028E-08	7.298E-08	9.058E-08	1.164E-07	1.073E-07	9.332E-08	7.847E-08	6.618E-08	5.174E-08	4.183E-08
N	4.008E-07	1.858E-07	1.088E-07	9.067E-07	8.487E-08	7.434E-08	6.294E-08	5.226E-08	4.395E-08	3.749E-08	3.242E-08
NNE	1.743E-07	1.059E-07	8.765E-08	7.731E-08	6.843E-08	5.714E-08	4.711E-08	3.915E-08	3.299E-08	2.821E-08	2.447E-08
NE	2.227E-07	1.068E-07	6.205E-08	4.872E-08	4.182E-08	3.404E-08	2.749E-08	2.249E-08	1.873E-08	1.587E-08	1.367E-08
ENE	1.863E-07	7.521E-08	4.076E-08	3.369E-08	3.140E-08	2.671E-08	2.226E-08	1.866E-08	1.586E-08	1.366E-08	1.194E-08
E	7.236E-08	3.952E-08	3.306E-08	3.353E-08	3.357E-08	2.879E-08	2.383E-08	1.977E-08	1.661E-08	1.416E-08	1.225E-08
ESE	9.909E-08	9.761E-08	8.142E-08	5.964E-08	4.161E-08	3.134E-08	2.448E-08	1.969E-08	1.624E-08	1.368E-08	1.174E-08
SE	2.679E-08	2.825E-08	5.581E-08	6.825E-08	6.869E-08	5.784E-08	4.722E-08	3.878E-08	3.233E-08	2.739E-08	2.356E-08
SSE	4.259E-08	3.794E-08	5.368E-08	5.863E-08	5.588E-08	4.648E-08	3.781E-08	3.101E-08	2.584E-08	2.189E-08	1.883E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.283E-08	1.472E-08	9.484E-09	5.387E-09	3.774E-09	2.853E-09	2.217E-09	1.794E-09	1.507E-09	1.291E-09	1.118E-09
SSW	1.784E-08	1.571E-08	1.036E-08	6.071E-09	4.497E-09	3.435E-09	2.695E-09	2.198E-09	1.844E-09	1.580E-09	1.377E-09
SW	1.382E-08	1.253E-08	8.464E-09	5.112E-09	3.881E-09	3.099E-09	2.572E-09	2.108E-09	1.775E-09	1.527E-09	1.335E-09
WSW	1.952E-08	1.202E-08	8.348E-09	5.070E-09	3.444E-09	2.559E-09	2.011E-09	1.643E-09	1.380E-09	1.184E-09	1.034E-09
W	1.700E-08	9.237E-09	6.637E-09	4.451E-09	3.415E-09	2.559E-09	2.010E-09	1.640E-09	1.377E-09	1.181E-09	1.030E-09
WNW	4.038E-08	2.336E-08	1.635E-08	1.040E-08	7.294E-09	5.540E-09	4.451E-09	3.677E-09	3.098E-09	2.657E-09	2.317E-09
NW	3.615E-08	1.999E-08	1.361E-08	8.265E-09	5.595E-09	4.145E-09	3.303E-09	2.702E-09	2.263E-09	1.936E-09	1.684E-09
NNW	3.515E-08	1.887E-08	1.212E-08	6.865E-09	4.609E-09	3.391E-09	2.653E-09	2.158E-09	1.812E-09	1.547E-09	1.341E-09
N	2.845E-08	1.737E-08	1.337E-08	9.146E-09	6.699E-09	5.106E-09	3.967E-09	3.204E-09	2.663E-09	2.263E-09	1.958E-09
NNE	2.577E-08	2.644E-08	1.693E-08	9.548E-09	6.397E-09	4.699E-09	3.658E-09	2.962E-09	2.469E-09	2.104E-09	1.824E-09
NE	1.415E-08	1.439E-08	9.228E-09	5.220E-09	3.503E-09	2.578E-09	2.017E-09	1.640E-09	1.370E-09	1.169E-09	1.014E-09
ENE	1.261E-08	1.681E-08	1.113E-08	6.553E-09	4.513E-09	3.384E-09	2.795E-09	2.357E-09	1.981E-09	1.700E-09	1.484E-09
E	1.256E-08	1.605E-08	1.056E-08	6.170E-09	4.226E-09	3.155E-09	2.487E-09	2.036E-09	1.770E-09	1.555E-09	1.355E-09
ESE	1.172E-08	1.223E-08	8.037E-09	4.685E-09	3.209E-09	2.395E-09	1.887E-09	1.543E-09	1.297E-09	1.113E-09	9.712E-10
SE	2.054E-08	1.231E-08	9.339E-09	6.643E-09	4.886E-09	3.878E-09	3.229E-09	2.775E-09	2.332E-09	2.000E-09	1.744E-09
SSE	1.946E-08	2.096E-08	1.345E-08	7.620E-09	5.121E-09	3.771E-09	2.941E-09	2.387E-09	1.993E-09	1.701E-09	1.476E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.949E-08	5.319E-08	3.638E-08	2.620E-08	2.473E-08	1.419E-08	5.581E-09	2.845E-09	1.806E-09	1.291E-09
SSW	1.356E-08	2.345E-08	2.223E-08	2.286E-08	1.931E-08	1.380E-08	6.324E-09	3.422E-09	2.205E-09	1.583E-09
SW	5.228E-08	6.019E-08	3.656E-08	2.182E-08	1.532E-08	1.101E-08	5.310E-09	3.097E-09	2.114E-09	1.530E-09
WSW	2.377E-07	1.438E-07	6.611E-08	3.541E-08	2.293E-08	1.205E-08	5.076E-09	2.576E-09	1.648E-09	1.186E-09
W	2.136E-07	1.288E-07	5.729E-08	3.130E-08	2.034E-08	9.807E-09	4.476E-09	2.568E-09	1.646E-09	1.183E-09
WNW	2.282E-07	2.403E-07	1.221E-07	7.179E-08	4.779E-08	2.403E-08	1.034E-08	5.572E-09	3.677E-09	2.662E-09
NW	2.151E-07	2.382E-07	1.217E-07	6.695E-08	4.324E-08	2.075E-08	8.266E-09	4.195E-09	2.707E-09	1.939E-09
NNW	8.243E-08	1.066E-07	9.112E-08	6.419E-08	4.229E-08	1.949E-08	7.030E-09	3.421E-09	2.168E-09	1.549E-09
N	1.178E-07	8.148E-08	6.171E-08	4.386E-08	3.245E-08	1.805E-08	8.997E-09	5.075E-09	3.216E-09	2.269E-09
NNE	8.710E-08	6.538E-08	4.660E-08	3.293E-08	2.606E-08	2.206E-08	9.787E-09	4.735E-09	2.973E-09	2.108E-09
NE	6.607E-08	3.989E-08	2.724E-08	1.872E-08	1.450E-08	1.204E-08	5.348E-09	2.600E-09	1.645E-09	1.171E-09
ENE	4.527E-08	2.982E-08	2.201E-08	1.582E-08	1.270E-08	1.335E-08	6.663E-09	3.450E-09	2.339E-09	1.703E-09
E	3.471E-08	3.143E-08	2.353E-08	1.658E-08	1.293E-08	1.283E-08	6.282E-09	3.173E-09	2.064E-09	1.545E-09
ESE	7.534E-08	4.105E-08	2.439E-08	1.625E-08	1.231E-08	1.025E-08	4.774E-09	2.409E-09	1.548E-09	1.115E-09
SE	5.522E-08	6.377E-08	4.668E-08	3.229E-08	2.358E-08	1.282E-08	6.461E-09	3.887E-09	2.736E-09	2.003E-09
SSE	5.239E-08	5.231E-08	3.740E-08	2.581E-08	1.997E-08	1.729E-08	7.805E-09	3.799E-09	2.395E-09	1.704E-09

B307

ERP ELEVATED STACK RELEASES - OCT-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.393E-09	2.382E-08	5.161E-08	6.066E-08	5.726E-08	4.624E-08	3.662E-08	2.938E-08	2.403E-08	2.548E-08	2.597E-08
SSW	2.894E-11	2.223E-09	1.196E-08	2.041E-08	2.541E-08	2.340E-08	2.016E-08	2.298E-08	2.420E-08	2.127E-08	1.894E-08
SW	7.936E-08	5.553E-08	4.568E-08	5.545E-08	7.583E-08	5.046E-08	3.609E-08	2.730E-08	2.156E-08	1.759E-08	1.474E-08
WSW	2.897E-07	2.961E-07	2.502E-07	1.983E-07	1.679E-07	9.756E-08	6.429E-08	4.598E-08	3.480E-08	2.746E-08	2.236E-08
W	3.151E-07	2.174E-07	2.297E-07	1.990E-07	1.413E-07	8.364E-08	5.583E-08	4.033E-08	3.078E-08	2.446E-08	2.004E-08
WNW	7.813E-08	1.074E-07	2.267E-07	2.891E-07	2.935E-07	1.748E-07	1.174E-07	8.957E-08	7.196E-08	5.723E-08	4.693E-08
NW	1.947E-07	1.730E-07	1.968E-07	2.492E-07	3.084E-07	1.786E-07	1.177E-07	8.596E-08	6.628E-08	5.221E-08	4.246E-08
NNW	1.933E-07	8.021E-08	7.291E-08	9.046E-08	1.162E-07	1.071E-07	9.301E-08	7.814E-08	6.585E-08	5.145E-08	4.156E-08
N	4.003E-07	1.853E-07	1.085E-07	9.046E-08	8.464E-08	7.409E-08	6.269E-08	5.201E-08	4.371E-08	3.726E-08	3.220E-08
NNE	1.741E-07	1.057E-07	8.748E-08	7.714E-08	6.821E-08	5.690E-08	4.686E-08	3.890E-08	3.275E-08	2.797E-08	2.423E-08
NE	2.224E-07	1.066E-07	6.191E-08	4.861E-08	4.171E-08	3.392E-08	2.738E-08	2.238E-08	1.863E-08	1.577E-08	1.357E-08
ENE	1.861E-07	7.503E-08	4.066E-08	3.361E-08	3.131E-08	2.662E-08	2.217E-08	1.858E-08	1.577E-08	1.358E-08	1.186E-08
E	7.229E-08	3.946E-08	3.301E-08	3.347E-08	3.347E-08	2.868E-08	2.371E-08	1.965E-08	1.649E-08	1.405E-08	1.214E-08
ESE	9.898E-08	9.748E-08	8.131E-08	5.954E-08	4.150E-08	3.124E-08	2.438E-08	1.959E-08	1.615E-08	1.359E-08	1.166E-08
SE	2.677E-08	2.823E-08	5.575E-08	6.817E-08	6.856E-08	5.770E-08	4.707E-08	3.863E-08	3.218E-08	2.725E-08	2.342E-08
SSE	4.258E-08	3.792E-08	5.365E-08	5.858E-08	5.580E-08	4.639E-08	3.771E-08	3.092E-08	2.575E-08	2.180E-08	1.874E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.271E-08	1.459E-08	9.373E-09	5.291E-09	3.682E-09	2.765E-09	2.134E-09	1.715E-09	1.431E-09	1.217E-09	1.047E-09
SSW	1.769E-08	1.549E-08	1.017E-08	5.903E-09	4.328E-09	3.273E-09	2.543E-09	2.054E-09	1.706E-09	1.448E-09	1.249E-09
SW	1.370E-08	1.232E-08	8.274E-09	4.936E-09	3.696E-09	2.911E-09	2.382E-09	1.927E-09	1.602E-09	1.360E-09	1.174E-09
WSW	1.935E-08	1.186E-08	8.205E-09	4.940E-09	3.326E-09	2.449E-09	1.908E-09	1.545E-09	1.287E-09	1.094E-09	9.467E-10
W	1.683E-08	9.090E-09	6.482E-09	4.275E-09	3.220E-09	2.375E-09	1.837E-09	1.476E-09	1.220E-09	1.031E-09	8.852E-10
WNW	4.002E-08	2.303E-08	1.602E-08	1.006E-08	6.971E-09	5.229E-09	4.147E-09	3.383E-09	2.815E-09	2.385E-09	2.055E-09
NW	3.583E-08	1.972E-08	1.335E-08	8.032E-09	5.384E-09	3.949E-09	3.117E-09	2.525E-09	2.093E-09	1.773E-09	1.528E-09
NNW	3.490E-08	1.866E-08	1.194E-08	6.715E-09	4.475E-09	3.267E-09	2.537E-09	2.048E-09	1.706E-09	1.446E-09	1.244E-09
N	2.823E-08	1.717E-08	1.317E-08	8.954E-09	6.511E-09	4.926E-09	3.799E-09	3.046E-09	2.513E-09	2.120E-09	1.820E-09
NNE	2.549E-08	2.603E-08	1.657E-08	9.252E-09	6.134E-09	4.459E-09	3.435E-09	2.753E-09	2.272E-09	1.916E-09	1.644E-09
NE	1.404E-08	1.425E-08	9.109E-09	5.119E-09	3.412E-09	2.494E-09	1.939E-09	1.565E-09	1.299E-09	1.100E-09	9.483E-10
ENE	1.252E-08	1.659E-08	1.093E-08	6.374E-09	4.346E-09	3.226E-09	2.633E-09	2.194E-09	1.825E-09	1.550E-09	1.339E-09
E	1.244E-08	1.586E-08	1.040E-08	6.032E-09	4.101E-09	3.040E-09	2.380E-09	1.935E-09	1.671E-09	1.457E-09	1.262E-09
ESE	1.163E-08	1.207E-08	7.896E-09	4.561E-09	3.096E-09	2.289E-09	1.787E-09	1.449E-09	1.207E-09	1.027E-09	8.877E-10
SE	2.041E-08	1.219E-08	9.213E-09	6.499E-09	4.737E-09	3.724E-09	3.069E-09	2.609E-09	2.171E-09	1.845E-09	1.594E-09
SSE	1.936E-08	2.076E-08	1.328E-08	7.477E-09	4.992E-09	3.652E-09	2.829E-09	2.280E-09	1.891E-09	1.603E-09	1.383E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.946E-08	5.312E-08	3.629E-08	2.611E-08	2.462E-08	1.408E-08	5.483E-09	2.757E-09	1.727E-09	1.218E-09
SSW	1.355E-08	2.340E-08	2.215E-08	2.273E-08	1.917E-08	1.362E-08	6.151E-09	3.262E-09	2.061E-09	1.451E-09
SW	5.221E-08	6.003E-08	3.641E-08	2.169E-08	1.520E-08	1.083E-08	5.127E-09	2.909E-09	1.933E-09	1.363E-09
WSW	2.373E-07	1.434E-07	6.584E-08	3.520E-08	2.276E-08	1.190E-08	4.948E-09	2.466E-09	1.550E-09	1.097E-09
W	2.133E-07	1.285E-07	5.705E-08	3.110E-08	2.016E-08	9.652E-09	4.296E-09	2.385E-09	1.482E-09	1.033E-09
WNW	2.279E-07	2.398E-07	1.216E-07	7.138E-08	4.742E-08	2.369E-08	1.001E-08	5.261E-09	3.385E-09	2.390E-09
NW	2.148E-07	2.376E-07	1.212E-07	6.654E-08	4.289E-08	2.047E-08	8.038E-09	3.999E-09	2.529E-09	1.777E-09
NNW	8.233E-08	1.064E-07	9.081E-08	6.388E-08	4.203E-08	1.928E-08	6.881E-09	3.297E-09	2.057E-09	1.448E-09
N	1.176E-07	8.124E-08	6.146E-08	4.363E-08	3.223E-08	1.785E-08	8.806E-09	4.898E-09	3.058E-09	2.125E-09
NNE	8.693E-08	6.517E-08	4.635E-08	3.269E-08	2.581E-08	2.171E-08	9.493E-09	4.496E-09	2.765E-09	1.921E-09
NE	6.593E-08	3.978E-08	2.713E-08	1.861E-08	1.440E-08	1.192E-08	5.247E-09	2.517E-09	1.571E-09	1.103E-09
ENE	4.516E-08	2.974E-08	2.192E-08	1.574E-08	1.261E-08	1.317E-08	6.485E-09	3.288E-09	2.179E-09	1.553E-09
E	3.465E-08	3.134E-08	2.341E-08	1.646E-08	1.282E-08	1.267E-08	6.145E-09	3.059E-09	1.961E-09	1.448E-09
ESE	7.523E-08	4.095E-08	2.429E-08	1.616E-08	1.222E-08	1.012E-08	4.651E-09	2.304E-09	1.453E-09	1.029E-09
SE	5.515E-08	6.364E-08	4.653E-08	3.215E-08	2.344E-08	1.269E-08	6.319E-09	3.732E-09	2.574E-09	1.849E-09
SSE	5.235E-08	5.223E-08	3.731E-08	2.572E-08	1.988E-08	1.713E-08	7.663E-09	3.680E-09	2.289E-09	1.607E-09

B308

ERP ELEVATED STACK RELEASES - OCT-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.394E-09	2.363E-08	5.093E-08	5.999E-08	5.638E-08	4.520E-08	3.553E-08	2.829E-08	2.298E-08	2.429E-08	2.472E-08
SSW	2.895E-11	2.209E-09	1.191E-08	2.037E-08	2.520E-08	2.306E-08	1.976E-08	2.249E-08	2.366E-08	2.074E-08	1.845E-08
SW	7.938E-08	5.506E-08	4.498E-08	5.499E-08	7.496E-08	4.953E-08	3.522E-08	2.653E-08	2.088E-08	1.699E-08	1.419E-08
WSW	2.898E-07	2.937E-07	2.451E-07	1.941E-07	1.641E-07	9.454E-08	6.188E-08	4.400E-08	3.314E-08	2.604E-08	2.112E-08
W	3.152E-07	2.132E-07	2.254E-07	1.948E-07	1.373E-07	8.061E-08	5.346E-08	3.842E-08	2.919E-08	2.311E-08	1.888E-08
WNW	7.815E-08	1.066E-07	2.242E-07	2.851E-07	2.876E-07	1.698E-07	1.133E-07	8.614E-08	6.907E-08	5.470E-08	4.466E-08
NW	1.948E-07	1.716E-07	1.938E-07	2.459E-07	3.034E-07	1.742E-07	1.140E-07	8.294E-08	6.374E-08	4.999E-08	4.046E-08
NNW	1.934E-07	7.955E-08	7.184E-08	8.961E-08	1.148E-07	1.053E-07	9.119E-08	7.644E-08	6.430E-08	5.001E-08	4.019E-08
N	4.007E-07	1.840E-07	1.067E-07	8.916E-08	8.328E-08	7.258E-08	6.111E-08	5.046E-08	4.222E-08	3.585E-08	3.086E-08
NNE	1.742E-07	1.049E-07	8.593E-08	7.581E-08	6.695E-08	5.562E-08	4.559E-08	3.767E-08	3.158E-08	2.688E-08	2.321E-08
NE	2.226E-07	1.058E-07	6.081E-08	4.782E-08	4.093E-08	3.311E-08	2.656E-08	2.159E-08	1.787E-08	1.505E-08	1.290E-08
ENE	1.862E-07	7.449E-08	3.997E-08	3.311E-08	3.077E-08	2.603E-08	2.158E-08	1.800E-08	1.523E-08	1.307E-08	1.137E-08
E	7.234E-08	3.916E-08	3.250E-08	3.307E-08	3.299E-08	2.810E-08	2.309E-08	1.902E-08	1.588E-08	1.346E-08	1.158E-08
ESE	9.906E-08	9.670E-08	7.963E-08	5.809E-08	4.039E-08	3.029E-08	2.353E-08	1.883E-08	1.545E-08	1.296E-08	1.107E-08
SE	2.678E-08	2.801E-08	5.506E-08	6.748E-08	6.706E-08	5.653E-08	4.581E-08	3.737E-08	3.095E-08	2.677E-08	2.231E-08
SSE	4.259E-08	3.761E-08	5.286E-08	5.786E-08	5.494E-08	4.540E-08	3.669E-08	2.990E-08	2.477E-08	2.087E-08	1.787E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.153E-08	1.362E-08	8.508E-09	4.553E-09	2.994E-09	2.142E-09	1.596E-09	1.243E-09	1.010E-09	8.401E-10	7.079E-10
SSW	1.723E-08	1.499E-08	9.553E-09	5.217E-09	3.585E-09	2.626E-09	1.986E-09	1.567E-09	1.275E-09	1.062E-09	9.008E-10
SW	1.321E-08	1.189E-08	7.770E-09	4.372E-09	3.059E-09	2.279E-09	1.815E-09	1.435E-09	1.170E-09	9.757E-10	8.287E-10
WSW	1.825E-08	1.098E-08	7.408E-09	4.255E-09	2.754E-09	1.963E-09	1.488E-09	1.176E-09	9.580E-10	7.992E-10	6.791E-10
W	1.581E-08	8.449E-09	5.994E-09	3.815E-09	2.758E-09	1.982E-09	1.500E-09	1.183E-09	9.625E-10	8.015E-10	6.798E-10
WNW	3.793E-08	2.133E-08	1.446E-08	8.599E-09	5.566E-09	3.978E-09	3.060E-09	2.437E-09	1.985E-09	1.650E-09	1.397E-09
NW	3.398E-08	1.822E-08	1.200E-08	6.835E-09	4.324E-09	3.023E-09	2.310E-09	1.824E-09	1.478E-09	1.227E-09	1.038E-09
NNW	3.358E-08	1.745E-08	1.083E-08	5.719E-09	3.552E-09	2.446E-09	1.811E-09	1.409E-09	1.142E-09	9.454E-10	7.958E-10
N	2.697E-08	1.620E-08	1.237E-08	8.361E-09	5.939E-09	4.325E-09	3.253E-09	2.550E-09	2.062E-09	1.708E-09	1.442E-09
NNE	2.445E-08	2.498E-08	1.544E-08	8.187E-09	5.171E-09	3.613E-09	2.690E-09	2.093E-09	1.682E-09	1.385E-09	1.163E-09
NE	1.335E-08	1.354E-08	8.386E-09	4.486E-09	2.875E-09	2.034E-09	1.537E-09	1.210E-09	9.819E-10	8.152E-10	6.898E-10
ENE	1.203E-08	1.613E-08	1.032E-08	5.663E-09	3.597E-09	2.520E-09	1.958E-09	1.576E-09	1.277E-09	1.059E-09	8.946E-10
E	1.185E-08	1.527E-08	9.725E-09	5.316E-09	3.377E-09	2.365E-09	1.763E-09	1.371E-09	1.137E-09	9.594E-10	8.108E-10
ESE	1.106E-08	1.159E-08	7.373E-09	4.022E-09	2.558E-09	1.792E-09	1.335E-09	1.038E-09	8.322E-10	6.836E-10	5.723E-10
SE	1.935E-08	1.138E-08	8.548E-09	6.028E-09	4.395E-09	3.469E-09	2.878E-09	2.453E-09	2.010E-09	1.685E-09	1.438E-09
SSE	1.846E-08	1.983E-08	1.230E-08	6.563E-09	4.176E-09	2.935E-09	2.197E-09	1.717E-09	1.386E-09	1.146E-09	9.655E-10

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT		SEGMENT BOUNDARIES IN MILES FROM THE SITE									
DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	4.889E-08	5.221E-08	3.521E-08	2.499E-08	2.341E-08	1.311E-08	4.739E-09	2.151E-09	1.255E-09	8.416E-10	
SSW	1.351E-08	2.318E-08	2.173E-08	2.221E-08	1.868E-08	1.307E-08	5.455E-09	2.626E-09	1.575E-09	1.065E-09	
SW	5.167E-08	5.922E-08	3.556E-08	2.101E-08	1.466E-08	1.035E-08	4.544E-09	2.301E-09	1.443E-09	9.787E-10	
WSW	2.332E-07	1.399E-07	6.343E-08	3.354E-08	2.151E-08	1.101E-08	4.289E-09	1.984E-09	1.182E-09	8.018E-10	
W	2.091E-07	1.249E-07	5.468E-08	2.951E-08	1.900E-08	8.994E-09	3.829E-09	1.996E-09	1.190E-09	8.041E-10	
WNW	2.251E-07	2.347E-07	1.175E-07	6.848E-08	4.514E-08	2.197E-08	8.554E-09	4.034E-09	2.443E-09	1.656E-09	
NW	2.120E-07	2.332E-07	1.176E-07	6.399E-08	4.088E-08	1.896E-08	6.867E-09	3.084E-09	1.831E-09	1.231E-09	
NNW	8.145E-08	1.050E-07	8.904E-08	6.233E-08	4.065E-08	1.809E-08	5.891E-09	2.487E-09	1.422E-09	9.483E-10	
N	1.161E-07	7.983E-08	5.991E-08	4.215E-08	3.090E-08	1.689E-08	8.175E-09	4.327E-09	2.565E-09	1.714E-09	
NNE	8.564E-08	6.388E-08	4.510E-08	3.153E-08	2.475E-08	2.062E-08	8.458E-09	3.659E-09	2.107E-09	1.391E-09	
NE	6.503E-08	3.899E-08	2.632E-08	1.786E-08	1.370E-08	1.120E-08	4.637E-09	2.059E-09	1.217E-09	8.182E-10	
ENE	4.459E-08	2.918E-08	2.134E-08	1.520E-08	1.212E-08	1.264E-08	5.780E-09	2.582E-09	1.571E-09	1.063E-09	
E	3.423E-08	3.084E-08	2.280E-08	1.585E-08	1.224E-08	1.205E-08	5.434E-09	2.394E-09	1.394E-09	9.569E-10	
ESE	7.385E-08	3.983E-08	2.345E-08	1.547E-08	1.163E-08	9.598E-09	4.116E-09	1.814E-09	1.044E-09	6.864E-10	
SE	5.457E-08	6.265E-08	4.529E-08	3.093E-08	2.233E-08	1.189E-08	5.862E-09	3.479E-09	2.406E-09	1.690E-09	
SSE	5.169E-08	5.135E-08	3.630E-08	2.475E-08	1.898E-08	1.618E-08	6.776E-09	2.970E-09	1.728E-09	1.150E-09	

B309

ERP ELEVATED STACK RELEASES - OCT-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	3.456E-09	3.257E-09	3.428E-09	2.747E-09	1.497E-09	9.594E-10	6.633E-10	4.820E-10	3.631E-10	3.075E-10	2.679E-10
SSW	3.095E-10	5.126E-10	8.218E-10	7.894E-10	4.762E-10	3.159E-10	2.220E-10	1.627E-10	1.553E-10	1.174E-10	9.183E-11
SW	2.574E-09	2.002E-09	1.566E-09	1.003E-09	7.194E-10	3.840E-10	2.359E-10	1.594E-10	1.149E-10	8.685E-11	6.801E-11
WSW	1.429E-08	1.048E-08	7.214E-09	4.771E-09	2.025E-09	1.060E-09	6.466E-10	4.354E-10	3.135E-10	2.369E-10	1.857E-10
W	7.935E-09	1.048E-08	6.559E-09	3.542E-09	1.469E-09	7.762E-10	4.752E-10	3.208E-10	2.314E-10	1.751E-10	1.374E-10
WNW	5.448E-09	4.454E-09	7.850E-09	4.881E-09	2.822E-09	1.412E-09	8.358E-10	5.537E-10	4.021E-10	3.073E-10	2.473E-10
NW	7.737E-09	6.093E-09	4.882E-09	5.479E-09	3.115E-09	1.549E-09	9.131E-10	6.021E-10	4.300E-10	3.269E-10	2.614E-10
NNW	5.429E-09	4.344E-09	3.585E-09	2.414E-09	1.897E-09	1.016E-09	6.251E-10	4.957E-10	3.591E-10	2.780E-10	2.272E-10
N	6.257E-09	5.276E-09	4.760E-09	3.446E-09	1.748E-09	1.091E-09	7.439E-10	5.368E-10	4.029E-10	3.116E-10	2.467E-10
NNE	5.695E-09	4.597E-09	3.854E-09	2.631E-09	1.273E-09	7.787E-10	5.257E-10	3.773E-10	2.825E-10	2.182E-10	1.727E-10
NE	3.887E-09	3.157E-09	2.676E-09	1.843E-09	8.988E-10	5.517E-10	3.731E-10	2.681E-10	2.008E-10	1.551E-10	1.228E-10
ENE	2.343E-09	1.962E-09	1.749E-09	1.255E-09	6.325E-10	3.936E-10	2.680E-10	1.933E-10	1.450E-10	1.121E-10	8.878E-11
E	2.347E-09	1.985E-09	1.800E-09	1.307E-09	6.651E-10	4.154E-10	2.834E-10	2.046E-10	1.536E-10	1.188E-10	9.405E-11
ESE	6.156E-09	4.670E-09	3.470E-09	2.109E-09	9.134E-10	5.309E-10	3.485E-10	2.463E-10	1.830E-10	1.409E-10	1.115E-10
SE	2.972E-09	3.042E-09	3.510E-09	2.956E-09	1.661E-09	1.076E-09	7.481E-10	5.451E-10	4.112E-10	3.186E-10	2.523E-10
SSE	5.225E-09	4.461E-09	4.104E-09	3.013E-09	1.545E-09	9.683E-10	6.618E-10	4.781E-10	3.591E-10	2.778E-10	2.199E-10

DIRECTION FROM SITE	DISTANCES IN MILES											
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00	
S	2.155E-10	1.161E-10	7.308E-11	3.929E-11	2.449E-11	2.120E-11	1.518E-11	1.139E-11	8.837E-12	7.059E-12	5.762E-12	
SSW	7.383E-11	6.428E-11	4.598E-11	2.765E-11	1.701E-11	1.161E-11	8.317E-12	6.245E-12	4.856E-12	3.879E-12	3.166E-12	
SW	5.475E-11	4.648E-11	3.330E-11	2.018E-11	1.302E-11	8.514E-12	5.957E-12	4.473E-12	3.478E-12	2.778E-12	2.268E-12	
WSW	1.498E-10	8.538E-11	5.594E-11	3.690E-11	2.236E-11	1.500E-11	1.075E-11	8.069E-12	6.274E-12	5.012E-12	4.091E-12	
W	1.109E-10	5.098E-11	4.070E-11	2.392E-11	1.708E-11	1.145E-11	8.205E-12	6.161E-12	4.791E-12	3.827E-12	3.123E-12	
WNW	2.086E-10	1.163E-10	7.984E-11	4.668E-11	3.135E-11	2.104E-11	1.495E-11	1.123E-11	8.745E-12	6.986E-12	5.702E-12	
NW	2.187E-10	1.184E-10	8.002E-11	5.196E-11	3.203E-11	2.164E-11	1.519E-11	1.142E-11	8.850E-12	7.069E-12	5.770E-12	
NNW	1.946E-10	1.143E-10	8.067E-11	4.826E-11	3.098E-11	2.084E-11	1.494E-11	1.116E-11	8.565E-12	6.842E-12	5.585E-12	
N	1.991E-10	9.482E-11	5.816E-11	3.104E-11	6.330E-11	3.988E-11	2.866E-11	2.159E-11	1.682E-11	1.347E-11	1.101E-11	
NNE	1.395E-10	1.556E-10	9.669E-11	5.057E-11	3.109E-11	2.092E-11	1.503E-11	1.130E-11	8.796E-12	7.041E-12	5.757E-12	
NE	9.917E-11	1.193E-10	7.241E-11	3.689E-11	2.254E-11	1.524E-11	1.126E-11	8.483E-12	6.611E-12	5.220E-12	4.261E-12	
ENE	7.167E-11	8.769E-11	6.484E-11	4.013E-11	2.580E-11	1.720E-11	1.215E-11	8.352E-12	6.521E-12	5.235E-12	4.290E-12	
E	7.591E-11	8.276E-11	5.995E-11	3.653E-11	2.343E-11	1.565E-11	1.108E-11	8.197E-12	6.293E-12	4.817E-12	3.940E-12	
ESE	9.023E-11	8.382E-11	5.953E-11	3.593E-11	2.324E-11	1.575E-11	1.133E-11	8.510E-12	6.608E-12	5.295E-12	4.333E-12	
SE	2.034E-10	9.655E-11	5.901E-11	3.123E-11	1.919E-11	1.328E-11	9.963E-12	1.849E-11	1.422E-11	1.127E-11	9.151E-12	
SSE	1.775E-10	2.004E-10	1.223E-10	6.240E-11	3.790E-11	2.540E-11	1.819E-11	1.365E-11	1.061E-11	8.471E-12	6.912E-12	

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	3.087E-09	1.536E-09	6.697E-10	3.759E-10	2.602E-10	1.191E-10	4.022E-11	1.967E-11	1.150E-11	7.106E-12	
SSW	7.387E-10	4.746E-10	2.233E-10	1.430E-10	9.273E-11	5.827E-11	2.700E-11	1.173E-11	6.308E-12	3.904E-12	
SW	1.413E-09	6.334E-10	2.448E-10	1.169E-10	6.868E-11	4.246E-11	1.991E-11	8.692E-12	4.518E-12	2.797E-12	
WSW	6.854E-09	2.206E-09	6.724E-10	3.192E-10	1.876E-10	8.660E-11	3.467E-11	1.526E-11	8.150E-12	5.045E-12	
W	6.090E-09	1.622E-09	4.937E-10	2.355E-10	1.387E-10	5.973E-11	2.461E-11	1.165E-11	6.223E-12	3.852E-12	
WNW	5.776E-09	2.653E-09	8.766E-10	4.093E-10	2.507E-10	1.206E-10	4.724E-11	2.135E-11	1.135E-11	7.032E-12	
NW	5.416E-09	2.944E-09	9.582E-10	4.399E-10	2.650E-10	1.236E-10	4.934E-11	2.183E-11	1.152E-11	7.116E-12	
NNW	3.233E-09	1.620E-09	6.776E-10	3.672E-10	2.302E-10	1.172E-10	4.778E-11	2.119E-11	1.125E-11	6.887E-12	
N	4.291E-09	1.833E-09	7.535E-10	4.064E-10	2.483E-10	1.017E-10	5.140E-11	4.164E-11	2.179E-11	1.355E-11	
NNE	3.475E-09	1.355E-09	5.338E-10	2.851E-10	1.739E-10	1.258E-10	5.216E-11	2.128E-11	1.141E-11	7.086E-12	
NE	2.413E-09	9.545E-10	3.787E-10	2.026E-10	1.236E-10	9.399E-11	3.840E-11	1.559E-11	8.563E-12	5.277E-12	
ENE	1.577E-09	6.647E-10	2.716E-10	1.463E-10	8.936E-11	7.397E-11	3.926E-11	1.747E-11	8.739E-12	5.266E-12	
E	1.622E-09	6.968E-10	2.871E-10	1.549E-10	9.466E-11	7.110E-11	3.591E-11	1.590E-11	8.296E-12	4.929E-12	
ESE	3.132E-09	1.009E-09	3.563E-10	1.850E-10	1.123E-10	7.445E-11	3.553E-11	1.598E-11	8.591E-12	5.328E-12	
SE	3.160E-09	1.689E-09	7.544E-10	4.142E-10	2.538E-10	1.036E-10	3.205E-11	1.353E-11	1.443E-11	1.136E-11	
SSE	3.698E-09	1.615E-09	6.700E-10	3.621E-10	2.213E-10	1.606E-10	6.482E-11	2.585E-11	1.379E-11	8.527E-12	

B310

ERP ELEVATED STACK RELEASES - OCT-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY 8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED
A	Site Boundary S	.80	5.4E-08	5.4E-08	5.4E-08 3.3E-09
A	Site Boundary SSW	.82	1.5E-08	1.5E-08	1.5E-08 8.5E-10
A	Site Boundary SW	.97	5.4E-08	5.4E-08	5.3E-08 1.1E-09
A	Site Boundary WSW	.93	2.1E-07	2.1E-07	2.0E-07 5.0E-09
A	Site Boundary W	.91	2.1E-07	2.1E-07	2.0E-07 4.3E-09
A	Site Boundary WNW	.94	2.8E-07	2.8E-07	2.7E-07 5.5E-09
A	Site Boundary NW	.81	2.0E-07	2.0E-07	2.0E-07 4.4E-09
A	Site Boundary NNW	.69	6.4E-08	6.4E-08	6.3E-08 3.7E-09
A	Site Boundary N	.67	1.1E-07	1.1E-07	1.1E-07 4.8E-09
A	Site Boundary NNE	.60	8.7E-08	8.7E-08	8.6E-08 4.2E-09
A	Site Boundary NE	.62	6.8E-08	6.8E-08	6.7E-08 2.9E-09
A	Site Boundary ENE	.59	4.8E-08	4.8E-08	4.7E-08 1.9E-09
A	Site Boundary E	.53	3.4E-08	3.4E-08	3.3E-08 2.0E-09
A	Site Boundary ESE	.54	9.0E-08	9.0E-08	8.9E-08 4.4E-09
A	Site Boundary SE	.65	4.2E-08	4.2E-08	4.2E-08 3.3E-09
A	Site Boundary SSE	.81	5.5E-08	5.5E-08	5.4E-08 3.8E-09
A	Nearest Res SW	1.30	7.1E-08	7.1E-08	7.0E-08 9.7E-10
A	Nearest Res WSW	1.30	1.8E-07	1.8E-07	1.8E-07 2.8E-09
A	Nearest Res W	1.00	2.0E-07	2.0E-07	1.9E-07 3.5E-09
A	Nearest Res WNW	1.70	2.3E-07	2.3E-07	2.3E-07 2.1E-09
A	Nearest Res NW	.90	2.2E-07	2.2E-07	2.2E-07 6.5E-09
A	Nearest Res NNW	1.90	1.1E-07	1.1E-07	1.1E-07 1.1E-09
A	Nearest Res N	3.00	5.2E-08	5.2E-08	5.0E-08 5.4E-10
A	Nearest Res ENE	1.70	2.9E-08	2.9E-08	2.9E-08 5.1E-10
A	Nearest Res E	2.00	2.9E-08	2.9E-08	2.8E-08 4.2E-10
A	Nearest Res ESE	2.30	2.7E-08	2.7E-08	2.6E-08 4.1E-10
A	Nearest Res NNW	3.50	6.6E-08	6.6E-08	6.4E-08 3.6E-10
A	Nearest Garde SW	1.30	7.1E-08	7.1E-08	7.0E-08 9.7E-10
A	Nearest Garde WSW	1.90	1.1E-07	1.1E-07	1.0E-07 1.2E-09
A	Nearest Garde WNW	2.40	1.3E-07	1.3E-07	1.2E-07 9.2E-10
A	Nearest Garde NW	2.90	9.2E-08	9.1E-08	8.8E-08 6.5E-10
A	Nearest Garde NNW	1.90	1.1E-07	1.1E-07	1.1E-07 1.1E-09
A	Nearest Garde ENE	2.80	2.0E-08	2.0E-08	1.9E-08 2.2E-10
A	Nearest Garde E	2.00	2.9E-08	2.9E-08	2.8E-08 4.2E-10
A	Nearest Garde ESE	2.30	2.7E-08	2.7E-08	2.6E-08 4.1E-10
A	Nearest Garde SE	1.20	7.1E-08	7.1E-08	7.0E-08 2.3E-09
A	MAXIMUM CHI/Q S	1.00	6.1E-08	6.1E-08	6.0E-08 2.7E-09
A	MAXIMUM CHI/Q SSW	1.50	2.5E-08	2.5E-08	2.5E-08 4.8E-10
A	MAXIMUM CHI/Q SW	.25	6.3E-08	6.3E-08	6.3E-08 2.6E-09
A	MAXIMUM CHI/Q WSW	.50	2.8E-07	2.8E-07	2.8E-07 1.0E-08
A	MAXIMUM CHI/Q W	.25	2.5E-07	2.5E-07	2.5E-07 7.9E-09
A	MAXIMUM CHI/Q WNW	1.50	2.9E-07	2.9E-07	2.9E-07 2.8E-09
A	MAXIMUM CHI/Q NW	1.50	3.1E-07	3.1E-07	3.0E-07 3.1E-09
A	MAXIMUM CHI/Q NNW	.25	1.5E-07	1.5E-07	1.5E-07 5.4E-09
A	MAXIMUM CHI/Q N	.25	3.1E-07	3.1E-07	3.1E-07 6.3E-09
A	MAXIMUM CHI/Q NNE	.25	1.4E-07	1.4E-07	1.4E-07 5.7E-09
A	MAXIMUM CHI/Q NE	.25	1.7E-07	1.7E-07	1.7E-07 3.9E-09
A	MAXIMUM CHI/Q ENE	.25	1.4E-07	1.4E-07	1.4E-07 2.3E-09
A	MAXIMUM CHI/Q E	.25	5.6E-08	5.6E-08	5.6E-08 2.3E-09
A	MAXIMUM CHI/Q ESE	.25	7.9E-08	7.9E-08	7.9E-08 6.2E-09
A	MAXIMUM CHI/Q SE	1.50	6.9E-08	6.9E-08	6.8E-08 1.7E-09
A	MAXIMUM CHI/Q SSE	1.00	5.8E-08	5.8E-08	5.8E-08 3.0E-09

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**Atmospheric Diffusion Estimates**

**Elevated Releases**

**July-December 2004**

ERP ELEVATED STACK RELEASES - JUL-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500		
S	7.473E-10	1.658E-08	4.296E-08	5.743E-08	6.203E-08	5.385E-08	4.470E-08	3.707E-08	3.111E-08	3.547E-08	3.830E-08									
SSW	6.703E-11	8.439E-09	2.773E-08	3.940E-08	4.490E-08	4.031E-08	3.429E-08	3.819E-08	3.973E-08	3.482E-08	3.092E-08									
SW	4.072E-08	3.558E-08	4.575E-08	6.960E-08	1.030E-07	6.936E-08	4.994E-08	3.793E-08	3.001E-08	2.450E-08	2.052E-08									
WSW	1.677E-07	1.552E-07	1.422E-07	1.457E-07	1.752E-07	1.087E-07	7.478E-08	5.512E-08	4.269E-08	3.430E-08	2.834E-08									
W	1.901E-07	1.325E-07	1.756E-07	1.741E-07	1.474E-07	9.213E-08	6.372E-08	4.719E-08	3.668E-08	2.957E-08	2.450E-08									
WNW	1.049E-07	9.226E-08	1.771E-07	2.403E-07	2.853E-07	1.761E-07	1.207E-07	9.365E-08	7.576E-08	6.047E-08	4.972E-08									
NW	1.718E-07	1.778E-07	2.161E-07	2.804E-07	3.719E-07	2.168E-07	1.431E-07	1.045E-07	8.047E-08	6.335E-08	5.149E-08									
NNW	2.704E-07	2.040E-07	1.989E-07	1.932E-07	2.105E-07	1.936E-07	1.734E-07	1.504E-07	1.300E-07	1.020E-07	8.268E-08									
N	4.074E-07	2.761E-07	1.959E-07	1.451E-07	1.126E-07	9.320E-08	7.758E-08	6.411E-08	5.389E-08	4.604E-08	3.991E-08									
NNE	2.055E-07	1.186E-07	8.547E-08	7.074E-08	6.259E-08	5.323E-08	4.457E-08	3.750E-08	3.190E-08	2.750E-08	2.401E-08									
NE	2.421E-07	1.128E-07	6.437E-08	4.882E-08	4.095E-08	3.327E-08	2.695E-08	2.213E-08	1.851E-08	1.574E-08	1.361E-08									
ENE	2.470E-07	1.012E-07	4.843E-08	3.493E-08	2.991E-08	2.461E-08	2.013E-08	1.668E-08	1.405E-08	1.203E-08	1.045E-08									
E	1.063E-07	4.800E-08	3.043E-08	2.625E-08	2.453E-08	2.079E-08	1.720E-08	1.430E-08	1.205E-08	1.031E-08	8.945E-09									
ESE	1.170E-07	8.879E-08	6.659E-08	4.691E-08	3.255E-08	2.474E-08	1.952E-08	1.585E-08	1.318E-08	1.118E-08	9.656E-09									
SE	3.820E-08	2.667E-08	4.189E-08	4.913E-08	4.942E-08	4.207E-08	3.470E-08	2.875E-08	2.414E-08	2.058E-08	1.779E-08									
SSE	2.306E-08	3.160E-08	4.722E-08	5.128E-08	4.913E-08	4.130E-08	3.389E-08	2.798E-08	2.343E-08	1.993E-08	1.720E-08									

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	25.000	30.000	35.000	40.000	45.000	50.000			
S	3.402E-08	2.278E-08	1.479E-08	8.472E-09	5.957E-09	4.513E-09	3.514E-09	2.846E-09	2.394E-09	2.052E-09	1.779E-09									
SSW	2.867E-08	2.304E-08	1.506E-08	8.720E-09	6.320E-09	4.789E-09	3.743E-09	3.042E-09	2.546E-09	2.176E-09	1.891E-09									
SW	1.890E-08	1.505E-08	9.993E-09	5.899E-09	4.313E-09	3.358E-09	2.737E-09	2.232E-09	1.871E-09	1.603E-09	1.396E-09									
WSW	2.500E-08	1.611E-08	1.133E-08	6.949E-09	4.701E-09	3.480E-09	2.726E-09	2.220E-09	1.859E-09	1.591E-09	1.384E-09									
W	2.077E-08	1.152E-08	8.352E-09	5.523E-09	4.121E-09	3.072E-09	2.407E-09	1.960E-09	1.642E-09	1.406E-09	1.224E-09									
WNW	4.242E-08	2.423E-08	1.669E-08	1.033E-08	7.153E-09	5.382E-09	4.283E-09	3.517E-09	2.953E-09	2.528E-09	2.200E-09									
NW	4.335E-08	2.360E-08	1.583E-08	9.416E-09	6.344E-09	4.681E-09	3.700E-09	3.014E-09	2.518E-09	2.150E-09	1.867E-09									
NNW	6.982E-08	3.808E-08	2.459E-08	1.404E-08	9.486E-09	7.014E-09	5.513E-09	4.499E-09	3.790E-09	3.244E-09	2.818E-09									
N	3.514E-08	2.184E-08	1.735E-08	1.248E-08	9.377E-09	7.211E-09	5.622E-09	4.553E-09	3.794E-09	3.231E-09	2.801E-09									
NNE	2.580E-08	2.840E-08	1.826E-08	1.037E-08	6.972E-09	5.137E-09	4.008E-09	3.252E-09	2.716E-09	2.318E-09	2.012E-09									
NE	1.429E-08	1.652E-08	1.066E-08	6.085E-09	4.110E-09	3.038E-09	2.392E-09	1.954E-09	1.641E-09	1.402E-09	1.219E-09									
ENE	1.087E-08	1.374E-08	9.072E-09	5.324E-09	3.659E-09	2.739E-09	2.245E-09	1.883E-09	1.582E-09	1.357E-09	1.184E-09									
E	9.231E-09	1.123E-08	7.362E-09	4.280E-09	2.923E-09	2.177E-09	1.713E-09	1.400E-09	1.208E-09	1.056E-09	9.193E-10									
ESE	9.797E-09	1.107E-08	7.335E-09	4.316E-09	2.972E-09	2.227E-09	1.760E-09	1.443E-09	1.215E-09	1.045E-09	9.128E-10									
SE	1.558E-08	9.476E-09	7.277E-09	5.206E-09	3.815E-09	3.007E-09	2.482E-09	2.113E-09	1.773E-09	1.519E-09	1.323E-09									
SSE	1.792E-08	1.963E-08	1.260E-08	7.143E-09	4.801E-09	3.535E-09	2.757E-09	2.237E-09	1.867E-09	1.593E-09	1.383E-09									

DIRECTION FROM SITE	CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT										SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	4-5	5-10	10-20	20-30	30-40	40-50				
S	4.353E-08	5.737E-08	4.409E-08	3.448E-08	3.588E-08	2.172E-08	8.757E-09	4.498E-09	2.865E-09	2.052E-09										
SSW	2.863E-08	4.164E-08	3.746E-08	3.742E-08	3.124E-08	2.074E-08	9.062E-09	4.779E-09	3.053E-09	2.180E-09										
SW	5.409E-08	8.061E-08	5.031E-08	3.017E-08	2.110E-08	1.366E-08	6.104E-09	3.364E-09	2.239E-09	1.606E-09										
WSW	1.467E-07	1.391E-07	7.597E-08	4.305E-08	2.887E-08	1.596E-08	6.924E-09	3.504E-09	2.227E-09	1.594E-09										
W	1.654E-07	1.288E-07	6.468E-08	3.697E-08	2.462E-08	1.217E-08	5.529E-09	3.085E-09	1.967E-09	1.409E-09										
WNW	1.863E-07	2.268E-07	1.246E-07	7.505E-08	5.020E-08	2.492E-08	1.033E-08	5.415E-09	3.521E-09	2.532E-09										
NW	2.362E-07	2.826E-07	1.473E-07	8.083E-08	5.199E-08	2.454E-08	9.477E-09	4.732E-09	3.021E-09	2.154E-09										
NNW	1.975E-07	1.991E-07	1.696E-07	1.252E-07	8.364E-08	3.913E-08	1.436E-08	7.073E-09	4.518E-09	3.248E-09										
N	1.911E-07	1.112E-07	7.636E-08	5.382E-08	3.996E-08	2.280E-08	1.219E-08	7.153E-09	4.569E-09	3.238E-09										
NNE	8.630E-08	6.024E-08	4.405E-08	3.182E-08	2.571E-08	2.332E-08	1.061E-08	5.175E-09	3.264E-09	2.322E-09										
NE	6.823E-08	3.929E-08	2.671E-08	1.849E-08	1.449E-08	1.342E-08	6.224E-09	3.066E-09	1.960E-09	1.405E-09										
ENE	5.415E-08	2.867E-08	1.994E-08	1.403E-08	1.107E-08	1.103E-08	5.417E-09	2.787E-09	1.872E-09	1.360E-09										
E	3.247E-08	2.325E-08	1.700E-08	1.203E-08	9.455E-09	9.066E-09	4.362E-09	2.190E-09	1.417E-09	1.050E-09										
ESE	6.278E-08	3.227E-08	1.944E-08	1.318E-08	1.016E-08	9.128E-09	4.390E-09	2.239E-09	1.447E-09	1.046E-09										
SE	4.172E-08	4.609E-08	3.429E-08	2.410E-08	1.780E-08	9.854E-09	5.048E-09	3.012E-09	2.089E-09	1.521E-09										
SSE	4.555E-08	4.613E-08	3.350E-08	2.340E-08	1.828E-08	1.613E-08	7.316E-09	3.561E-09	2.245E-09	1.597E-09										

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ERP ELEVATED STACK RELEASES - JUL-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	7.471E-10	1.658E-08	4.292E-08	5.735E-08	6.189E-08	5.368E-08	4.452E-08	3.689E-08	3.093E-08	3.524E-08	3.801E-08
SSW	6.699E-11	8.427E-09	2.768E-08	3.932E-08	4.476E-08	4.014E-08	3.411E-08	3.795E-08	3.943E-08	3.452E-08	3.061E-08
SW	4.070E-08	3.555E-08	4.569E-08	6.947E-08	1.027E-07	6.909E-08	4.969E-08	3.770E-08	2.979E-08	2.430E-08	2.032E-08
WSW	1.676E-07	1.551E-07	1.419E-07	1.455E-07	1.746E-07	1.083E-07	7.438E-08	5.476E-08	4.236E-08	3.399E-08	2.806E-08
W	1.900E-07	1.324E-07	1.754E-07	1.738E-07	1.470E-07	9.177E-08	6.340E-08	4.689E-08	3.641E-08	2.931E-08	2.426E-08
WNW	1.048E-07	9.218E-08	1.768E-07	2.399E-07	2.845E-07	1.754E-07	1.201E-07	9.307E-08	7.519E-08	5.994E-08	4.923E-08
NW	1.717E-07	1.776E-07	2.158E-07	2.800E-07	3.710E-07	2.160E-07	1.425E-07	1.040E-07	7.995E-08	6.288E-08	5.106E-08
NNW	2.702E-07	2.038E-07	1.985E-07	1.928E-07	2.100E-07	1.930E-07	1.727E-07	1.497E-07	1.292E-07	1.013E-07	8.202E-08
N	4.070E-07	2.757E-07	1.956E-07	1.448E-07	1.123E-07	9.290E-08	7.727E-08	6.381E-08	5.360E-08	4.576E-08	3.964E-08
NNE	2.053E-07	1.185E-07	8.531E-08	7.059E-08	6.239E-08	5.300E-08	4.433E-08	3.725E-08	3.166E-08	2.726E-08	2.378E-08
NE	2.419E-07	1.125E-07	6.423E-08	4.871E-08	4.083E-08	3.315E-08	2.683E-08	2.201E-08	1.839E-08	1.563E-08	1.350E-08
ENE	2.467E-07	1.009E-07	4.829E-08	3.484E-08	2.981E-08	2.451E-08	2.003E-08	1.658E-08	1.395E-08	1.194E-08	1.037E-08
E	1.062E-07	4.792E-08	3.037E-08	2.619E-08	2.445E-08	2.070E-08	1.711E-08	1.421E-08	1.196E-08	1.022E-08	8.860E-09
ESE	1.169E-07	8.865E-08	6.647E-08	4.681E-08	3.245E-08	2.465E-08	1.943E-08	1.576E-08	1.309E-08	1.110E-08	9.575E-09
SE	3.819E-08	2.664E-08	4.184E-08	4.906E-08	4.931E-08	4.195E-08	3.458E-08	2.863E-08	2.402E-08	2.046E-08	1.767E-08
SSE	2.305E-08	3.158E-08	4.718E-08	5.122E-08	4.904E-08	4.119E-08	3.377E-08	2.786E-08	2.331E-08	1.981E-08	1.709E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.374E-08	2.248E-08	1.453E-08	8.254E-09	5.753E-09	4.320E-09	3.335E-09	2.678E-09	2.233E-09	1.897E-09	1.631E-09
SSW	2.834E-08	2.260E-08	1.468E-08	8.383E-09	5.987E-09	4.472E-09	3.447E-09	2.763E-09	2.281E-09	1.922E-09	1.648E-09
SW	1.870E-08	1.476E-08	9.737E-09	5.669E-09	4.083E-09	3.131E-09	2.512E-09	2.019E-09	1.668E-09	1.409E-09	1.210E-09
WSW	2.472E-08	1.582E-08	1.105E-08	6.681E-09	4.460E-09	3.258E-09	2.519E-09	2.023E-09	1.672E-09	1.412E-09	1.213E-09
W	2.053E-08	1.132E-08	8.147E-09	5.307E-09	3.898E-09	2.864E-09	2.212E-09	1.776E-09	1.467E-09	1.239E-09	1.063E-09
WNW	4.195E-08	2.381E-08	1.629E-08	9.947E-09	6.800E-09	5.049E-09	3.964E-09	3.212E-09	2.662E-09	2.249E-09	1.933E-09
NW	4.295E-08	2.326E-08	1.553E-08	9.143E-09	6.100E-09	4.457E-09	3.488E-09	2.813E-09	2.327E-09	1.968E-09	1.692E-09
NNW	6.920E-08	3.756E-08	2.414E-08	1.365E-08	9.139E-09	6.694E-09	5.212E-09	4.214E-09	3.516E-09	2.982E-09	2.567E-09
N	3.487E-08	2.160E-08	1.710E-08	1.222E-08	9.118E-09	6.962E-09	5.390E-09	4.334E-09	3.585E-09	3.032E-09	2.610E-09
NNE	2.553E-08	2.794E-08	1.787E-08	1.003E-08	6.673E-09	4.862E-09	3.752E-09	3.011E-09	2.487E-09	2.099E-09	1.803E-09
NE	1.416E-08	1.629E-08	1.046E-08	5.908E-09	3.950E-09	2.891E-09	2.253E-09	1.822E-09	1.514E-09	1.281E-09	1.103E-09
ENE	1.077E-08	1.354E-08	8.892E-09	5.163E-09	3.509E-09	2.598E-09	2.105E-09	1.744E-09	1.449E-09	1.230E-09	1.061E-09
E	9.137E-09	1.109E-08	7.241E-09	4.177E-09	2.829E-09	2.091E-09	1.633E-09	1.325E-09	1.135E-09	9.840E-10	8.506E-10
ESE	9.706E-09	1.089E-08	7.173E-09	4.173E-09	2.840E-09	2.104E-09	1.643E-09	1.332E-09	1.109E-09	9.428E-10	8.146E-10
SE	1.546E-08	9.367E-09	7.162E-09	5.075E-09	3.682E-09	2.872E-09	2.346E-09	1.975E-09	1.641E-09	1.392E-09	1.200E-09
SSE	1.778E-08	1.937E-08	1.238E-08	6.956E-09	4.634E-09	3.382E-09	2.614E-09	2.102E-09	1.740E-09	1.471E-09	1.266E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.348E-08	5.723E-08	4.391E-08	3.427E-08	3.561E-08	2.145E-08	8.538E-09	4.308E-09	2.696E-09	1.898E-09
SSW	2.857E-08	4.150E-08	3.725E-08	3.713E-08	3.093E-08	2.036E-08	8.717E-09	4.466E-09	2.775E-09	1.927E-09
SW	5.400E-08	8.036E-08	5.007E-08	2.996E-08	2.090E-08	1.340E-08	5.868E-09	3.137E-09	2.026E-09	1.412E-09
WSW	1.464E-07	1.387E-07	7.557E-08	4.272E-08	2.568E-08	1.568E-08	6.665E-09	3.283E-09	2.031E-09	1.416E-09
W	1.651E-07	1.284E-07	6.436E-08	3.670E-08	2.438E-08	1.196E-08	5.312E-09	2.879E-09	1.783E-09	1.241E-09
WNW	1.861E-07	2.261E-07	1.240E-07	7.449E-08	4.971E-08	2.450E-08	9.959E-09	5.082E-09	3.217E-09	2.254E-09
NW	2.358E-07	2.819E-07	1.467E-07	8.031E-08	5.156E-08	2.420E-08	9.209E-09	4.507E-09	2.821E-09	1.972E-09
NNW	1.972E-07	1.986E-07	1.689E-07	1.244E-07	8.298E-08	3.862E-08	1.398E-08	6.753E-09	4.233E-09	2.986E-09
N	1.908E-07	1.109E-07	7.605E-08	5.353E-08	3.969E-08	2.255E-08	1.193E-08	6.908E-09	4.350E-09	3.040E-09
NNE	8.613E-08	6.004E-08	4.381E-08	3.158E-08	2.546E-08	2.293E-08	1.028E-08	4.901E-09	3.023E-09	2.104E-09
NE	6.807E-08	3.917E-08	2.659E-08	1.837E-08	1.437E-08	1.322E-08	6.048E-09	2.918E-09	1.828E-09	1.284E-09
ENE	5.401E-08	2.857E-08	1.985E-08	1.394E-08	1.098E-08	1.086E-08	5.257E-09	2.644E-09	1.735E-09	1.232E-09
E	3.241E-08	2.317E-08	1.691E-08	1.194E-08	9.366E-09	8.944E-09	4.259E-09	2.105E-09	1.340E-09	9.792E-10
ESE	6.266E-08	3.217E-08	1.935E-08	1.309E-08	1.007E-08	8.976E-09	4.247E-09	2.116E-09	1.336E-09	9.446E-10
SE	4.167E-08	4.599E-08	3.416E-08	2.398E-08	1.768E-08	9.741E-09	4.920E-09	2.877E-09	1.954E-09	1.394E-09
SSE	4.551E-08	4.603E-08	3.338E-08	2.328E-08	1.815E-08	1.591E-08	7.130E-09	3.409E-09	2.110E-09	1.475E-09

B314

ERP ELEVATED STACK RELEASES - JUL-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	7.472E-10	1.645E-08	4.245E-08	5.689E-08	6.115E-08	5.270E-08	4.342E-08	3.576E-08	2.982E-08	3.395E-08	3.666E-08
SSW	6.702E-11	8.367E-09	2.739E-08	3.902E-08	4.425E-08	3.946E-08	3.336E-08	3.703E-08	3.845E-08	3.358E-08	2.973E-08
SW	4.071E-08	3.525E-08	4.510E-08	6.902E-08	1.016E-07	6.789E-08	4.857E-08	3.669E-08	2.889E-08	2.350E-08	1.961E-08
WSW	1.677E-07	1.538E-07	1.394E-07	1.434E-07	1.721E-07	1.060E-07	7.246E-08	5.314E-08	4.098E-08	3.280E-08	2.701E-08
W	1.901E-07	1.300E-07	1.727E-07	1.707E-07	1.438E-07	8.933E-08	6.148E-08	4.534E-08	3.513E-08	2.823E-08	2.333E-08
WNW	1.049E-07	9.146E-08	1.751E-07	2.370E-07	2.801E-07	1.716E-07	1.170E-07	9.050E-08	7.304E-08	5.805E-08	4.750E-08
NW	1.718E-07	1.761E-07	2.124E-07	2.764E-07	3.656E-07	2.112E-07	1.385E-07	1.007E-07	7.717E-08	6.043E-08	4.884E-08
NNW	2.703E-07	2.021E-07	1.949E-07	1.896E-07	2.068E-07	1.896E-07	1.696E-07	1.469E-07	1.268E-07	9.898E-08	7.980E-08
N	4.073E-07	2.735E-07	1.917E-07	1.417E-07	1.097E-07	9.059E-08	7.512E-08	6.182E-08	5.177E-08	4.407E-08	3.807E-08
NNE	2.054E-07	1.175E-07	8.373E-08	6.931E-08	6.122E-08	5.184E-08	4.319E-08	3.615E-08	3.062E-08	2.628E-08	2.286E-08
NE	2.421E-07	1.117E-07	6.304E-08	4.782E-08	4.000E-08	3.232E-08	2.601E-08	2.123E-08	1.764E-08	1.493E-08	1.284E-08
ENE	2.469E-07	1.002E-07	4.741E-08	3.421E-08	2.921E-08	2.390E-08	1.943E-08	1.600E-08	1.341E-08	1.142E-08	9.886E-09
E	1.063E-07	4.755E-08	2.984E-08	2.578E-08	2.403E-08	2.025E-08	1.664E-08	1.375E-08	1.151E-08	9.793E-09	8.454E-09
ESE	1.170E-07	8.795E-08	6.510E-08	4.566E-08	3.157E-08	2.390E-08	1.877E-08	1.516E-08	1.255E-08	1.061E-08	9.123E-09
SE	3.820E-08	2.643E-08	4.128E-08	4.853E-08	4.861E-08	4.111E-08	3.369E-08	2.773E-08	2.315E-08	1.963E-08	1.689E-08
SSE	2.305E-08	3.132E-08	4.647E-08	5.056E-08	4.828E-08	4.033E-08	3.287E-08	2.697E-08	2.246E-08	1.900E-08	1.632E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.247E-08	2.133E-08	1.341E-08	7.203E-09	4.718E-09	3.369E-09	2.509E-09	1.952E-09	1.587E-09	1.320E-09	1.113E-09
SSW	2.751E-08	2.181E-08	1.378E-08	7.443E-09	5.005E-09	3.630E-09	2.732E-09	2.145E-09	1.739E-09	1.442E-09	1.219E-09
SW	1.805E-08	1.422E-08	9.130E-09	5.026E-09	3.393E-09	2.470E-09	1.930E-09	1.518E-09	1.231E-09	1.022E-09	8.647E-10
WSW	2.379E-08	1.501E-08	1.023E-08	5.931E-09	3.825E-09	2.717E-09	2.052E-09	1.616E-09	1.312E-09	1.091E-09	9.246E-10
W	1.972E-08	1.082E-08	7.757E-09	4.833E-09	3.380E-09	2.418E-09	1.827E-09	1.440E-09	1.170E-09	9.733E-10	8.248E-10
WNW	4.032E-08	2.234E-08	1.488E-08	8.569E-09	5.463E-09	3.857E-09	2.933E-09	2.321E-09	1.884E-09	1.563E-09	1.320E-09
NW	4.089E-08	2.156E-08	1.399E-08	7.800E-09	4.928E-09	3.443E-09	2.610E-09	2.054E-09	1.662E-09	1.377E-09	1.163E-09
NNW	6.702E-08	3.539E-08	2.206E-08	1.171E-08	7.293E-09	5.031E-09	3.730E-09	2.909E-09	2.362E-09	1.958E-09	1.650E-09
N	3.341E-08	2.051E-08	1.622E-08	1.159E-08	8.457E-09	6.199E-09	4.680E-09	3.681E-09	2.985E-09	2.480E-09	2.099E-09
NNE	2.460E-08	2.699E-08	1.676E-08	8.934E-09	5.654E-09	3.956E-09	2.949E-09	2.296E-09	1.846E-09	1.521E-09	1.277E-09
NE	1.350E-08	1.563E-08	9.742E-09	5.235E-09	3.345E-09	2.359E-09	1.784E-09	1.408E-09	1.146E-09	9.519E-10	8.058E-10
ENE	1.029E-08	1.310E-08	8.359E-09	4.573E-09	2.904E-09	2.034E-09	1.571E-09	1.257E-09	1.017E-09	8.431E-10	7.118E-10
E	8.723E-09	1.067E-08	6.770E-09	3.680E-09	2.330E-09	1.628E-09	1.211E-09	9.406E-10	7.738E-10	6.492E-10	5.478E-10
ESE	9.266E-09	1.054E-08	6.755E-09	3.712E-09	2.366E-09	1.660E-09	1.238E-09	9.620E-10	7.715E-10	6.337E-10	5.304E-10
SE	1.472E-08	8.804E-09	6.706E-09	4.759E-09	3.456E-09	2.707E-09	2.224E-09	1.878E-09	1.537E-09	1.287E-09	1.097E-09
SSE	1.699E-08	1.858E-08	1.152E-08	6.132E-09	3.876E-09	2.709E-09	2.018E-09	1.570E-09	1.262E-09	1.040E-09	8.731E-10

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.309E-08	5.645E-08	4.283E-08	3.309E-08	3.431E-08	2.028E-08	7.477E-09	3.385E-09	1.972E-09	1.322E-09
SSW	2.833E-08	4.096E-08	3.646E-08	3.619E-08	3.005E-08	1.951E-08	7.768E-09	3.637E-09	2.158E-09	1.447E-09
SW	5.354E-08	7.938E-08	4.897E-08	2.906E-08	2.018E-08	1.281E-08	5.212E-09	2.500E-09	1.526E-09	1.026E-09
WSW	1.444E-07	1.363E-07	7.368E-08	4.134E-08	2.753E-08	1.484E-08	5.950E-09	2.746E-09	1.625E-09	1.095E-09
W	1.623E-07	1.256E-07	6.245E-08	3.542E-08	2.344E-08	1.144E-08	4.837E-09	2.438E-09	1.448E-09	9.766E-10
WNW	1.840E-07	2.223E-07	1.210E-07	7.232E-08	4.796E-08	2.302E-08	8.590E-09	3.916E-09	2.330E-09	1.568E-09
NW	2.328E-07	2.772E-07	1.428E-07	7.751E-08	4.933E-08	2.249E-08	7.900E-09	3.506E-09	2.063E-09	1.382E-09
NNW	1.942E-07	1.953E-07	1.658E-07	1.219E-07	8.075E-08	3.649E-08	1.205E-08	5.114E-09	2.935E-09	1.963E-09
N	1.876E-07	1.083E-07	7.393E-08	5.171E-08	3.812E-08	2.147E-08	1.123E-08	6.194E-09	3.702E-09	2.489E-09
NNE	8.483E-08	5.885E-08	4.268E-08	3.055E-08	2.452E-08	2.191E-08	9.215E-09	4.006E-09	2.311E-09	1.527E-09
NE	6.709E-08	3.833E-08	2.578E-08	1.763E-08	1.370E-08	1.254E-08	5.396E-09	2.392E-09	1.415E-09	9.553E-10
ENE	5.328E-08	2.796E-08	1.925E-08	1.339E-08	1.049E-08	1.037E-08	4.673E-09	2.081E-09	1.255E-09	8.461E-10
E	3.197E-08	2.274E-08	1.645E-08	1.150E-08	8.950E-09	8.504E-09	3.767E-09	1.649E-09	9.544E-10	6.486E-10
ESE	6.154E-08	3.129E-08	1.870E-08	1.256E-08	9.615E-09	8.576E-09	3.790E-09	1.679E-09	9.681E-10	6.363E-10
SE	4.120E-08	4.526E-08	3.328E-08	2.312E-08	1.690E-08	9.187E-09	4.613E-09	2.713E-09	1.847E-09	1.291E-09
SSE	4.492E-08	4.526E-08	3.250E-08	2.243E-08	1.737E-08	1.509E-08	6.327E-09	2.744E-09	1.581E-09	1.044E-09

B315

ERP ELEVATED STACK RELEASES - JUL-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.166E-09	2.230E-09	2.589E-09	2.186E-09	1.231E-09	7.980E-10	5.548E-10	4.043E-10	3.050E-10	2.500E-10	2.261E-10
SSW	7.068E-10	8.771E-10	1.193E-09	1.081E-09	6.328E-10	4.158E-10	2.909E-10	2.127E-10	2.009E-10	1.519E-10	1.189E-10
SW	1.820E-09	1.501E-09	1.305E-09	9.183E-10	7.610E-10	4.102E-10	2.532E-10	1.716E-10	1.239E-10	9.371E-11	7.337E-11
WSW	7.683E-09	5.733E-09	4.107E-09	2.921E-09	1.392E-09	7.351E-10	4.498E-10	3.033E-10	2.186E-10	1.652E-10	1.294E-10
W	4.754E-09	7.018E-09	4.648E-09	2.586E-09	1.098E-09	5.837E-10	3.581E-10	2.419E-10	1.745E-10	1.320E-10	1.035E-10
WNW	4.666E-09	3.773E-09	6.209E-09	3.923E-09	2.223E-09	1.116E-09	6.626E-10	4.418E-10	3.250E-10	2.508E-10	2.041E-10
NW	9.907E-09	7.640E-09	5.874E-09	5.946E-09	3.283E-09	1.634E-09	9.667E-10	6.411E-10	4.616E-10	3.547E-10	2.869E-10
NNW	1.248E-08	9.613E-09	7.374E-09	4.635E-09	3.194E-09	1.702E-09	1.049E-09	8.272E-10	6.069E-10	4.768E-10	3.957E-10
N	1.531E-08	1.179E-08	9.043E-09	5.682E-09	2.546E-09	1.505E-09	9.973E-10	7.086E-10	5.277E-10	4.068E-10	3.220E-10
NNE	5.552E-09	4.384E-09	3.530E-09	2.325E-09	1.090E-09	6.577E-10	4.407E-10	3.151E-10	2.354E-10	1.817E-10	1.438E-10
NE	4.641E-09	3.628E-09	2.865E-09	1.853E-09	8.539E-10	5.113E-10	3.413E-10	2.434E-10	1.817E-10	1.401E-10	1.109E-10
ENE	2.843E-09	2.257E-09	1.836E-09	1.221E-09	5.773E-10	3.497E-10	2.348E-10	1.681E-10	1.256E-10	9.699E-11	7.678E-11
E	2.328E-09	1.857E-09	1.525E-09	1.022E-09	4.866E-10	2.957E-10	1.989E-10	1.425E-10	1.066E-10	8.228E-11	6.514E-11
ESE	5.128E-09	3.854E-09	2.808E-09	1.670E-09	7.058E-10	4.053E-10	2.641E-10	1.859E-10	1.378E-10	1.060E-10	8.392E-11
SE	2.531E-09	2.405E-09	2.557E-09	2.060E-09	1.126E-09	7.230E-10	5.002E-10	3.636E-10	2.739E-10	2.122E-10	1.680E-10
SSE	3.924E-09	3.361E-09	3.106E-09	2.288E-09	1.176E-09	7.378E-10	5.045E-10	3.646E-10	2.739E-10	2.118E-10	1.677E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	1.818E-10	1.229E-10	8.296E-11	4.759E-11	3.005E-11	2.201E-11	1.574E-11	1.180E-11	9.278E-12	7.404E-12	6.045E-12
SSW	9.611E-11	7.836E-11	5.532E-11	3.293E-11	2.008E-11	1.408E-11	1.009E-11	7.583E-12	5.925E-12	4.733E-12	3.863E-12
SW	5.935E-11	5.208E-11	3.745E-11	2.271E-11	1.458E-11	9.293E-12	6.698E-12	5.030E-12	3.911E-12	3.124E-12	2.550E-12
WSW	1.050E-10	7.066E-11	4.835E-11	3.087E-11	1.870E-11	1.254E-11	9.005E-12	6.762E-12	5.258E-12	4.200E-12	3.428E-12
W	8.344E-11	3.811E-11	3.882E-11	2.399E-11	1.576E-11	1.056E-11	7.570E-12	5.684E-12	4.419E-12	3.530E-12	2.881E-12
WNW	1.756E-10	1.026E-10	7.213E-11	4.302E-11	2.834E-11	1.882E-11	1.317E-11	9.895E-12	7.699E-12	6.150E-12	5.020E-12
NW	2.428E-10	1.369E-10	9.466E-11	6.009E-11	3.685E-11	2.479E-11	1.760E-11	1.322E-11	1.028E-11	8.212E-12	6.703E-12
NNW	3.437E-10	2.113E-10	1.524E-10	9.289E-11	6.002E-11	4.045E-11	2.772E-11	2.031E-11	1.578E-11	1.262E-11	1.032E-11
N	2.604E-10	1.246E-10	7.688E-11	4.160E-11	8.456E-11	5.175E-11	3.716E-11	2.796E-11	2.177E-11	1.742E-11	1.424E-11
NNE	1.162E-10	1.475E-10	9.239E-11	4.876E-11	3.007E-11	2.024E-11	1.453E-11	1.092E-11	8.492E-12	6.796E-12	5.555E-12
NE	8.967E-11	1.073E-10	6.567E-11	3.382E-11	2.074E-11	1.401E-11	1.036E-11	7.778E-12	6.065E-12	4.786E-12	3.907E-12
ENE	6.203E-11	6.695E-11	4.863E-11	2.975E-11	1.914E-11	1.283E-11	9.121E-12	6.333E-12	4.960E-12	3.996E-12	3.285E-12
E	5.262E-11	5.673E-11	4.116E-11	2.515E-11	1.619E-11	1.085E-11	7.712E-12	5.723E-12	4.405E-12	3.321E-12	2.721E-12
ESE	6.795E-11	6.469E-11	4.628E-11	2.812E-11	1.824E-11	1.237E-11	8.903E-12	6.690E-12	5.196E-12	4.165E-12	3.409E-12
SE	1.355E-10	6.436E-11	3.937E-11	2.088E-11	1.287E-11	8.939E-12	6.735E-12	1.266E-11	9.747E-12	7.736E-12	6.288E-12
SSE	1.354E-10	1.481E-10	9.139E-11	4.724E-11	2.880E-11	1.928E-11	1.379E-11	1.032E-11	8.007E-12	6.385E-12	5.203E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	2.330E-09	1.251E-09	5.595E-10	3.125E-10	2.168E-10	1.182E-10	4.765E-11	2.165E-11	1.197E-11	7.456E-12	
SSW	1.073E-09	6.359E-10	2.930E-10	1.856E-10	1.202E-10	7.207E-11	3.220E-11	1.408E-11	7.669E-12	4.764E-12	
SW	1.177E-09	6.401E-10	2.624E-10	1.260E-10	7.421E-11	4.719E-11	2.237E-11	9.664E-12	5.080E-12	3.144E-12	
WSW	3.941E-09	1.440E-09	4.673E-10	2.224E-10	1.310E-10	6.838E-11	2.935E-11	1.277E-11	6.830E-12	4.227E-12	
W	4.258E-09	1.200E-09	3.718E-10	1.776E-10	1.045E-10	4.850E-11	2.363E-11	1.075E-11	5.741E-12	3.553E-12	
WNW	4.652E-09	2.109E-09	6.951E-10	3.301E-10	2.074E-10	1.053E-10	4.297E-11	1.910E-11	9.995E-12	6.190E-12	
NW	6.298E-09	3.142E-09	1.014E-09	4.722E-10	2.907E-10	1.417E-10	5.744E-11	2.513E-11	1.335E-11	8.266E-12	
NNW	6.654E-09	2.851E-09	1.134E-09	6.203E-10	4.005E-10	2.145E-10	9.150E-11	4.058E-11	2.070E-11	1.271E-11	
N	8.160E-09	2.780E-09	1.017E-09	5.333E-10	3.243E-10	1.336E-10	6.853E-11	5.466E-11	2.823E-11	1.753E-11	
NNE	3.184E-09	1.172E-09	4.483E-10	2.377E-10	1.448E-10	1.161E-10	5.015E-11	2.057E-11	1.103E-11	6.839E-12	
NE	2.585E-09	9.236E-10	3.475E-10	1.835E-10	1.117E-10	8.487E-11	3.508E-11	1.434E-11	7.863E-12	4.840E-12	
ENE	1.656E-09	6.192E-10	2.387E-10	1.268E-10	7.731E-11	5.771E-11	2.923E-11	1.303E-11	6.606E-12	4.018E-12	
E	1.375E-09	5.207E-10	2.021E-10	1.076E-10	6.558E-11	4.890E-11	2.473E-11	1.102E-11	5.789E-12	3.420E-12	
ESE	2.534E-09	7.864E-10	2.705E-10	1.395E-10	8.455E-11	5.723E-11	2.776E-11	1.255E-11	6.754E-12	4.191E-12	
SE	2.302E-09	1.155E-09	5.050E-10	2.760E-10	1.690E-10	6.906E-11	2.143E-11	9.107E-12	9.857E-12	7.796E-12	
SSE	2.799E-09	1.228E-09	5.107E-10	2.761E-10	1.688E-10	1.201E-10	4.886E-11	1.962E-11	1.043E-11	6.428E-12	

B316

ERP ELEVATED STACK RELEASES - JUL-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST  
RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY 8.000 DAY DECAY

		UNDEPLETED	UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	4.7E-08	4.7E-08	4.6E-08	2.5E-09
A	Site Boundary	SSW	.82	3.2E-08	3.2E-08	3.2E-08	1.2E-09
A	Site Boundary	SW	.97	6.7E-08	6.7E-08	6.6E-08	9.6E-10
A	Site Boundary	WSW	.93	1.4E-07	1.4E-07	1.4E-07	3.0E-09
A	Site Boundary	W	.91	1.8E-07	1.7E-07	1.7E-07	3.1E-09
A	Site Boundary	WNW	.94	2.3E-07	2.3E-07	2.2E-07	4.4E-09
A	Site Boundary	NW	.81	2.3E-07	2.3E-07	2.2E-07	5.2E-09
A	Site Boundary	NNW	.69	1.9E-07	1.9E-07	1.9E-07	7.8E-09
A	Site Boundary	N	.67	2.0E-07	2.0E-07	2.0E-07	9.7E-09
A	Site Boundary	NNE	.60	9.1E-08	9.1E-08	9.0E-08	4.0E-09
A	Site Boundary	NE	.62	7.2E-08	7.1E-08	7.0E-08	3.2E-09
A	Site Boundary	ENE	.59	6.3E-08	6.3E-08	6.2E-08	2.1E-09
A	Site Boundary	E	.53	3.9E-08	3.9E-08	3.8E-08	1.8E-09
A	Site Boundary	ESE	.54	7.8E-08	7.8E-08	7.8E-08	3.7E-09
A	Site Boundary	SE	.65	3.3E-08	3.3E-08	3.3E-08	2.5E-09
A	Site Boundary	SSE	.81	4.8E-08	4.8E-08	4.8E-08	2.9E-09
A	Nearest Res	SW	1.30	9.5E-08	9.5E-08	9.4E-08	1.0E-09
A	Nearest Res	WSW	1.30	1.7E-07	1.7E-07	1.6E-07	1.9E-09
A	Nearest Res	W	1.00	1.7E-07	1.7E-07	1.7E-07	2.6E-09
A	Nearest Res	WNW	1.70	2.3E-07	2.3E-07	2.3E-07	1.6E-09
A	Nearest Res	NW	.90	2.5E-07	2.5E-07	2.5E-07	7.0E-09
A	Nearest Res	NNW	1.90	2.0E-07	2.0E-07	1.9E-07	1.9E-09
A	Nearest Res	N	3.00	6.4E-08	6.4E-08	6.2E-08	7.1E-10
A	Nearest Res	ENE	1.70	2.7E-08	2.7E-08	2.7E-08	4.6E-10
A	Nearest Res	E	2.00	2.1E-08	2.1E-08	2.0E-08	3.0E-10
A	Nearest Res	ESE	2.30	2.1E-08	2.1E-08	2.1E-08	3.1E-10
A	Nearest Cow	NNW	3.50	1.3E-07	1.3E-07	1.3E-07	6.1E-10
A	Nearest Garde	SW	1.30	9.5E-08	9.5E-08	9.4E-08	1.0E-09
A	Nearest Garde	WSW	1.90	1.2E-07	1.2E-07	1.2E-07	8.2E-10
A	Nearest Garde	WNW	2.40	1.3E-07	1.3E-07	1.3E-07	7.3E-10
A	Nearest Garde	NW	2.90	1.1E-07	1.1E-07	1.1E-07	6.9E-10
A	Nearest Garde	NNW	1.90	2.0E-07	2.0E-07	1.9E-07	1.9E-09
A	Nearest Garde	ENE	2.80	1.8E-08	1.8E-08	1.7E-08	1.9E-10
A	Nearest Garde	E	2.00	2.1E-08	2.1E-08	2.0E-08	3.0E-10
A	Nearest Garde	ESE	2.30	2.1E-08	2.1E-08	2.1E-08	3.1E-10
A	Nearest Garde	SE	1.20	5.1E-08	5.1E-08	5.0E-08	1.6E-09
A	MAXIMUM CHI/Q	S	1.50	6.2E-08	6.2E-08	6.1E-08	1.2E-09
A	MAXIMUM CHI/Q	SSW	1.50	4.5E-08	4.5E-08	4.4E-08	6.3E-10
A	MAXIMUM CHI/Q	SW	1.50	1.0E-07	1.0E-07	1.0E-07	7.6E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.7E-07	1.7E-07	1.7E-07	1.4E-09
A	MAXIMUM CHI/Q	W	.25	1.5E-07	1.5E-07	1.5E-07	4.8E-09
A	MAXIMUM CHI/Q	WNW	1.50	2.9E-07	2.8E-07	2.8E-07	2.2E-09
A	MAXIMUM CHI/Q	NW	1.50	3.7E-07	3.7E-07	3.7E-07	3.3E-09
A	MAXIMUM CHI/Q	NNW	.25	2.1E-07	2.1E-07	2.1E-07	1.2E-08
A	MAXIMUM CHI/Q	N	.25	3.2E-07	3.2E-07	3.2E-07	1.5E-08
A	MAXIMUM CHI/Q	NNE	.25	1.6E-07	1.6E-07	1.6E-07	5.6E-09
A	MAXIMUM CHI/Q	NE	.25	1.9E-07	1.9E-07	1.9E-07	4.6E-09
A	MAXIMUM CHI/Q	ENE	.25	1.9E-07	1.9E-07	1.9E-07	2.8E-09
A	MAXIMUM CHI/Q	E	.25	8.2E-08	8.2E-08	8.2E-08	2.3E-09
A	MAXIMUM CHI/Q	ESE	.25	9.2E-08	9.2E-08	9.2E-08	5.1E-09
A	MAXIMUM CHI/Q	SE	1.50	4.9E-08	4.9E-08	4.9E-08	1.1E-09
A	MAXIMUM CHI/Q	SSE	1.00	5.1E-08	5.1E-08	5.0E-08	2.3E-09

**Atmospheric Diffusion Estimates**

**Elevated Releases**

January-December 2004

ERP ELEVATED STACK RELEASES - JAN-DEC 2004  
 NO DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.452E-08	4.311E-08	6.887E-08	7.494E-08	7.203E-08	6.074E-08	4.990E-08	4.123E-08	3.455E-08	3.971E-08	4.342E-08
SSW	2.219E-09	1.213E-08	2.935E-08	3.859E-08	4.221E-08	3.737E-08	3.156E-08	3.484E-08	3.613E-08	3.164E-08	2.808E-08
SW	2.137E-08	2.354E-08	4.389E-08	7.649E-08	1.130E-07	7.537E-08	5.382E-08	4.058E-08	3.190E-08	2.590E-08	2.157E-08
WSW	8.853E-08	8.499E-08	9.146E-08	1.159E-07	1.571E-07	9.813E-08	6.760E-08	4.982E-08	3.854E-08	3.093E-08	2.552E-08
W	1.095E-07	1.031E-07	1.817E-07	1.910E-07	1.587E-07	9.749E-08	6.647E-08	4.865E-08	3.746E-08	2.995E-08	2.464E-08
WNW	7.869E-08	6.837E-08	1.463E-07	2.058E-07	2.381E-07	1.453E-07	9.886E-08	7.595E-08	6.098E-08	4.852E-08	3.979E-08
NW	1.086E-07	1.137E-07	1.501E-07	2.117E-07	3.149E-07	1.857E-07	1.236E-07	9.097E-08	7.046E-08	5.566E-08	4.538E-08
NNW	1.677E-07	1.515E-07	1.634E-07	1.642E-07	1.820E-07	1.693E-07	1.546E-07	1.379E-07	1.237E-07	9.760E-08	7.949E-08
N	2.855E-07	2.153E-07	1.692E-07	1.296E-07	9.993E-08	8.182E-08	6.755E-08	5.554E-08	4.654E-08	3.968E-08	3.434E-08
NNE	1.465E-07	1.056E-07	8.503E-08	6.938E-08	5.853E-08	4.899E-08	4.079E-08	3.425E-08	2.913E-08	2.513E-08	2.196E-08
NE	1.502E-07	7.549E-08	5.020E-08	4.079E-08	3.527E-08	2.927E-08	2.410E-08	2.004E-08	1.692E-08	1.451E-08	1.263E-08
ENE	1.255E-07	5.945E-08	3.724E-08	3.055E-08	2.675E-08	2.211E-08	1.811E-08	1.500E-08	1.263E-08	1.080E-08	9.380E-09
E	5.347E-08	2.696E-08	2.439E-08	2.523E-08	2.488E-08	2.122E-08	1.757E-08	1.461E-08	1.231E-08	1.054E-08	9.150E-09
ESE	5.887E-08	4.806E-08	4.409E-08	3.856E-08	3.301E-08	2.710E-08	2.212E-08	1.827E-08	1.534E-08	1.309E-08	1.134E-08
SE	2.001E-08	2.326E-08	4.218E-08	5.035E-08	5.057E-08	4.287E-08	3.522E-08	2.908E-08	2.435E-08	2.070E-08	1.786E-08
SSE	3.884E-08	5.063E-08	6.534E-08	6.468E-08	5.846E-08	4.859E-08	3.982E-08	3.294E-08	2.767E-08	2.361E-08	2.045E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.871E-08	2.611E-08	1.697E-08	9.747E-09	6.863E-09	5.203E-09	4.056E-09	3.290E-09	2.768E-09	2.374E-09	2.060E-09
SSW	2.601E-08	2.039E-08	1.328E-08	7.658E-09	5.495E-09	4.143E-09	3.234E-09	2.626E-09	2.195E-09	1.875E-09	1.628E-09
SW	1.959E-08	1.427E-08	9.351E-09	5.424E-09	3.865E-09	2.955E-09	2.371E-09	1.925E-09	1.608E-09	1.373E-09	1.192E-09
WSW	2.240E-08	1.401E-08	9.684E-09	5.819E-09	3.913E-09	2.883E-09	2.249E-09	1.825E-09	1.524E-09	1.300E-09	1.129E-09
W	2.075E-08	1.124E-08	7.912E-09	5.020E-09	3.634E-09	2.686E-09	2.094E-09	1.698E-09	1.417E-09	1.209E-09	1.049E-09
WNW	3.385E-08	1.915E-08	1.313E-08	8.087E-09	5.589E-09	4.198E-09	3.337E-09	2.737E-09	2.297E-09	1.964E-09	1.709E-09
NW	3.833E-08	2.112E-08	1.429E-08	8.584E-09	5.799E-09	4.287E-09	3.400E-09	2.774E-09	2.320E-09	1.982E-09	1.723E-09
NNW	6.776E-08	3.833E-08	2.495E-08	1.440E-08	9.801E-09	7.287E-09	5.773E-09	4.743E-09	4.032E-09	3.468E-09	3.019E-09
N	3.021E-08	1.876E-08	1.506E-08	1.141E-08	9.208E-09	7.438E-09	5.842E-09	4.753E-09	3.974E-09	3.395E-09	2.950E-09
NNE	2.389E-08	2.922E-08	1.887E-08	1.078E-08	7.283E-09	5.386E-09	4.214E-09	3.429E-09	2.869E-09	2.454E-09	2.134E-09
NE	1.357E-08	1.734E-08	1.122E-08	6.435E-09	4.360E-09	3.232E-09	2.554E-09	2.092E-09	1.761E-09	1.506E-09	1.311E-09
ENE	9.751E-09	1.299E-08	8.603E-09	5.070E-09	3.494E-09	2.621E-09	2.171E-09	1.833E-09	1.541E-09	1.323E-09	1.155E-09
E	9.530E-09	1.212E-08	7.962E-09	4.639E-09	3.172E-09	2.365E-09	1.863E-09	1.523E-09	1.318E-09	1.153E-09	1.005E-09
ESE	1.152E-08	1.299E-08	8.611E-09	5.069E-09	3.488E-09	2.612E-09	2.063E-09	1.691E-09	1.424E-09	1.224E-09	1.069E-09
SE	1.561E-08	9.437E-09	7.200E-09	5.097E-09	3.713E-09	2.912E-09	2.392E-09	2.028E-09	1.699E-09	1.454E-09	1.265E-09
SSE	2.169E-08	2.601E-08	1.677E-08	9.563E-09	6.455E-09	4.770E-09	3.730E-09	3.033E-09	2.537E-09	2.169E-09	1.885E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.584E-08	6.766E-08	4.932E-08	3.842E-08	4.058E-08	2.485E-08	1.007E-08	5.187E-09	3.310E-09	2.375E-09
SSW	2.963E-08	3.925E-08	3.442E-08	3.405E-08	2.837E-08	1.848E-08	7.947E-09	4.140E-09	2.636E-09	1.878E-09
SW	5.386E-08	8.815E-08	5.427E-08	3.209E-08	2.212E-08	1.327E-08	5.604E-09	2.964E-09	1.932E-09	1.376E-09
WSW	1.009E-07	1.217E-07	6.863E-08	3.886E-08	2.596E-08	1.395E-08	5.831E-09	2.904E-09	1.831E-09	1.303E-09
W	1.684E-07	1.387E-07	6.761E-08	3.780E-08	2.477E-08	1.187E-08	5.047E-09	2.702E-09	1.704E-09	1.211E-09
WNW	1.554E-07	1.897E-07	1.021E-07	6.051E-08	4.018E-08	1.974E-08	8.098E-09	4.225E-09	2.741E-09	1.968E-09
NW	1.694E-07	2.346E-07	1.271E-07	7.068E-08	4.582E-08	2.191E-08	8.613E-09	4.335E-09	2.780E-09	1.986E-09
NNW	1.611E-07	1.724E-07	1.518E-07	1.178E-07	8.051E-08	3.892E-08	1.470E-08	7.352E-09	4.766E-09	3.469E-09
N	1.618E-07	9.846E-08	6.655E-08	4.650E-08	3.439E-08	1.966E-08	1.124E-08	7.271E-09	4.767E-09	3.402E-09
NNE	8.264E-08	5.671E-08	4.036E-08	2.907E-08	2.361E-08	2.343E-08	1.102E-08	5.423E-09	3.440E-09	2.458E-09
NE	5.164E-08	3.383E-08	2.386E-08	1.690E-08	1.353E-08	1.378E-08	6.577E-09	3.262E-09	2.098E-09	1.509E-09
ENE	3.920E-08	2.553E-08	1.793E-08	1.261E-08	9.939E-09	1.032E-08	5.155E-09	2.674E-09	1.819E-09	1.326E-09
E	2.533E-08	2.333E-08	1.736E-08	1.229E-08	9.702E-09	9.698E-09	4.725E-09	2.379E-09	1.542E-09	1.147E-09
ESE	4.252E-08	3.162E-08	2.191E-08	1.532E-08	1.192E-08	1.072E-08	5.153E-09	2.626E-09	1.695E-09	1.226E-09
SE	4.161E-08	4.710E-08	3.480E-08	2.431E-08	1.787E-08	9.815E-09	4.950E-09	2.918E-09	2.007E-09	1.456E-09
SSE	6.178E-08	5.546E-08	3.941E-08	2.763E-08	2.185E-08	2.095E-08	9.784E-09	4.803E-09	3.043E-09	2.173E-09

B319

ERP ELEVATED STACK RELEASES - JAN-DEC 2004  
 2.260 DAY DECAY, UNDEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	1.451E-08	4.308E-08	6.881E-08	7.484E-08	7.187E-08	6.055E-08	4.971E-08	4.103E-08	3.435E-08	3.945E-08	4.310E-08
SSW	2.218E-09	1.212E-08	2.931E-08	3.851E-08	4.209E-08	3.723E-08	3.141E-08	3.463E-08	3.588E-08	3.139E-08	2.783E-08
SW	2.136E-08	2.352E-08	4.384E-08	7.635E-08	1.126E-07	7.508E-08	5.356E-08	4.034E-08	3.168E-08	2.569E-08	2.138E-08
WSW	8.849E-08	8.491E-08	9.133E-08	1.157E-07	1.566E-07	9.773E-08	6.724E-08	4.950E-08	3.825E-08	3.066E-08	2.527E-08
W	1.095E-07	1.030E-07	1.815E-07	1.907E-07	1.583E-07	9.714E-08	6.617E-08	4.838E-08	3.721E-08	2.972E-08	2.443E-08
WNW	7.865E-08	6.830E-08	1.461E-07	2.054E-07	2.374E-07	1.448E-07	9.837E-08	7.548E-08	6.053E-08	4.811E-08	3.941E-08
NW	1.085E-07	1.136E-07	1.499E-07	2.114E-07	3.141E-07	1.851E-07	1.231E-07	9.051E-08	7.004E-08	5.528E-08	4.502E-08
NNW	1.676E-07	1.513E-07	1.631E-07	1.639E-07	1.816E-07	1.688E-07	1.540E-07	1.373E-07	1.231E-07	9.697E-08	7.891E-08
N	2.853E-07	2.151E-07	1.690E-07	1.294E-07	9.971E-08	8.158E-08	6.731E-08	5.531E-08	4.631E-08	3.945E-08	3.413E-08
NNE	1.464E-07	1.054E-07	8.491E-08	6.926E-08	5.837E-08	4.881E-08	4.060E-08	3.405E-08	2.894E-08	2.493E-08	2.177E-08
NE	1.500E-07	7.534E-08	5.010E-08	4.070E-08	3.517E-08	2.916E-08	2.398E-08	1.993E-08	1.681E-08	1.440E-08	1.252E-08
ENE	1.253E-07	5.932E-08	3.715E-08	3.047E-08	2.666E-08	2.202E-08	1.802E-08	1.491E-08	1.254E-08	1.072E-08	9.300E-09
E	5.341E-08	2.691E-08	2.434E-08	2.518E-08	2.481E-08	2.114E-08	1.749E-08	1.453E-08	1.224E-08	1.047E-08	9.080E-09
ESE	5.880E-08	4.799E-08	4.402E-08	3.850E-08	3.294E-08	2.702E-08	2.204E-08	1.819E-08	1.526E-08	1.301E-08	1.126E-08
SE	2.000E-08	2.324E-08	4.215E-08	5.029E-08	5.048E-08	4.276E-08	3.511E-08	2.896E-08	2.424E-08	2.059E-08	1.775E-08
SSE	3.883E-08	5.061E-08	6.530E-08	6.461E-08	5.836E-08	4.847E-08	3.969E-08	3.281E-08	2.754E-08	2.348E-08	2.033E-08

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.839E-08	2.576E-08	1.667E-08	9.488E-09	6.618E-09	4.969E-09	3.839E-09	3.085E-09	2.572E-09	2.186E-09	1.879E-09
SSW	2.574E-08	2.004E-08	1.298E-08	7.391E-09	5.235E-09	3.896E-09	3.004E-09	2.409E-09	1.989E-09	1.677E-09	1.439E-09
SW	1.939E-08	1.403E-08	9.141E-09	5.240E-09	3.686E-09	2.782E-09	2.204E-09	1.767E-09	1.458E-09	1.230E-09	1.055E-09
WSW	2.215E-08	1.376E-08	9.453E-09	5.607E-09	3.723E-09	2.708E-09	2.087E-09	1.672E-09	1.379E-09	1.163E-09	9.970E-10
W	2.055E-08	1.107E-08	7.747E-09	4.854E-09	3.468E-09	2.533E-09	1.951E-09	1.563E-09	1.289E-09	1.087E-09	9.322E-10
WNW	3.349E-08	1.883E-08	1.283E-08	7.802E-09	5.324E-09	3.949E-09	3.098E-09	2.509E-09	2.079E-09	1.756E-09	1.509E-09
NW	3.800E-08	2.084E-08	1.403E-08	8.356E-09	5.594E-09	4.099E-09	3.221E-09	2.604E-09	2.158E-09	1.828E-09	1.575E-09
NNW	6.721E-08	3.785E-08	2.453E-08	1.403E-08	9.472E-09	6.982E-09	5.484E-09	4.466E-09	3.763E-09	3.209E-09	2.770E-09
N	3.000E-08	1.857E-08	1.486E-08	1.118E-08	8.955E-09	7.178E-09	5.596E-09	4.521E-09	3.752E-09	3.183E-09	2.747E-09
NNE	2.367E-08	2.880E-08	1.851E-08	1.047E-08	7.010E-09	5.135E-09	3.980E-09	3.207E-09	2.659E-09	2.252E-09	1.940E-09
NE	1.344E-08	1.710E-08	1.102E-08	6.258E-09	4.201E-09	3.085E-09	2.415E-09	1.959E-09	1.634E-09	1.385E-09	1.194E-09
ENE	9.660E-09	1.278E-08	8.412E-09	4.899E-09	3.336E-09	2.473E-09	2.021E-09	1.684E-09	1.399E-09	1.187E-09	1.023E-09
E	9.452E-09	1.199E-08	7.840E-09	4.532E-09	3.075E-09	2.275E-09	1.778E-09	1.443E-09	1.238E-09	1.075E-09	9.290E-10
ESE	1.143E-08	1.283E-08	8.468E-09	4.943E-09	3.372E-09	2.503E-09	1.960E-09	1.593E-09	1.330E-09	1.134E-09	9.820E-10
SE	1.551E-08	9.339E-09	7.098E-09	4.982E-09	3.598E-09	2.796E-09	2.276E-09	1.912E-09	1.588E-09	1.347E-09	1.162E-09
SSE	2.154E-08	2.568E-08	1.648E-08	9.314E-09	6.230E-09	4.562E-09	3.536E-09	2.849E-09	2.362E-09	2.001E-09	1.725E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	6.577E-08	6.750E-08	4.913E-08	3.820E-08	4.027E-08	2.453E-08	9.809E-09	4.957E-09	3.105E-09	2.187E-09
SSW	2.958E-08	3.913E-08	3.425E-08	3.381E-08	2.811E-08	1.817E-08	7.674E-09	3.896E-09	2.419E-09	1.682E-09
SW	5.377E-08	8.788E-08	5.401E-08	3.187E-08	2.192E-08	1.305E-08	5.416E-09	2.792E-09	1.774E-09	1.233E-09
WSW	1.007E-07	1.213E-07	6.827E-08	3.857E-08	2.571E-08	1.371E-08	5.624E-09	2.730E-09	1.679E-09	1.165E-09
W	1.682E-07	1.383E-07	6.731E-08	3.755E-08	2.456E-08	1.170E-08	4.881E-09	2.549E-09	1.570E-09	1.090E-09
WNW	1.552E-07	1.891E-07	1.016E-07	6.007E-08	3.979E-08	1.942E-08	7.819E-09	3.975E-09	2.514E-09	1.760E-09
NW	1.691E-07	2.339E-07	1.266E-07	7.026E-08	4.546E-08	2.163E-08	8.390E-09	4.146E-09	2.611E-09	1.832E-09
NNW	1.609E-07	1.720E-07	1.512E-07	1.172E-07	7.993E-08	3.846E-08	1.434E-08	7.047E-09	4.489E-09	3.210E-09
N	1.616E-07	9.824E-08	6.632E-08	4.627E-08	3.418E-08	1.946E-08	1.101E-08	7.019E-09	4.535E-09	3.190E-09
NNE	8.251E-08	5.654E-08	4.017E-08	2.887E-08	2.341E-08	2.309E-08	1.072E-08	5.173E-09	3.219E-09	2.257E-09
NE	5.153E-08	3.373E-08	2.374E-08	1.678E-08	1.342E-08	1.358E-08	6.401E-09	3.114E-09	1.966E-09	1.388E-09
ENE	3.911E-08	2.545E-08	1.784E-08	1.253E-08	9.854E-09	1.014E-08	4.985E-09	2.523E-09	1.672E-09	1.189E-09
E	2.529E-08	2.326E-08	1.728E-08	1.222E-08	9.628E-09	9.580E-09	4.620E-09	2.290E-09	1.461E-09	1.069E-09
ESE	4.245E-08	3.154E-08	2.182E-08	1.524E-08	1.184E-08	1.058E-08	5.028E-09	2.518E-09	1.598E-09	1.136E-09
SE	4.157E-08	4.701E-08	3.469E-08	2.420E-08	1.776E-08	9.714E-09	4.837E-09	2.802E-09	1.892E-09	1.350E-09
SSE	6.173E-08	5.535E-08	3.928E-08	2.750E-08	2.171E-08	2.067E-08	9.537E-09	4.596E-09	2.860E-09	2.006E-09

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ERP ELEVATED STACK RELEASES - JAN-DEC 2004  
 8.000 DAY DECAY, DEPLETED  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE										
SECTOR	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	
S	1.452E-08	4.273E-08	6.775E-08	7.385E-08	7.076E-08	5.930E-08	4.840E-08	3.973E-08	3.310E-08	3.804E-08	4.164E-08	
SSW	2.218E-09	1.202E-08	2.896E-08	3.817E-08	4.157E-08	3.657E-08	3.068E-08	3.376E-08	3.494E-08	3.049E-08	2.698E-08	
SW	2.137E-08	2.333E-08	4.338E-08	7.601E-08	1.115E-07	7.370E-08	5.224E-08	3.915E-08	3.062E-08	2.475E-08	2.053E-08	
WSW	8.851E-08	8.420E-08	8.989E-08	1.145E-07	1.546E-07	9.584E-08	6.561E-08	4.810E-08	3.705E-08	2.961E-08	2.435E-08	
W	1.095E-07	1.014E-07	1.793E-07	1.876E-07	1.548E-07	9.438E-08	6.397E-08	4.659E-08	3.571E-08	2.844E-08	2.332E-08	
WNW	7.868E-08	6.779E-08	1.447E-07	2.030E-07	2.336E-07	1.414E-07	9.561E-08	7.317E-08	5.858E-08	4.639E-08	3.784E-08	
NW	1.086E-07	1.126E-07	1.476E-07	2.089E-07	3.102E-07	1.816E-07	1.202E-07	8.808E-08	6.800E-08	5.346E-08	4.335E-08	
NNW	1.676E-07	1.501E-07	1.602E-07	1.613E-07	1.789E-07	1.659E-07	1.512E-07	1.348E-07	1.209E-07	9.495E-08	7.694E-08	
N	2.855E-07	2.133E-07	1.656E-07	1.266E-07	9.745E-08	7.952E-08	6.539E-08	5.353E-08	4.468E-08	3.795E-08	3.273E-08	
NNE	1.465E-07	1.046E-07	8.328E-08	6.790E-08	5.720E-08	4.769E-08	3.953E-08	3.304E-08	2.799E-08	2.405E-08	2.094E-08	
NE	1.501E-07	7.477E-08	4.918E-08	3.996E-08	3.447E-08	2.847E-08	2.331E-08	1.928E-08	1.620E-08	1.383E-08	1.198E-08	
ENE	1.254E-07	5.888E-08	3.649E-08	2.995E-08	2.615E-08	2.150E-08	1.751E-08	1.442E-08	1.207E-08	1.028E-08	8.887E-09	
E	5.345E-08	2.671E-08	2.398E-08	2.486E-08	2.444E-08	2.071E-08	1.703E-08	1.407E-08	1.180E-08	1.004E-08	8.679E-09	
ESE	5.885E-08	4.761E-08	4.323E-08	3.782E-08	3.231E-08	2.639E-08	2.142E-08	1.760E-08	1.470E-08	1.249E-08	1.077E-08	
SE	2.000E-08	2.306E-08	4.160E-08	4.976E-08	4.977E-08	4.191E-08	3.419E-08	2.805E-08	2.334E-08	1.974E-08	1.695E-08	
SSE	3.884E-08	5.018E-08	6.420E-08	6.361E-08	5.735E-08	4.741E-08	3.862E-08	3.178E-08	2.656E-08	2.256E-08	1.946E-08	

ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)		DISTANCE IN MILES FROM THE SITE									
SECTOR	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	3.703E-08	2.452E-08	1.543E-08	8.296E-09	5.431E-09	3.878E-09	2.893E-09	2.254E-09	1.832E-09	1.524E-09	1.285E-09
SSW	2.495E-08	1.928E-08	1.214E-08	6.535E-09	4.360E-09	3.148E-09	2.367E-09	1.858E-09	1.505E-09	1.248E-09	1.054E-09
SW	1.862E-08	1.338E-08	8.484E-09	4.601E-09	3.040E-09	2.181E-09	1.681E-09	1.317E-09	1.065E-09	8.818E-10	7.443E-10
WSW	2.132E-08	1.304E-08	8.735E-09	4.963E-09	3.182E-09	2.251E-09	1.694E-09	1.330E-09	1.077E-09	8.937E-10	7.555E-10
W	1.957E-08	1.046E-08	7.258E-09	4.345E-09	2.958E-09	2.100E-09	1.580E-09	1.240E-09	1.004E-09	8.331E-10	7.043E-10
WNW	3.202E-08	1.758E-08	1.166E-08	6.694E-09	4.267E-09	3.011E-09	2.289E-09	1.811E-09	1.469E-09	1.217E-09	1.028E-09
NW	3.642E-08	1.944E-08	1.272E-08	7.160E-09	4.543E-09	3.185E-09	2.426E-09	1.913E-09	1.550E-09	1.286E-09	1.087E-09
NNW	6.524E-08	3.577E-08	2.247E-08	1.206E-08	7.549E-09	5.229E-09	3.904E-09	3.063E-09	2.511E-09	2.092E-09	1.768E-09
N	2.870E-08	1.761E-08	1.408E-08	1.063E-08	8.373E-09	6.456E-09	4.913E-09	3.885E-09	3.164E-09	2.638E-09	2.240E-09
NNE	2.283E-08	2.792E-08	1.741E-08	9.348E-09	5.954E-09	4.188E-09	3.135E-09	2.451E-09	1.978E-09	1.635E-09	1.377E-09
NE	1.290E-08	1.653E-08	1.034E-08	5.578E-09	3.571E-09	2.522E-09	1.916E-09	1.517E-09	1.239E-09	1.031E-09	8.736E-10
ENE	9.247E-09	1.241E-08	7.947E-09	4.366E-09	2.778E-09	1.948E-09	1.519E-09	1.222E-09	9.887E-10	8.187E-10	6.907E-10
E	9.043E-09	1.158E-08	7.354E-09	4.004E-09	2.535E-09	1.771E-09	1.317E-09	1.023E-09	8.427E-10	7.082E-10	5.975E-10
ESE	1.094E-08	1.240E-08	7.956E-09	4.380E-09	2.793E-09	1.961E-09	1.463E-09	1.139E-09	9.144E-10	7.520E-10	6.303E-10
SE	1.474E-08	8.756E-09	6.621E-09	4.647E-09	3.354E-09	2.613E-09	2.136E-09	1.796E-09	1.467E-09	1.227E-09	1.045E-09
SSE	2.066E-08	2.478E-08	1.543E-08	8.267E-09	5.258E-09	3.694E-09	2.764E-09	2.159E-09	1.742E-09	1.439E-09	1.212E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	6.490E-08	6.635E-08	4.784E-08	3.688E-08	3.887E-08	2.326E-08	8.607E-09	3.898E-09	2.276E-09	1.527E-09	
SSW	2.929E-08	3.859E-08	3.348E-08	3.291E-08	2.727E-08	1.737E-08	6.814E-09	3.159E-09	1.869E-09	1.252E-09	
SW	5.343E-08	8.680E-08	5.273E-08	3.082E-08	2.107E-08	1.237E-08	4.770E-09	2.210E-09	1.325E-09	8.851E-10	
WSW	9.957E-08	1.196E-07	6.666E-08	3.737E-08	2.479E-08	1.297E-08	5.010E-09	2.276E-09	1.338E-09	8.969E-10	
W	1.657E-07	1.353E-07	6.513E-08	3.605E-08	2.345E-08	1.106E-08	4.376E-09	2.121E-09	1.247E-09	8.361E-10	
WNW	1.535E-07	1.858E-07	9.885E-08	5.810E-08	3.822E-08	1.816E-08	6.719E-09	3.057E-09	1.817E-09	1.222E-09	
NW	1.671E-07	2.306E-07	1.237E-07	6.820E-08	4.378E-08	2.023E-08	7.233E-09	3.243E-09	1.921E-09	1.291E-09	
NNW	1.584E-07	1.692E-07	1.486E-07	1.150E-07	7.794E-08	3.641E-08	1.237E-08	5.318E-09	3.093E-09	2.096E-09	
N	1.589E-07	9.595E-08	6.441E-08	4.464E-08	3.278E-08	1.850E-08	1.039E-08	6.350E-09	3.904E-09	2.646E-09	
NNE	8.118E-08	5.535E-08	3.911E-08	2.793E-08	2.256E-08	2.212E-08	9.632E-09	4.238E-09	2.466E-09	1.641E-09	
NE	5.077E-08	3.302E-08	2.307E-08	1.618E-08	1.287E-08	1.297E-08	5.744E-09	2.559E-09	1.525E-09	1.034E-09	
ENE	3.856E-08	2.493E-08	1.734E-08	1.206E-08	9.433E-09	9.725E-09	4.456E-09	1.998E-09	1.218E-09	8.217E-10	
E	2.498E-08	2.287E-08	1.683E-08	1.178E-08	9.218E-09	9.137E-09	4.096E-09	1.793E-09	1.038E-09	7.070E-10	
ESE	4.180E-08	3.090E-08	2.122E-08	1.468E-08	1.134E-08	1.010E-08	4.469E-09	1.984E-09	1.146E-09	7.550E-10	
SE	4.111E-08	4.627E-08	3.379E-08	2.332E-08	1.696E-08	9.138E-09	4.511E-09	2.620E-09	1.768E-09	1.231E-09	
SSE	6.082E-08	5.432E-08	3.823E-08	2.653E-08	2.082E-08	1.970E-08	8.521E-09	3.739E-09	2.173E-09	1.445E-09	

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ERP ELEVATED STACK RELEASES - JAN-DEC 2004  
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) AT FIXED POINTS BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	DISTANCES IN MILES										
	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	4.358E-09	3.831E-09	3.679E-09	2.784E-09	1.459E-09	9.221E-10	6.330E-10	4.583E-10	3.446E-10	2.809E-10	2.528E-10
SSW	1.156E-09	1.186E-09	1.373E-09	1.158E-09	6.510E-10	4.220E-10	2.934E-10	2.138E-10	2.007E-10	1.518E-10	1.188E-10
SW	1.454E-09	1.287E-09	1.247E-09	9.498E-10	8.776E-10	4.747E-10	2.934E-10	1.989E-10	1.437E-10	1.086E-10	8.503E-11
WSW	4.332E-09	3.338E-09	2.563E-09	2.241E-09	1.112E-09	5.924E-10	3.637E-10	2.457E-10	1.771E-10	1.339E-10	1.048E-10
W	3.126E-09	6.048E-09	4.455E-09	2.613E-09	1.164E-09	6.223E-10	3.824E-10	2.585E-10	1.866E-10	1.412E-10	1.109E-10
WNW	3.271E-09	2.722E-09	4.932E-09	3.226E-09	1.858E-09	9.342E-10	5.547E-10	3.693E-10	2.720E-10	2.091E-10	1.694E-10
NW	6.727E-09	5.197E-09	4.011E-09	4.096E-09	2.271E-09	1.132E-09	6.731E-10	4.502E-10	3.285E-10	2.569E-10	2.121E-10
NNW	1.092E-08	8.404E-09	6.430E-09	4.030E-09	2.758E-09	1.470E-09	9.063E-10	7.196E-10	5.311E-10	4.206E-10	3.521E-10
N	1.615E-08	1.239E-08	9.425E-09	5.872E-09	2.609E-09	1.536E-09	1.015E-09	7.204E-10	5.362E-10	4.132E-10	3.271E-10
NNE	6.795E-09	5.271E-09	4.100E-09	2.612E-09	1.187E-09	7.063E-10	4.697E-10	3.344E-10	2.493E-10	1.922E-10	1.522E-10
NE	3.312E-09	2.627E-09	2.134E-09	1.417E-09	6.688E-10	4.049E-10	2.718E-10	1.945E-10	1.454E-10	1.122E-10	8.885E-11
ENE	1.896E-09	1.568E-09	1.371E-09	9.688E-10	4.823E-10	2.986E-10	2.029E-10	1.461E-10	1.095E-10	8.468E-11	6.705E-11
E	1.387E-09	1.221E-09	1.176E-09	8.909E-10	4.675E-10	2.956E-10	2.029E-10	1.469E-10	1.105E-10	8.551E-11	6.771E-11
ESE	3.000E-09	2.446E-09	2.086E-09	1.445E-09	7.080E-10	4.354E-10	2.948E-10	2.119E-10	1.587E-10	1.226E-10	9.710E-11
SE	2.939E-09	2.758E-09	2.887E-09	2.306E-09	1.254E-09	8.031E-10	5.550E-10	4.032E-10	3.037E-10	2.352E-10	1.863E-10
SSE	6.260E-09	5.102E-09	4.351E-09	3.013E-09	1.475E-09	9.071E-10	6.140E-10	4.413E-10	3.306E-10	2.555E-10	2.023E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	2.033E-10	1.452E-10	9.965E-11	5.809E-11	3.693E-11	2.585E-11	1.851E-11	1.388E-11	1.096E-11	8.739E-12	7.134E-12
SSW	9.594E-11	7.630E-11	5.362E-11	3.182E-11	1.955E-11	1.371E-11	9.826E-12	7.381E-12	5.766E-12	4.606E-12	3.759E-12
SW	6.871E-11	5.474E-11	3.853E-11	2.294E-11	1.464E-11	9.674E-12	7.070E-12	5.309E-12	4.128E-12	3.297E-12	2.691E-12
WSW	8.500E-11	5.928E-11	4.076E-11	2.600E-11	1.574E-11	1.056E-11	7.584E-12	5.694E-12	4.428E-12	3.537E-12	2.887E-12
W	8.954E-11	4.117E-11	4.093E-11	2.452E-11	1.647E-11	1.106E-11	7.922E-12	5.949E-12	4.625E-12	3.695E-12	3.016E-12
WNW	1.447E-10	8.311E-11	5.795E-11	3.429E-11	2.257E-11	1.520E-11	1.067E-11	8.020E-12	6.249E-12	4.992E-12	4.075E-12
NW	1.833E-10	1.108E-10	7.933E-11	4.891E-11	2.997E-11	2.014E-11	1.432E-11	1.076E-11	8.368E-12	6.685E-12	5.456E-12
NNW	3.086E-10	1.948E-10	1.421E-10	8.743E-11	5.655E-11	3.804E-11	2.560E-11	1.868E-11	1.448E-11	1.157E-11	9.452E-12
N	2.645E-10	1.267E-10	7.817E-11	4.234E-11	7.936E-11	4.950E-11	3.549E-11	2.668E-11	2.076E-11	1.660E-11	1.356E-11
NNE	1.230E-10	1.673E-10	1.040E-10	5.433E-11	3.331E-11	2.237E-11	1.603E-11	1.202E-11	9.340E-12	7.461E-12	6.090E-12
NE	7.179E-11	1.017E-10	6.262E-11	3.241E-11	1.987E-11	1.339E-11	9.710E-12	7.290E-12	5.680E-12	4.511E-12	3.682E-12
ENE	5.413E-11	5.885E-11	4.267E-11	2.603E-11	1.671E-11	1.117E-11	7.918E-12	5.578E-12	4.358E-12	3.502E-12	2.873E-12
E	5.463E-11	6.294E-11	4.599E-11	2.819E-11	1.807E-11	1.204E-11	8.503E-12	6.270E-12	4.802E-12	3.711E-12	3.034E-12
ESE	7.841E-11	8.088E-11	5.810E-11	3.522E-11	2.261E-11	1.514E-11	1.076E-11	7.989E-12	6.149E-12	4.882E-12	3.964E-12
SE	1.502E-10	7.137E-11	4.366E-11	2.317E-11	1.429E-11	9.916E-12	7.459E-12	1.334E-11	1.028E-11	8.169E-12	6.646E-12
SSE	1.633E-10	1.945E-10	1.196E-10	6.160E-11	3.750E-11	2.511E-11	1.796E-11	1.345E-11	1.044E-11	8.322E-12	6.784E-12

\*\*\*\*\* RELATIVE DEPOSITION PER UNIT AREA (M\*\*-2) BY DOWNWIND SECTORS \*\*\*\*\*

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES										
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	3.315E-09	1.515E-09	6.402E-10	3.528E-10	2.428E-10	1.379E-10	5.792E-11	2.587E-11	1.409E-11	8.804E-12	
SSW	1.236E-09	6.618E-10	2.958E-10	1.858E-10	1.201E-10	7.058E-11	3.121E-11	1.371E-11	7.464E-12	4.636E-12	
SW	1.124E-09	7.146E-10	3.039E-10	1.461E-10	8.598E-11	5.064E-11	2.271E-11	9.956E-12	5.362E-12	3.319E-12	
WSW	2.592E-09	1.132E-09	3.775E-10	1.802E-10	1.061E-10	5.676E-11	2.472E-11	1.075E-11	5.752E-12	3.560E-12	
W	3.990E-09	1.245E-09	3.968E-10	1.899E-10	1.120E-10	5.181E-11	2.459E-11	1.125E-11	6.009E-12	3.719E-12	
WNW	3.683E-09	1.751E-09	5.817E-10	2.758E-10	1.720E-10	8.561E-11	3.434E-11	1.535E-11	8.104E-12	5.025E-12	
NW	4.312E-09	2.171E-09	7.064E-10	3.360E-10	2.147E-10	1.129E-10	4.725E-11	2.043E-11	1.086E-11	6.729E-12	
NNW	5.802E-09	2.468E-09	9.819E-10	5.428E-10	3.563E-10	1.967E-10	8.587E-11	3.800E-11	1.906E-11	1.165E-11	
N	8.505E-09	2.857E-09	1.036E-09	5.420E-10	3.294E-10	1.358E-10	6.675E-11	5.186E-11	2.694E-11	1.670E-11	
NNE	3.699E-09	1.290E-09	4.786E-10	2.519E-10	1.532E-10	1.293E-10	5.603E-11	2.275E-11	1.214E-11	7.510E-12	
NE	1.925E-09	7.177E-10	2.764E-10	1.468E-10	8.946E-11	7.767E-11	3.355E-11	1.364E-11	7.368E-12	4.550E-12	
ENE	1.236E-09	5.088E-10	2.057E-10	1.105E-10	6.749E-11	5.061E-11	2.558E-11	1.134E-11	5.782E-12	3.523E-12	
E	1.059E-09	4.852E-10	2.052E-10	1.114E-10	6.814E-11	5.356E-11	2.765E-11	1.223E-11	6.349E-12	3.783E-12	
ESE	1.881E-09	7.507E-10	2.991E-10	1.602E-10	9.775E-11	7.021E-11	3.470E-11	1.538E-11	8.080E-12	4.917E-12	
SE	2.600E-09	1.287E-09	5.604E-10	3.061E-10	1.874E-10	7.657E-11	2.378E-11	1.010E-11	1.049E-11	8.231E-12	
SSE	3.923E-09	1.564E-09	6.231E-10	3.336E-10	2.036E-10	1.543E-10	6.378E-11	2.555E-11	1.359E-11	8.379E-12	

ERP ELEVATED STACK RELEASES - JAN-DEC 2004  
CORRECTED USING STANDARD OPEN TERRAIN FACTORS  
SPECIFIC POINTS OF INTEREST

RELEASE TYPE OF DIRECTION DIST. X/Q X/Q X/Q D/Q  
ID LOCATION FROM SITE (MI) (SEC/M3) (SEC/M3) (SEC/M3) (PER SQ.METER)  
NO DECAY

2.260 DAY DECAY

8.000 DAY DECAY

		UNDEPLETED		UNDEPLETED		DEPLETED	
A	Site Boundary S	.80	7.1E-08	7.1E-08	6.9E-08	3.5E-09	
A	Site Boundary SSW	.82	3.3E-08	3.3E-08	3.2E-08	1.3E-09	
A	Site Boundary SW	.97	7.3E-08	7.3E-08	7.3E-08	9.9E-10	
A	Site Boundary WSW	.93	1.1E-07	1.1E-07	1.0E-07	2.1E-09	
A	Site Boundary W	.91	1.9E-07	1.9E-07	1.9E-07	3.1E-09	
A	Site Boundary WNW	.94	1.9E-07	1.9E-07	1.9E-07	3.6E-09	
A	Site Boundary NW	.81	1.6E-07	1.6E-07	1.6E-07	3.6E-09	
A	Site Boundary NNW	.69	1.5E-07	1.5E-07	1.5E-07	6.8E-09	
A	Site Boundary N	.67	1.7E-07	1.7E-07	1.7E-07	1.0E-08	
A	Site Boundary NNE	.60	8.8E-08	8.8E-08	8.7E-08	4.7E-09	
A	Site Boundary NE	.62	5.3E-08	5.2E-08	5.2E-08	2.3E-09	
A	Site Boundary ENE	.59	4.2E-08	4.2E-08	4.1E-08	1.5E-09	
A	Site Boundary E	.53	2.3E-08	2.3E-08	2.3E-08	1.2E-09	
A	Site Boundary ESE	.54	4.4E-08	4.4E-08	4.3E-08	2.4E-09	
A	Site Boundary SE	.65	3.3E-08	3.3E-08	3.3E-08	2.8E-09	
A	Site Boundary SSE	.81	6.5E-08	6.5E-08	6.4E-08	4.0E-09	
A	Nearest Res SW	1.30	1.1E-07	1.0E-07	1.0E-07	1.2E-09	
A	Nearest Res WSW	1.30	1.5E-07	1.5E-07	1.4E-07	1.5E-09	
A	Nearest Res W	1.00	1.9E-07	1.9E-07	1.9E-07	2.6E-09	
A	Nearest Res WNW	1.70	1.9E-07	1.9E-07	1.9E-07	1.4E-09	
A	Nearest Res NW	.90	1.8E-07	1.8E-07	1.8E-07	4.7E-09	
A	Nearest Res NNW	1.90	1.7E-07	1.7E-07	1.7E-07	1.6E-09	
A	Nearest Res N	3.00	5.5E-08	5.5E-08	5.3E-08	7.2E-10	
A	Nearest Res ENE	1.70	2.5E-08	2.5E-08	2.4E-08	3.9E-10	
A	Nearest Res E	2.00	2.1E-08	2.1E-08	2.1E-08	3.0E-10	
A	Nearest Res ESE	2.30	2.4E-08	2.4E-08	2.3E-08	3.4E-10	
A	Nearest Cow NNW	3.50	1.2E-07	1.2E-07	1.2E-07	5.3E-10	
A	Nearest Garde SW	1.30	1.1E-07	1.0E-07	1.0E-07	1.2E-09	
A	Nearest Garde WSW	1.90	1.1E-07	1.1E-07	1.0E-07	6.6E-10	
A	Nearest Garde WNW	2.40	1.1E-07	1.1E-07	1.0E-07	6.1E-10	
A	Nearest Garde NW	2.90	9.6E-08	9.6E-08	9.3E-08	4.8E-10	
A	Nearest Garde NNW	1.90	1.7E-07	1.7E-07	1.7E-07	1.6E-09	
A	Nearest Garde ENE	2.80	1.6E-08	1.6E-08	1.6E-08	1.7E-10	
A	Nearest Garde E	2.00	2.1E-08	2.1E-08	2.1E-08	3.0E-10	
A	Nearest Garde ESE	2.30	2.4E-08	2.4E-08	2.3E-08	3.4E-10	
A	Nearest Garde SE	1.20	5.2E-08	5.2E-08	5.2E-08	1.8E-09	
A	MAXIMUM CHI/Q S	1.00	7.5E-08	7.5E-08	7.4E-08	2.8E-09	
A	MAXIMUM CHI/Q SSW	1.50	4.2E-08	4.2E-08	4.2E-08	6.5E-10	
A	MAXIMUM CHI/Q SW	1.50	1.1E-07	1.1E-07	1.1E-07	8.8E-10	
A	MAXIMUM CHI/Q WSW	1.50	1.6E-07	1.6E-07	1.5E-07	1.1E-09	
A	MAXIMUM CHI/Q W	1.00	1.9E-07	1.9E-07	1.9E-07	2.6E-09	
A	MAXIMUM CHI/Q WNW	1.50	2.4E-07	2.4E-07	2.3E-07	1.9E-09	
A	MAXIMUM CHI/Q NW	1.50	3.1E-07	3.1E-07	3.1E-07	2.3E-09	
A	MAXIMUM CHI/Q NNW	1.50	1.8E-07	1.8E-07	1.8E-07	2.8E-09	
A	MAXIMUM CHI/Q N	.25	2.3E-07	2.3E-07	2.3E-07	1.6E-08	
A	MAXIMUM CHI/Q NNE	.25	1.2E-07	1.2E-07	1.2E-07	6.8E-09	
A	MAXIMUM CHI/Q NE	.25	1.2E-07	1.2E-07	1.2E-07	3.3E-09	
A	MAXIMUM CHI/Q ENE	.25	9.7E-08	9.6E-08	9.6E-08	1.9E-09	
A	MAXIMUM CHI/Q E	.25	4.1E-08	4.1E-08	4.1E-08	1.4E-09	
A	MAXIMUM CHI/Q ESE	.25	4.6E-08	4.6E-08	4.6E-08	3.0E-09	
A	MAXIMUM CHI/Q SE	1.50	5.1E-08	5.0E-08	5.0E-08	1.3E-09	
A	MAXIMUM CHI/Q SSE	.75	6.5E-08	6.5E-08	6.4E-08	4.4E-09	

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## ATMOSPHERIC DIFFUSION MODEL

Onsite meteorological data from January 1 through December 31, 2004 were used to determine long-term (routine) diffusion estimates for evaluating normal atmospheric releases from Cooper Nuclear Station. Atmospheric dispersion parameters (X/Q values) were determined for the site boundary distances from each release point, the standard population distances, and special locations for nearest residence, cow, and garden using the methodology presented in U.S. NRC Regulatory Guide 1.111 (Rev.1) and the computer code XOQDOQ (NUREG/CR2919). Two release modes were analyzed. Releases from the 99-meter free-standing stack were considered 100 percent elevated, while releases from the reactor building, turbine-generator building, radwaste building and augmented radwaste building vents were considered as a 100 percent ground level release (one combined source term was assumed to apply for these vents).

Winds were obtained from measurements at the 10-meter level (for ground-level releases) and the 100-meter level (for elevated releases), and the stability class was based on the vertical temperature gradient between 60 meters and 10 meters (for ground releases) and 100 meters and 10 meters (for elevated releases). In accordance with Regulatory Guide 1.111, calm periods were distributed directionally in proportion to the directional distribution within a stability class of the lowest wind speed group. For the calculations, calm periods were assigned a speed of one-half the threshold wind speed of the wind vane or anemometer, whichever is higher.

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 at the release point, was modified to account for various modes of effluent releases. In the case of an elevated release, plume rise due to momentum effects was incorporated into the calculation. For ground-level releases, building wake effects were considered.

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

$$(X/Q)_i = 2.032 \sum_{jk} \frac{f_{ijk}}{xu_{jk} \Sigma_{zk}} \exp \left[ \frac{-1/2 h_e^2}{\sigma_{zk}^2} \right] \quad (\text{Eq. 1})$$

and

$$\Sigma_{zk} = \left( \sigma_{zk}^2 + 0.5 D_z^2 / \pi \right)^{1/2} \leq \sqrt{3} \sigma_{zk} \quad (\text{Eq. 2})$$

where

I	=	index identifying direction sector;
j	=	index identifying wind speed class;
k	=	index identifying atmospheric stability class;
$\frac{X}{Q}$	=	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;
$\Sigma_z$	=	vertical plume spread with volumetric building wake correction for a release within the building wake cavity;
$\sigma_z$	=	vertical plume spread without volumetric building wake correction;
$D_z$	=	maximum adjacent building height either upwind or downwind of the release point (44.5 meters for ground-level releases); and
$h_e$	=	effective plume height;

The term  $\Sigma_{zk}$  given in Equations 1 and 2 is used for ground-level release ( $h = 0$ ) within the building wake cavity. For an elevated release, no volumetric building wake correction needs to be considered, i.e.,  $\Sigma_{zk} = \sigma_{zk}$ . For all building wake determinations, the reactor building was considered to be the dominating structure in the modification of air flows within the building complex.

Since the model does not directly consider the effects of spatial and temporal variation in airflow due to terrain, appropriate adjustments were made to the calculated  $X/Q$  values, using the default values of Regulatory Guide 1.111, Rev. 0.

**APPENDIX C**  
**DOSE CALCULATIONS**

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## **LIQUID EFFLUENT DOSE CALCULATIONS**

Doses to the maximum individual and 0 to 50 - mile population resulting from the release of radioactive material in liquid effluents from Cooper Nuclear Station were calculated using the LADTAP II computer program. The LADTAP II program implements the radiological dose models of Regulatory Guide 1.109 for determining the radiation exposure to man from three principal exposure pathways in the aquatic environment -- potable water, aquatic foods, and recreational water use. Doses to both the maximum individual and 0 to 50 mile population are calculated as a function of age group and pathway for significant body organs, and are presented in Tables 1 - 6.

Assumptions and data sources used for input to the LADTAP II code are described in a separate section of this appendix (see page C51).

TABLE 1. Doses to Maximum Individual at the Site Boundary, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2004 Cooper Nuclear Station

Period and Pathway	Dose to Individual, mrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>1st Quarter</u>								
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>2nd Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals for 1st & 2nd Quarters	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

Calculated doses are based on the following periods of exposures: Fishing: April - November; Drinking water and shoreline: January - December



TABLE 2. Doses to Maximum Individual at the Site Boundary, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, July-December 2004, Cooper Nuclear Station

Period and Pathway	Dose to Individual, mrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>3rd Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>
<u>4th Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>
<b>Totals for 3rd &amp; 4th Quarters</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>

Calculated doses are based on the following periods of exposures:  
 Fishing: April - November; Drinking water and shoreline: January - December

TABLE 3. Summary of Doses to Maximum Individual at the Site Boundary, Resulting from Exposure to Radioactivity Discharged in Liquid Effluents, January-December 2004, Cooper Nuclear Station

Period and Pathway	Dose to Individual, mrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>1st Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>2nd Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>3rd Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>4th Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals for 2004</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>

TABLE 4. Doses to Population Within a 50-Mile Radius, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2004, Cooper Nuclear Station

Period and Pathway	Dose to Population, manrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>1st Quarter</u>								
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>2nd Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Swimming	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Boating	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Totals for 1st & 2nd Quarters	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

Calculated doses are based on the following periods of exposures: Fishing and Boating: April - November; Drinking water and shoreline: January - December; Swimming: June - September  
 Exposure from drinking water is calculated for the city of St. Joseph, Missouri, nearest public water intake from the Missouri River, 84 miles downstream

TABLE 5. Doses to Population Within a 50-Mile Radius, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, July-December 2004, Cooper Nuclear Station

Period and Pathway	Dose to Population, manrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>3rd Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Swimming	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Boating	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>
<u>4th Quarter</u>								
Eating Fish		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Drinking Water		0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
Shoreline	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>
<b>Totals for 3rd &amp; 4th Quarters</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>	<b>0.00 E+00</b>

Calculated doses are based on the following periods of exposures: Fishing and Boating: April - November; Drinking water and shoreline: January - December; Swimming: June - September  
 Exposure from drinking water is calculated for the city of St. Joseph, Missouri, nearest public water intake from the Missouri River, 84 miles downstream

TABLE 6. Summary of Doses to Population Within a 50-Mile Radius, Resulting from Exposure to Radioactivity Discharged in Liquid Effluents, January-December 2004, Cooper Nuclear Station

Period and Pathway	Dose to Population, manrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
<u>1st Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>2nd Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>3rd Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<u>4th Quarter</u>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00
<b>Totals for 2004</b>	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

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## **GASEOUS EFFLUENT DOSE CALCULATIONS**

Doses to the maximum individual and 0 to 50 mile population resulting from the release of radioactive material in gaseous effluents from the Cooper Nuclear Station were calculated using the GASPARG computer code. Four sites were selected for individual dose calculations: the site boundary, the nearest residence, the nearest garden and the nearest cow. GASPARG implements the radiological dose models of Regulatory Guide 1.109 for determining the radiation exposure to man from four principal atmospheric exposure pathways: plume, ground, inhalation, and ingestion. Doses to the maximum individual and the population are calculated as a function of age group and pathway for significant body organs.

Tables 1 through 7 present maximum individual doses. Population doses are given in Tables 8 through 14.

Assumptions and data used for input to the GASPARG code are described in a separate section of this appendix (see page C51).

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 3.14E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 2.92E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.96E-04	1.99E-04	5.15E-04
GROUND	3.11E-06	3.11E-06	3.11E-06	3.11E-06	3.11E-06	3.11E-06	3.11E-06	3.65E-06
VEGET								
ADULT	1.48E-05	2.45E-05	1.33E-04	1.99E-05	3.39E-05	6.42E-03	2.06E-08	0.00E+00
TEEN	2.17E-05	2.95E-05	2.19E-04	3.00E-05	5.13E-05	8.65E-03	3.85E-08	0.00E+00
CHILD	4.22E-05	2.33E-05	5.30E-04	5.08E-05	8.27E-05	1.66E-02	5.86E-08	0.00E+00
MEAT								
ADULT	3.45E-07	3.39E-07	1.55E-06	5.42E-07	9.09E-07	1.73E-04	1.67E-09	0.00E+00
TEEN	2.63E-07	2.10E-07	1.30E-06	4.41E-07	7.42E-07	1.25E-04	1.58E-09	0.00E+00
CHILD	3.80E-07	1.28E-07	2.44E-06	5.87E-07	9.43E-07	1.89E-04	1.86E-09	0.00E+00
COW MILK								
ADULT	8.69E-06	5.08E-06	1.61E-05	1.51E-05	2.57E-05	4.82E-03	1.41E-08	0.00E+00
TEEN	1.45E-05	6.86E-06	2.92E-05	2.67E-05	4.58E-05	7.63E-03	2.91E-08	0.00E+00
CHILD	2.68E-05	5.49E-06	7.13E-05	4.66E-05	7.61E-05	1.51E-02	4.48E-08	0.00E+00
INFANT	5.07E-05	5.44E-06	1.44E-04	1.14E-04	1.32E-04	3.67E-02	8.10E-08	0.00E+00
GOATMILK								
ADULT	1.07E-05	6.86E-06	2.44E-05	1.83E-05	3.09E-05	5.79E-03	4.23E-08	0.00E+00
TEEN	1.77E-05	9.28E-06	4.45E-05	3.25E-05	5.50E-05	9.16E-03	8.74E-08	0.00E+00
CHILD	3.29E-05	7.43E-06	1.09E-04	5.66E-05	9.15E-05	1.81E-02	1.34E-07	0.00E+00
INFANT	6.21E-05	7.38E-06	2.16E-04	1.38E-04	1.59E-04	4.41E-02	2.43E-07	0.00E+00
INHAL								
ADULT	9.53E-07	3.21E-06	1.85E-06	2.02E-06	3.47E-06	5.17E-04	1.03E-05	0.00E+00
TEEN	1.25E-06	1.49E-05	2.61E-06	2.78E-06	4.79E-06	6.50E-04	1.76E-05	0.00E+00
CHILD	1.37E-06	1.21E-04	3.56E-06	2.73E-06	4.50E-06	7.55E-04	1.58E-05	0.00E+00
INFANT	9.89E-07	1.06E-04	2.69E-06	2.55E-06	2.97E-06	6.92E-04	1.59E-05	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 3.24E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 3.09E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.10E-04	5.37E-04
GROUND	3.71E-06	3.71E-06	3.71E-06	3.71E-06	3.71E-06	3.71E-06	3.71E-06	4.35E-06
VEGET								
ADULT	1.67E-05	2.78E-05	1.52E-04	2.25E-05	3.83E-05	7.25E-03	2.93E-08	0.00E+00
TEEN	2.45E-05	3.36E-05	2.49E-04	3.40E-05	5.80E-05	9.77E-03	5.48E-08	0.00E+00
CHILD	4.78E-05	2.65E-05	6.03E-04	5.75E-05	9.34E-05	1.87E-02	8.34E-08	0.00E+00
MEAT								
ADULT	3.93E-07	3.89E-07	1.78E-06	6.16E-07	1.03E-06	1.95E-04	2.38E-09	0.00E+00
TEEN	2.98E-07	2.41E-07	1.48E-06	5.01E-07	8.39E-07	1.41E-04	2.25E-09	0.00E+00
CHILD	4.30E-07	1.47E-07	2.78E-06	6.67E-07	1.07E-06	2.13E-04	2.65E-09	0.00E+00
COW MILK								
ADULT	9.84E-06	5.75E-06	1.82E-05	1.70E-05	2.90E-05	5.45E-03	2.01E-08	0.00E+00
TEEN	1.63E-05	7.76E-06	3.32E-05	3.03E-05	5.17E-05	8.62E-03	4.15E-08	0.00E+00
CHILD	3.03E-05	6.21E-06	8.08E-05	5.28E-05	8.60E-05	1.71E-02	6.38E-08	0.00E+00
INFANT	5.73E-05	6.16E-06	1.63E-04	1.29E-04	1.50E-04	4.15E-02	1.15E-07	0.00E+00
GOATMILK								
ADULT	1.22E-05	7.76E-06	2.78E-05	2.08E-05	3.49E-05	6.53E-03	6.02E-08	0.00E+00
TEEN	2.01E-05	1.05E-05	5.06E-05	3.69E-05	6.22E-05	1.03E-02	1.24E-07	0.00E+00
CHILD	3.72E-05	8.41E-06	1.24E-04	6.43E-05	1.03E-04	2.05E-02	1.91E-07	0.00E+00
INFANT	7.02E-05	8.35E-06	2.45E-04	1.57E-04	1.80E-04	4.98E-02	3.46E-07	0.00E+00
INHAL								
ADULT	9.54E-07	3.21E-06	1.85E-06	2.02E-06	3.47E-06	5.17E-04	1.03E-05	0.00E+00
TEEN	1.25E-06	1.49E-05	2.61E-06	2.78E-06	4.79E-06	6.50E-04	1.77E-05	0.00E+00
CHILD	1.37E-06	1.21E-04	3.56E-06	2.74E-06	4.50E-06	7.55E-04	1.58E-05	0.00E+00
INFANT	9.89E-07	1.07E-04	2.69E-06	2.55E-06	2.97E-06	6.92E-04	1.59E-05	0.00E+00



TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.28E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 3.02E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.05E-04	4.39E-04
GROUND	1.37E-06	1.37E-06	1.37E-06	1.37E-06	1.37E-06	1.37E-06	1.37E-06	1.61E-06
VEGET								
ADULT	5.61E-06	9.40E-06	5.15E-05	7.52E-06	1.27E-05	2.41E-03	1.43E-08	0.00E+00
TEEN	8.20E-06	1.13E-05	8.42E-05	1.14E-05	1.93E-05	3.24E-03	2.68E-08	0.00E+00
CHILD	1.60E-05	8.93E-06	2.04E-04	1.92E-05	3.10E-05	6.21E-03	4.08E-08	0.00E+00
MEAT								
ADULT	1.33E-07	1.34E-07	6.06E-07	2.08E-07	3.42E-07	6.47E-05	1.16E-09	0.00E+00
TEEN	1.00E-07	8.29E-08	5.04E-07	1.69E-07	2.79E-07	4.69E-05	1.10E-09	0.00E+00
CHILD	1.44E-07	5.04E-08	9.42E-07	2.25E-07	3.55E-07	7.08E-05	1.30E-09	0.00E+00
COW MILK								
ADULT	3.29E-06	1.92E-06	6.12E-06	5.69E-06	9.64E-06	1.81E-03	9.83E-09	0.00E+00
TEEN	5.45E-06	2.59E-06	1.11E-05	1.01E-05	1.72E-05	2.86E-03	2.03E-08	0.00E+00
CHILD	1.01E-05	2.07E-06	2.71E-05	1.76E-05	2.86E-05	5.66E-03	3.12E-08	0.00E+00
INFANT	1.90E-05	2.06E-06	5.43E-05	4.29E-05	4.97E-05	1.38E-02	5.65E-08	0.00E+00
GOATMILK								
ADULT	4.10E-06	2.59E-06	9.38E-06	6.98E-06	1.16E-05	2.17E-03	2.95E-08	0.00E+00
TEEN	6.73E-06	3.50E-06	1.71E-05	1.24E-05	2.07E-05	3.43E-03	6.09E-08	0.00E+00
CHILD	1.24E-05	2.80E-06	4.16E-05	2.16E-05	3.44E-05	6.80E-03	9.36E-08	0.00E+00
INFANT	2.34E-05	2.79E-06	8.21E-05	5.25E-05	5.99E-05	1.65E-02	1.69E-07	0.00E+00
INHAL								
ADULT	3.40E-07	1.21E-06	6.61E-07	7.18E-07	1.22E-06	1.81E-04	3.75E-06	0.00E+00
TEEN	4.47E-07	5.49E-06	9.33E-07	9.89E-07	1.69E-06	2.27E-04	6.45E-06	0.00E+00
CHILD	4.91E-07	4.41E-05	1.27E-06	9.74E-07	1.58E-06	2.64E-04	5.76E-06	0.00E+00
INFANT	3.54E-07	3.88E-05	9.58E-07	9.07E-07	1.05E-06	2.42E-04	5.81E-06	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 1.61E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 2.62E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.76E-04	1.76E-04	1.76E-04	1.76E-04	1.76E-04	1.76E-04	1.77E-04	3.45E-04
GROUND	1.11E-07	1.11E-07	1.11E-07	1.11E-07	1.11E-07	1.11E-07	1.11E-07	1.29E-07
VEGET								
ADULT	3.29E-07	5.69E-07	3.17E-06	4.35E-07	7.23E-07	1.36E-04	1.87E-09	0.00E+00
TEEN	4.77E-07	6.86E-07	5.12E-06	6.57E-07	1.10E-06	1.83E-04	3.50E-09	0.00E+00
CHILD	9.24E-07	5.40E-07	1.23E-05	1.11E-06	1.76E-06	3.52E-04	5.33E-09	0.00E+00
MEAT								
ADULT	8.11E-09	8.67E-09	3.80E-08	1.25E-08	1.96E-08	3.66E-06	1.52E-10	0.00E+00
TEEN	5.94E-09	5.37E-09	3.13E-08	1.02E-08	1.60E-08	2.65E-06	1.44E-10	0.00E+00
CHILD	8.36E-09	3.27E-09	5.80E-08	1.35E-08	2.03E-08	4.00E-06	1.69E-10	0.00E+00
COW MILK								
ADULT	1.91E-07	1.11E-07	3.62E-07	3.29E-07	5.48E-07	1.02E-04	1.28E-09	0.00E+00
TEEN	3.13E-07	1.49E-07	6.55E-07	5.84E-07	9.78E-07	1.62E-04	2.65E-09	0.00E+00
CHILD	5.74E-07	1.20E-07	1.59E-06	1.02E-06	1.63E-06	3.21E-04	4.07E-09	0.00E+00
INFANT	1.08E-06	1.19E-07	3.16E-06	2.47E-06	2.83E-06	7.80E-04	7.37E-09	0.00E+00
GOATMILK								
ADULT	2.45E-07	1.49E-07	5.67E-07	4.15E-07	6.65E-07	1.23E-04	3.84E-09	0.00E+00
TEEN	3.94E-07	2.01E-07	1.03E-06	7.37E-07	1.19E-06	1.94E-04	7.94E-09	0.00E+00
CHILD	7.13E-07	1.61E-07	2.49E-06	1.28E-06	1.97E-06	3.85E-04	1.22E-08	0.00E+00
INFANT	1.33E-06	1.60E-07	4.84E-06	3.09E-06	3.43E-06	9.35E-04	2.21E-08	0.00E+00
INHAL								
ADULT	4.31E-08	2.02E-07	8.07E-08	9.02E-08	1.40E-07	1.88E-05	4.64E-07	0.00E+00
TEEN	5.70E-08	7.24E-07	1.13E-07	1.24E-07	1.93E-07	2.36E-05	7.94E-07	0.00E+00
CHILD	6.42E-08	5.24E-06	1.52E-07	1.22E-07	1.81E-07	2.76E-05	7.07E-07	0.00E+00
INFANT	4.61E-08	4.60E-06	1.14E-07	1.14E-07	1.20E-07	2.53E-05	7.11E-07	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 1.08E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.77E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.20E-04	2.33E-04
GROUND	1.01E-06	1.01E-06	1.01E-06	1.01E-06	1.01E-06	1.01E-06	1.01E-06	1.20E-06
VEGET								
ADULT	4.48E-06	7.65E-06	4.23E-05	5.94E-06	9.97E-06	1.89E-03	1.74E-08	0.00E+00
TEEN	6.52E-06	9.23E-06	6.88E-05	8.98E-06	1.51E-05	2.54E-03	3.27E-08	0.00E+00
CHILD	1.27E-05	7.27E-06	1.66E-04	1.52E-05	2.44E-05	4.87E-03	4.97E-08	0.00E+00
MEAT								
ADULT	1.08E-07	1.12E-07	5.01E-07	1.67E-07	2.70E-07	5.07E-05	1.42E-09	0.00E+00
TEEN	8.02E-08	6.94E-08	4.15E-07	1.36E-07	2.20E-07	3.67E-05	1.34E-09	0.00E+00
CHILD	1.14E-07	4.22E-08	7.73E-07	1.81E-07	2.80E-07	5.55E-05	1.58E-09	0.00E+00
COW MILK								
ADULT	2.60E-06	1.51E-06	4.90E-06	4.48E-06	7.55E-06	1.42E-03	1.20E-08	0.00E+00
TEEN	4.29E-06	2.03E-06	8.89E-06	7.96E-06	1.35E-05	2.24E-03	2.47E-08	0.00E+00
CHILD	7.91E-06	1.63E-06	2.16E-05	1.39E-05	2.24E-05	4.43E-03	3.80E-08	0.00E+00
INFANT	1.49E-05	1.61E-06	4.32E-05	3.38E-05	3.89E-05	1.08E-02	6.87E-08	0.00E+00
GOATMILK								
ADULT	3.29E-06	2.03E-06	7.60E-06	5.57E-06	9.12E-06	1.70E-03	3.59E-08	0.00E+00
TEEN	5.34E-06	2.75E-06	1.38E-05	9.89E-06	1.63E-05	2.69E-03	7.41E-08	0.00E+00
CHILD	9.77E-06	2.20E-06	3.36E-05	1.72E-05	2.70E-05	5.32E-03	1.14E-07	0.00E+00
INFANT	1.84E-05	2.19E-06	6.58E-05	4.17E-05	4.70E-05	1.29E-02	2.06E-07	0.00E+00
INHAL								
ADULT	1.25E-07	2.49E-07	2.42E-07	2.60E-07	4.38E-07	6.55E-05	5.01E-07	0.00E+00
TEEN	1.65E-07	5.10E-07	3.41E-07	3.58E-07	6.04E-07	8.22E-05	8.61E-07	0.00E+00
CHILD	1.81E-07	2.53E-06	4.65E-07	3.52E-07	5.67E-07	9.51E-05	7.67E-07	0.00E+00
INFANT	1.30E-07	2.18E-06	3.49E-07	3.28E-07	3.74E-07	8.71E-05	7.43E-07	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 4.97E-05 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 8.76E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.86E-05	5.86E-05	5.86E-05	5.86E-05	5.86E-05	5.86E-05	5.91E-05	1.12E-04
GROUND	1.03E-05	1.03E-05	1.03E-05	1.03E-05	1.03E-05	1.03E-05	1.03E-05	1.21E-05
VEGET								
ADULT	2.15E-05	1.79E-05	5.60E-05	3.61E-05	6.18E-05	1.17E-02	1.38E-09	0.00E+00
TEEN	3.06E-05	2.06E-05	8.74E-05	5.44E-05	9.36E-05	1.58E-02	2.51E-09	0.00E+00
CHILD	5.55E-05	1.58E-05	2.05E-04	9.19E-05	1.51E-04	3.03E-02	3.76E-09	0.00E+00
MEAT								
ADULT	5.77E-07	5.55E-07	1.05E-06	9.68E-07	1.65E-06	3.15E-04	5.23E-11	0.00E+00
TEEN	4.41E-07	3.32E-07	8.57E-07	7.87E-07	1.35E-06	2.28E-04	4.95E-11	0.00E+00
CHILD	6.27E-07	1.94E-07	1.58E-06	1.05E-06	1.71E-06	3.45E-04	5.79E-11	0.00E+00
COW MILK								
ADULT	1.55E-05	8.12E-06	2.05E-05	2.74E-05	4.70E-05	8.82E-03	4.89E-11	0.00E+00
TEEN	2.59E-05	1.09E-05	3.70E-05	4.87E-05	8.38E-05	1.40E-02	1.01E-10	0.00E+00
CHILD	4.79E-05	8.78E-06	8.97E-05	8.49E-05	1.39E-04	2.77E-02	1.55E-10	0.00E+00
INFANT	9.06E-05	8.68E-06	1.85E-04	2.08E-04	2.42E-04	6.72E-02	3.74E-10	0.00E+00
GOATMILK								
ADULT	1.86E-05	9.71E-06	2.57E-05	3.29E-05	5.64E-05	1.06E-02	5.86E-12	0.00E+00
TEEN	3.11E-05	1.31E-05	4.64E-05	5.84E-05	1.01E-04	1.68E-02	1.21E-11	0.00E+00
CHILD	5.75E-05	1.05E-05	1.12E-04	1.02E-04	1.67E-04	3.32E-02	1.86E-11	0.00E+00
INFANT	1.09E-04	1.04E-05	2.30E-04	2.49E-04	2.91E-04	8.06E-02	4.49E-11	0.00E+00
INHAL								
ADULT	1.08E-06	3.20E-06	1.54E-06	2.36E-06	4.04E-06	5.83E-04	9.33E-06	0.00E+00
TEEN	1.42E-06	1.67E-05	2.17E-06	3.25E-06	5.57E-06	7.35E-04	1.60E-05	0.00E+00
CHILD	1.56E-06	1.40E-04	2.95E-06	3.20E-06	5.23E-06	8.58E-04	1.43E-05	0.00E+00
INFANT	1.12E-06	1.23E-04	2.34E-06	2.98E-06	3.45E-06	7.86E-04	1.46E-05	0.00E+00

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TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
AT .60 MILES NNE

ANNUAL BETA AIR DOSE = 3.79E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 6.68E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.47E-05	4.47E-05	4.47E-05	4.47E-05	4.47E-05	4.47E-05	4.51E-05	8.53E-05
GROUND	6.33E-06	6.33E-06	6.33E-06	6.33E-06	6.33E-06	6.33E-06	6.33E-06	7.41E-06
VEGET								
ADULT	1.32E-05	1.09E-05	3.42E-05	2.22E-05	3.81E-05	7.22E-03	8.37E-10	0.00E+00
TEEN	1.88E-05	1.26E-05	5.34E-05	3.35E-05	5.76E-05	9.73E-03	1.52E-09	0.00E+00
CHILD	3.41E-05	9.67E-06	1.25E-04	5.66E-05	9.28E-05	1.86E-02	2.28E-09	0.00E+00
MEAT								
ADULT	3.55E-07	3.40E-07	6.40E-07	5.96E-07	1.02E-06	1.94E-04	3.17E-11	0.00E+00
TEEN	2.72E-07	2.03E-07	5.25E-07	4.85E-07	8.29E-07	1.41E-04	3.00E-11	0.00E+00
CHILD	3.86E-07	1.19E-07	9.65E-07	6.45E-07	1.05E-06	2.12E-04	3.51E-11	0.00E+00
COW MILK								
ADULT	9.55E-06	4.99E-06	1.26E-05	1.69E-05	2.89E-05	5.43E-03	2.96E-11	0.00E+00
TEEN	1.59E-05	6.73E-06	2.28E-05	3.00E-05	5.16E-05	8.60E-03	6.13E-11	0.00E+00
CHILD	2.95E-05	5.40E-06	5.52E-05	5.22E-05	8.58E-05	1.70E-02	9.37E-11	0.00E+00
INFANT	5.58E-05	5.34E-06	1.14E-04	1.28E-04	1.49E-04	4.14E-02	2.27E-10	0.00E+00
GOATMILK								
ADULT	1.15E-05	5.97E-06	1.58E-05	2.02E-05	3.47E-05	6.52E-03	3.55E-12	0.00E+00
TEEN	1.91E-05	8.06E-06	2.85E-05	3.60E-05	6.19E-05	1.03E-02	7.35E-12	0.00E+00
CHILD	3.54E-05	6.47E-06	6.90E-05	6.27E-05	1.03E-04	2.04E-02	1.12E-11	0.00E+00
INFANT	6.70E-05	6.40E-06	1.42E-04	1.53E-04	1.79E-04	4.97E-02	2.72E-11	0.00E+00
INHAL								
ADULT	8.50E-07	2.53E-06	1.22E-06	1.86E-06	3.18E-06	4.60E-04	7.39E-06	0.00E+00
TEEN	1.12E-06	1.33E-05	1.71E-06	2.56E-06	4.39E-06	5.80E-04	1.27E-05	0.00E+00
CHILD	1.23E-06	1.11E-04	2.33E-06	2.52E-06	4.12E-06	6.76E-04	1.13E-05	0.00E+00
INFANT	8.86E-07	9.75E-05	1.84E-06	2.35E-06	2.72E-06	6.20E-04	1.16E-05	0.00E+00

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TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.84E-05 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 5.01E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.38E-05	6.40E-05
GROUND	1.33E-06	1.33E-06	1.33E-06	1.33E-06	1.33E-06	1.33E-06	1.33E-06	1.56E-06
VEGET								
ADULT	3.21E-06	2.67E-06	8.39E-06	5.39E-06	9.23E-06	1.75E-03	2.07E-10	0.00E+00
TEEN	4.57E-06	3.08E-06	1.31E-05	8.12E-06	1.40E-05	2.36E-03	3.76E-10	0.00E+00
CHILD	8.29E-06	2.37E-06	3.07E-05	1.37E-05	2.25E-05	4.52E-03	5.64E-10	0.00E+00
MEAT								
ADULT	8.63E-08	8.33E-08	1.56E-07	1.45E-07	2.46E-07	4.71E-05	7.84E-12	0.00E+00
TEEN	6.60E-08	4.98E-08	1.28E-07	1.18E-07	2.01E-07	3.41E-05	7.42E-12	0.00E+00
CHILD	9.37E-08	2.91E-08	2.36E-07	1.57E-07	2.56E-07	5.15E-05	8.68E-12	0.00E+00
COW MILK								
ADULT	2.31E-06	1.20E-06	3.05E-06	4.08E-06	7.00E-06	1.32E-03	7.33E-12	0.00E+00
TEEN	3.86E-06	1.62E-06	5.52E-06	7.25E-06	1.25E-05	2.08E-03	1.52E-11	0.00E+00
CHILD	7.14E-06	1.30E-06	1.34E-05	1.26E-05	2.08E-05	4.13E-03	2.32E-11	0.00E+00
INFANT	1.35E-05	1.28E-06	2.76E-05	3.09E-05	3.61E-05	1.00E-02	5.61E-11	0.00E+00
GOATMILK								
ADULT	2.78E-06	1.44E-06	3.83E-06	4.90E-06	8.40E-06	1.58E-03	8.80E-13	0.00E+00
TEEN	4.64E-06	1.94E-06	6.92E-06	8.70E-06	1.50E-05	2.50E-03	1.82E-12	0.00E+00
CHILD	8.58E-06	1.56E-06	1.68E-05	1.52E-05	2.49E-05	4.95E-03	2.78E-12	0.00E+00
INFANT	1.62E-05	1.54E-06	3.43E-05	3.71E-05	4.34E-05	1.20E-02	6.73E-12	0.00E+00
INHAL								
ADULT	1.92E-07	3.55E-07	2.72E-07	4.12E-07	6.89E-07	9.96E-05	5.37E-07	0.00E+00
TEEN	2.52E-07	1.04E-06	3.82E-07	5.67E-07	9.50E-07	1.25E-04	9.10E-07	0.00E+00
CHILD	2.78E-07	6.74E-06	5.19E-07	5.58E-07	8.92E-07	1.46E-04	8.06E-07	0.00E+00
INFANT	2.00E-07	5.89E-06	4.09E-07	5.20E-07	5.89E-07	1.34E-04	8.09E-07	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 2.84E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 5.01E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.35E-05	3.38E-05	6.40E-05
GROUND	1.69E-07	1.69E-07	1.69E-07	1.69E-07	1.69E-07	1.69E-07	1.69E-07	1.98E-07
VEGET								
ADULT	2.98E-07	4.22E-07	1.50E-06	4.64E-07	7.95E-07	1.51E-04	5.26E-11	0.00E+00
TEEN	4.28E-07	4.95E-07	2.35E-06	6.99E-07	1.20E-06	2.03E-04	9.56E-11	0.00E+00
CHILD	7.95E-07	3.84E-07	5.52E-06	1.18E-06	1.94E-06	3.89E-04	1.43E-10	0.00E+00
MEAT								
ADULT	7.71E-09	1.16E-08	2.28E-08	1.24E-08	2.12E-08	4.05E-06	1.99E-12	0.00E+00
TEEN	5.90E-09	7.06E-09	1.85E-08	1.01E-08	1.73E-08	2.93E-06	1.89E-12	0.00E+00
CHILD	8.47E-09	4.20E-09	3.38E-08	1.35E-08	2.20E-08	4.42E-06	2.21E-12	0.00E+00
COW MILK								
ADULT	2.00E-07	1.13E-07	2.99E-07	3.53E-07	6.05E-07	1.13E-04	1.86E-12	0.00E+00
TEEN	3.34E-07	1.52E-07	5.39E-07	6.27E-07	1.08E-06	1.80E-04	3.85E-12	0.00E+00
CHILD	6.20E-07	1.23E-07	1.30E-06	1.09E-06	1.79E-06	3.56E-04	5.89E-12	0.00E+00
INFANT	1.17E-06	1.21E-07	2.64E-06	2.67E-06	3.12E-06	8.64E-04	1.43E-11	0.00E+00
GOATMILK								
ADULT	2.41E-07	1.35E-07	4.02E-07	4.23E-07	7.26E-07	1.36E-04	2.24E-13	0.00E+00
TEEN	4.03E-07	1.83E-07	7.21E-07	7.52E-07	1.30E-06	2.15E-04	4.62E-13	0.00E+00
CHILD	7.48E-07	1.47E-07	1.74E-06	1.31E-06	2.15E-06	4.27E-04	7.07E-13	0.00E+00
INFANT	1.41E-06	1.46E-07	3.47E-06	3.21E-06	3.75E-06	1.04E-03	1.71E-12	0.00E+00
INHAL								
ADULT	3.66E-08	1.77E-07	5.26E-08	7.66E-08	1.10E-07	1.39E-05	2.70E-07	0.00E+00
TEEN	4.88E-08	4.79E-07	7.35E-08	1.06E-07	1.52E-07	1.76E-05	4.56E-07	0.00E+00
CHILD	5.59E-08	2.88E-06	9.94E-08	1.04E-07	1.43E-07	2.06E-05	4.04E-07	0.00E+00
INFANT	4.02E-08	2.51E-06	7.67E-08	9.68E-08	9.45E-08	1.89E-05	4.03E-07	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
 AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 5.33E-07 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 3.72E-07 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.48E-07	2.48E-07	2.48E-07	2.48E-07	2.48E-07	2.48E-07	2.54E-07	7.64E-07
GROUND	6.01E-07	6.01E-07	6.01E-07	6.01E-07	6.01E-07	6.01E-07	6.01E-07	7.07E-07
VEGET								
ADULT	1.52E-06	1.25E-06	3.90E-06	2.55E-06	4.38E-06	8.30E-04	9.44E-11	0.00E+00
TEEN	2.16E-06	1.44E-06	6.08E-06	3.85E-06	6.62E-06	1.12E-03	1.71E-10	0.00E+00
CHILD	3.92E-06	1.10E-06	1.43E-05	6.50E-06	1.07E-05	2.14E-03	2.57E-10	0.00E+00
MEAT								
ADULT	4.08E-08	3.89E-08	7.32E-08	6.85E-08	1.17E-07	2.23E-05	3.57E-12	0.00E+00
TEEN	3.12E-08	2.32E-08	6.00E-08	5.57E-08	9.53E-08	1.62E-05	3.38E-12	0.00E+00
CHILD	4.43E-08	1.36E-08	1.10E-07	7.42E-08	1.21E-07	2.44E-05	3.96E-12	0.00E+00
COW MILK								
ADULT	1.10E-06	5.73E-07	1.44E-06	1.94E-06	3.32E-06	6.24E-04	3.34E-12	0.00E+00
TEEN	1.83E-06	7.73E-07	2.61E-06	3.44E-06	5.93E-06	9.88E-04	6.91E-12	0.00E+00
CHILD	3.39E-06	6.19E-07	6.33E-06	6.00E-06	9.86E-06	1.96E-03	1.06E-11	0.00E+00
INFANT	6.41E-06	6.13E-07	1.31E-05	1.47E-05	1.72E-05	4.76E-03	2.56E-11	0.00E+00
GOATMILK								
ADULT	1.32E-06	6.86E-07	1.81E-06	2.33E-06	3.99E-06	7.49E-04	4.01E-13	0.00E+00
TEEN	2.20E-06	9.25E-07	3.27E-06	4.13E-06	7.12E-06	1.19E-03	8.29E-13	0.00E+00
CHILD	4.07E-06	7.42E-07	7.92E-06	7.20E-06	1.18E-05	2.35E-03	1.27E-12	0.00E+00
INFANT	7.70E-06	7.34E-07	1.63E-05	1.76E-05	2.06E-05	5.71E-03	3.07E-12	0.00E+00
INHAL								
ADULT	1.51E-07	4.48E-07	2.18E-07	3.31E-07	5.72E-07	8.30E-05	1.30E-06	0.00E+00
TEEN	1.99E-07	2.34E-06	3.07E-07	4.56E-07	7.89E-07	1.05E-04	2.23E-06	0.00E+00
CHILD	2.18E-07	1.95E-05	4.17E-07	4.49E-07	7.41E-07	1.22E-04	1.99E-06	0.00E+00
INFANT	1.57E-07	1.72E-05	3.30E-07	4.19E-07	4.89E-07	1.12E-04	2.04E-06	0.00E+00



TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 3.81E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 4.44E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.97E-04	2.97E-04	2.97E-04	2.97E-04	2.97E-04	2.97E-04	3.01E-04	6.90E-04
GROUND	8.99E-06	8.99E-06	8.99E-06	8.99E-06	8.99E-06	8.99E-06	8.99E-06	1.05E-05
VEGET								
ADULT	2.70E-05	3.39E-05	1.64E-04	4.05E-05	6.90E-05	1.31E-02	3.66E-08	0.00E+00
TEEN	3.90E-05	4.04E-05	2.67E-04	6.11E-05	1.04E-04	1.76E-02	6.86E-08	0.00E+00
CHILD	7.36E-05	3.16E-05	6.43E-04	1.03E-04	1.68E-04	3.38E-02	1.04E-07	0.00E+00
MEAT								
ADULT	6.80E-07	6.36E-07	2.14E-06	1.10E-06	1.85E-06	3.51E-04	2.96E-09	0.00E+00
TEEN	5.15E-07	3.87E-07	1.78E-06	8.96E-07	1.51E-06	2.55E-04	2.80E-09	0.00E+00
CHILD	7.36E-07	2.31E-07	3.32E-06	1.19E-06	1.92E-06	3.84E-04	3.29E-09	0.00E+00
COW MILK								
ADULT	1.75E-05	9.65E-06	2.77E-05	3.07E-05	5.23E-05	9.82E-03	2.48E-08	0.00E+00
TEEN	2.92E-05	1.30E-05	5.03E-05	5.45E-05	9.33E-05	1.56E-02	5.12E-08	0.00E+00
CHILD	5.40E-05	1.04E-05	1.22E-04	9.50E-05	1.55E-04	3.08E-02	7.88E-08	0.00E+00
INFANT	1.02E-04	1.03E-05	2.48E-04	2.32E-04	2.70E-04	7.48E-02	1.43E-07	0.00E+00
GOATMILK								
ADULT	2.15E-05	1.23E-05	3.91E-05	3.72E-05	6.29E-05	1.18E-02	7.43E-08	0.00E+00
TEEN	3.55E-05	1.67E-05	7.11E-05	6.61E-05	1.12E-04	1.87E-02	1.54E-07	0.00E+00
CHILD	6.57E-05	1.34E-05	1.73E-04	1.15E-04	1.87E-04	3.69E-02	2.36E-07	0.00E+00
INFANT	1.24E-04	1.33E-05	3.47E-04	2.81E-04	3.25E-04	8.98E-02	4.27E-07	0.00E+00
INHAL								
ADULT	1.69E-06	5.44E-06	2.85E-06	3.64E-06	6.24E-06	9.15E-04	1.68E-05	0.00E+00
TEEN	2.22E-06	2.69E-05	4.02E-06	5.01E-06	8.61E-06	1.15E-03	2.88E-05	0.00E+00
CHILD	2.44E-06	2.22E-04	5.48E-06	4.93E-06	8.09E-06	1.34E-03	2.57E-05	0.00E+00
INFANT	1.76E-06	1.95E-04	4.22E-06	4.60E-06	5.34E-06	1.23E-03	2.61E-05	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 4.48E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 5.19E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.48E-04	3.53E-04	8.09E-04
GROUND	1.39E-05	1.39E-05	1.39E-05	1.39E-05	1.39E-05	1.39E-05	1.39E-05	1.62E-05
VEGET								
ADULT	3.94E-05	5.08E-05	2.47E-04	5.87E-05	9.98E-05	1.89E-02	6.95E-08	0.00E+00
TEEN	5.69E-05	6.06E-05	3.99E-04	8.86E-05	1.51E-04	2.55E-02	1.30E-07	0.00E+00
CHILD	1.07E-04	4.74E-05	9.60E-04	1.50E-04	2.44E-04	4.88E-02	1.98E-07	0.00E+00
MEAT								
ADULT	9.94E-07	9.65E-07	3.22E-06	1.61E-06	2.68E-06	5.08E-04	5.61E-09	0.00E+00
TEEN	7.51E-07	5.88E-07	2.67E-06	1.31E-06	2.19E-06	3.68E-04	5.31E-09	0.00E+00
CHILD	1.07E-06	3.51E-07	4.96E-06	1.74E-06	2.78E-06	5.56E-04	6.24E-09	0.00E+00
COW MILK								
ADULT	2.55E-05	1.41E-05	4.05E-05	4.45E-05	7.58E-05	1.42E-02	4.70E-08	0.00E+00
TEEN	4.23E-05	1.90E-05	7.35E-05	7.90E-05	1.35E-04	2.25E-02	9.72E-08	0.00E+00
CHILD	7.82E-05	1.52E-05	1.79E-04	1.38E-04	2.25E-04	4.45E-02	1.49E-07	0.00E+00
INFANT	1.48E-04	1.51E-05	3.62E-04	3.37E-04	3.91E-04	1.08E-01	2.70E-07	0.00E+00
GOATMILK								
ADULT	3.13E-05	1.80E-05	5.76E-05	5.42E-05	9.12E-05	1.71E-02	1.41E-07	0.00E+00
TEEN	5.16E-05	2.43E-05	1.05E-04	9.62E-05	1.63E-04	2.70E-02	2.91E-07	0.00E+00
CHILD	9.52E-05	1.95E-05	2.54E-04	1.68E-04	2.70E-04	5.35E-02	4.48E-07	0.00E+00
INFANT	1.80E-04	1.93E-05	5.08E-04	4.08E-04	4.70E-04	1.30E-01	8.10E-07	0.00E+00
INHAL								
ADULT	2.03E-06	6.61E-06	3.44E-06	4.37E-06	7.50E-06	1.10E-03	2.05E-05	0.00E+00
TEEN	2.67E-06	3.29E-05	4.85E-06	6.02E-06	1.03E-05	1.38E-03	3.52E-05	0.00E+00
CHILD	2.93E-06	2.72E-04	6.60E-06	5.93E-06	9.72E-06	1.61E-03	3.14E-05	0.00E+00
INFANT	2.11E-06	2.39E-04	5.08E-06	5.52E-06	6.41E-06	1.48E-03	3.19E-05	0.00E+00

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TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.37E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 3.38E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.27E-04	2.27E-04	2.27E-04	2.27E-04	2.27E-04	2.27E-04	2.29E-04	4.74E-04
GROUND	2.98E-06	2.98E-06	2.98E-06	2.98E-06	2.98E-06	2.98E-06	2.98E-06	3.49E-06
VEGET								
ADULT	8.45E-06	1.09E-05	5.31E-05	1.26E-05	2.14E-05	4.06E-03	1.52E-08	0.00E+00
TEEN	1.22E-05	1.30E-05	8.59E-05	1.90E-05	3.24E-05	5.46E-03	2.84E-08	0.00E+00
CHILD	2.30E-05	1.02E-05	2.06E-04	3.21E-05	5.22E-05	1.05E-02	4.32E-08	0.00E+00
MEAT								
ADULT	2.13E-07	2.08E-07	6.92E-07	3.45E-07	5.74E-07	1.09E-04	1.22E-09	0.00E+00
TEEN	1.61E-07	1.27E-07	5.74E-07	2.80E-07	4.69E-07	7.90E-05	1.16E-09	0.00E+00
CHILD	2.30E-07	7.56E-08	1.07E-06	3.73E-07	5.96E-07	1.19E-04	1.36E-09	0.00E+00
COW MILK								
ADULT	5.46E-06	3.02E-06	8.70E-06	9.55E-06	1.63E-05	3.05E-03	1.03E-08	0.00E+00
TEEN	9.07E-06	4.07E-06	1.58E-05	1.70E-05	2.90E-05	4.83E-03	2.12E-08	0.00E+00
CHILD	1.68E-05	3.26E-06	3.84E-05	2.96E-05	4.82E-05	9.55E-03	3.26E-08	0.00E+00
INFANT	3.17E-05	3.23E-06	7.78E-05	7.22E-05	8.38E-05	2.32E-02	5.90E-08	0.00E+00
GOATMILK								
ADULT	6.71E-06	3.85E-06	1.24E-05	1.16E-05	1.96E-05	3.66E-03	3.07E-08	0.00E+00
TEEN	1.11E-05	5.21E-06	2.25E-05	2.06E-05	3.49E-05	5.79E-03	6.35E-08	0.00E+00
CHILD	2.04E-05	4.18E-06	5.46E-05	3.60E-05	5.80E-05	1.15E-02	9.77E-08	0.00E+00
INFANT	3.85E-05	4.14E-06	1.09E-04	8.76E-05	1.01E-04	2.79E-02	1.77E-07	0.00E+00
INHAL								
ADULT	5.38E-07	1.83E-06	9.06E-07	1.16E-06	1.96E-06	2.84E-04	5.37E-06	0.00E+00
TEEN	7.09E-07	8.66E-06	1.28E-06	1.59E-06	2.70E-06	3.58E-04	9.21E-06	0.00E+00
CHILD	7.80E-07	7.03E-05	1.74E-06	1.57E-06	2.54E-06	4.17E-04	8.22E-06	0.00E+00
INFANT	5.62E-07	6.19E-05	1.34E-06	1.46E-06	1.68E-06	3.82E-04	8.35E-06	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 1.98E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 3.32E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 2.23E-04	: 2.23E-04	: 2.23E-04	: 2.23E-04	: 2.23E-04	: 2.23E-04	: 2.25E-04	: 4.32E-04
GROUND	: 2.75E-07	: 2.75E-07	: 2.75E-07	: 2.75E-07	: 2.75E-07	: 2.75E-07	: 2.75E-07	: 3.21E-07
VEGET	:	:	:	:	:	:	:	:
ADULT	: 6.31E-07	: 9.69E-07	: 4.72E-06	: 9.04E-07	: 1.52E-06	: 2.86E-04	: 2.84E-09	: 0.00E+00
TEEN	: 9.07E-07	: 1.15E-06	: 7.53E-06	: 1.37E-06	: 2.29E-06	: 3.85E-04	: 5.32E-09	: 0.00E+00
CHILD	: 1.72E-06	: 9.04E-07	: 1.79E-05	: 2.31E-06	: 3.70E-06	: 7.38E-04	: 8.09E-09	: 0.00E+00
MEAT	:	:	:	:	:	:	:	:
ADULT	: 1.62E-08	: 1.96E-08	: 6.17E-08	: 2.55E-08	: 4.09E-08	: 7.68E-06	: 2.29E-10	: 0.00E+00
TEEN	: 1.20E-08	: 1.20E-08	: 5.04E-08	: 2.07E-08	: 3.34E-08	: 5.56E-06	: 2.17E-10	: 0.00E+00
CHILD	: 1.69E-08	: 7.21E-09	: 9.26E-08	: 2.76E-08	: 4.24E-08	: 8.40E-06	: 2.55E-10	: 0.00E+00
COW MILK	:	:	:	:	:	:	:	:
ADULT	: 3.93E-07	: 2.22E-07	: 6.65E-07	: 6.85E-07	: 1.15E-06	: 2.15E-04	: 1.92E-09	: 0.00E+00
TEEN	: 6.48E-07	: 3.00E-07	: 1.20E-06	: 1.22E-06	: 2.05E-06	: 3.40E-04	: 3.98E-09	: 0.00E+00
CHILD	: 1.19E-06	: 2.40E-07	: 2.91E-06	: 2.12E-06	: 3.41E-06	: 6.74E-04	: 6.11E-09	: 0.00E+00
INFANT	: 2.25E-06	: 2.38E-07	: 5.81E-06	: 5.16E-06	: 5.94E-06	: 1.64E-03	: 1.11E-08	: 0.00E+00
GOATMILK	:	:	:	:	:	:	:	:
ADULT	: 4.96E-07	: 2.82E-07	: 9.84E-07	: 8.52E-07	: 1.39E-06	: 2.58E-04	: 5.76E-09	: 0.00E+00
TEEN	: 8.04E-07	: 3.82E-07	: 1.77E-06	: 1.51E-06	: 2.48E-06	: 4.08E-04	: 1.19E-08	: 0.00E+00
CHILD	: 1.46E-06	: 3.07E-07	: 4.29E-06	: 2.64E-06	: 4.13E-06	: 8.09E-04	: 1.83E-08	: 0.00E+00
INFANT	: 2.75E-06	: 3.05E-07	: 8.38E-06	: 6.37E-06	: 7.17E-06	: 1.97E-03	: 3.31E-08	: 0.00E+00
INHAL	:	:	:	:	:	:	:	:
ADULT	: 7.91E-08	: 3.31E-07	: 1.30E-07	: 1.66E-07	: 2.51E-07	: 3.30E-05	: 5.64E-07	: 0.00E+00
TEEN	: 1.05E-07	: 9.26E-07	: 1.82E-07	: 2.29E-07	: 3.46E-07	: 4.16E-05	: 9.58E-07	: 0.00E+00
CHILD	: 1.19E-07	: 5.76E-06	: 2.46E-07	: 2.25E-07	: 3.25E-07	: 4.85E-05	: 8.49E-07	: 0.00E+00
INFANT	: 8.55E-08	: 5.03E-06	: 1.86E-07	: 2.10E-07	: 2.14E-07	: 4.45E-05	: 8.47E-07	: 0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 1.19E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.67E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.12E-04	1.13E-04	2.36E-04
GROUND	2.07E-06	2.07E-06	2.07E-06	2.07E-06	2.07E-06	2.07E-06	2.07E-06	2.42E-06
VEGET								
ADULT	5.62E-06	7.44E-06	3.61E-05	8.34E-06	1.42E-05	2.68E-03	1.20E-08	0.00E+00
TEEN	8.11E-06	8.87E-06	5.83E-05	1.26E-05	2.14E-05	3.61E-03	2.25E-08	0.00E+00
CHILD	1.53E-05	6.93E-06	1.40E-04	2.13E-05	3.45E-05	6.92E-03	3.42E-08	0.00E+00
MEAT								
ADULT	1.42E-07	1.43E-07	4.72E-07	2.29E-07	3.80E-07	7.20E-05	9.69E-10	0.00E+00
TEEN	1.07E-07	8.70E-08	3.90E-07	1.86E-07	3.10E-07	5.22E-05	9.17E-10	0.00E+00
CHILD	1.52E-07	5.20E-08	7.24E-07	2.48E-07	3.94E-07	7.87E-05	1.08E-09	0.00E+00
COW MILK								
ADULT	3.62E-06	2.00E-06	5.80E-06	6.32E-06	1.07E-05	2.01E-03	8.12E-09	0.00E+00
TEEN	6.00E-06	2.70E-06	1.05E-05	1.12E-05	1.92E-05	3.19E-03	1.68E-08	0.00E+00
CHILD	1.11E-05	2.17E-06	2.56E-05	1.96E-05	3.18E-05	6.31E-03	2.58E-08	0.00E+00
INFANT	2.10E-05	2.15E-06	5.17E-05	4.78E-05	5.54E-05	1.53E-02	4.67E-08	0.00E+00
GOATMILK								
ADULT	4.46E-06	2.56E-06	8.30E-06	7.71E-06	1.29E-05	2.42E-03	2.43E-08	0.00E+00
TEEN	7.34E-06	3.46E-06	1.50E-05	1.37E-05	2.31E-05	3.82E-03	5.03E-08	0.00E+00
CHILD	1.35E-05	2.77E-06	3.65E-05	2.39E-05	3.83E-05	7.57E-03	7.73E-08	0.00E+00
INFANT	2.55E-05	2.75E-06	7.28E-05	5.81E-05	6.67E-05	1.84E-02	1.40E-07	0.00E+00
INHAL								
ADULT	2.85E-07	9.61E-07	4.79E-07	6.11E-07	1.04E-06	1.51E-04	2.84E-06	0.00E+00
TEEN	3.75E-07	4.58E-06	6.75E-07	8.42E-07	1.43E-06	1.90E-04	4.88E-06	0.00E+00
CHILD	4.12E-07	3.73E-05	9.20E-07	8.29E-07	1.35E-06	2.21E-04	4.35E-06	0.00E+00
INFANT	2.97E-07	3.28E-05	7.07E-07	7.73E-07	8.88E-07	2.03E-04	4.42E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 6.06E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.16E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.73E-05	7.73E-05	7.73E-05	7.73E-05	7.73E-05	7.73E-05	7.79E-05	1.43E-04
GROUND	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.11E-04	2.48E-04
VEGET								
ADULT	2.85E-05	7.57E-05	2.63E-04	3.39E-05	5.58E-05	1.06E-02	8.74E-10	0.00E+00
TEEN	4.26E-05	8.79E-05	4.34E-04	5.12E-05	8.45E-05	1.43E-02	1.59E-09	0.00E+00
CHILD	8.46E-05	6.55E-05	1.06E-03	8.62E-05	1.36E-04	2.73E-02	2.38E-09	0.00E+00
MEAT								
ADULT	1.39E-06	7.68E-06	2.98E-06	1.24E-06	1.49E-06	2.85E-04	3.31E-11	0.00E+00
TEEN	1.09E-06	4.19E-06	2.50E-06	9.95E-07	1.22E-06	2.06E-04	3.14E-11	0.00E+00
CHILD	1.65E-06	2.16E-06	4.72E-06	1.28E-06	1.55E-06	3.11E-04	3.67E-11	0.00E+00
COW MILK								
ADULT	1.45E-05	1.04E-05	2.84E-05	2.48E-05	4.23E-05	7.96E-03	3.10E-11	0.00E+00
TEEN	2.42E-05	1.37E-05	5.18E-05	4.40E-05	7.55E-05	1.26E-02	6.40E-11	0.00E+00
CHILD	4.51E-05	1.08E-05	1.27E-04	7.66E-05	1.25E-04	2.49E-02	9.80E-11	0.00E+00
INFANT	8.52E-05	1.05E-05	2.55E-04	1.87E-04	2.18E-04	6.06E-02	2.37E-10	0.00E+00
GOATMILK								
ADULT	1.74E-05	1.23E-05	4.41E-05	2.96E-05	5.08E-05	9.55E-03	3.71E-12	0.00E+00
TEEN	2.92E-05	1.66E-05	8.07E-05	5.26E-05	9.06E-05	1.51E-02	7.68E-12	0.00E+00
CHILD	5.47E-05	1.33E-05	1.98E-04	9.17E-05	1.51E-04	2.99E-02	1.18E-11	0.00E+00
INFANT	1.04E-04	1.32E-05	3.93E-04	2.24E-04	2.62E-04	7.27E-02	2.84E-11	0.00E+00
INHAL								
ADULT	1.12E-06	6.84E-06	2.21E-06	2.34E-06	3.92E-06	5.65E-04	3.01E-05	0.00E+00
TEEN	1.47E-06	3.53E-05	3.12E-06	3.23E-06	5.40E-06	7.12E-04	4.98E-05	0.00E+00
CHILD	1.63E-06	2.95E-04	4.26E-06	3.18E-06	5.07E-06	8.29E-04	4.35E-05	0.00E+00
INFANT	1.17E-06	2.60E-04	3.20E-06	2.96E-06	3.35E-06	7.60E-04	4.09E-05	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 5.67E-05 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 1.08E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.23E-05	7.23E-05	7.23E-05	7.23E-05	7.23E-05	7.23E-05	7.29E-05	1.34E-04
GROUND	2.04E-04	2.04E-04	2.04E-04	2.04E-04	2.04E-04	2.04E-04	2.04E-04	2.40E-04
VEGET								
ADULT	2.76E-05	7.41E-05	2.56E-04	3.28E-05	5.40E-05	1.02E-02	1.09E-09	0.00E+00
TEEN	4.12E-05	8.61E-05	4.23E-04	4.95E-05	8.17E-05	1.38E-02	1.99E-09	0.00E+00
CHILD	8.21E-05	6.42E-05	1.03E-03	8.33E-05	1.32E-04	2.65E-02	2.98E-09	0.00E+00
MEAT								
ADULT	1.34E-06	7.45E-06	2.90E-06	1.20E-06	1.44E-06	2.75E-04	4.14E-11	0.00E+00
TEEN	1.05E-06	4.06E-06	2.44E-06	9.62E-07	1.18E-06	2.00E-04	3.92E-11	0.00E+00
CHILD	1.60E-06	2.10E-06	4.60E-06	1.24E-06	1.50E-06	3.01E-04	4.58E-11	0.00E+00
COW MILK								
ADULT	1.40E-05	1.01E-05	2.75E-05	2.39E-05	4.09E-05	7.70E-03	3.87E-11	0.00E+00
TEEN	2.34E-05	1.33E-05	5.03E-05	4.25E-05	7.30E-05	1.22E-02	8.00E-11	0.00E+00
CHILD	4.36E-05	1.04E-05	1.23E-04	7.41E-05	1.21E-04	2.41E-02	1.22E-10	0.00E+00
INFANT	8.24E-05	1.02E-05	2.47E-04	1.81E-04	2.11E-04	5.86E-02	2.96E-10	0.00E+00
GOATMILK								
ADULT	1.69E-05	1.19E-05	4.28E-05	2.86E-05	4.91E-05	9.24E-03	4.64E-12	0.00E+00
TEEN	2.82E-05	1.61E-05	7.82E-05	5.09E-05	8.76E-05	1.46E-02	9.60E-12	0.00E+00
CHILD	5.29E-05	1.29E-05	1.92E-04	8.87E-05	1.46E-04	2.89E-02	1.47E-11	0.00E+00
INFANT	1.00E-04	1.28E-05	3.81E-04	2.17E-04	2.53E-04	7.03E-02	3.55E-11	0.00E+00
INHAL								
ADULT	1.34E-06	8.28E-06	2.67E-06	2.82E-06	4.73E-06	6.85E-04	3.68E-05	0.00E+00
TEEN	1.77E-06	4.32E-05	3.78E-06	3.88E-06	6.53E-06	8.63E-04	6.09E-05	0.00E+00
CHILD	1.95E-06	3.62E-04	5.16E-06	3.82E-06	6.13E-06	1.00E-03	5.33E-05	0.00E+00
INFANT	1.40E-06	3.19E-04	3.87E-06	3.55E-06	4.05E-06	9.21E-04	5.01E-05	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 5.28E-05 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 1.01E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.79E-05	1.24E-04
GROUND	6.42E-05	6.42E-05	6.42E-05	6.42E-05	6.42E-05	6.42E-05	6.42E-05	7.54E-05
VEGET								
ADULT	8.68E-06	2.39E-05	8.12E-05	1.02E-05	1.68E-05	3.20E-03	5.39E-10	0.00E+00
TEEN	1.29E-05	2.77E-05	1.34E-04	1.55E-05	2.55E-05	4.31E-03	9.79E-10	0.00E+00
CHILD	2.58E-05	2.07E-05	3.27E-04	2.60E-05	4.11E-05	8.26E-03	1.47E-09	0.00E+00
MEAT								
ADULT	4.19E-07	2.34E-06	9.26E-07	3.74E-07	4.50E-07	8.60E-05	2.04E-11	0.00E+00
TEEN	3.29E-07	1.28E-06	7.79E-07	3.00E-07	3.68E-07	6.23E-05	1.93E-11	0.00E+00
CHILD	5.00E-07	6.62E-07	1.47E-06	3.87E-07	4.67E-07	9.40E-05	2.26E-11	0.00E+00
COW MILK								
ADULT	4.37E-06	3.17E-06	8.65E-06	7.47E-06	1.28E-05	2.40E-03	1.91E-11	0.00E+00
TEEN	7.30E-06	4.20E-06	1.58E-05	1.33E-05	2.28E-05	3.80E-03	3.95E-11	0.00E+00
CHILD	1.36E-05	3.29E-06	3.86E-05	2.31E-05	3.79E-05	7.53E-03	6.04E-11	0.00E+00
INFANT	2.57E-05	3.23E-06	7.77E-05	5.66E-05	6.59E-05	1.83E-02	1.46E-10	0.00E+00
GOATMILK								
ADULT	5.27E-06	3.74E-06	1.34E-05	8.94E-06	1.53E-05	2.88E-03	2.29E-12	0.00E+00
TEEN	8.82E-06	5.06E-06	2.46E-05	1.59E-05	2.73E-05	4.56E-03	4.74E-12	0.00E+00
CHILD	1.65E-05	4.05E-06	6.03E-05	2.77E-05	4.55E-05	9.04E-03	7.25E-12	0.00E+00
INFANT	3.13E-05	4.03E-06	1.20E-04	6.77E-05	7.91E-05	2.20E-02	1.75E-11	0.00E+00
INHAL								
ADULT	2.79E-07	1.75E-06	5.14E-07	5.76E-07	8.95E-07	1.24E-04	6.92E-06	0.00E+00
TEEN	3.70E-07	8.35E-06	7.26E-07	7.93E-07	1.23E-06	1.56E-04	1.15E-05	0.00E+00
CHILD	4.16E-07	6.80E-05	9.92E-07	7.80E-07	1.16E-06	1.82E-04	1.00E-05	0.00E+00
INFANT	2.98E-07	5.99E-05	7.47E-07	7.25E-07	7.65E-07	1.66E-04	9.45E-06	0.00E+00



TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 3.72E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 7.08E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.74E-05	4.74E-05	4.74E-05	4.74E-05	4.74E-05	4.74E-05	4.78E-05	8.76E-05
GROUND	4.65E-06	4.65E-06	4.65E-06	4.65E-06	4.65E-06	4.65E-06	4.65E-06	5.47E-06
VEGET								
ADULT	6.31E-07	1.81E-06	6.02E-06	7.37E-07	1.21E-06	2.30E-04	6.27E-11	0.00E+00
TEEN	9.42E-07	2.11E-06	9.93E-06	1.11E-06	1.84E-06	3.10E-04	1.14E-10	0.00E+00
CHILD	1.88E-06	1.58E-06	2.42E-05	1.87E-06	2.96E-06	5.95E-04	1.71E-10	0.00E+00
MEAT								
ADULT	3.03E-08	1.72E-07	6.93E-08	2.70E-08	3.24E-08	6.19E-06	2.37E-12	0.00E+00
TEEN	2.38E-08	9.40E-08	5.83E-08	2.16E-08	2.65E-08	4.49E-06	2.25E-12	0.00E+00
CHILD	3.62E-08	4.88E-08	1.10E-07	2.79E-08	3.36E-08	6.77E-06	2.63E-12	0.00E+00
COW MILK								
ADULT	3.14E-07	2.31E-07	6.30E-07	5.37E-07	9.19E-07	1.73E-04	2.22E-12	0.00E+00
TEEN	5.26E-07	3.06E-07	1.15E-06	9.54E-07	1.64E-06	2.74E-04	4.59E-12	0.00E+00
CHILD	9.81E-07	2.40E-07	2.81E-06	1.66E-06	2.72E-06	5.42E-04	7.02E-12	0.00E+00
INFANT	1.85E-06	2.35E-07	5.66E-06	4.07E-06	4.74E-06	1.32E-03	1.70E-11	0.00E+00
GOATMILK								
ADULT	3.80E-07	2.72E-07	9.81E-07	6.43E-07	1.10E-06	2.08E-04	2.66E-13	0.00E+00
TEEN	6.35E-07	3.67E-07	1.80E-06	1.14E-06	1.97E-06	3.28E-04	5.51E-13	0.00E+00
CHILD	1.19E-06	2.94E-07	4.41E-06	1.99E-06	3.27E-06	6.50E-04	8.42E-13	0.00E+00
INFANT	2.26E-06	2.92E-07	8.74E-06	4.87E-06	5.69E-06	1.58E-03	2.04E-12	0.00E+00
INHAL								
ADULT	6.79E-08	3.69E-07	9.90E-08	1.33E-07	1.63E-07	1.89E-05	9.37E-07	0.00E+00
TEEN	9.13E-08	1.14E-06	1.40E-07	1.83E-07	2.25E-07	2.37E-05	1.54E-06	0.00E+00
CHILD	1.07E-07	7.54E-06	1.91E-07	1.80E-07	2.11E-07	2.76E-05	1.34E-06	0.00E+00
INFANT	7.64E-08	6.62E-06	1.45E-07	1.67E-07	1.39E-07	2.53E-05	1.24E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 6.06E-06 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.16E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.73E-06	7.79E-06	1.43E-05
GROUND	1.36E-05	1.36E-05	1.36E-05	1.36E-05	1.36E-05	1.36E-05	1.36E-05	1.60E-05
VEGET								
ADULT	1.85E-06	4.92E-06	1.71E-05	2.19E-06	3.61E-06	6.85E-04	6.27E-11	0.00E+00
TEEN	2.76E-06	5.71E-06	2.82E-05	3.31E-06	5.47E-06	9.23E-04	1.14E-10	0.00E+00
CHILD	5.48E-06	4.26E-06	6.87E-05	5.57E-06	8.81E-06	1.77E-03	1.71E-10	0.00E+00
MEAT								
ADULT	8.97E-08	4.97E-07	1.93E-07	8.02E-08	9.64E-08	1.84E-05	2.37E-12	0.00E+00
TEEN	7.03E-08	2.71E-07	1.62E-07	6.44E-08	7.87E-08	1.33E-05	2.25E-12	0.00E+00
CHILD	1.07E-07	1.40E-07	3.06E-07	8.31E-08	1.00E-07	2.01E-05	2.63E-12	0.00E+00
COW MILK								
ADULT	9.35E-07	6.71E-07	1.84E-06	1.60E-06	2.74E-06	5.15E-04	2.22E-12	0.00E+00
TEEN	1.56E-06	8.90E-07	3.36E-06	2.84E-06	4.88E-06	8.15E-04	4.59E-12	0.00E+00
CHILD	2.92E-06	6.97E-07	8.21E-06	4.96E-06	8.12E-06	1.61E-03	7.02E-12	0.00E+00
INFANT	5.51E-06	6.83E-07	1.65E-05	1.21E-05	1.41E-05	3.92E-03	1.70E-11	0.00E+00
GOATMILK								
ADULT	1.13E-06	7.97E-07	2.85E-06	1.92E-06	3.28E-06	6.18E-04	2.66E-13	0.00E+00
TEEN	1.89E-06	1.08E-06	5.22E-06	3.40E-06	5.86E-06	9.78E-04	5.51E-13	0.00E+00
CHILD	3.54E-06	8.62E-07	1.28E-05	5.93E-06	9.74E-06	1.94E-03	8.42E-13	0.00E+00
INFANT	6.70E-06	8.57E-07	2.55E-05	1.45E-05	1.69E-05	4.70E-03	2.04E-12	0.00E+00
INHAL								
ADULT	1.60E-07	9.79E-07	3.20E-07	3.38E-07	5.70E-07	8.25E-05	4.36E-06	0.00E+00
TEEN	2.11E-07	5.11E-06	4.52E-07	4.65E-07	7.85E-07	1.04E-04	7.22E-06	0.00E+00
CHILD	2.34E-07	4.28E-05	6.18E-07	4.58E-07	7.38E-07	1.21E-04	6.31E-06	0.00E+00
INFANT	1.67E-07	3.78E-05	4.64E-07	4.26E-07	4.87E-07	1.11E-04	5.93E-06	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
 AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 1.19E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 1.39E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.26E-05	9.26E-05	9.26E-05	9.26E-05	9.26E-05	9.26E-05	9.38E-05	2.05E-04
GROUND	4.43E-04	4.43E-04	4.43E-04	4.43E-04	4.43E-04	4.43E-04	4.43E-04	5.21E-04
VEGET								
ADULT	6.08E-04	3.33E-03	2.06E-02	2.70E-05	3.06E-05	4.62E-03	5.77E-08	0.00E+00
TEEN	1.00E-03	4.10E-03	3.41E-02	4.09E-05	4.61E-05	6.23E-03	1.08E-07	0.00E+00
CHILD	2.43E-03	3.25E-03	8.33E-02	6.56E-05	7.29E-05	1.19E-02	1.65E-07	0.00E+00
MEAT								
ADULT	9.90E-06	5.04E-05	2.02E-04	6.03E-06	3.88E-06	1.24E-04	4.71E-09	0.00E+00
TEEN	8.10E-06	2.98E-05	1.70E-04	4.65E-06	2.91E-06	9.01E-05	4.45E-09	0.00E+00
CHILD	1.41E-05	1.72E-05	3.21E-04	5.44E-06	3.37E-06	1.36E-04	5.23E-09	0.00E+00
COW MILK								
ADULT	4.26E-05	1.75E-04	9.75E-04	2.98E-05	3.09E-05	3.47E-03	3.98E-08	0.00E+00
TEEN	7.60E-05	2.36E-04	1.79E-03	5.10E-05	5.29E-05	5.49E-03	8.22E-08	0.00E+00
CHILD	1.74E-04	1.86E-04	4.42E-03	8.15E-05	8.43E-05	1.09E-02	1.26E-07	0.00E+00
INFANT	3.12E-04	2.47E-04	8.37E-03	1.65E-04	1.35E-04	2.64E-02	2.29E-07	0.00E+00
GOATMILK								
ADULT	6.68E-05	3.26E-04	2.03E-03	1.62E-05	2.39E-05	4.16E-03	1.19E-07	0.00E+00
TEEN	1.21E-04	4.46E-04	3.73E-03	2.85E-05	4.23E-05	6.58E-03	2.47E-07	0.00E+00
CHILD	2.88E-04	3.58E-04	9.22E-03	4.87E-05	7.00E-05	1.30E-02	3.79E-07	0.00E+00
INFANT	5.45E-04	3.69E-04	1.75E-02	1.13E-04	1.20E-04	3.17E-02	6.86E-07	0.00E+00
INHAL								
ADULT	3.43E-06	1.08E-04	9.50E-05	1.53E-06	2.38E-06	3.46E-04	4.54E-04	0.00E+00
TEEN	4.81E-06	1.23E-04	1.35E-04	2.09E-06	3.26E-06	4.34E-04	7.77E-04	0.00E+00
CHILD	6.35E-06	1.35E-04	1.86E-04	2.02E-06	3.05E-06	5.02E-04	6.90E-04	0.00E+00
INFANT	4.21E-06	9.39E-05	1.22E-04	1.81E-06	1.99E-06	4.60E-04	6.41E-04	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.92E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 2.28E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.52E-04	1.52E-04	1.52E-04	1.52E-04	1.52E-04	1.52E-04	1.54E-04	3.35E-04
GROUND	7.76E-04	7.76E-04	7.76E-04	7.76E-04	7.76E-04	7.76E-04	7.76E-04	9.13E-04
VEGET								
ADULT	1.06E-03	5.83E-03	3.61E-02	4.63E-05	5.30E-05	8.06E-03	7.49E-08	0.00E+00
TEEN	1.75E-03	7.18E-03	5.98E-02	7.02E-05	7.97E-05	1.09E-02	1.40E-07	0.00E+00
CHILD	4.25E-03	5.69E-03	1.46E-01	1.13E-04	1.26E-04	2.08E-02	2.13E-07	0.00E+00
MEAT								
ADULT	1.72E-05	8.78E-05	3.54E-04	1.02E-05	6.57E-06	2.17E-04	6.11E-09	0.00E+00
TEEN	1.41E-05	5.21E-05	2.98E-04	7.88E-06	4.92E-06	1.57E-04	5.78E-09	0.00E+00
CHILD	2.45E-05	3.01E-05	5.62E-04	9.21E-06	5.70E-06	2.37E-04	6.79E-09	0.00E+00
COW MILK								
ADULT	7.38E-05	3.04E-04	1.71E-03	5.07E-05	5.31E-05	6.05E-03	5.16E-08	0.00E+00
TEEN	1.32E-04	4.09E-04	3.14E-03	8.68E-05	9.09E-05	9.57E-03	1.07E-07	0.00E+00
CHILD	3.02E-04	3.23E-04	7.74E-03	1.39E-04	1.45E-04	1.89E-02	1.64E-07	0.00E+00
INFANT	5.44E-04	4.26E-04	1.47E-02	2.82E-04	2.32E-04	4.60E-02	2.97E-07	0.00E+00
GOATMILK								
ADULT	1.16E-04	5.71E-04	3.56E-03	2.76E-05	4.14E-05	7.26E-03	1.55E-07	0.00E+00
TEEN	2.11E-04	7.80E-04	6.54E-03	4.86E-05	7.34E-05	1.15E-02	3.20E-07	0.00E+00
CHILD	5.04E-04	6.27E-04	1.61E-02	8.32E-05	1.21E-04	2.27E-02	4.92E-07	0.00E+00
INFANT	9.54E-04	6.45E-04	3.06E-02	1.95E-04	2.08E-04	5.52E-02	8.90E-07	0.00E+00
INHAL								
ADULT	5.36E-06	1.70E-04	1.49E-04	2.35E-06	3.65E-06	5.31E-04	7.11E-04	0.00E+00
TEEN	7.52E-06	1.93E-04	2.12E-04	3.22E-06	5.02E-06	6.66E-04	1.22E-03	0.00E+00
CHILD	9.93E-06	2.12E-04	2.91E-04	3.12E-06	4.69E-06	7.70E-04	1.08E-03	0.00E+00
INFANT	6.57E-06	1.47E-04	1.92E-04	2.78E-06	3.06E-06	7.06E-04	1.00E-03	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.18E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 3.27E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.19E-04	2.19E-04	2.19E-04	2.19E-04	2.19E-04	2.19E-04	2.21E-04	4.44E-04
GROUND	2.63E-04	2.63E-04	2.63E-04	2.63E-04	2.63E-04	2.63E-04	2.63E-04	3.10E-04
VEGET								
ADULT	3.62E-04	1.98E-03	1.22E-02	1.85E-05	1.99E-05	2.82E-03	1.01E-07	0.00E+00
TEEN	5.97E-04	2.44E-03	2.03E-02	2.81E-05	2.99E-05	3.80E-03	1.90E-07	0.00E+00
CHILD	1.44E-03	1.93E-03	4.95E-02	4.49E-05	4.71E-05	7.29E-03	2.89E-07	0.00E+00
MEAT								
ADULT	6.28E-06	3.10E-05	1.21E-04	4.48E-06	2.90E-06	7.59E-05	8.27E-09	0.00E+00
TEEN	5.12E-06	1.83E-05	1.01E-04	3.45E-06	2.17E-06	5.50E-05	7.82E-09	0.00E+00
CHILD	8.84E-06	1.05E-05	1.91E-04	4.03E-06	2.50E-06	8.30E-05	9.19E-09	0.00E+00
COW MILK								
ADULT	2.71E-05	1.12E-04	5.81E-04	2.15E-05	2.10E-05	2.11E-03	6.99E-08	0.00E+00
TEEN	4.81E-05	1.49E-04	1.07E-03	3.68E-05	3.57E-05	3.35E-03	1.44E-07	0.00E+00
CHILD	1.09E-04	1.16E-04	2.63E-03	5.84E-05	5.66E-05	6.62E-03	2.22E-07	0.00E+00
INFANT	1.93E-04	1.62E-04	4.98E-03	1.16E-04	8.91E-05	1.61E-02	4.02E-07	0.00E+00
GOATMILK								
ADULT	4.08E-05	1.95E-04	1.21E-03	1.14E-05	1.52E-05	2.54E-03	2.10E-07	0.00E+00
TEEN	7.29E-05	2.66E-04	2.22E-03	2.01E-05	2.69E-05	4.01E-03	4.33E-07	0.00E+00
CHILD	1.72E-04	2.13E-04	5.48E-03	3.43E-05	4.44E-05	7.94E-03	6.66E-07	0.00E+00
INFANT	3.26E-04	2.21E-04	1.04E-02	7.79E-05	7.59E-05	1.93E-02	1.20E-06	0.00E+00
INHAL								
ADULT	1.54E-06	4.72E-05	4.16E-05	7.34E-07	1.07E-06	1.50E-04	1.97E-04	0.00E+00
TEEN	2.16E-06	5.17E-05	5.91E-05	1.00E-06	1.47E-06	1.88E-04	3.38E-04	0.00E+00
CHILD	2.84E-06	3.90E-05	8.12E-05	9.72E-07	1.37E-06	2.17E-04	3.00E-04	0.00E+00
INFANT	1.88E-06	2.33E-05	5.36E-05	8.69E-07	8.96E-07	1.99E-04	2.78E-04	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 6.00E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 9.40E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.30E-05	6.30E-05	6.30E-05	6.30E-05	6.30E-05	6.30E-05	6.37E-05	1.26E-04
GROUND	1.07E-05	1.07E-05	1.07E-05	1.07E-05	1.07E-05	1.07E-05	1.07E-05	1.26E-05
VEGET								
ADULT	1.48E-05	8.07E-05	4.98E-04	8.06E-07	8.47E-07	1.17E-04	5.62E-09	0.00E+00
TEEN	2.43E-05	9.93E-05	8.26E-04	1.23E-06	1.27E-06	1.57E-04	1.05E-08	0.00E+00
CHILD	5.88E-05	7.86E-05	2.01E-03	1.96E-06	2.01E-06	3.01E-04	1.60E-08	0.00E+00
MEAT								
ADULT	2.65E-07	1.29E-06	4.91E-06	2.02E-07	1.31E-07	3.14E-06	4.58E-10	0.00E+00
TEEN	2.15E-07	7.58E-07	4.13E-06	1.56E-07	9.80E-08	2.27E-06	4.33E-10	0.00E+00
CHILD	3.70E-07	4.34E-07	7.78E-06	1.82E-07	1.13E-07	3.43E-06	5.09E-10	0.00E+00
COW MILK								
ADULT	1.14E-06	4.74E-06	2.37E-05	9.62E-07	9.13E-07	8.74E-05	3.87E-09	0.00E+00
TEEN	2.02E-06	6.27E-06	4.35E-05	1.64E-06	1.55E-06	1.38E-04	8.00E-09	0.00E+00
CHILD	4.55E-06	4.86E-06	1.07E-04	2.60E-06	2.45E-06	2.74E-04	1.23E-08	0.00E+00
INFANT	8.00E-06	6.96E-06	2.03E-04	5.12E-06	3.83E-06	6.65E-04	2.22E-08	0.00E+00
GOATMILK								
ADULT	1.68E-06	7.95E-06	4.92E-05	5.05E-07	6.43E-07	1.05E-04	1.16E-08	0.00E+00
TEEN	2.99E-06	1.08E-05	9.04E-05	8.89E-07	1.14E-06	1.66E-04	2.40E-08	0.00E+00
CHILD	7.05E-06	8.71E-06	2.23E-04	1.52E-06	1.87E-06	3.28E-04	3.69E-08	0.00E+00
INFANT	1.33E-05	9.03E-06	4.23E-04	3.41E-06	3.19E-06	7.98E-04	6.67E-08	0.00E+00
INHAL								
ADULT	1.29E-07	3.64E-06	3.18E-06	7.76E-08	9.83E-08	1.23E-05	1.51E-05	0.00E+00
TEEN	1.80E-07	4.04E-06	4.52E-06	1.06E-07	1.35E-07	1.54E-05	2.58E-05	0.00E+00
CHILD	2.35E-07	3.45E-06	6.21E-06	1.03E-07	1.26E-07	1.77E-05	2.30E-05	0.00E+00
INFANT	1.57E-07	2.19E-06	4.10E-06	9.23E-08	8.22E-08	1.63E-05	2.13E-05	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 7.42E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.09E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.28E-05	7.28E-05	7.28E-05	7.28E-05	7.28E-05	7.28E-05	7.35E-05	1.49E-04
GROUND	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.28E-04	1.50E-04
VEGET								
ADULT	1.76E-04	9.62E-04	5.95E-03	8.50E-06	9.34E-06	1.36E-03	3.59E-08	0.00E+00
TEEN	2.90E-04	1.18E-03	9.85E-03	1.29E-05	1.40E-05	1.83E-03	6.72E-08	0.00E+00
CHILD	7.01E-04	9.38E-04	2.40E-02	2.07E-05	2.22E-05	3.51E-03	1.02E-07	0.00E+00
MEAT								
ADULT	2.97E-06	1.48E-05	5.85E-05	2.00E-06	1.29E-06	3.66E-05	2.93E-09	0.00E+00
TEEN	2.43E-06	8.78E-06	4.92E-05	1.54E-06	9.65E-07	2.65E-05	2.77E-09	0.00E+00
CHILD	4.20E-06	5.05E-06	9.26E-05	1.80E-06	1.12E-06	4.00E-05	3.25E-09	0.00E+00
COW MILK								
ADULT	1.28E-05	5.29E-05	2.82E-04	9.71E-06	9.69E-06	1.02E-03	2.47E-08	0.00E+00
TEEN	2.28E-05	7.06E-05	5.18E-04	1.66E-05	1.65E-05	1.61E-03	5.11E-08	0.00E+00
CHILD	5.18E-05	5.53E-05	1.28E-03	2.64E-05	2.63E-05	3.19E-03	7.85E-08	0.00E+00
INFANT	9.22E-05	7.57E-05	2.42E-03	5.29E-05	4.15E-05	7.76E-03	1.42E-07	0.00E+00
GOATMILK								
ADULT	1.96E-05	9.44E-05	5.86E-04	5.20E-06	7.21E-06	1.22E-03	7.42E-08	0.00E+00
TEEN	3.52E-05	1.29E-04	1.08E-03	9.15E-06	1.28E-05	1.94E-03	1.53E-07	0.00E+00
CHILD	8.35E-05	1.04E-04	2.66E-03	1.56E-05	2.11E-05	3.83E-03	2.36E-07	0.00E+00
INFANT	1.58E-04	1.07E-04	5.04E-03	3.59E-05	3.61E-05	9.31E-03	4.26E-07	0.00E+00
INHAL								
ADULT	6.11E-07	1.88E-05	1.64E-05	2.97E-07	4.43E-07	6.25E-05	7.85E-05	0.00E+00
TEEN	8.55E-07	2.14E-05	2.33E-05	4.07E-07	6.08E-07	7.84E-05	1.34E-04	0.00E+00
CHILD	1.12E-06	2.40E-05	3.21E-05	3.94E-07	5.69E-07	9.07E-05	1.19E-04	0.00E+00
INFANT	7.46E-07	1.68E-05	2.12E-05	3.53E-07	3.72E-07	8.31E-05	1.11E-04	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 2.86E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 4.01E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.68E-04	2.71E-04	5.54E-04
GROUND	9.22E-04	9.22E-04	9.22E-04	9.22E-04	9.22E-04	9.22E-04	9.22E-04	1.08E-03
VEGET								
ADULT	1.08E-03	5.86E-03	3.61E-02	7.19E-05	9.36E-05	1.56E-02	1.22E-07	0.00E+00
TEEN	1.78E-03	7.21E-03	5.99E-02	1.09E-04	1.41E-04	2.10E-02	2.29E-07	0.00E+00
CHILD	4.29E-03	5.71E-03	1.46E-01	1.77E-04	2.25E-04	4.03E-02	3.48E-07	0.00E+00
MEAT								
ADULT	1.84E-05	9.36E-05	3.55E-04	1.17E-05	8.01E-06	4.20E-04	9.94E-09	0.00E+00
TEEN	1.50E-05	5.52E-05	2.98E-04	9.03E-06	6.07E-06	3.04E-04	9.41E-09	0.00E+00
CHILD	2.59E-05	3.17E-05	5.63E-04	1.06E-05	7.13E-06	4.59E-04	1.11E-08	0.00E+00
COW MILK								
ADULT	8.50E-05	3.16E-04	1.72E-03	7.07E-05	8.48E-05	1.17E-02	8.39E-08	0.00E+00
TEEN	1.51E-04	4.23E-04	3.16E-03	1.22E-04	1.47E-04	1.85E-02	1.73E-07	0.00E+00
CHILD	3.37E-04	3.33E-04	7.80E-03	2.00E-04	2.38E-04	3.67E-02	2.66E-07	0.00E+00
INFANT	6.07E-04	4.42E-04	1.48E-02	4.26E-04	3.93E-04	8.92E-02	4.82E-07	0.00E+00
GOATMILK								
ADULT	1.29E-04	5.78E-04	3.57E-03	4.98E-05	7.80E-05	1.41E-02	2.52E-07	0.00E+00
TEEN	2.31E-04	7.89E-04	6.57E-03	8.80E-05	1.39E-04	2.22E-02	5.20E-07	0.00E+00
CHILD	5.41E-04	6.34E-04	1.62E-02	1.52E-04	2.30E-04	4.40E-02	7.99E-07	0.00E+00
INFANT	1.02E-03	6.53E-04	3.07E-02	3.60E-04	3.97E-04	1.07E-01	1.45E-06	0.00E+00
INHAL								
ADULT	5.49E-06	1.50E-04	1.28E-04	3.96E-06	6.35E-06	9.18E-04	6.31E-04	0.00E+00
TEEN	7.62E-06	1.94E-04	1.83E-04	5.43E-06	8.74E-06	1.15E-03	1.08E-03	0.00E+00
CHILD	9.81E-06	4.30E-04	2.51E-04	5.30E-06	8.19E-06	1.34E-03	9.57E-04	0.00E+00
INFANT	6.57E-06	3.45E-04	1.66E-04	4.83E-06	5.38E-06	1.23E-03	8.89E-04	0.00E+00

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TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
AT .67 MILES N

ANNUAL BETA AIR DOSE = 3.24E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 4.39E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.94E-04	2.94E-04	2.94E-04	2.94E-04	2.94E-04	2.94E-04	2.97E-04	6.14E-04
GROUND	1.10E-03	1.10E-03	1.10E-03	1.10E-03	1.10E-03	1.10E-03	1.10E-03	1.30E-03
VEGET								
ADULT	1.29E-03	7.02E-03	4.32E-02	8.62E-05	1.12E-04	1.87E-02	1.52E-07	0.00E+00
TEEN	2.13E-03	8.63E-03	7.16E-02	1.31E-04	1.69E-04	2.52E-02	2.85E-07	0.00E+00
CHILD	5.14E-03	6.83E-03	1.75E-01	2.13E-04	2.70E-04	4.82E-02	4.33E-07	0.00E+00
MEAT								
ADULT	2.20E-05	1.12E-04	4.25E-04	1.40E-05	9.64E-06	5.02E-04	1.24E-08	0.00E+00
TEEN	1.80E-05	6.61E-05	3.57E-04	1.09E-05	7.30E-06	3.64E-04	1.17E-08	0.00E+00
CHILD	3.11E-05	3.79E-05	6.73E-04	1.28E-05	8.57E-06	5.49E-04	1.38E-08	0.00E+00
COW MILK								
ADULT	1.02E-04	3.79E-04	2.06E-03	8.49E-05	1.02E-04	1.40E-02	1.04E-07	0.00E+00
TEEN	1.80E-04	5.07E-04	3.78E-03	1.47E-04	1.76E-04	2.22E-02	2.16E-07	0.00E+00
CHILD	4.03E-04	3.99E-04	9.33E-03	2.40E-04	2.86E-04	4.39E-02	3.31E-07	0.00E+00
INFANT	7.27E-04	5.31E-04	1.77E-02	5.12E-04	4.70E-04	1.07E-01	6.00E-07	0.00E+00
GOATMILK								
ADULT	1.55E-04	6.92E-04	4.27E-03	5.97E-05	9.34E-05	1.68E-02	3.13E-07	0.00E+00
TEEN	2.77E-04	9.45E-04	7.86E-03	1.06E-04	1.66E-04	2.66E-02	6.46E-07	0.00E+00
CHILD	6.48E-04	7.59E-04	1.94E-02	1.82E-04	2.75E-04	5.27E-02	9.94E-07	0.00E+00
INFANT	1.23E-03	7.81E-04	3.68E-02	4.32E-04	4.75E-04	1.28E-01	1.80E-06	0.00E+00
INHAL								
ADULT	7.43E-06	2.04E-04	1.75E-04	5.29E-06	8.52E-06	1.23E-03	8.58E-04	0.00E+00
TEEN	1.03E-05	2.63E-04	2.48E-04	7.26E-06	1.17E-05	1.55E-03	1.47E-03	0.00E+00
CHILD	1.33E-05	5.84E-04	3.41E-04	7.08E-06	1.10E-05	1.80E-03	1.30E-03	0.00E+00
INFANT	8.88E-06	4.68E-04	2.26E-04	6.45E-06	7.22E-06	1.65E-03	1.21E-03	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.94E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 4.63E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.10E-04	3.10E-04	3.10E-04	3.10E-04	3.10E-04	3.10E-04	3.13E-04	6.16E-04
GROUND	3.59E-04	3.59E-04	3.59E-04	3.59E-04	3.59E-04	3.59E-04	3.59E-04	4.22E-04
VEGET								
ADULT	4.23E-04	2.29E-03	1.41E-02	3.00E-05	3.76E-05	6.07E-03	1.10E-07	0.00E+00
TEEN	6.96E-04	2.82E-03	2.34E-02	4.55E-05	5.67E-05	8.18E-03	2.05E-07	0.00E+00
CHILD	1.68E-03	2.23E-03	5.70E-02	7.40E-05	9.02E-05	1.57E-02	3.13E-07	0.00E+00
MEAT								
ADULT	7.53E-06	3.75E-05	1.39E-04	5.37E-06	3.66E-06	1.63E-04	8.92E-09	0.00E+00
TEEN	6.13E-06	2.21E-05	1.17E-04	4.15E-06	2.76E-06	1.18E-04	8.44E-09	0.00E+00
CHILD	1.05E-05	1.26E-05	2.20E-04	4.88E-06	3.23E-06	1.79E-04	9.92E-09	0.00E+00
COW MILK								
ADULT	3.48E-05	1.31E-04	6.73E-04	3.09E-05	3.52E-05	4.56E-03	7.53E-08	0.00E+00
TEEN	6.13E-05	1.74E-04	1.24E-03	5.33E-05	6.08E-05	7.21E-03	1.56E-07	0.00E+00
CHILD	1.36E-04	1.36E-04	3.05E-03	8.65E-05	9.79E-05	1.43E-02	2.39E-07	0.00E+00
INFANT	2.43E-04	1.87E-04	5.77E-03	1.81E-04	1.60E-04	3.47E-02	4.33E-07	0.00E+00
GOATMILK								
ADULT	5.13E-05	2.26E-04	1.40E-03	2.09E-05	3.10E-05	5.47E-03	2.26E-07	0.00E+00
TEEN	9.13E-05	3.09E-04	2.57E-03	3.68E-05	5.50E-05	8.66E-03	4.67E-07	0.00E+00
CHILD	2.12E-04	2.48E-04	6.34E-03	6.34E-05	9.11E-05	1.71E-02	7.17E-07	0.00E+00
INFANT	4.01E-04	2.57E-04	1.20E-02	1.49E-04	1.57E-04	4.16E-02	1.30E-06	0.00E+00
INHAL								
ADULT	1.73E-06	4.56E-05	3.87E-05	1.34E-06	2.01E-06	2.79E-04	1.90E-04	0.00E+00
TEEN	2.40E-06	5.91E-05	5.50E-05	1.83E-06	2.77E-06	3.51E-04	3.25E-04	0.00E+00
CHILD	3.08E-06	1.33E-04	7.56E-05	1.79E-06	2.60E-06	4.07E-04	2.88E-04	0.00E+00
INFANT	2.07E-06	1.07E-04	5.00E-05	1.63E-06	1.70E-06	3.73E-04	2.68E-04	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 1.43E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 2.33E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.56E-04	1.56E-04	1.56E-04	1.56E-04	1.56E-04	1.56E-04	1.57E-04	3.06E-04
GROUND	2.12E-05	2.12E-05	2.12E-05	2.12E-05	2.12E-05	2.12E-05	2.12E-05	2.49E-05
VEGET								
ADULT	2.52E-05	1.36E-04	8.39E-04	1.87E-06	2.28E-06	3.58E-04	9.56E-09	0.00E+00
TEEN	4.14E-05	1.68E-04	1.39E-03	2.85E-06	3.43E-06	4.82E-04	1.79E-08	0.00E+00
CHILD	9.98E-05	1.33E-04	3.39E-03	4.61E-06	5.45E-06	9.25E-04	2.72E-08	0.00E+00
MEAT								
ADULT	4.65E-07	2.28E-06	8.27E-06	3.59E-07	2.44E-07	9.63E-06	7.78E-10	0.00E+00
TEEN	3.77E-07	1.34E-06	6.95E-06	2.77E-07	1.83E-07	6.98E-06	7.36E-10	0.00E+00
CHILD	6.45E-07	7.61E-07	1.31E-05	3.25E-07	2.14E-07	1.05E-05	8.65E-10	0.00E+00
COW MILK								
ADULT	2.14E-06	8.11E-06	4.01E-05	2.00E-06	2.18E-06	2.69E-04	6.56E-09	0.00E+00
TEEN	3.76E-06	1.07E-05	7.35E-05	3.43E-06	3.76E-06	4.25E-04	1.36E-08	0.00E+00
CHILD	8.32E-06	8.32E-06	1.81E-04	5.55E-06	6.04E-06	8.41E-04	2.08E-08	0.00E+00
INFANT	1.47E-05	1.18E-05	3.43E-04	1.15E-05	9.78E-06	2.04E-03	3.77E-08	0.00E+00
GOATMILK								
ADULT	3.09E-06	1.35E-05	8.30E-05	1.30E-06	1.86E-06	3.22E-04	1.97E-08	0.00E+00
TEEN	5.46E-06	1.84E-05	1.52E-04	2.30E-06	3.29E-06	5.10E-04	4.07E-08	0.00E+00
CHILD	1.27E-05	1.48E-05	3.77E-04	3.95E-06	5.45E-06	1.01E-03	6.25E-08	0.00E+00
INFANT	2.39E-05	1.53E-05	7.14E-04	9.17E-06	9.37E-06	2.45E-03	1.13E-07	0.00E+00
INHAL								
ADULT	2.35E-07	5.23E-06	4.37E-06	2.23E-07	2.72E-07	3.21E-05	2.12E-05	0.00E+00
TEEN	3.24E-07	6.39E-06	6.22E-06	3.06E-07	3.74E-07	4.02E-05	3.61E-05	0.00E+00
CHILD	4.13E-07	1.08E-05	8.54E-06	2.99E-07	3.51E-07	4.66E-05	3.21E-05	0.00E+00
INFANT	2.80E-07	8.35E-06	5.66E-06	2.72E-07	2.30E-07	4.27E-05	2.98E-05	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 6.79E-05 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.01E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.73E-05	6.80E-05	1.36E-04
GROUND	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.19E-04	1.40E-04
VEGET								
ADULT	1.40E-04	7.60E-04	4.68E-03	9.60E-06	1.23E-05	2.02E-03	2.51E-08	0.00E+00
TEEN	2.30E-04	9.34E-04	7.75E-03	1.46E-05	1.85E-05	2.72E-03	4.70E-08	0.00E+00
CHILD	5.56E-04	7.40E-04	1.89E-02	2.37E-05	2.95E-05	5.21E-03	7.15E-08	0.00E+00
MEAT								
ADULT	2.43E-06	1.23E-05	4.60E-05	1.63E-06	1.12E-06	5.43E-05	2.04E-09	0.00E+00
TEEN	1.98E-06	7.22E-06	3.87E-05	1.26E-06	8.45E-07	3.93E-05	1.93E-09	0.00E+00
CHILD	3.42E-06	4.14E-06	7.29E-05	1.49E-06	9.90E-07	5.94E-05	2.27E-09	0.00E+00
COW MILK								
ADULT	1.12E-05	4.20E-05	2.23E-04	9.65E-06	1.13E-05	1.51E-03	1.72E-08	0.00E+00
TEEN	1.99E-05	5.61E-05	4.10E-04	1.67E-05	1.96E-05	2.40E-03	3.56E-08	0.00E+00
CHILD	4.43E-05	4.40E-05	1.01E-03	2.71E-05	3.16E-05	4.74E-03	5.47E-08	0.00E+00
INFANT	7.95E-05	5.95E-05	1.91E-03	5.75E-05	5.18E-05	1.15E-02	9.89E-08	0.00E+00
GOATMILK								
ADULT	1.69E-05	7.49E-05	4.63E-04	6.66E-06	1.02E-05	1.82E-03	5.16E-08	0.00E+00
TEEN	3.01E-05	1.02E-04	8.51E-04	1.18E-05	1.81E-05	2.88E-03	1.07E-07	0.00E+00
CHILD	7.02E-05	8.22E-05	2.10E-03	2.03E-05	3.00E-05	5.69E-03	1.64E-07	0.00E+00
INFANT	1.33E-04	8.48E-05	3.98E-03	4.79E-05	5.17E-05	1.38E-02	2.97E-07	0.00E+00
INHAL								
ADULT	8.66E-07	2.34E-05	2.00E-05	6.36E-07	1.01E-06	1.44E-04	9.82E-05	0.00E+00
TEEN	1.20E-06	3.02E-05	2.84E-05	8.73E-07	1.39E-06	1.82E-04	1.68E-04	0.00E+00
CHILD	1.54E-06	6.73E-05	3.91E-05	8.52E-07	1.30E-06	2.11E-04	1.49E-04	0.00E+00
INFANT	1.03E-06	5.40E-05	2.58E-05	7.77E-07	8.54E-07	1.93E-04	1.38E-04	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2004

SPECIAL LOCATION NO. 1 A Site Boundary  
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 4.66E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 7.25E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.86E-04	4.86E-04	4.86E-04	4.86E-04	4.86E-04	4.86E-04	4.90E-04	9.67E-04
GROUND	8.21E-04	8.21E-04	8.21E-04	8.21E-04	8.21E-04	8.21E-04	8.21E-04	9.66E-04
VEGET								
ADULT	9.83E-04	5.21E-03	3.21E-02	1.07E-04	1.57E-04	2.79E-02	1.50E-07	0.00E+00
TEEN	1.61E-03	6.40E-03	5.31E-02	1.62E-04	2.37E-04	3.75E-02	2.80E-07	0.00E+00
CHILD	3.87E-03	5.07E-03	1.30E-01	2.68E-04	3.80E-04	7.19E-02	4.26E-07	0.00E+00
MEAT								
ADULT	1.70E-05	8.34E-05	3.16E-04	1.15E-05	9.07E-06	7.50E-04	1.21E-08	0.00E+00
TEEN	1.38E-05	4.92E-05	2.65E-04	8.95E-06	6.99E-06	5.43E-04	1.15E-08	0.00E+00
CHILD	2.37E-05	2.82E-05	5.00E-04	1.07E-05	8.36E-06	8.20E-04	1.35E-08	0.00E+00
COW MILK								
ADULT	9.39E-05	2.89E-04	1.55E-03	9.52E-05	1.31E-04	2.09E-02	1.02E-07	0.00E+00
TEEN	1.64E-04	3.87E-04	2.84E-03	1.66E-04	2.30E-04	3.31E-02	2.11E-07	0.00E+00
CHILD	3.55E-04	3.05E-04	7.01E-03	2.78E-04	3.76E-04	6.54E-02	3.25E-07	0.00E+00
INFANT	6.45E-04	4.01E-04	1.33E-02	6.25E-04	6.35E-04	1.59E-01	5.87E-07	0.00E+00
GOATMILK								
ADULT	1.37E-04	5.23E-04	3.19E-03	8.38E-05	1.36E-04	2.51E-02	3.06E-07	0.00E+00
TEEN	2.42E-04	7.14E-04	5.87E-03	1.48E-04	2.42E-04	3.97E-02	6.33E-07	0.00E+00
CHILD	5.48E-04	5.74E-04	1.45E-02	2.57E-04	4.02E-04	7.85E-02	9.73E-07	0.00E+00
INFANT	1.04E-03	5.90E-04	2.75E-02	6.19E-04	6.97E-04	1.91E-01	1.76E-06	0.00E+00
INHAL								
ADULT	6.71E-06	1.36E-04	1.22E-04	6.98E-06	1.16E-05	1.74E-03	5.67E-04	0.00E+00
TEEN	9.19E-06	1.47E-04	1.73E-04	9.60E-06	1.59E-05	2.19E-03	9.68E-04	0.00E+00
CHILD	1.14E-05	9.32E-05	2.38E-04	9.40E-06	1.49E-05	2.52E-03	8.59E-04	0.00E+00
INFANT	7.74E-06	4.99E-05	1.58E-04	8.65E-06	9.83E-06	2.31E-03	7.95E-04	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 2 A Site Boundary  
AT .67 MILES N

ANNUAL BETA AIR DOSE = 8.15E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 1.00E-03 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.72E-04	6.72E-04	6.72E-04	6.72E-04	6.72E-04	6.72E-04	6.80E-04	1.50E-03
GROUND	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.09E-03	1.28E-03
VEGET								
ADULT	1.30E-03	6.90E-03	4.25E-02	1.44E-04	2.12E-04	3.76E-02	2.20E-07	0.00E+00
TEEN	2.14E-03	8.48E-03	7.03E-02	2.19E-04	3.20E-04	5.06E-02	4.12E-07	0.00E+00
CHILD	5.12E-03	6.72E-03	1.72E-01	3.61E-04	5.13E-04	9.70E-02	6.26E-07	0.00E+00
MEAT								
ADULT	2.26E-05	1.11E-04	4.18E-04	1.55E-05	1.22E-05	1.01E-03	1.78E-08	0.00E+00
TEEN	1.83E-05	6.52E-05	3.51E-04	1.20E-05	9.42E-06	7.32E-04	1.69E-08	0.00E+00
CHILD	3.15E-05	3.74E-05	6.63E-04	1.44E-05	1.13E-05	1.10E-03	1.98E-08	0.00E+00
COW MILK								
ADULT	1.26E-04	3.85E-04	2.05E-03	1.29E-04	1.77E-04	2.82E-02	1.50E-07	0.00E+00
TEEN	2.20E-04	5.16E-04	3.77E-03	2.25E-04	3.11E-04	4.47E-02	3.11E-07	0.00E+00
CHILD	4.74E-04	4.06E-04	9.29E-03	3.76E-04	5.09E-04	8.84E-02	4.77E-07	0.00E+00
INFANT	8.62E-04	5.36E-04	1.76E-02	8.46E-04	8.60E-04	2.15E-01	8.64E-07	0.00E+00
GOATMILK								
ADULT	1.83E-04	6.94E-04	4.23E-03	1.14E-04	1.85E-04	3.39E-02	4.51E-07	0.00E+00
TEEN	3.23E-04	9.47E-04	7.78E-03	2.01E-04	3.29E-04	5.36E-02	9.31E-07	0.00E+00
CHILD	7.30E-04	7.61E-04	1.92E-02	3.49E-04	5.45E-04	1.06E-01	1.43E-06	0.00E+00
INFANT	1.38E-03	7.83E-04	3.64E-02	8.40E-04	9.45E-04	2.58E-01	2.59E-06	0.00E+00
INHAL								
ADULT	8.79E-06	1.84E-04	1.55E-04	9.65E-06	1.61E-05	2.35E-03	7.65E-04	0.00E+00
TEEN	1.20E-05	2.64E-04	2.21E-04	1.33E-05	2.22E-05	2.95E-03	1.31E-03	0.00E+00
CHILD	1.49E-05	8.00E-04	3.03E-04	1.30E-05	2.08E-05	3.43E-03	1.16E-03	0.00E+00
INFANT	1.01E-05	6.65E-04	2.01E-04	1.20E-05	1.37E-05	3.15E-03	1.08E-03	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 3 A Nearest Resident  
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 5.71E-04 MILLRADS  
 ANNUAL GAMMA AIR DOSE = 8.70E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 5.83E-04	: 5.83E-04	: 5.83E-04	: 5.83E-04	: 5.83E-04	: 5.83E-04	: 5.89E-04	: 1.18E-03
GROUND	: 3.04E-04	: 3.04E-04	: 3.04E-04	: 3.04E-04	: 3.04E-04	: 3.04E-04	: 3.04E-04	: 3.57E-04
VEGET	:	:	:	:	:	:	:	:
ADULT	: 3.64E-04	: 1.93E-03	: 1.18E-02	: 4.10E-05	: 5.90E-05	: 1.04E-02	: 1.03E-07	: 0.00E+00
TEEN	: 5.96E-04	: 2.37E-03	: 1.96E-02	: 6.20E-05	: 8.91E-05	: 1.40E-02	: 1.94E-07	: 0.00E+00
CHILD	: 1.43E-03	: 1.88E-03	: 4.79E-02	: 1.02E-04	: 1.43E-04	: 2.67E-02	: 2.94E-07	: 0.00E+00
MEAT	:	:	:	:	:	:	:	:
ADULT	: 6.46E-06	: 3.13E-05	: 1.17E-04	: 4.70E-06	: 3.65E-06	: 2.78E-04	: 8.39E-09	: 0.00E+00
TEEN	: 5.25E-06	: 1.84E-05	: 9.81E-05	: 3.65E-06	: 2.81E-06	: 2.02E-04	: 7.94E-09	: 0.00E+00
CHILD	: 8.97E-06	: 1.06E-05	: 1.85E-04	: 4.36E-06	: 3.35E-06	: 3.04E-04	: 9.33E-09	: 0.00E+00
COW MILK	:	:	:	:	:	:	:	:
ADULT	: 3.57E-05	: 1.11E-04	: 5.73E-04	: 3.74E-05	: 4.99E-05	: 7.78E-03	: 7.06E-08	: 0.00E+00
TEEN	: 6.23E-05	: 1.48E-04	: 1.05E-03	: 6.51E-05	: 8.76E-05	: 1.23E-02	: 1.46E-07	: 0.00E+00
CHILD	: 1.34E-04	: 1.16E-04	: 2.59E-03	: 1.08E-04	: 1.43E-04	: 2.44E-02	: 2.24E-07	: 0.00E+00
INFANT	: 2.42E-04	: 1.56E-04	: 4.92E-03	: 2.42E-04	: 2.41E-04	: 5.92E-02	: 4.06E-07	: 0.00E+00
GOATMILK	:	:	:	:	:	:	:	:
ADULT	: 5.14E-05	: 1.94E-04	: 1.18E-03	: 3.23E-05	: 5.13E-05	: 9.34E-03	: 2.12E-07	: 0.00E+00
TEEN	: 9.04E-05	: 2.65E-04	: 2.17E-03	: 5.72E-05	: 9.13E-05	: 1.48E-02	: 4.38E-07	: 0.00E+00
CHILD	: 2.04E-04	: 2.12E-04	: 5.36E-03	: 9.92E-05	: 1.51E-04	: 2.93E-02	: 6.73E-07	: 0.00E+00
INFANT	: 3.85E-04	: 2.19E-04	: 1.02E-02	: 2.37E-04	: 2.62E-04	: 7.11E-02	: 1.22E-06	: 0.00E+00
INHAL	:	:	:	:	:	:	:	:
ADULT	: 2.21E-06	: 4.56E-05	: 3.80E-05	: 2.47E-06	: 3.97E-06	: 5.64E-04	: 1.88E-04	: 0.00E+00
TEEN	: 3.02E-06	: 6.57E-05	: 5.40E-05	: 3.39E-06	: 5.47E-06	: 7.10E-04	: 3.21E-04	: 0.00E+00
CHILD	: 3.75E-06	: 2.01E-04	: 7.42E-05	: 3.33E-06	: 5.13E-06	: 8.26E-04	: 2.85E-04	: 0.00E+00
INFANT	: 2.55E-06	: 1.67E-04	: 4.93E-05	: 3.07E-06	: 3.37E-06	: 7.57E-04	: 2.65E-04	: 0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 4 A Nearest Cow  
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 3.30E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 5.47E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.67E-04	3.67E-04	3.67E-04	3.67E-04	3.67E-04	3.67E-04	3.70E-04	7.15E-04
GROUND	1.95E-05	1.95E-05	1.95E-05	1.95E-05	1.95E-05	1.95E-05	1.95E-05	2.30E-05
VEGET								
ADULT	2.35E-05	1.25E-04	7.65E-04	2.72E-06	3.78E-06	6.51E-04	1.17E-08	0.00E+00
TEEN	3.85E-05	1.53E-04	1.27E-03	4.12E-06	5.72E-06	8.76E-04	2.18E-08	0.00E+00
CHILD	9.23E-05	1.21E-04	3.09E-03	6.78E-06	9.14E-06	1.68E-03	3.32E-08	0.00E+00
MEAT								
ADULT	4.38E-07	2.08E-06	7.56E-06	3.49E-07	2.64E-07	1.75E-05	9.46E-10	0.00E+00
TEEN	3.54E-07	1.22E-06	6.35E-06	2.71E-07	2.02E-07	1.27E-05	8.95E-10	0.00E+00
CHILD	6.02E-07	6.97E-07	1.20E-05	3.22E-07	2.39E-07	1.91E-05	1.05E-09	0.00E+00
COW MILK								
ADULT	2.38E-06	7.56E-06	3.70E-05	2.57E-06	3.28E-06	4.88E-04	7.97E-09	0.00E+00
TEEN	4.13E-06	1.00E-05	6.80E-05	4.47E-06	5.73E-06	7.73E-04	1.65E-08	0.00E+00
CHILD	8.87E-06	7.78E-06	1.68E-04	7.39E-06	9.33E-06	1.53E-03	2.53E-08	0.00E+00
INFANT	1.59E-05	1.09E-05	3.17E-04	1.62E-05	1.56E-05	3.72E-03	4.58E-08	0.00E+00
GOATMILK								
ADULT	3.36E-06	1.25E-05	7.62E-05	2.15E-06	3.27E-06	5.86E-04	2.39E-08	0.00E+00
TEEN	5.86E-06	1.71E-05	1.40E-04	3.80E-06	5.81E-06	9.28E-04	4.94E-08	0.00E+00
CHILD	1.31E-05	1.37E-05	3.46E-04	6.57E-06	9.64E-06	1.84E-03	7.59E-08	0.00E+00
INFANT	2.47E-05	1.42E-05	6.56E-04	1.55E-05	1.67E-05	4.46E-03	1.37E-07	0.00E+00
INHAL								
ADULT	3.05E-07	5.35E-06	4.32E-06	3.83E-07	5.17E-07	6.45E-05	2.09E-05	0.00E+00
TEEN	4.18E-07	7.07E-06	6.14E-06	5.26E-07	7.12E-07	8.11E-05	3.56E-05	0.00E+00
CHILD	5.17E-07	1.62E-05	8.43E-06	5.15E-07	6.68E-07	9.43E-05	3.16E-05	0.00E+00
INFANT	3.55E-07	1.32E-05	5.61E-06	4.75E-07	4.39E-07	8.65E-05	2.94E-05	0.00E+00



TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2004 (CONTINUED)

SPECIAL LOCATION NO. 5 A Nearest Garden  
AT 1.20 MILES SE

ANNUAL BETA AIR DOSE = 1.86E-04 MILLRADS  
ANNUAL GAMMA AIR DOSE = 2.65E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.78E-04	1.78E-04	1.78E-04	1.78E-04	1.78E-04	1.78E-04	1.80E-04	3.70E-04
GROUND	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.36E-04	1.60E-04
VEGET								
ADULT	1.63E-04	8.64E-04	5.31E-03	1.83E-05	2.65E-05	4.67E-03	3.96E-08	0.00E+00
TEEN	2.67E-04	1.06E-03	8.80E-03	2.77E-05	4.00E-05	6.29E-03	7.41E-08	0.00E+00
CHILD	6.41E-04	8.41E-04	2.15E-02	4.57E-05	6.41E-05	1.21E-02	1.13E-07	0.00E+00
MEAT								
ADULT	2.87E-06	1.40E-05	5.24E-05	2.05E-06	1.60E-06	1.26E-04	3.21E-09	0.00E+00
TEEN	2.33E-06	8.23E-06	4.40E-05	1.59E-06	1.23E-06	9.09E-05	3.04E-09	0.00E+00
CHILD	3.99E-06	4.72E-06	8.30E-05	1.90E-06	1.47E-06	1.37E-04	3.57E-09	0.00E+00
COW MILK								
ADULT	1.59E-05	4.92E-05	2.57E-04	1.65E-05	2.23E-05	3.51E-03	2.71E-08	0.00E+00
TEEN	2.78E-05	6.57E-05	4.72E-04	2.88E-05	3.92E-05	5.55E-03	5.59E-08	0.00E+00
CHILD	5.99E-05	5.16E-05	1.16E-03	4.81E-05	6.41E-05	1.10E-02	8.59E-08	0.00E+00
INFANT	1.08E-04	6.90E-05	2.21E-03	1.07E-04	1.08E-04	2.67E-02	1.55E-07	0.00E+00
GOATMILK								
ADULT	2.30E-05	8.69E-05	5.30E-04	1.44E-05	2.30E-05	4.21E-03	8.11E-08	0.00E+00
TEEN	4.05E-05	1.19E-04	9.73E-04	2.55E-05	4.10E-05	6.66E-03	1.68E-07	0.00E+00
CHILD	9.13E-05	9.53E-05	2.40E-03	4.42E-05	6.80E-05	1.32E-02	2.58E-07	0.00E+00
INFANT	1.73E-04	9.82E-05	4.56E-03	1.06E-04	1.18E-04	3.20E-02	4.66E-07	0.00E+00
INHAL								
ADULT	1.12E-06	2.31E-05	1.93E-05	1.25E-06	2.05E-06	2.96E-04	9.53E-05	0.00E+00
TEEN	1.53E-06	3.31E-05	2.75E-05	1.72E-06	2.82E-06	3.72E-04	1.63E-04	0.00E+00
CHILD	1.89E-06	1.01E-04	3.78E-05	1.68E-06	2.65E-06	4.33E-04	1.45E-04	0.00E+00
INFANT	1.29E-06	8.39E-05	2.51E-05	1.55E-06	1.74E-06	3.97E-04	1.35E-04	0.00E+00

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TABLE 8. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-MARCH 2004

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.97E-04 : : 98.48% :	: 1.97E-04 : : 98.00% :	: 1.97E-04 : : 91.34% :	: 1.97E-04 : : 97.73% :	: 1.97E-04 : : 96.62% :	: 1.97E-04 : : 14.26% :	: 2.00E-04 : : 99.18% :	: 4.58E-04 : : 99.89% :
GROUND	: 4.17E-07 : : .21% :	: 4.17E-07 : : .21% :	: 4.17E-07 : : .19% :	: 4.17E-07 : : .21% :	: 4.17E-07 : : .20% :	: 4.17E-07 : : .03% :	: 4.17E-07 : : .21% :	: 4.90E-07 : : .11% :
INHAL	: 2.03E-07 : : .10% :	: 1.81E-06 : : .90% :	: 4.43E-07 : : .21% :	: 4.23E-07 : : .21% :	: 7.08E-07 : : .35% :	: 1.06E-04 : : 7.65% :	: 1.20E-06 : : .59% :	: 0.00E+00 : : .00% :
VEGET	: 4.19E-07 : : .21% :	: 9.84E-07 : : .49% :	: 1.27E-05 : : 5.85% :	: 1.99E-07 : : .10% :	: 1.19E-07 : : .06% :	: 1.26E-05 : : .91% :	: 1.88E-08 : : .01% :	: 0.00E+00 : : .00% :
COW MILK	: 1.97E-06 : : .98% :	: 7.60E-07 : : .38% :	: 4.94E-06 : : 2.28% :	: 3.46E-06 : : 1.71% :	: 5.54E-06 : : 2.71% :	: 1.05E-03 : : 75.59% :	: 2.48E-08 : : .01% :	: 0.00E+00 : : .00% :
MEAT	: 5.06E-08 : : .03% :	: 4.97E-08 : : .02% :	: 2.71E-07 : : .13% :	: 7.94E-08 : : .04% :	: 1.18E-07 : : .06% :	: 2.16E-05 : : 1.56% :	: 1.48E-09 : : .00% :	: 0.00E+00 : : .00% :
*TOTAL*	: 2.01E-04 : : .03% :	: 2.01E-04 : : .02% :	: 2.16E-04 : : .13% :	: 2.02E-04 : : .04% :	: 2.04E-04 : : .06% :	: 1.38E-03 : : 1.56% :	: 2.02E-04 : : .00% :	: 4.59E-04 : : .00% :

TABLE 9. DOSES TO POPULATION WITHIN 50 MILES, APRIL-JUNE 2004

Cooper Q2 2004  
 ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 9.89E-06 : : 79.25% :	: 9.89E-06 : : 75.86% :	: 9.89E-06 : : 54.07% :	: 9.89E-06 : : 70.40% :	: 9.89E-06 : : 59.43% :	: 9.89E-06 : : .82% :	: 1.01E-05 : : 88.41% :	: 2.72E-05 : : 98.49% :
GROUND	: 3.55E-07 : : 2.84% :	: 3.55E-07 : : 2.72% :	: 3.55E-07 : : 1.94% :	: 3.55E-07 : : 2.53% :	: 3.55E-07 : : 2.13% :	: 3.55E-07 : : .03% :	: 3.55E-07 : : 3.11% :	: 4.18E-07 : : 1.51% :
INHAL	: 1.96E-07 : : 1.57% :	: 1.73E-06 : : 13.31% :	: 3.44E-07 : : 1.88% :	: 4.16E-07 : : 2.96% :	: 6.99E-07 : : 4.20% :	: 1.04E-04 : : 8.60% :	: 9.65E-07 : : 8.47% :	: 0.00E+00 : : .00% :
VEGET	: 1.33E-07 : : 1.06% :	: 3.46E-07 : : 2.65% :	: 4.24E-06 : : 23.16% :	: 4.10E-08 : : .29% :	: 6.61E-08 : : .40% :	: 1.27E-05 : : 1.05% :	: 2.16E-11 : : .00% :	: 0.00E+00 : : .00% :
COW MILK	: 1.86E-06 : : 14.94% :	: 6.62E-07 : : 5.07% :	: 3.34E-06 : : 18.25% :	: 3.28E-06 : : 23.34% :	: 5.52E-06 : : 33.15% :	: 1.06E-03 : : 87.70% :	: 1.74E-11 : : .00% :	: 0.00E+00 : : .00% :
MEAT	: 4.15E-08 : : .33% :	: 5.09E-08 : : .39% :	: 1.28E-07 : : .70% :	: 6.73E-08 : : .48% :	: 1.14E-07 : : .68% :	: 2.17E-05 : : 1.81% :	: 1.02E-11 : : .00% :	: 0.00E+00 : : .00% :
*TOTAL*	: 1.25E-05 : : 1.30E-05 :	: 1.30E-05 : : 1.83E-05 :	: 1.83E-05 : : 1.40E-05 :	: 1.40E-05 : : 1.66E-05 :	: 1.66E-05 : : 1.20E-03 :	: 1.20E-03 : : 1.14E-05 :	: 1.14E-05 : : 2.76E-05 :	: 2.76E-05 : : 2.76E-05 :

TABLE 10. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-JUNE 2004

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.97E-04 : : 97.20% :	: 1.97E-04 : : 96.50% :	: 1.97E-04 : : 87.86% :	: 1.97E-04 : : 95.74% :	: 1.97E-04 : : 93.51% :	: 1.97E-04 : : 7.63% :	: 2.00E-04 : : 98.54% :	: 4.60E-04 : : 99.80% :
GROUND	: 7.76E-07 : : .38% :	: 7.76E-07 : : .38% :	: 7.76E-07 : : .35% :	: 7.76E-07 : : .38% :	: 7.76E-07 : : .37% :	: 7.76E-07 : : .03% :	: 7.76E-07 : : .38% :	: 9.13E-07 : : .20% :
INHAL	: 4.00E-07 : : .20% :	: 3.51E-06 : : 1.72% :	: 7.86E-07 : : .35% :	: 8.41E-07 : : .41% :	: 1.41E-06 : : .67% :	: 2.10E-04 : : 8.14% :	: 2.14E-06 : : 1.06% :	: 0.00E+00 : : .00% :
VEGET	: 5.54E-07 : : .27% :	: 1.33E-06 : : .65% :	: 1.69E-05 : : 7.57% :	: 2.46E-07 : : .12% :	: 1.87E-07 : : .09% :	: 2.53E-05 : : .98% :	: 1.95E-08 : : .01% :	: 0.00E+00 : : .00% :
COW MILK	: 3.84E-06 : : 1.90% :	: 1.42E-06 : : .70% :	: 8.29E-06 : : 3.70% :	: 6.75E-06 : : 3.28% :	: 1.11E-05 : : 5.25% :	: 2.10E-03 : : 81.54% :	: 2.60E-08 : : .01% :	: 0.00E+00 : : .00% :
MEAT	: 9.23E-08 : : .05% :	: 1.00E-07 : : .05% :	: 3.99E-07 : : .18% :	: 1.47E-07 : : .07% :	: 2.31E-07 : : .11% :	: 4.34E-05 : : 1.68% :	: 1.55E-09 : : .00% :	: 0.00E+00 : : .00% :
*TOTAL*	: 2.02E-04 : : .05% :	: 2.04E-04 : : .05% :	: 2.24E-04 : : .09% :	: 2.05E-04 : : .07% :	: 2.10E-04 : : .09% :	: 2.58E-03 : : 1.03% :	: 2.02E-04 : : .08% :	: 4.61E-04 : : .02% :

TABLE 11. DOSES TO POPULATION WITHIN 50 MILES, JULY-SEPTEMBER 2004

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 9.72E-06 : : 43.40% :	: 9.72E-06 : : 36.64% :	: 9.72E-06 : : 27.27% :	: 9.72E-06 : : 41.52% :	: 9.72E-06 : : 37.88% :	: 9.72E-06 : : .87% :	: 9.87E-06 : : 42.69% :	: 2.36E-05 : : 66.64% :
GROUND	: 1.01E-05 : : 44.93% :	: 1.01E-05 : : 37.93% :	: 1.01E-05 : : 28.23% :	: 1.01E-05 : : 42.99% :	: 1.01E-05 : : 39.21% :	: 1.01E-05 : : .90% :	: 1.01E-05 : : 43.54% :	: 1.18E-05 : : 33.36% :
INHAL	: 2.20E-07 : : .98% :	: 3.19E-06 : : 12.03% :	: 4.62E-07 : : 1.30% :	: 4.43E-07 : : 1.89% :	: 7.24E-07 : : 2.82% :	: 1.09E-04 : : 9.77% :	: 3.19E-06 : : 13.78% :	: 0.00E+00 : : .00% :
VEGET	: 5.34E-07 : : 2.38% :	: 2.22E-06 : : 8.38% :	: 1.06E-05 : : 29.80% :	: 1.21E-07 : : .51% :	: 5.99E-08 : : .23% :	: 1.15E-05 : : 1.03% :	: 1.80E-11 : : .00% :	: 0.00E+00 : : .00% :
COW MILK	: 1.76E-06 : : 7.86% :	: 8.71E-07 : : 3.28% :	: 4.53E-06 : : 12.71% :	: 2.98E-06 : : 12.72% :	: 4.99E-06 : : 19.45% :	: 9.57E-04 : : 85.66% :	: 1.43E-11 : : .00% :	: 0.00E+00 : : .00% :
MEAT	: 9.99E-08 : : .45% :	: 4.59E-07 : : 1.73% :	: 2.48E-07 : : .70% :	: 8.61E-08 : : .37% :	: 1.04E-07 : : .40% :	: 1.98E-05 : : 1.77% :	: 8.62E-12 : : .00% :	: 0.00E+00 : : .00% :
*TOTAL*	: 2.24E-05	: 2.65E-05	: 3.57E-05	: 2.34E-05	: 2.57E-05	: 1.12E-03	: 2.31E-05	: 3.55E-05

TABLE 12. DOSES TO POPULATION WITHIN 50 MILES, OCTOBER-DECEMBER 2004

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.33E-04 : : 48.73% :	: 1.33E-04 : : 26.94% :	: 1.33E-04 : : 4.39% :	: 1.33E-04 : : 66.49% :	: 1.33E-04 : : 67.57% :	: 1.33E-04 : : 8.99% :	: 1.35E-04 : : 45.56% :	: 3.00E-04 : : 84.21% :
GROUND	: 4.79E-05 : : 17.60% :	: 4.79E-05 : : 9.73% :	: 4.79E-05 : : 1.59% :	: 4.79E-05 : : 24.01% :	: 4.79E-05 : : 24.40% :	: 4.79E-05 : : 3.25% :	: 4.79E-05 : : 16.23% :	: 5.64E-05 : : 15.79% :
INHAL	: 9.23E-07 : : .34% :	: 2.22E-05 : : 4.50% :	: 2.47E-05 : : .82% :	: 4.45E-07 : : .22% :	: 6.58E-07 : : .34% :	: 9.77E-05 : : 6.62% :	: 1.13E-04 : : 38.16% :	: 0.00E+00 : : .00% :
VEGET	: 6.86E-05 : : 25.17% :	: 2.32E-04 : : 47.17% :	: 2.33E-03 : : 77.00% :	: 3.07E-06 : : 1.54% :	: 1.58E-06 : : .81% :	: 1.42E-05 : : .96% :	: 5.02E-08 : : .02% :	: 0.00E+00 : : .00% :
COW MILK	: 2.00E-05 : : 7.36% :	: 4.91E-05 : : 9.97% :	: 4.48E-04 : : 14.82% :	: 1.39E-05 : : 6.96% :	: 1.25E-05 : : 6.38% :	: 1.16E-03 : : 78.54% :	: 6.75E-08 : : .02% :	: 0.00E+00 : : .00% :
MEAT	: 2.20E-06 : : .81% :	: 8.37E-06 : : 1.70% :	: 4.17E-05 : : 1.38% :	: 1.56E-06 : : .78% :	: 1.00E-06 : : .51% :	: 2.41E-05 : : 1.64% :	: 3.98E-09 : : .00% :	: 0.00E+00 : : .00% :
*TOTAL*	: 2.72E-04	: 4.93E-04	: 3.02E-03	: 2.00E-04	: 1.96E-04	: 1.48E-03	: 2.95E-04	: 3.57E-04

TABLE 13. DOSES TO POPULATION WITHIN 50 MILES, JULY-DECEMBER 2004

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.62E-04 :	1.62E-04 :	1.62E-04 :	1.62E-04 :	1.62E-04 :	1.62E-04 :	1.64E-04 :	3.67E-04 :
	: 50.73% :	29.65% :	5.25% :	65.46% :	65.71% :	6.18% :	46.03% :	83.26% :
GROUND	: 6.28E-05 :	6.28E-05 :	6.28E-05 :	6.28E-05 :	6.28E-05 :	6.28E-05 :	6.28E-05 :	7.39E-05 :
	: 19.69% :	11.51% :	2.04% :	25.41% :	25.50% :	2.40% :	17.63% :	16.74% :
INHAL	: 1.24E-06 :	2.78E-05 :	2.81E-05 :	9.03E-07 :	1.40E-06 :	2.09E-04 :	1.29E-04 :	0.00E+00 :
	: .39% :	5.09% :	.91% :	.37% :	.57% :	7.98% :	36.31% :	.00% :
VEGET	: 6.91E-05 :	2.35E-04 :	2.34E-03 :	3.19E-06 :	1.64E-06 :	2.57E-05 :	5.01E-08 :	0.00E+00 :
	: 21.65% :	42.99% :	75.78% :	1.29% :	.67% :	.98% :	.01% :	.00% :
COW MILK	: 2.18E-05 :	5.00E-05 :	4.52E-04 :	1.68E-05 :	1.75E-05 :	2.11E-03 :	6.72E-08 :	0.00E+00 :
	: 6.83% :	9.15% :	14.66% :	6.81% :	7.10% :	80.78% :	.02% :	.00% :
MEAT	: 2.30E-06 :	8.84E-06 :	4.20E-05 :	1.65E-06 :	1.11E-06 :	4.39E-05 :	4.00E-09 :	0.00E+00 :
	: .72% :	1.62% :	1.36% :	.67% :	.45% :	1.68% :	.00% :	.00% :
*TOTAL*	: 3.19E-04 :	5.46E-04 :	3.08E-03 :	2.47E-04 :	2.46E-04 :	2.62E-03 :	3.56E-04 :	4.41E-04 :

TABLE 14. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-DECEMBER 2004

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 ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.57E-04 :	3.57E-04 :	3.57E-04 :	3.57E-04 :	3.57E-04 :	3.57E-04 :	3.62E-04 :	8.23E-04 :
	: 68.95% :	47.95% :	10.83% :	79.46% :	78.76% :	6.87% :	65.72% :	91.88% :
GROUND	: 6.18E-05 :	6.18E-05 :	6.18E-05 :	6.18E-05 :	6.18E-05 :	6.18E-05 :	6.18E-05 :	7.27E-05 :
	: 11.94% :	8.30% :	1.88% :	13.76% :	13.64% :	1.19% :	11.22% :	8.12% :
INHAL	: 1.61E-06 :	3.03E-05 :	2.79E-05 :	1.75E-06 :	2.81E-06 :	4.20E-04 :	1.27E-04 :	0.00E+00 :
	: .31% :	4.08% :	.85% :	.39% :	.62% :	8.08% :	23.03% :	.00% :
VEGET	: 6.94E-05 :	2.35E-04 :	2.35E-03 :	3.42E-06 :	1.82E-06 :	5.09E-05 :	6.93E-08 :	0.00E+00 :
	: 13.41% :	31.60% :	71.23% :	.76% :	.40% :	.98% :	.01% :	.00% :
COW MILK	: 2.55E-05 :	5.11E-05 :	4.59E-04 :	2.35E-05 :	2.85E-05 :	4.22E-03 :	9.27E-08 :	0.00E+00 :
	: 4.93% :	6.87% :	13.93% :	5.23% :	6.29% :	81.19% :	.02% :	.00% :
MEAT	: 2.38E-06 :	8.90E-06 :	4.22E-05 :	1.78E-06 :	1.33E-06 :	8.72E-05 :	5.52E-09 :	0.00E+00 :
	: .46% :	1.20% :	1.28% :	.40% :	.29% :	1.68% :	.00% :	.00% :
*TOTAL*	: 5.18E-04 :	7.44E-04 :	3.29E-03 :	4.49E-04 :	4.53E-04 :	5.19E-03 :	5.51E-04 :	8.95E-04 :



## DOSE CALCULATION MODELS

To evaluate the radiological consequences of the routine release of liquid and gaseous effluents from the Cooper Nuclear Station, two computer codes were used: LADTAP II for liquid doses and GASPAR for gaseous doses. Both of these computer codes implement the dose calculational methodologies of U.S. NRC Regulatory Guide 1.109, Revision 1.

Source terms for each quarter are combined with station-specific demographic data and either hydrological dilution factors, for liquid dose calculations, or atmospheric diffusion estimates, for gaseous dose calculations.

For liquid dose calculations, the hydrological dilution factors used for input to LADTAP II, as well as other input parameters, are listed in Table 12. Other inputs not specifically listed in this table are taken from Regulatory Guide 1.109, Revision 1. Semiannual doses are obtained by summing the contributions from the appropriate quarters.

For gaseous dose calculations, atmospheric diffusion estimates are obtained from the reduction and processing of onsite meteorological data, as described in Appendix B. Source terms for the semiannual period are obtained by summing source terms for the appropriate quarters. Additional input to GASPAR includes the following station-supplied data:

- 0 to 50 mile population distribution
- 0 to 50 mile meat, milk, and vegetable distributions
- Absolute humidity at Cooper Nuclear Station ( $14.61 \text{ g/m}^3$ )
- The fraction of the year that the vegetables are grown (0.5)
- The fraction of the daily feed intake derived from pasture for milk and meat animals (0.5)

Other values used for input to GASPAR are default values from Regulatory Guide 1.109, Rev. 1.

TABLE 15. Values of Parameters Used to Make Dose Estimates Resulting From Liquid Discharges at Cooper Nuclear Station January-December 2004

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Parameter	Values Assigned	
	Individual	Population

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NO LIQUID EFFLUENTS RELEASED IN 2004

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## REFERENCES

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