



Nebraska Public Power District

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NLS2017044

May 1, 2017

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: Annual Radioactive Effluent Release Report
Cooper Nuclear Station, Docket No. 50-298, DPR-46

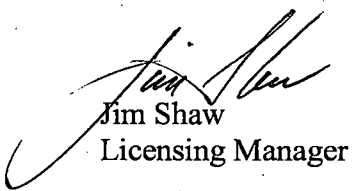
Dear Sir or Madam:

The purpose of this letter is to transmit to the Nuclear Regulatory Commission (NRC) the Cooper Nuclear Station (CNS) Annual Radioactive Effluent Release Report for the period January 1, 2016, through December 31, 2016. This document is being submitted for NRC use per the requirements of Technical Specification 5.6.3 and CNS Offsite Dose Assessment Manual (ODAM) D 5.3. There were no changes to the CNS ODAM or Process Control Program during this reporting period.

This letter contains no regulatory commitments.

Should you have any questions or require additional information, please contact me at (402) 825-2788.

Sincerely,



Jim Shaw
Licensing Manager

/bk

Enclosure: Annual Radioactive Effluent Release Report January 1, 2016, through
December 31, 2016

cc: Regional Administrator w/ enclosure
USNRC - Region IV

CNS Records w/ enclosure

NPG Distribution w/o enclosure

Cooper Project Manager w/ enclosure
USNRC - NRR Plant Licensing Branch

Senior Resident Inspector w/ enclosure
USNRC - CNS

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Enclosure

Annual Radioactive Effluent Release Report January 1, 2016, through December 31, 2016

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

RADIOACTIVE EFFLUENT RELEASE REPORT

January 1, 2016 through December 31, 2016

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, 2016. 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, 2016 through December 31, 2016

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, 2016 through December 31, 2016

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 2×10^{-4} uCi/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.

e. Carbon-14:

Carbon-14 source term was estimated using 2016 plant operational data and applying the methodology outlined in EPRI Technical Report 1021106 (EPRI, 2010).

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 an offsite laboratory.

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	NA	minutes
3.	Maximum time period for batch release	NA	minutes
4.	Average time period for batch release	NA	minutes
5.	Minimum time period for batch release	NA	minutes
6.	Average stream flow during periods of release of effluent into a flowing stream	NA	liters/minute

b. Gaseous

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

F. Abnormal Release

a. Liquid

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

b. Gaseous

1.	Number of releases:	0	
2.	Total activity released	NA	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 %
A. Fission and activation gases						
1. Total release	Ci	3.43E-01	3.46E-01	1.29E+00	2.63E-01	2.0E+01
2. Average release rate for period	μCi/sec	4.36E-02	4.40E-02	1.62E-01	3.31E-02	
B. Iodines						
1. Total iodine 131	Ci	1.58E-05	1.43E-05	4.53E-05	1.70E-05	3.0E+01
2. Average release rate for period	μCi/sec	2.01E-06	1.82E-06	5.70E-06	2.14E-06	
C. Particulates						
1. Particulates with half-lives >8 days	Ci	7.59E-06	5.71E-06	1.08E-04	4.99E-04	5.0E+01
2. Average release rate for period	μCi/sec	9.66E-07	7.26E-07	1.36E-05	6.28E-05	
3. Gross alpha radioactivity	Ci	1.54E-06	5.48E-07	1.49E-06	1.61E-06	
D. Tritium						
1. Total release	Ci	1.51E+00	5.91E+00	6.07E+00	1.05E+00	3.0E+01
2. Average release rate for period	μCi/sec	1.92E-01	7.52E-01	7.64E-01	1.32E-01	
E. Carbon-14						
1. Total release	Ci	2.64E+00	2.64E+00	2.66E+00	2.66E+00	NA
2. Release Rate	μCi/sec	3.35E-01	3.35E-01	3.35E-01	3.35E-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	6.17E-03	0.00E+00	3.10E-02	7.01E-02
krypton-83m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
krypton-85m	Ci	0.00E+00	0.00E+00	2.88E-02	1.07E-02
krypton-85	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
krypton-87	Ci	0.00E+00	0.00E+00	1.43E-01	3.47E-02
krypton-88	Ci	0.00E+00	0.00E+00	9.51E-02	3.35E-02
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	1.03E-02	0.00E+00	0.00E+00
xenon-133	Ci	0.00E+00	0.00E+00	8.43E-03	4.41E-03
xenon-135m	Ci	7.03E-02	5.70E-02	1.89E-01	1.02E-02
xenon-135	Ci	1.76E-02	1.07E-02	1.52E-01	2.10E-02
xenon-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-138	Ci	2.49E-01	2.40E-01	6.15E-01	7.81E-02
Total for period	Ci	3.43E-01	3.18E-01	1.26E+00	2.63E-01
2. Iodines					
iodine-131	Ci	6.37E-06	4.91E-06	2.70E-05	1.07E-05
iodine-132	Ci	4.79E-07	0.00E+00	3.56E-06	0.00E+00
iodine-133	Ci	2.29E-05	1.64E-05	6.57E-05	2.97E-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	5.03E-05
Total for period	Ci	2.97E-05	2.13E-05	9.63E-05	9.07E-05

* 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					
sodium-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium-51	Ci	0.00E+00	0.00E+00	4.93E-06	4.49E-06
manganese-54	Ci	0.00E+00	0.00E+00	1.14E-06	2.22E-06
manganese-56	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-58	Ci	0.00E+00	0.00E+00	2.75E-07	0.00E+00
cobalt-60	Ci	0.00E+00	0.00E+00	1.95E-05	3.95E-06
zinc-65	Ci	0.00E+00	0.00E+00	6.20E-07	0.00E+00
zinc-69	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rubidium-88	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
rubidium-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-89	Ci	5.14E-08	7.47E-08	1.27E-06	1.95E-06
strontium-90	Ci	0.00E+00	4.62E-09	0.00E+00	3.15E-08
strontium-91	Ci	0.00E+00	0.00E+00	3.67E-06	7.21E-05
yttrium-91m	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
niobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ruthenium-103	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony-124	Ci	0.00E+00	1.01E-08	0.00E+00	0.00E+00
antimony-125	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
tellurium-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cesium-137	Ci	0.00E+00	8.97E-09	2.30E-07	7.08E-07
cesium-138	Ci	1.08E-04	2.51E-04	3.19E-04	3.04E-01
barium-139	Ci	3.25E-04	3.87E-04	9.33E-04	3.24E-02
barium-140	Ci	0.00E+00	0.00E+00	1.55E-06	1.22E-06
lanthanum-140	Ci	0.00E+00	0.00E+00	1.58E-06	1.52E-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	4.33E-04	6.38E-04	1.29E-03	3.36E-01
Total for period with >8d half life	Ci	5.14E-08	9.84E-08	2.95E-05	1.46E-05

* No batch discharges were made

TABLE 1C
EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT
GASEOUS EFFLUENT-BUILDING VENT RELEASE
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	0.00E+00	0.00E+00	1.76E-02	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	2.80E-02	0.00E+00	0.00E+00
xenon-135m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-135	Ci	0.00E+00	0.00E+00	5.57E-03	0.00E+00
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	0.00E+00	2.80E-02	2.32E-02	0.00E+00
2. Iodines					
iodine-131	Ci	9.42E-06	9.42E-06	1.83E-05	6.34E-06
iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-133	Ci	1.84E-05	2.10E-05	3.59E-05	0.00E+00
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	2.78E-05	3.04E-05	5.42E-05	6.34E-06

* No batch discharges were made.

TABLE 1C
EFFLUENT AND GASEOUS WASTE DISPOSAL ANNUAL REPORT
GASEOUS EFFLUENT-BUILDING VENT RELEASE (CONTINUED)
CONTINUOUS MODE *BATCH

NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
3. Particulates					
sodium-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
chromium-51	Ci	0.00E+00	0.00E+00	7.45E-06	2.75E-04
manganese-54	Ci	0.00E+00	0.00E+00	1.64E-06	2.04E-05
manganese-56	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt-57	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	1.13E-05
iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	1.29E-05
cobalt-60	Ci	7.37E-06	5.53E-06	6.84E-05	1.52E-04
zinc-65	Ci	0.00E+00	0.00E+00	0.00E+00	1.23E-05
rubidium-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-90	Ci	0.00E+00	8.20E-08	0.00E+00	0.00E+00
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
nobium-95	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
technetium-99m	Ci	2.12E-06	4.72E-07	2.97E-07	1.21E-07
ruthenium-103	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
silver-110m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony-124	Ci	0.00E+00	0.00E+00	0.00E+00	6.22E-07
cesium-137	Ci	1.70E-07	0.00E+00	1.40E-06	8.35E-08
cesium-138	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
barium-139	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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-141	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	9.66E-06	6.08E-06	7.92E-05	4.85E-04
Total for period >8 day half life	Ci	7.54E-06	5.61E-06	7.89E-05	4.85E-04

* 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 %
A. Fission and activation products						
1. Total release (not including tritium, gases or alpha)	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.0E+01
2. Average diluted concentration during period	μCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
B. Tritium						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.0E+01
2. Average diluted concentration during period	μCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
C. Dissolved and entrained gases						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.0E+01
2. Average diluted concentration during period	μCi/ml	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
D. Gross alpha radioactivity						
1. Total release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.0E+01
E. Volume of waste released (prior to dilution)						
	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.0E+01
F. Volume of dilution water used during period						
	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.0E+01

TABLE 2B
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT
LIQUID EFFLUENTS (CONTINUED)
CONTINUOUS MODE *BATCH MODE

NUCLIDES RELEASED	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR
sodium-24	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
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	0.00E+00
iron-55	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	0.00E+00
iron-59	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cobalt-60	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
zinc-65	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-90	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
technetium-99m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
antimony-124	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-131	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
cesium-134	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
cerium-144	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
 xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-135	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, 2016 through December 31, 2016

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.	m ³	4.58E+01	N/A
	Ci	5.84E+01	15%
b. Dry compressible waste, contaminated equip, etc.	m ³	4.68E+02	N/A
	Ci	3.37E-01	25%
c. Irradiated components, control rods, etc.	m ³	0.0	N/A
	Ci	0.0	N/A
d. Other	m ³	0.0	N/A
	Ci	0.0	N/A

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

a. Resin

americium-241	4.95E-03	iodine-131	0.00E-00
antimony-125	4.57E-04	manganese-54	1.75E+00
carbon-14	2.46E-01	nickel-63	7.76E-01
cesium-134	3.14E-01	plutonium-238	5.40E-04
cesium-137	2.53E-00	plutonium-239	4.91E-04
cobalt-58	1.29E-01	plutonium-241	1.15E-01
cobalt-60	6.43E+01	strontium-89	2.11E-02
curium-242	3.18E-04	strontium-90	1.07E-02
curium-244	4.27E-04	technetium-99	1.30E-02
iodine-129	1.41E-02	tritium	5.97E-02
iron-55	2.82E+01	zinc-65	1.51E+00
iron-59	0.00E-00	silver-110m	5.87E-04

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (continued)

PERIOD: January 1, 2016 through December 31, 2016

b. DAW

americium-241	4.41E-04	manganese-54	8.67E+00
antimony-124	1.78E-01	nickel-63	6.73E-01
carbon-14	4.05E-02	niobium-95	2.77E-01
cesium-137	9.83E-02	plutonium-238	4.68E-04
chromium-51	2.85E+00	plutonium-239	4.26E-04
cobalt-57	0.00E-00	plutonium-241	9.87E-02
cobalt-58	2.47E+00	silver-110m	0.00E-00
cobalt-60	5.58E+01	strontium-89	1.76E-02
curium-242	2.75E-04	strontium-90	9.25E-03
curium-244	3.70E-04	technetium-99	9.00E-03
iodine-129	1.98E-03	tritium	4.74E-02
iron-55	2.44E+01	zinc-65	3.63E+00
iron-59	6.79E-01	zirconium-95	1.09E-01

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (continued)
PERIOD: January 1, 2016 through December 31, 2016

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
8	Exclusive Use	UT
8	Exclusive Use	TN

4. Solidification Agent

None

B. Irradiated Fuel Shipments (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None	NA	NA

**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	N	N	N
	1. Total	mrad	3.24E-06	1.13E-05	8.33E-05	2.28E-06	1.11E-04
	Percent of Technical Specification						
	2. Limit		0.00%	0.00%	0.00%	0.00%	0.00%
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrad	1.58E-05	2.16E-05	1.09E-04	1.52E-05	1.46E-04
	Percent of Technical Specification						
	2. Limit		0.00%	0.00%	0.00%	0.00%	0.00%
B.	Maximum beta air dose						
	Site boundary*		N	N	N	N	N
	1. Total	mrad	1.61E-06	1.73E-05	1.16E-04	1.19E-06	1.58E-04
	Percent of Technical Specification						
	2. Limit		0.00%	0.00%	0.00%	0.00%	0.00%
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrad	7.82E-06	1.31E-05	8.17E-05	7.96E-06	9.77E-05
	Percent of Technical Specification						
	2. Limit		0.00%	0.00%	0.00%	0.00%	0.00%
C.	Maximum organ dose due to I-131, I-133, and particulates (>8 day half lives)						
	Site boundary*		N	SE	N	N	N
	1. Total	mrem	5.81E-03	6.42E-03	1.89E-02	1.46E-02	4.43E-02
	Percent of Technical Specification						
	2. Limit		0.08%	0.09%	0.25%	0.19%	0.30%
	3. Organ		Thyroid	Thyroid	Thyroid	Thyroid	Thyroid
	4. Exposed Individual		Infant	Infant	Infant	Infant	Infant
	Most Exposed Resident*		NW	NW	NW	NW	NW
	1. Total	mrem	1.47E-03	2.56E-03	8.07E-03	4.32E-03	1.65E-02
	Percent of Technical Specification						
	2. Limit		0.02%	0.03%	0.11%	0.06%	0.11%
	3. Organ		Thyroid	Thyroid	Thyroid	Thyroid	Thyroid
	4. Exposed Individual		Infant	Infant	Infant	Infant	Infant
D.	Maximum organ dose rate due to I-131, I-133, tritium, and particulates (>8 day half-lives) was 0.044 mrem/year which was 0.30% 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, SE is 0.65 miles Southeast,
and NW residence is 0.90 miles Northwest.

GASEOUS RADIOACTIVE WASTES (Continued)
CUMULATIVE DOSE DATA

F. Maximum organ dose due to Carbon-14*		<u>1st Qtr</u>	<u>2nd Qtr</u>	<u>3rd Qtr</u>	<u>4th Qtr</u>	<u>Annual</u>
1. Total	mrem	2.93E-01	2.70E-01	3.32E-01	3.89E-01	1.08E+00
2. Percent of Technical Specification Limit		2.93%	2.70%	3.32%	3.89%	5.39%
3. Organ	mrem	Bone	Bone	Bone	Bone	Bone
4. Exposed Individual		Child	Child	Child	Child	Child

*Maximum organ dose due to Carbon-14 is based on summation of organ dose pathways from the nearest garden, nearest meat animal, and nearest milk animal. Inhalation pathway was negligible.

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	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2. Percent of Technical Specification Limit		0.00%	0.00%	0.00%	0.00%	0.00%
B. Maximum Organ Dose						
1. Total	mrem	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
2. Percent of Technical Specification Limit		0.00%	0.00%	0.00%	0.00%	0.00%

SUPPLEMENTAL INFORMATION

A. Unplanned Releases, Leaks, or Spills:

None

B. NPPD Initiated Changes to the Process Control Program:

None.

C. Changes to the Offsite Dose Assessment Manual:

None

D. Reports Required by the Offsite Dose Assessment Manual:

- 1) The following is being reported per the requirements of ODAM Specification D3.3.2, Condition B, Required Action B.2.2. This condition is being reported below due to the condition continuing for a period of greater than 31 days during the January 1- December 31, 2016 reporting period.
 - a) The ERP process flow element was declared inoperable on 7/2/2016 at 00:08, due to inaccurate process flows observed at HV-FR-4000, Channel 2. Work Orders were generated to correct the condition. Procurement of quality working parts was the cause of this condition not being completed within the required timeframe. The ERP process flow element was declared operable on 12/7/2016, at 00:22. The ERP process flow element was inoperable in 2016 from July 2 through December 7 for a total of 158 days.

APPENDIX B
METEOROLOGY

CONTENTS

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ATMOSPHERIC DIFFUSION MODEL	B324

METEOROLOGICAL DATA SUMMARIES

Meteorological data collected onsite for the period January 1, 2016, through December 31, 2016, 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 2016 was approximately 99.5%.

	<u>Average Data Recovery</u>
January 1 - March 31, 2016 (Q1)	99.9%
April 1 - June 30, 2016 (Q2)	100.0%
First Semiannual Period - January 1 - June 30, 2016 (SEM1)	99.9%
July 1 - September 30, 2016 (Q3)	98.2%
October 1 - December 31, 2016 (Q4)	100.0%
Second Semiannual Period - July 1 - December 31, 2016 (SEM2)	99.1%
Annual Period - January 1 - December 31, 2016 (ANN)	99.5%

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	North-northwest	18.0%	Northwest	13.4%
Q2	South	12.5%	South	12.5%
SEM1	North-northwest	13.4%	South	11.9%
Q3	South	16.4%	South-southeast	15.8%
Q4	South	12.6%	South	16.3%
SEM2	South	14.5%	South	15.7%
ANN	South	12.9%	South	13.8%

	<u>Mean Wind Speed at 100m Level</u>	<u>Mean Wind Speed at 10m Level</u>
Q1	14.5 MPH	9.3 MPH
Q2	13.9 MPH	8.6 MPH
SEM1	14.2 MPH	8.9 MPH
Q3	12.3 MPH	6.5 MPH
Q4	13.7 MPH	7.5 MPH
SEM2	13.0 MPH	7.0 MPH
ANN	13.6 MPH	8.0 MPH

	<u>Maximum Hourly Average Wind Speed/ (Date at 100m Level)</u>	<u>Maximum Hourly Average Wind Speed/ (Date at 10m Level)</u>
Q1	39.2 MPH/ (16/03/07)	31.1 MPH/ (16/02/18)
Q2	41.1 MPH/ (16/04/24)	33.0 MPH/ (16/04/24)
SEM1	41.1 MPH/ (16/04/24)	33.0 MPH/ (16/04/24)
Q3	40.9 MPH/ (16/09/05)	25.7 MPH/ (16/07/07)
Q4	43.1 MPH/ (16/11/27)	27.8 MPH/ (16/11/27)
SEM2	43.1 MPH/ (16/11/27)	27.8 MPH/ (16/11/27)
ANN	43.1 MPH/ (16/11/27)	33.0 MPH/ (16/04/24)

TEMPERATURE AT 10-METER LEVEL

	<u>Mean Hourly Average Temperature</u>	<u>Average Daily Maximum</u>	<u>Average Daily Minimum</u>
Q1	37.7 Degrees F	47.0 Degrees F	28.6 Degrees F
Q2	65.9 Degrees F	75.1 Degrees F	56.5 Degrees F
SEM1	51.8 Degrees F	61.0 Degrees F	42.6 Degrees F
Q3	74.0 Degrees F	82.8 Degrees F	66.1 Degrees F
Q4	45.6 Degrees F	55.3 Degrees F	36.3 Degrees F
SEM2	59.8 Degrees F	69.0 Degrees F	51.2 Degrees F
ANN	55.8 Degrees F	65.1 Degrees F	46.9 Degrees F

	<u>Maximum Temperature (Date)</u>	<u>Minimum Temperature (Date)</u>
Q1	78.1 Degrees F (16/03/30)	-8.1 Degrees F (16/01/18)
Q2	98.8 Degrees F (16/06/15)	27.3 Degrees F (16/04/09)
SEM1	98.8 Degrees F (16/06/15)	-8.1 Degrees F (16/01/18)
Q3	96.6 Degrees F (16/08/11)	47.7 Degrees F (16/09/30)
Q4	87.7 Degrees F (16/10/17)	-10.3 Degrees F (16/12/18)
SEM2	96.6 Degrees F (16/08/11)	-10.3 Degrees F (16/12/18)
ANN	98.8 Degrees F (16/06/15)	-10.3 Degrees F (16/12/18)

PRECIPITATION

	<u>Total Precipitation</u>	<u>Maximum Daily Precipitation Total/ (Date)</u>	<u>Maximum Hourly Precipitation Total/ (Date)</u>
Q1	2.60 Inches	0.77 Inches (16/03/17)	0.54 Inches (16/03/17)
Q2	12.64 Inches	2.91 Inches (16/05/09)	1.59 Inches (16/05/09)
SEM1	15.24 Inches	2.91 Inches (16/05/09)	1.59 Inches (16/05/09)
Q3	15.88 Inches	2.11 Inches (16/08/11)	1.18 Inches (16/08/11)
Q4	3.42 Inches	1.16 Inches (16/11/22)	0.51 Inches (16/11/22)
SEM2	19.30 Inches	2.11 Inches (16/08/11)	1.18 Inches (16/08/11)
ANN	34.54 Inches	2.91 Inches (16/05/09)	1.59 Inches (16/05/09)

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	2%	58%	40%
Q2	7%	54%	39%
SEM1	5%	56%	39%
Q3	5%	45%	49%
Q4	2%	47%	51%
SEM2	4%	46%	50%
ANN	4%	51%	45%

TABLE 1. Meteorological Data Recovery

Data Recovery (% of total Observations)

	January- March 2016	April- June 2016	January- June 2016	July- Sept. 2016	October- Dec. 2016	July- Dec. 2016	January- Dec. 2016
100m wind speed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
100m wind direction	100.0	100.0	100.0	100.0	100.0	100.0	100.0
100m ambient temperature	100.0	100.0	100.0	100.0	100.0	100.0	100.0
60m wind speed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
60m wind direction	100.0	100.0	100.0	100.0	100.0	100.0	100.0
60m ambient temperature	99.6	100.0	99.8	100.0	100.0	100.0	99.9
10m wind speed	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10m wind direction	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10m ambient temperature	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10m dew point	99.6	100.0	99.8	75.3	100.0	87.7	93.7
100m-10m delta T	99.6	100.0	99.8	100.0	100.0	100.0	99.9
100m-60m delta T	99.6	100.0	99.8	100.0	100.0	100.0	99.9
60m-10m delta T	100.0	100.0	100.0	100.0	100.0	100.0	100.0
100m JFD	100.0	100.0	100.0	100.0	100.0	100.0	100.0
10m JFD	99.6	100.0	99.8	100.0	100.0	100.0	99.9

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

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, 2016. 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**

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NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

JANUARY

10.0 METER 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	25.4	31	21.8	31	86.4	31	3.5	31	24.2
2	31	24.6	31	21.4	31	87.7	31	3.4	31	23.6
3	31	24.2	31	21.2	31	88.4	31	3.4	31	23.3
4	31	23.9	31	20.8	31	87.9	31	3.4	31	23.0
5	31	23.3	31	20.2	31	87.9	31	3.3	31	22.4
6	31	22.9	31	20.0	31	88.4	31	3.3	31	22.1
7	31	22.7	31	19.8	31	88.6	31	3.3	31	21.8
8	31	22.5	31	19.6	31	88.6	31	3.2	31	21.7
9	31	22.7	31	19.5	31	87.2	31	3.2	31	21.8
10	31	24.1	31	19.8	31	83.5	31	3.3	31	22.8
11	31	25.8	31	20.4	31	80.0	31	3.3	31	24.2
12	31	27.7	31	21.1	31	76.7	31	3.4	31	25.6
13	31	29.4	31	21.7	31	73.8	31	3.5	31	26.8
14	31	30.8	31	22.3	31	71.6	31	3.6	31	27.9
15	31	32.0	31	22.9	31	70.2	31	3.6	31	28.8
16	31	32.5	31	23.5	31	70.6	31	3.7	31	29.2
17	31	32.2	31	23.9	31	72.5	31	3.7	31	29.1
18	31	31.2	31	24.2	31	76.1	31	3.8	31	28.6
19	31	29.8	31	23.8	31	79.0	31	3.7	31	27.7
20	31	28.7	31	23.3	31	80.4	31	3.7	31	26.8
21	31	27.8	31	22.8	31	81.7	31	3.6	31	26.1
22	31	27.4	31	22.8	31	83.2	31	3.6	31	25.8
23	31	26.8	31	22.6	31	84.1	31	3.6	31	25.4
24	31	26.2	31	22.3	31	85.3	31	3.6	31	24.9
HOURLY MEAN		26.8		21.7		81.7		3.5		25.1
AVG DAILY MAX		34.7		27.7		94.1		4.3		31.6
AVG DAILY MIN		19.5		16.3		67.9		2.8		18.7
ABSOLUTE MAX		56.2		41.9		100.0		6.9		48.3
ABSOLUTE MIN		-8.1		-12.8		46.2		.7		-8.5
TOTAL OBS		744		744		744		744		744

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NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

FEBRUARY

10.0 METER 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	34.0	29	27.4	29	78.5	29	4.2	29	31.4
2	29	33.4	29	27.3	29	80.1	29	4.2	29	31.0
3	29	33.2	29	27.2	29	80.4	29	4.2	29	30.9
4	29	32.9	29	26.9	29	80.8	29	4.1	29	30.6
5	29	32.3	29	26.7	29	81.8	29	4.1	29	30.2
6	29	31.6	29	26.6	29	83.2	29	4.1	29	29.7
7	29	31.3	29	26.5	29	83.8	29	4.1	29	29.5
8	29	31.1	29	26.3	29	83.3	29	4.1	29	29.4
9	29	32.4	29	26.3	29	79.4	29	4.0	29	30.2
10	29	34.7	29	26.5	29	73.7	29	4.1	29	31.5
11	29	37.4	29	26.6	29	67.4	29	4.1	29	33.2
12	29	40.0	29	27.2	29	62.7	29	4.2	29	34.8
13	29	42.2	29	27.7	29	59.1	29	4.2	29	36.2
14	29	43.7	29	27.6	29	56.1	29	4.2	29	37.0
15	29	44.7	29	27.6	29	54.6	29	4.2	29	37.5
16	29	45.2	29	27.8	29	53.8	29	4.2	29	37.9
17	29	45.0	29	28.3	29	55.2	29	4.3	29	37.9
18	29	43.9	29	28.8	29	58.6	29	4.4	29	37.5
19	29	41.0	29	28.8	29	64.4	29	4.4	29	36.0
20	29	38.7	29	28.7	29	69.5	29	4.4	29	34.7
21	29	37.3	29	28.2	29	72.2	29	4.3	29	33.7
22	29	36.3	29	28.0	29	74.3	29	4.3	29	33.0
23	29	35.4	29	27.7	29	75.4	29	4.3	29	32.4
24	29	34.6	29	27.3	29	76.6	29	4.2	29	31.8
HOURLY MEAN		37.2		27.4		71.0		4.2		33.2
AVG DAILY MAX		46.5		33.1		91.0		5.2		39.6
AVG DAILY MIN		27.9		22.4		50.9		3.4		26.4
ABSOLUTE MAX		75.0		50.6		100.0		9.3		59.5
ABSOLUTE MIN		13.0		1.3		17.9		1.3		10.7
TOTAL OBS		696		696		696		696		696

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 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

MARCH

10.0 METER 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	45.0	31	36.5	31	73.8	31	6.1	31	41.2
2	31	43.9	31	36.3	31	76.4	31	6.0	31	40.6
3	31	43.1	31	36.1	31	77.5	31	6.0	31	40.1
4	31	42.2	31	35.9	31	79.6	31	6.0	31	39.5
5	31	41.5	31	35.7	31	80.9	31	5.9	31	39.0
6	31	41.1	31	35.6	31	81.7	31	5.9	31	38.7
7	31	41.0	31	35.8	31	82.5	31	6.0	31	38.8
8	31	41.3	30	36.1	30	82.7	30	6.1	30	39.1
9	31	43.8	30	37.2	30	78.1	30	6.3	30	40.9
10	31	46.9	30	37.6	30	71.2	30	6.4	30	42.8
11	31	49.9	30	37.3	30	63.6	30	6.3	30	44.2
12	31	52.5	30	37.2	30	58.2	30	6.3	30	45.5
13	31	54.8	30	37.1	30	54.0	30	6.2	30	46.6
14	31	56.9	30	37.1	30	50.2	30	6.2	30	47.6
15	31	58.3	30	36.9	30	47.6	30	6.1	30	48.2
16	31	59.0	30	36.3	30	45.8	30	5.9	30	48.3
17	31	59.0	31	35.7	31	44.9	31	5.8	31	48.0
18	31	57.6	31	35.9	31	47.2	31	5.8	31	47.5
19	31	55.1	31	37.3	31	54.3	31	6.1	31	46.8
20	31	52.4	31	37.7	31	59.9	31	6.3	31	45.7
21	31	50.5	31	37.8	31	63.8	31	6.4	31	44.7
22	31	48.9	31	37.5	31	66.6	31	6.3	31	43.7
23	31	47.8	31	37.1	31	68.3	31	6.2	31	43.0
24	31	46.5	31	36.9	31	70.9	31	6.1	31	42.2
HOURLY MEAN		49.1		36.7		65.9		6.1		43.4
AVG DAILY MAX		59.9		42.3		88.4		7.5		49.5
AVG DAILY MIN		38.3		30.2		41.0		4.6		35.9
ABSOLUTE MAX		78.1		59.2		100.0		12.8		64.0
ABSOLUTE MIN		21.0		15.8		20.5		2.5		20.0
TOTAL OBS		744		735		735		735		735

B10

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2016

JAN-MAR HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	91	34.8	91	28.6	91	79.6	91	4.6	91	32.3
2	91	34.0	91	28.4	91	81.4	91	4.6	91	31.8
3	91	33.5	91	28.2	91	82.1	91	4.6	91	31.4
4	91	33.0	91	27.9	91	82.8	91	4.5	91	31.0
5	91	32.4	91	27.6	91	83.6	91	4.4	91	30.5
6	91	31.9	91	27.4	91	84.5	91	4.4	91	30.2
7	91	31.7	91	27.4	91	85.0	91	4.4	91	30.1
8	91	31.6	90	27.3	90	84.9	90	4.4	90	30.0
9	91	33.0	90	27.6	90	81.7	90	4.5	90	30.9
10	91	35.2	90	27.9	90	76.2	90	4.6	90	32.3
11	91	37.7	90	28.0	90	70.5	90	4.6	90	33.7
12	91	40.1	90	28.4	90	66.0	90	4.6	90	35.2
13	91	42.1	90	28.8	90	62.5	90	4.6	90	36.4
14	91	43.8	90	28.9	90	59.5	90	4.6	90	37.4
15	91	45.0	90	29.1	90	57.7	90	4.6	90	38.1
16	91	45.6	90	29.1	90	56.9	90	4.6	90	38.3
17	91	45.4	91	29.3	91	57.6	91	4.6	91	38.4
18	91	44.2	91	29.7	91	60.7	91	4.7	91	37.9
19	91	42.0	91	30.0	91	65.9	91	4.8	91	36.8
20	91	40.0	91	29.9	91	69.9	91	4.8	91	35.7
21	91	38.6	91	29.6	91	72.6	91	4.8	91	34.9
22	91	37.6	91	29.5	91	74.7	91	4.7	91	34.2
23	91	36.7	91	29.2	91	76.0	91	4.7	91	33.6
24	91	35.8	91	28.9	91	77.6	91	4.6	91	33.0
HOURLY MEAN		37.7		28.6		72.9		4.6		33.9
AVG DAILY MAX		47.0		34.4		91.1		5.7		40.3
AVG DAILY MIN		28.6		23.0		53.3		3.6		27.0
ABSOLUTE MAX		78.1		59.2		100.0		12.8		64.0
ABSOLUTE MIN		-8.1		-12.8		17.9		.7		-8.5
TOTAL OBS	2184		2175		2175		2175		2175	

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PROGRAM:-WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

APRIL

10.0 METER 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	52.1	30	43.7	30	74.5	30	8.1	30	48.3
2	30	51.5	30	43.8	30	76.3	30	8.1	30	48.0
3	30	50.4	30	43.6	30	78.1	30	8.0	30	47.4
4	30	49.5	30	43.3	30	79.6	30	8.0	30	46.8
5	30	49.1	30	43.0	30	80.1	30	7.9	30	46.4
6	30	48.7	30	43.0	30	81.1	30	7.9	30	46.2
7	30	48.7	30	42.9	30	80.8	30	7.9	30	46.2
8	30	50.2	30	42.7	30	76.6	30	7.8	30	46.9
9	30	52.4	30	42.8	30	71.9	30	7.8	30	48.1
10	30	55.1	30	43.0	30	66.4	30	7.8	30	49.5
11	30	57.5	30	42.5	30	60.6	30	7.7	30	50.4
12	30	59.4	30	42.0	30	56.5	30	7.5	30	51.1
13	30	61.1	30	41.9	30	53.4	30	7.4	30	51.8
14	30	62.4	30	42.1	30	51.9	30	7.5	30	52.5
15	30	63.6	30	42.3	30	50.4	30	7.5	30	53.0
16	30	64.1	30	42.4	30	49.4	30	7.4	30	53.3
17	30	64.4	30	42.3	30	48.5	30	7.4	30	53.3
18	30	64.0	30	42.2	30	48.8	30	7.3	30	53.1
19	30	62.6	30	42.8	30	52.1	30	7.6	30	52.7
20	30	59.5	30	43.3	30	58.8	30	7.8	30	51.6
21	30	57.2	30	43.7	30	64.4	30	8.0	30	50.8
22	30	55.7	30	43.6	30	67.2	30	8.0	30	50.0
23	30	54.3	30	43.9	30	70.7	30	8.1	30	49.4
24	30	53.3	30	44.1	30	73.0	30	8.1	30	49.1
HOURLY MEAN		56.1	42.9		65.5		7.8		49.8	
AVG DAILY MAX		65.3	49.4		87.8		9.6		55.1	
AVG DAILY MIN		46.6	37.8		45.5		6.4		43.8	
ABSOLUTE MAX		81.9	62.8		100.0		14.6		65.9	
ABSOLUTE MIN		27.3	13.0		16.0		2.1		23.6	
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 APR-JUN 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

MAY

10.0 METER 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	59.0	31	53.2	31	81.9	31	10.8	31	55.9
2	31	58.4	31	52.8	31	82.4	31	10.7	31	55.5
3	31	57.5	31	52.8	31	85.0	31	10.7	31	55.1
4	31	56.6	31	52.6	31	86.8	31	10.7	31	54.5
5	31	56.0	31	52.6	31	88.4	31	10.6	31	54.2
6	31	55.7	31	52.5	31	88.8	31	10.6	31	54.1
7	31	56.4	31	52.4	31	86.9	31	10.6	31	54.3
8	31	58.5	31	52.5	31	81.0	31	10.5	31	55.3
9	31	60.8	31	52.5	31	75.4	31	10.5	31	56.3
10	31	63.1	31	52.5	31	70.7	31	10.5	31	57.3
11	31	65.1	31	52.3	31	65.7	31	10.4	31	58.1
12	31	67.2	31	52.0	31	60.7	31	10.3	31	58.8
13	31	68.6	31	51.6	31	57.4	31	10.2	31	59.2
14	31	69.4	31	51.3	31	55.4	31	10.1	31	59.4
15	31	69.7	31	51.4	31	55.3	31	10.2	31	59.6
16	31	70.0	31	51.5	31	55.1	31	10.2	31	59.8
17	31	70.0	31	52.0	31	55.9	31	10.3	31	60.0
18	31	69.2	31	52.3	31	58.0	31	10.5	31	59.8
19	31	68.4	31	53.3	31	61.2	31	10.8	31	59.9
20	31	66.2	31	54.2	31	67.4	31	11.2	31	59.5
21	31	63.7	31	54.2	31	73.0	31	11.2	31	58.4
22	31	62.0	31	54.0	31	76.3	31	11.1	31	57.6
23	31	61.1	31	53.9	31	78.4	31	11.1	31	57.2
24	31	60.3	31	53.9	31	80.7	31	11.1	31	56.9
HOURLY MEAN		63.0		52.7		72.0		10.6		57.4
AVG DAILY MAX		71.7		57.4		92.6		12.5		61.5
AVG DAILY MIN		54.7		47.6		50.2		8.8		52.8
ABSOLUTE MAX		85.5		70.6		100.0		18.7		72.2
ABSOLUTE MIN		40.7		26.9		24.8		3.8		36.5
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 APR-JUN 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

JUNE

10.0 METER 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	73.3	30	65.1	30	76.6	30	15.7	30	68.1
2	30	72.1	30	64.9	30	78.9	30	15.7	30	67.6
3	30	71.2	30	64.8	30	80.7	30	15.6	30	67.2
4	30	70.3	30	64.5	30	82.2	30	15.5	30	66.7
5	30	69.5	30	64.2	30	83.6	30	15.4	30	66.2
6	30	69.0	30	64.0	30	84.5	30	15.3	30	65.9
7	30	70.7	30	64.3	30	80.6	30	15.4	30	66.7
8	30	73.6	30	64.3	30	73.4	30	15.3	30	67.7
9	30	76.4	30	64.1	30	66.9	30	15.2	30	68.6
10	30	79.2	30	63.9	30	60.7	30	15.0	30	69.5
11	30	81.8	30	63.2	30	54.8	30	14.7	30	69.9
12	30	83.6	30	63.2	30	51.5	30	14.6	30	70.5
13	30	85.0	30	62.8	30	48.6	30	14.4	30	70.8
14	30	86.4	30	62.7	30	46.3	30	14.3	30	71.1
15	30	87.3	30	62.5	30	44.8	30	14.2	30	71.3
16	30	87.0	30	62.3	30	45.2	30	14.1	30	71.1
17	30	86.7	30	62.8	30	46.6	30	14.4	30	71.3
18	30	86.6	30	63.3	30	47.2	30	14.6	30	71.5
19	30	85.8	30	64.4	30	49.9	30	15.2	30	71.8
20	30	83.2	30	65.3	30	55.9	30	15.7	30	71.5
21	30	79.9	30	65.4	30	62.6	30	15.9	30	70.6
22	30	77.4	30	65.6	30	68.2	30	15.9	30	69.8
23	30	75.7	30	65.8	30	72.6	30	16.1	30	69.4
24	30	74.5	30	65.6	30	74.8	30	16.0	30	68.8
HOURLY MEAN		78.6		64.1		64.1		15.2		69.3
AVG DAILY MAX		88.3		68.8		88.9		17.7		72.9
AVG DAILY MIN		68.5		59.8		41.9		13.0		65.3
ABSOLUTE MAX		98.8		74.4		100.0		21.3		78.7
ABSOLUTE MIN		57.7		46.6		19.7		7.9		54.0
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 APR-JUN 2016

APR-JUN HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	91	61.4	91	54.0	91	77.8	91	11.5	91	57.4
2	91	60.7	91	53.8	91	79.2	91	11.5	91	57.0
3	91	59.7	91	53.7	91	81.3	91	11.5	91	56.5
4	91	58.8	91	53.5	91	82.9	91	11.4	91	56.0
5	91	58.1	91	53.2	91	84.1	91	11.3	91	55.6
6	91	57.8	91	53.2	91	84.9	91	11.3	91	55.4
7	91	58.6	91	53.2	91	82.8	91	11.3	91	55.7
8	91	60.8	91	53.1	91	77.0	91	11.2	91	56.6
9	91	63.2	91	53.1	91	71.4	91	11.1	91	57.7
10	91	65.8	91	53.1	91	66.0	91	11.1	91	58.7
11	91	68.1	91	52.7	91	60.4	91	10.9	91	59.5
12	91	70.0	91	52.4	91	56.3	91	10.8	91	60.1
13	91	71.5	91	52.1	91	53.2	91	10.7	91	60.6
14	91	72.7	91	52.0	91	51.2	91	10.6	91	61.0
15	91	73.5	91	52.1	91	50.2	91	10.6	91	61.3
16	91	73.7	91	52.1	91	50.0	91	10.6	91	61.4
17	91	73.7	91	52.3	91	50.4	91	10.7	91	61.5
18	91	73.3	91	52.6	91	51.4	91	10.8	91	61.5
19	91	72.2	91	53.5	91	54.5	91	11.2	91	61.5
20	91	69.6	91	54.2	91	60.8	91	11.6	91	60.9
21	91	66.9	91	54.4	91	66.8	91	11.7	91	59.9
22	91	65.0	91	54.4	91	70.6	91	11.7	91	59.1
23	91	63.7	91	54.5	91	74.0	91	11.8	91	58.7
24	91	62.7	91	54.5	91	76.2	91	11.8	91	58.2
HOURLY MEAN		65.9		53.2		67.2		11.2		58.8
AVG DAILY MAX		75.1		58.5		89.8		13.3		63.2
AVG DAILY MIN		56.5		48.4		45.9		9.4		53.9
ABSOLUTE MAX		98.8		74.4		100.0		21.3		78.7
ABSOLUTE MIN		27.3		13.0		16.0		2.1		23.6
TOTAL OBS		2184		2184		2184		2184		2184

BIS

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-JUN 2016

JAN-JUN HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	182	48.1	182	41.3	182	78.7	182	8.1	182	44.9
2	182	47.3	182	41.1	182	80.3	182	8.0	182	44.4
3	182	46.6	182	41.0	182	81.7	182	8.0	182	44.0
4	182	45.9	182	40.7	182	82.9	182	7.9	182	43.5
5	182	45.2	182	40.4	182	83.8	182	7.9	182	43.1
6	182	44.8	182	40.3	182	84.7	182	7.8	182	42.8
7	182	45.1	182	40.3	182	83.9	182	7.9	182	42.9
8	182	46.2	181	40.3	181	81.0	181	7.8	181	43.4
9	182	48.1	181	40.4	181	76.5	181	7.9	181	44.3
10	182	50.5	181	40.6	181	71.1	181	7.8	181	45.6
11	182	52.9	181	40.4	181	65.4	181	7.8	181	46.7
12	182	55.1	181	40.5	181	61.1	181	7.7	181	47.7
13	182	56.8	181	40.5	181	57.8	181	7.7	181	48.6
14	182	58.3	181	40.5	181	55.3	181	7.6	181	49.3
15	182	59.2	181	40.7	181	53.9	181	7.6	181	49.8
16	182	59.6	181	40.7	181	53.4	181	7.6	181	49.9
17	182	59.5	182	40.8	182	54.0	182	7.6	182	49.9
18	182	58.7	182	41.1	182	56.0	182	7.7	182	49.7
19	182	57.1	182	41.8	182	60.2	182	8.0	182	49.2
20	182	54.8	182	42.1	182	65.3	182	8.2	182	48.3
21	182	52.7	182	42.0	182	69.7	182	8.2	182	47.4
22	182	51.3	182	41.9	182	72.7	182	8.2	182	46.7
23	182	50.2	182	41.8	182	75.0	182	8.2	182	46.1
24	182	49.2	182	41.7	182	76.9	182	8.2	182	45.6
HOURLY MEAN		51.8		41.0		70.1		7.9		46.4
AVG DAILY MAX		61.0		46.5		90.5		9.5		51.7
AVG DAILY MIN		42.6		35.7		49.6		6.5		40.5
ABSOLUTE MAX		98.8		74.4		100.0		21.3		78.7
ABSOLUTE MIN		-8.1		-12.8		16.0		.7		-8.5
TOTAL OBS		4368		4359		4359		4359		4359

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

JULY

10.0 METER 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	73.3	9	67.8	9	94.5	9	17.3	9	68.3
2	31	72.3	9	67.3	9	95.0	9	17.0	9	67.7
3	31	71.2	9	66.1	9	93.5	9	16.5	9	66.7
4	31	70.7	9	61.3	9	86.8	9	15.3	9	64.6
5	31	70.2	9	65.6	9	96.4	9	16.2	9	65.7
6	31	70.2	9	65.6	9	96.3	9	16.1	9	65.7
7	31	70.9	9	65.7	9	95.1	9	16.3	9	66.1
8	31	72.5	9	66.5	9	94.8	9	16.6	9	67.0
9	31	74.4	9	66.8	9	90.6	9	16.8	9	67.8
10	31	76.3	9	66.8	9	85.3	9	16.7	9	68.5
11	31	78.1	9	66.4	9	79.2	9	16.4	9	68.8
12	31	79.8	9	66.2	9	76.2	9	16.3	9	69.2
13	31	81.2	9	66.2	9	74.2	9	16.3	9	69.5
14	31	82.2	8	67.3	8	71.4	8	16.8	8	70.9
15	31	83.0	8	67.0	8	68.5	8	16.6	8	71.1
16	31	83.5	8	67.1	8	68.1	8	16.7	8	71.3
17	31	83.4	8	67.3	8	68.0	8	16.8	8	71.5
18	31	83.2	8	67.2	8	68.1	8	16.7	8	71.3
19	31	82.1	8	68.3	8	72.7	8	17.4	8	71.6
20	31	79.8	8	69.4	8	80.5	8	18.1	8	71.6
21	31	77.7	8	69.4	8	86.4	8	18.1	8	70.9
22	31	76.5	8	69.3	8	90.3	8	18.1	8	70.4
23	31	75.4	9	69.6	9	92.5	9	18.4	9	70.4
24	31	74.4	9	69.1	9	94.6	9	18.1	9	69.7
HOURLY MEAN		76.8	67.0		84.5		16.9		68.9	
AVG DAILY MAX		84.3	70.6		99.4		19.0		71.6	
AVG DAILY MIN		69.1	59.9		61.7		14.4		63.9	
ABSOLUTE MAX		96.0	76.0		100.0		22.3		78.5	
ABSOLUTE MIN		59.2	14.4		16.3		2.2		42.6	
TOTAL OBS		744	207		207		207		207	

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

AUGUST

10.0 METER 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	70.2	31	69.2	31	95.7	31	18.1	31	69.6
2	31	69.8	31	69.2	31	96.3	31	18.2	31	69.4
3	31	69.4	31	69.0	31	96.7	31	18.1	31	69.1
4	31	68.9	31	68.7	31	97.3	31	17.9	31	68.8
5	31	68.3	31	68.3	31	98.3	31	17.7	31	68.3
6	31	68.0	31	68.1	31	98.6	31	17.6	31	68.1
7	31	68.4	31	68.0	31	97.2	31	17.5	31	68.2
8	31	69.9	31	68.4	31	94.1	31	17.7	31	69.0
9	31	72.1	31	68.4	31	88.3	31	17.6	31	69.7
10	31	74.3	31	68.9	31	83.6	31	17.8	31	70.7
11	31	76.4	30	68.8	30	78.6	30	17.8	30	71.4
12	31	78.3	30	68.7	30	73.6	30	17.7	30	71.9
13	31	80.0	30	68.4	30	69.1	30	17.5	30	72.3
14	31	81.3	30	68.3	30	66.2	30	17.4	30	72.6
15	31	82.1	30	68.4	30	64.5	30	17.4	30	72.9
16	31	82.3	30	68.6	30	64.8	30	17.5	30	73.1
17	31	81.9	30	68.9	30	66.3	30	17.7	30	73.1
18	31	81.1	30	69.8	30	69.4	30	18.2	30	73.5
19	31	79.6	31	70.7	31	74.9	31	18.8	31	73.6
20	31	76.6	31	71.0	31	83.2	31	19.1	31	72.8
21	31	74.4	31	70.8	31	88.6	31	19.0	31	72.0
22	31	73.2	31	70.2	31	90.4	31	18.7	31	71.2
23	31	72.3	31	69.6	31	91.1	31	18.3	31	70.6
24	31	71.0	31	69.2	31	93.4	31	18.1	31	69.8
HOURLY MEAN		74.6		69.1		84.3		18.0		70.9
AVG DAILY MAX		83.3		72.6		99.5		20.1		74.8
AVG DAILY MIN		66.9		65.4		62.4		15.9		66.7
ABSOLUTE MAX		96.6		79.5		100.0		24.6		83.0
ABSOLUTE MIN		55.2		51.5		41.2		9.5		55.1
TOTAL OBS		744		736		736		736		736

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

SEPTEMBER

10.0 METER 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	66.3	30	63.1	30	89.7	30	15.1	30	64.4
2	30	65.4	30	62.6	30	90.5	30	14.8	30	63.7
3	30	65.0	30	62.3	30	90.8	30	14.7	30	63.4
4	30	64.5	30	62.1	30	91.6	30	14.6	30	63.1
5	30	63.9	30	61.9	30	92.6	30	14.5	30	62.7
6	30	63.4	30	61.6	30	93.3	30	14.4	30	62.3
7	30	63.0	30	61.1	30	93.1	30	14.2	30	61.9
8	30	64.6	30	61.4	30	89.6	30	14.3	30	62.7
9	30	67.5	30	62.0	30	83.0	30	14.5	30	64.2
10	30	70.8	30	62.3	30	75.2	30	14.6	30	65.6
11	30	73.7	30	62.0	30	68.2	30	14.4	30	66.5
12	30	76.1	30	61.8	30	62.8	30	14.3	30	67.2
13	30	77.7	30	61.9	30	59.9	30	14.4	30	67.9
14	30	79.0	30	61.7	30	57.0	30	14.2	30	68.2
15	30	79.6	30	61.6	30	56.1	30	14.2	30	68.4
16	30	79.5	30	61.9	30	57.1	30	14.3	30	68.5
17	30	79.1	30	62.4	30	58.7	30	14.6	30	68.7
18	30	77.3	30	63.3	30	63.6	30	15.0	30	68.6
19	30	73.7	30	64.4	30	73.4	30	15.6	30	67.8
20	30	71.2	30	64.7	30	80.1	30	15.7	30	67.1
21	30	70.0	30	64.5	30	83.2	30	15.7	30	66.6
22	30	69.0	30	64.1	30	84.8	30	15.5	30	66.0
23	30	67.8	30	63.6	30	86.6	30	15.3	30	65.3
24	30	66.8	30	63.3	30	88.8	30	15.2	30	64.7
HOURLY MEAN		70.6		62.6		77.9		14.8		65.6
AVG DAILY MAX		80.7		66.6		96.2		16.8		69.8
AVG DAILY MIN		62.0		58.5		53.9		12.9		60.8
ABSOLUTE MAX		92.2		76.8		100.0		22.9		79.4
ABSOLUTE MIN		47.7		40.7		29.7		6.4		45.6
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 JUL-SEP 2016

JUL-SEP HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	92	70.0	70	66.4	70	93.0	70	16.7	70	67.2
2	92	69.2	70	66.1	70	93.6	70	16.6	70	66.7
3	92	68.6	70	65.7	70	93.7	70	16.4	70	66.4
4	92	68.1	70	64.9	70	93.5	70	16.2	70	65.8
5	92	67.5	70	65.2	70	95.6	70	16.1	70	65.6
6	92	67.2	70	65.0	70	96.0	70	16.0	70	65.3
7	92	67.5	70	64.8	70	95.2	70	15.9	70	65.2
8	92	69.0	70	65.2	70	92.2	70	16.1	70	66.0
9	92	71.4	70	65.5	70	86.3	70	16.2	70	67.1
10	92	73.8	70	65.8	70	80.2	70	16.3	70	68.2
11	92	76.1	69	65.5	69	74.2	69	16.1	69	68.9
12	92	78.1	69	65.4	69	69.3	69	16.0	69	69.5
13	92	79.7	69	65.3	69	65.8	69	16.0	69	70.0
14	92	80.8	68	65.2	68	62.8	68	15.9	68	70.5
15	92	81.6	68	65.2	68	61.3	68	15.9	68	70.7
16	92	81.8	68	65.5	68	61.8	68	16.0	68	70.9
17	92	81.5	68	65.8	68	63.1	68	16.2	68	71.0
18	92	80.6	68	66.6	68	66.7	68	16.6	68	71.0
19	92	78.5	69	67.7	69	74.0	69	17.2	69	70.8
20	92	75.9	69	68.1	69	81.5	69	17.5	69	70.2
21	92	74.1	69	67.9	69	86.0	69	17.5	69	69.5
22	92	72.9	69	67.4	69	88.0	69	17.3	69	68.9
23	92	71.9	70	67.0	70	89.4	70	17.1	70	68.3
24	92	70.8	70	66.7	70	91.6	70	16.9	70	67.6
HOURLY MEAN		74.0		66.0		81.6		16.5		68.4
AVG DAILY MAX		82.8		69.8		98.1		18.6		72.2
AVG DAILY MIN		66.1		61.7		58.7		14.4		63.8
ABSOLUTE MAX		96.6		79.5		100.0		24.6		83.0
ABSOLUTE MIN		47.7		14.4		16.3		2.2		42.6
TOTAL OBS		2208		1663		1663		1663		1663

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY OCT-DEC 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

OCTOBER

10.0 METER 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	55.9	31	52.0	31	87.0	31	10.4	31	53.8
2	31	55.3	31	51.7	31	87.9	31	10.3	31	53.4
3	31	54.5	31	51.4	31	89.3	31	10.1	31	52.8
4	31	54.1	31	51.0	31	89.6	31	10.0	31	52.5
5	31	53.6	31	50.8	31	90.5	31	10.0	31	52.1
6	31	52.9	31	50.6	31	91.6	31	9.9	31	51.7
7	31	52.5	31	50.5	31	92.6	31	9.9	31	51.4
8	31	52.8	31	50.6	31	91.9	31	9.9	31	51.6
9	31	55.2	31	51.3	31	86.8	31	10.1	31	53.2
10	31	58.5	31	51.8	31	78.9	31	10.2	31	54.9
11	31	61.8	31	51.9	31	71.4	31	10.3	31	56.4
12	31	64.3	31	51.8	31	65.9	31	10.2	31	57.4
13	31	66.2	31	51.8	31	62.0	31	10.2	31	58.2
14	31	67.5	31	51.7	31	59.6	31	10.1	31	58.7
15	31	68.7	31	51.9	31	57.9	31	10.2	31	59.3
16	31	69.5	31	52.2	31	56.9	31	10.3	31	59.8
17	31	69.3	31	52.8	31	57.8	31	10.5	31	60.0
18	31	67.0	31	53.6	31	63.9	31	10.9	31	59.5
19	31	63.8	31	53.8	31	71.4	31	10.9	31	58.2
20	31	61.5	31	53.5	31	76.0	31	10.8	31	57.1
21	31	59.6	31	53.0	31	79.5	31	10.7	31	56.0
22	31	58.4	31	52.9	31	82.5	31	10.6	31	55.4
23	31	57.6	31	52.5	31	83.7	31	10.5	31	54.9
24	31	56.8	31	52.3	31	85.5	31	10.5	31	54.4
HOURLY MEAN		59.9		52.0		77.5		10.3		55.5
AVG DAILY MAX		70.3		56.9		97.2		12.2		61.0
AVG DAILY MIN		49.4		46.5		54.6		8.5		48.6
ABSOLUTE MAX		87.7		69.5		100.0		18.0		73.1
ABSOLUTE MIN		31.2		31.8		28.7		4.8		31.4
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 OCT-DEC 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

NOVEMBER

10.0 METER 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	46.2	30	39.6	30	78.6	30	6.7	30	43.1
2	30	45.3	30	39.4	30	80.7	30	6.6	30	42.5
3	30	44.3	30	39.3	30	83.3	30	6.6	30	42.0
4	30	43.6	30	39.0	30	84.5	30	6.6	30	41.5
5	30	42.9	30	38.6	30	85.3	30	6.5	30	40.9
6	30	41.9	30	38.0	30	86.4	30	6.3	30	40.2
7	30	41.5	30	37.7	30	86.5	30	6.2	30	39.8
8	30	41.0	30	37.2	30	86.5	30	6.1	30	39.3
9	30	42.4	30	37.5	30	83.0	30	6.2	30	40.3
10	30	46.4	30	38.8	30	75.2	30	6.4	30	42.9
11	30	50.1	30	39.6	30	68.1	30	6.6	30	45.2
12	30	53.1	30	39.8	30	62.1	30	6.6	30	46.7
13	30	55.4	30	39.5	30	57.2	30	6.5	30	47.7
14	30	57.0	30	39.4	30	54.3	30	6.5	30	48.4
15	30	58.0	30	39.5	30	53.1	30	6.5	30	48.9
16	30	58.2	30	39.7	30	53.0	30	6.6	30	49.0
17	30	57.1	30	40.3	30	56.1	30	6.7	30	48.8
18	30	54.5	30	40.6	30	61.2	30	6.8	30	47.7
19	30	52.3	30	40.2	30	65.1	30	6.8	30	46.5
20	30	50.5	30	40.1	30	68.8	30	6.7	30	45.5
21	30	49.1	30	39.8	30	71.4	30	6.7	30	44.7
22	30	48.2	30	39.5	30	72.8	30	6.6	30	44.1
23	30	47.3	30	39.3	30	74.6	30	6.6	30	43.6
24	30	46.1	30	38.9	30	76.7	30	6.5	30	42.7
HOURLY MEAN		48.8		39.2		71.8		6.5		44.3
AVG DAILY MAX		58.9		43.6		92.7		7.7		50.2
AVG DAILY MIN		39.4		34.6		50.2		5.5		37.8
ABSOLUTE MAX		75.5		60.9		100.0		13.4		65.9
ABSOLUTE MIN		26.8		18.1		29.5		2.7		24.7
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 OCT-DEC 2016

MONTHLY HOUR AVERAGES FOR THE PERIOD

DECEMBER

10.0 METER 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	26.5	31	20.1	31	77.0	31	3.3	31	24.5
2	31	25.6	31	19.6	31	78.1	31	3.2	31	23.8
3	31	25.0	31	19.3	31	79.1	31	3.2	31	23.3
4	31	24.5	31	18.9	31	79.3	31	3.1	31	22.8
5	31	24.0	31	18.6	31	80.0	31	3.1	31	22.4
6	31	23.3	31	18.3	31	81.0	31	3.0	31	21.8
7	31	22.9	31	18.1	31	81.8	31	3.0	31	21.5
8	31	22.7	31	18.0	31	82.1	31	3.0	31	21.4
9	31	23.4	31	18.2	31	80.4	31	3.1	31	21.9
10	31	25.3	31	18.8	31	76.4	31	3.1	31	23.4
11	31	27.4	31	19.4	31	72.3	31	3.2	31	24.9
12	31	29.6	31	20.4	31	69.2	31	3.3	31	26.6
13	31	31.8	31	21.1	31	65.8	31	3.5	31	28.2
14	31	33.5	31	21.6	31	63.2	31	3.6	31	29.4
15	31	34.7	31	22.1	31	61.6	31	3.6	31	30.3
16	31	35.2	31	22.5	31	61.8	31	3.7	31	30.7
17	31	34.6	31	22.7	31	63.6	31	3.7	31	30.5
18	31	32.7	31	22.6	31	67.9	31	3.6	31	29.2
19	31	31.2	31	22.3	31	70.8	31	3.6	31	28.2
20	31	30.0	31	22.0	31	72.9	31	3.5	31	27.4
21	31	29.1	31	21.8	31	74.8	31	3.5	31	26.8
22	31	28.5	31	21.4	31	75.7	31	3.5	31	26.2
23	31	27.7	31	20.9	31	76.4	31	3.4	31	25.6
24	31	26.9	31	20.4	31	76.9	31	3.3	31	24.9
HOURLY MEAN		28.2	20.4		73.7		3.3		25.7	
AVG DAILY MAX		36.7	26.8		88.7		4.3		32.6	
AVG DAILY MIN		20.0	14.7		57.5		2.7		18.9	
ABSOLUTE MAX		58.1	58.1		100.0		12.5		58.1	
ABSOLUTE MIN		-10.3	-15.0		36.1		.6		-10.7	
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 OCT-DEC 2016

OCT-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METER LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER	(DEG F)	NUMBER	(DEG F)	NUMBER	(%)	NUMBER	(GM/M3)	NUMBER	(DEG F)
	OBS		OBS		OBS		OBS		OBS	
1	92	42.8	92	37.2	92	80.9	92	6.8	92	40.4
2	92	42.0	92	36.9	92	82.3	92	6.7	92	39.9
3	92	41.2	92	36.6	92	83.9	92	6.7	92	39.3
4	92	40.7	92	36.3	92	84.4	92	6.6	92	38.9
5	92	40.1	92	36.0	92	85.3	92	6.5	92	38.5
6	92	39.4	92	35.6	92	86.3	92	6.4	92	37.9
7	92	39.0	92	35.4	92	86.9	92	6.4	92	37.6
8	92	38.8	92	35.2	92	86.9	92	6.4	92	37.4
9	92	40.3	92	35.6	92	83.4	92	6.5	92	38.4
10	92	43.4	92	36.4	92	76.8	92	6.6	92	40.4
11	92	46.4	92	37.0	92	70.6	92	6.7	92	42.1
12	92	49.0	92	37.3	92	65.8	92	6.7	92	43.6
13	92	51.1	92	37.5	92	61.7	92	6.7	92	44.7
14	92	52.6	92	37.6	92	59.1	92	6.7	92	45.5
15	92	53.7	92	37.8	92	57.6	92	6.8	92	46.1
16	92	54.2	92	38.1	92	57.3	92	6.9	92	46.5
17	92	53.6	92	38.6	92	59.2	92	7.0	92	46.4
18	92	51.4	92	38.9	92	64.3	92	7.1	92	45.5
19	92	49.1	92	38.8	92	69.1	92	7.1	92	44.3
20	92	47.3	92	38.5	92	72.6	92	7.0	92	43.3
21	92	45.9	92	38.2	92	75.3	92	7.0	92	42.5
22	92	45.0	92	37.9	92	77.0	92	6.9	92	41.9
23	92	44.1	92	37.6	92	78.3	92	6.8	92	41.3
24	92	43.2	92	37.2	92	79.7	92	6.8	92	40.7
HOURLY MEAN		45.6		37.2		74.4		6.7		41.8
AVG DAILY MAX		55.3		42.4		92.9		8.0		47.9
AVG DAILY MIN		36.3		31.9		54.1		5.5		35.0
ABSOLUTE MAX		87.7		69.5		100.0		18.0		73.1
ABSOLUTE MIN		-10.3		-15.0		28.7		.6		-10.7
TOTAL OBS		2208		2208		2208		2208		2208

B24

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-DEC 2016

JUL-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	184	56.4	162	49.8	162	86.1	162	11.1	162	52.0
2	184	55.6	162	49.5	162	87.2	162	11.0	162	51.5
3	184	54.9	162	49.2	162	88.2	162	10.9	162	51.0
4	184	54.4	162	48.7	162	88.4	162	10.7	162	50.5
5	184	53.8	162	48.6	162	89.7	162	10.7	162	50.2
6	184	53.3	162	48.3	162	90.5	162	10.6	162	49.7
7	184	53.2	162	48.1	162	90.5	162	10.5	162	49.5
8	184	53.9	162	48.2	162	89.2	162	10.6	162	49.8
9	184	55.8	162	48.5	162	84.7	162	10.7	162	50.8
10	184	58.6	162	49.1	162	78.3	162	10.8	162	52.4
11	184	61.2	161	49.2	161	72.1	161	10.7	161	53.6
12	184	63.5	161	49.3	161	67.3	161	10.7	161	54.7
13	184	65.4	161	49.4	161	63.4	161	10.7	161	55.5
14	184	66.7	160	49.3	160	60.7	160	10.6	160	56.1
15	184	67.7	160	49.5	160	59.1	160	10.7	160	56.6
16	184	68.0	160	49.8	160	59.2	160	10.8	160	56.9
17	184	67.6	160	50.2	160	60.9	160	10.9	160	56.8
18	184	66.0	160	50.7	160	65.3	160	11.2	160	56.3
19	184	63.8	161	51.2	161	71.2	161	11.4	161	55.7
20	184	61.6	161	51.2	161	76.4	161	11.5	161	54.8
21	184	60.0	161	50.9	161	79.9	161	11.5	161	54.1
22	184	59.0	161	50.6	161	81.7	161	11.3	161	53.5
23	184	58.0	162	50.3	162	83.1	162	11.3	162	53.0
24	184	57.0	162	49.9	162	84.9	162	11.1	162	52.3
HOURLY MEAN		59.8		49.6		77.5		10.9		53.2
AVG DAILY MAX		69.0		54.3		95.1		12.6		58.5
AVG DAILY MIN		51.2		44.9		56.1		9.4		47.6
ABSOLUTE MAX		96.6		79.5		100.0		24.6		83.0
ABSOLUTE MIN		-10.3		-15.0		16.3		.6		-10.7
TOTAL OBS		4416		3871		3871		3871		3871

B25

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-DEC 2016

JAN-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METER 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	52.3	344	45.3	344	82.2	344	9.5	344	48.2
2	366	51.5	344	45.1	344	83.5	344	9.4	344	47.7
3	366	50.8	344	44.8	344	84.8	344	9.4	344	47.3
4	366	50.2	344	44.4	344	85.5	344	9.2	344	46.8
5	366	49.6	344	44.3	344	86.6	344	9.2	344	46.4
6	366	49.1	344	44.1	344	87.4	344	9.1	344	46.1
7	366	49.2	344	44.0	344	87.0	344	9.1	344	46.0
8	366	50.1	343	44.0	343	84.8	343	9.1	343	46.4
9	366	52.0	343	44.3	343	80.4	343	9.2	343	47.4
10	366	54.6	343	44.6	343	74.5	343	9.2	343	48.8
11	366	57.1	342	44.6	342	68.6	342	9.2	342	49.9
12	366	59.3	342	44.6	342	64.0	342	9.1	342	51.0
13	366	61.1	342	44.7	342	60.5	342	9.1	342	51.9
14	366	62.5	341	44.7	341	57.8	341	9.1	341	52.5
15	366	63.5	341	44.8	341	56.4	341	9.1	341	53.0
16	366	63.8	341	44.9	341	56.1	341	9.1	341	53.2
17	366	63.6	342	45.2	342	57.2	342	9.2	342	53.2
18	366	62.4	342	45.6	342	60.4	342	9.3	342	52.8
19	366	60.5	343	46.2	343	65.4	343	9.6	343	52.2
20	366	58.2	343	46.3	343	70.5	343	9.8	343	51.4
21	366	56.4	343	46.2	343	74.4	343	9.7	343	50.5
22	366	55.1	343	46.0	343	76.9	343	9.7	343	49.9
23	366	54.1	344	45.8	344	78.8	344	9.6	344	49.3
24	366	53.1	344	45.6	344	80.7	344	9.6	344	48.8
HOURLY MEAN		55.8		45.0		73.5		9.3		49.6
AVG DAILY MAX		65.1		50.2		92.7		11.0		54.9
AVG DAILY MIN		46.9		40.0		52.7		7.9		43.8
ABSOLUTE MAX		98.8		79.5		100.0		24.6		83.0
ABSOLUTE MIN		-10.3		-15.0		16.0		.6		-10.7
TOTAL OBS		8784		8230		8230		8230		8230

B26

Wind Direction Frequencies

10-Meter Level

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	19.4	00.0	00.0	00.0	6.5	00.0	6.5	6.5	12.9	6.5	00.0	6.5	00.0	12.9	16.1	3.2	3.2	100.
2	12.9	3.2	00.0	00.0	3.2	00.0	6.5	12.9	12.9	9.7	3.2	3.2	3.2	6.5	9.7	12.9	00.0	100.
3	6.5	3.2	00.0	00.0	6.5	00.0	6.5	9.7	9.7	9.7	6.5	3.2	3.2	00.0	9.7	25.8	00.0	100.
4	9.7	3.2	3.2	00.0	3.2	00.0	6.5	12.9	9.7	6.5	3.2	3.2	3.2	3.2	12.9	19.4	00.0	100.
5	6.5	3.2	3.2	00.0	3.2	6.5	00.0	19.4	12.9	00.0	3.2	3.2	3.2	6.5	12.9	16.1	00.0	100.
6	3.2	00.0	6.5	00.0	3.2	00.0	6.5	16.1	9.7	3.2	6.5	00.0	3.2	6.5	16.1	19.4	00.0	100.
7	00.0	00.0	6.5	00.0	3.2	00.0	9.7	9.7	6.5	9.7	3.2	00.0	3.2	6.5	12.9	25.8	3.2	100.
8	00.0	3.2	00.0	3.2	3.2	3.2	3.2	19.4	9.7	3.2	6.5	00.0	3.2	9.7	19.4	12.9	00.0	100.
9	3.2	00.0	3.2	00.0	6.5	00.0	00.0	19.4	6.5	6.5	6.5	00.0	3.2	6.5	16.1	22.6	00.0	100.
10	6.5	00.0	3.2	00.0	3.2	3.2	00.0	16.1	9.7	6.5	00.0	9.7	3.2	3.2	29.0	6.5	00.0	100.
11	9.7	00.0	3.2	00.0	3.2	3.2	9.7	9.7	6.5	6.5	3.2	00.0	9.7	6.5	16.1	12.9	00.0	100.
12	3.2	6.5	3.2	00.0	3.2	3.2	3.2	12.9	9.7	3.2	6.5	3.2	6.5	3.2	19.4	12.9	00.0	100.
13	3.2	6.5	3.2	00.0	6.5	3.2	6.5	12.9	6.5	3.2	6.5	6.5	3.2	3.2	19.4	9.7	00.0	100.
14	9.7	00.0	3.2	00.0	3.2	6.5	6.5	9.7	6.5	6.5	6.5	9.7	00.0	6.5	19.4	6.5	00.0	100.
15	3.2	6.5	3.2	00.0	3.2	6.5	6.5	6.5	9.7	6.5	9.7	6.5	00.0	9.7	19.4	3.2	00.0	100.
16	3.2	6.5	3.2	00.0	00.0	9.7	6.5	6.5	9.7	9.7	9.7	3.2	00.0	9.7	19.4	3.2	00.0	100.
17	6.5	6.5	00.0	00.0	6.5	6.5	6.5	9.7	3.2	6.5	9.7	6.5	3.2	6.5	16.1	6.5	00.0	100.
18	3.2	9.7	00.0	00.0	9.7	6.5	6.5	6.5	3.2	6.5	3.2	9.7	12.9	3.2	16.1	3.2	00.0	100.
19	9.7	9.7	00.0	3.2	6.5	6.5	00.0	6.5	6.5	6.5	6.5	12.9	3.2	3.2	12.9	6.5	00.0	100.
20	12.9	6.5	00.0	00.0	6.5	6.5	3.2	6.5	6.5	6.5	3.2	3.2	12.9	9.7	9.7	6.5	00.0	100.
21	9.7	6.5	3.2	00.0	00.0	12.9	3.2	12.9	3.2	6.5	3.2	3.2	9.7	9.7	6.5	9.7	00.0	100.
22	16.1	3.2	00.0	00.0	6.5	3.2	00.0	16.1	6.5	12.9	00.0	3.2	6.5	12.9	3.2	9.7	00.0	100.
23	12.9	6.5	3.2	00.0	3.2	3.2	3.2	16.1	6.5	6.5	00.0	00.0	6.5	6.5	12.9	9.7	3.2	100.
24	19.4	00.0	00.0	3.2	6.5	3.2	6.5	3.2	16.1	00.0	3.2	3.2	3.2	9.7	12.9	6.5	3.2	100.
ALL	7.9	3.8	2.2	.4	4.4	3.9	4.7	11.6	8.3	6.2	4.6	4.2	4.4	6.7	14.9	11.3	.5	100.

NUMBER OF OBS = 744

B28

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	13.8	00.0	6.9	00.0	00.0	6.9	3.4	6.9	13.8	13.8	00.0	00.0	00.0	10.3	13.8	3.4	100.
2	6.9	13.8	3.4	3.4	00.0	3.4	3.4	6.9	10.3	6.9	10.3	6.9	00.0	00.0	17.2	6.9	00.0	100.
3	3.4	6.9	10.3	3.4	00.0	00.0	10.3	3.4	13.8	10.3	3.4	6.9	00.0	00.0	24.1	3.4	00.0	100.
4	6.9	00.0	10.3	00.0	3.4	00.0	10.3	6.9	17.2	3.4	00.0	10.3	3.4	3.4	13.8	10.3	00.0	100.
5	00.0	10.3	3.4	3.4	3.4	00.0	3.4	13.8	3.4	10.3	00.0	6.9	6.9	6.9	10.3	17.2	00.0	100.
6	6.9	3.4	3.4	3.4	00.0	00.0	3.4	3.4	20.7	6.9	00.0	00.0	00.0	10.3	17.2	20.7	00.0	100.
7	3.4	3.4	3.4	3.4	3.4	00.0	6.9	3.4	13.8	10.3	3.4	00.0	00.0	10.3	17.2	17.2	00.0	100.
8	3.4	00.0	3.4	00.0	6.9	00.0	6.9	3.4	17.2	13.8	00.0	3.4	6.9	00.0	10.3	24.1	00.0	100.
9	00.0	3.4	6.9	00.0	10.3	00.0	6.9	3.4	10.3	10.3	3.4	00.0	10.3	3.4	17.2	13.8	00.0	100.
10	3.4	00.0	00.0	00.0	10.3	6.9	3.4	3.4	13.8	10.3	3.4	10.3	6.9	00.0	6.9	20.7	00.0	100.
11	3.4	00.0	3.4	00.0	3.4	6.9	6.9	00.0	24.1	00.0	13.8	3.4	3.4	3.4	6.9	20.7	00.0	100.
12	3.4	3.4	00.0	3.4	3.4	3.4	6.9	3.4	13.8	3.4	17.2	3.4	3.4	00.0	10.3	20.7	00.0	100.
13	6.9	00.0	00.0	00.0	3.4	10.3	3.4	00.0	13.8	6.9	3.4	13.8	6.9	3.4	3.4	24.1	00.0	100.
14	10.3	00.0	00.0	3.4	3.4	6.9	3.4	3.4	10.3	6.9	10.3	3.4	00.0	10.3	13.8	13.8	00.0	100.
15	10.3	00.0	00.0	6.9	3.4	3.4	3.4	6.9	3.4	3.4	13.8	3.4	3.4	10.3	13.8	13.8	00.0	100.
16	3.4	10.3	3.4	3.4	3.4	00.0	3.4	10.3	00.0	6.9	6.9	3.4	3.4	10.3	13.8	17.2	00.0	100.
17	6.9	6.9	3.4	6.9	00.0	00.0	6.9	3.4	3.4	13.8	00.0	3.4	3.4	6.9	10.3	24.1	00.0	100.
18	10.3	3.4	6.9	3.4	00.0	6.9	6.9	00.0	00.0	10.3	00.0	10.3	00.0	10.3	13.8	17.2	00.0	100.
19	6.9	3.4	3.4	6.9	3.4	3.4	6.9	00.0	6.9	3.4	6.9	3.4	00.0	10.3	20.7	13.8	00.0	100.
20	17.2	10.3	3.4	00.0	3.4	3.4	00.0	6.9	17.2	00.0	00.0	3.4	10.3	10.3	10.3	3.4	00.0	100.
21	17.2	6.9	00.0	6.9	3.4	3.4	3.4	3.4	6.9	6.9	00.0	3.4	10.3	10.3	13.8	3.4	00.0	100.
22	13.8	3.4	3.4	3.4	3.4	3.4	3.4	6.9	10.3	13.8	00.0	3.4	00.0	3.4	20.7	6.9	00.0	100.
23	13.8	13.8	3.4	00.0	3.4	00.0	3.4	00.0	13.8	10.3	00.0	6.9	3.4	3.4	13.8	6.9	3.4	100.
24	6.9	10.3	3.4	00.0	00.0	6.9	3.4	3.4	6.9	17.2	3.4	3.4	00.0	3.4	10.3	17.2	3.4	100.
ALL	7.2	5.3	3.3	2.9	3.2	2.9	5.2	4.2	10.8	8.3	4.7	4.7	3.4	5.5	13.4	14.7	.4	100.

NUMBER OF OBS = 696

B29

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.2	3.2	00.0	9.7	3.2	9.7	6.5	9.7	9.7	3.2	00.0	6.5	3.2	9.7	6.5	3.2	100.
2	12.9	6.5	3.2	3.2	3.2	3.2	3.2	16.1	9.7	3.2	00.0	3.2	9.7	3.2	9.7	6.5	3.2	100.
3	9.7	00.0	00.0	00.0	3.2	3.2	6.5	22.6	19.4	3.2	00.0	3.2	6.5	3.2	6.5	12.9	00.0	100.
4	9.7	00.0	00.0	00.0	3.2	3.2	12.9	12.9	16.1	9.7	00.0	3.2	00.0	6.5	12.9	9.7	00.0	100.
5	6.5	00.0	3.2	00.0	00.0	12.9	16.1	9.7	9.7	3.2	00.0	6.5	6.5	9.7	3.2	12.9	00.0	100.
6	00.0	3.2	00.0	00.0	00.0	3.2	12.9	22.6	9.7	3.2	6.5	3.2	3.2	12.9	3.2	16.1	00.0	100.
7	3.2	00.0	00.0	00.0	00.0	3.2	12.9	19.4	19.4	3.2	00.0	00.0	3.2	9.7	6.5	19.4	00.0	100.
8	3.2	3.2	00.0	3.2	00.0	3.2	12.9	22.6	16.1	3.2	00.0	00.0	3.2	9.7	6.5	12.9	00.0	100.
9	3.2	3.2	00.0	00.0	00.0	3.2	19.4	16.1	22.6	00.0	00.0	3.2	3.2	3.2	9.7	12.9	00.0	100.
10	3.2	9.7	00.0	00.0	00.0	3.2	9.7	9.7	22.6	3.2	3.2	00.0	3.2	9.7	6.5	16.1	00.0	100.
11	12.9	00.0	00.0	00.0	00.0	00.0	6.5	19.4	19.4	3.2	6.5	3.2	6.5	00.0	9.7	12.9	00.0	100.
12	6.5	3.2	00.0	00.0	00.0	00.0	3.2	19.4	22.6	3.2	9.7	00.0	00.0	6.5	12.9	12.9	00.0	100.
13	00.0	3.2	3.2	00.0	00.0	00.0	6.5	19.4	16.1	6.5	9.7	00.0	00.0	6.5	22.6	6.5	00.0	100.
14	00.0	00.0	3.2	00.0	3.2	00.0	3.2	16.1	25.8	6.5	3.2	3.2	3.2	3.2	19.4	9.7	00.0	100.
15	00.0	00.0	3.2	00.0	00.0	3.2	6.5	16.1	12.9	6.5	9.7	3.2	9.7	9.7	12.9	6.5	00.0	100.
16	00.0	3.2	00.0	00.0	00.0	3.2	9.7	12.9	12.9	3.2	9.7	6.5	3.2	16.1	9.7	9.7	00.0	100.
17	3.2	00.0	00.0	00.0	00.0	6.5	16.1	3.2	16.1	6.5	6.5	3.2	00.0	12.9	16.1	9.7	00.0	100.
18	3.2	00.0	00.0	00.0	00.0	6.5	12.9	16.1	6.5	3.2	00.0	6.5	3.2	6.5	16.1	19.4	00.0	100.
19	3.2	3.2	6.5	00.0	00.0	3.2	12.9	12.9	6.5	9.7	00.0	00.0	00.0	12.9	16.1	12.9	00.0	100.
20	6.5	6.5	00.0	00.0	00.0	3.2	12.9	16.1	6.5	3.2	3.2	3.2	6.5	6.5	16.1	9.7	00.0	100.
21	3.2	3.2	00.0	3.2	00.0	6.5	9.7	16.1	9.7	00.0	6.5	3.2	6.5	00.0	22.6	6.5	3.2	100.
22	3.2	12.9	3.2	3.2	3.2	00.0	12.9	3.2	12.9	6.5	00.0	6.5	3.2	6.5	9.7	9.7	3.2	100.
23	3.2	3.2	00.0	00.0	3.2	3.2	12.9	22.6	9.7	3.2	00.0	3.2	3.2	6.5	16.1	9.7	00.0	100.
24	9.7	3.2	3.2	3.2	3.2	3.2	9.7	9.7	16.1	6.5	00.0	9.7	00.0	3.2	9.7	9.7	00.0	100.
ALL	5.0	3.0	1.3	.7	1.3	3.4	10.5	15.1	14.5	4.6	3.2	3.1	3.8	7.0	11.8	11.3	.5	100.

NUMBER OF OBS = 744

B30

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	13.2	5.5	1.1	2.2	5.5	1.1	7.7	5.5	9.9	9.9	5.5	2.2	2.2	5.5	12.1	7.7	3.3	100.
2	11.0	7.7	2.2	2.2	2.2	2.2	4.4	12.1	11.0	6.6	4.4	4.4	4.4	3.3	12.1	8.8	1.1	100.
3	6.6	3.3	3.3	1.1	3.3	1.1	7.7	12.1	14.3	7.7	3.3	4.4	3.3	1.1	13.2	14.3	00.0	100.
4	8.8	1.1	4.4	00.0	3.3	1.1	9.9	11.0	14.3	6.6	1.1	5.5	2.2	4.4	13.2	13.2	00.0	100.
5	4.4	4.4	3.3	1.1	2.2	6.6	6.6	14.3	8.8	4.4	1.1	5.5	5.5	7.7	8.8	15.4	00.0	100.
6	3.3	2.2	3.3	1.1	1.1	1.1	7.7	14.3	13.2	4.4	4.4	1.1	2.2	9.9	12.1	18.7	00.0	100.
7	2.2	1.1	3.3	1.1	2.2	1.1	9.9	11.0	13.2	7.7	2.2	00.0	2.2	8.8	12.1	20.9	1.1	100.
8	2.2	2.2	1.1	2.2	3.3	2.2	7.7	15.4	14.3	6.6	2.2	1.1	4.4	6.6	12.1	16.5	00.0	100.
9	2.2	2.2	3.3	00.0	5.5	1.1	8.8	13.2	13.2	5.5	3.3	1.1	5.5	4.4	14.3	16.5	00.0	100.
10	4.4	3.3	1.1	00.0	4.4	4.4	4.4	9.9	15.4	6.6	2.2	6.6	4.4	4.4	14.3	14.3	00.0	100.
11	8.8	00.0	2.2	00.0	2.2	3.3	7.7	9.9	16.5	3.3	7.7	2.2	6.6	3.3	11.0	15.4	00.0	100.
12	4.4	4.4	1.1	1.1	2.2	2.2	4.4	12.1	15.4	3.3	11.0	2.2	3.3	3.3	14.3	15.4	00.0	100.
13	3.3	3.3	2.2	00.0	3.3	4.4	5.5	11.0	12.1	5.5	6.6	6.6	3.3	4.4	15.4	13.2	00.0	100.
14	6.6	00.0	2.2	1.1	3.3	4.4	4.4	9.9	14.3	6.6	6.6	5.5	1.1	6.6	17.6	9.9	00.0	100.
15	4.4	2.2	2.2	2.2	2.2	4.4	5.5	9.9	8.8	5.5	11.0	4.4	4.4	9.9	15.4	7.7	00.0	100.
16	2.2	6.6	2.2	1.1	1.1	4.4	6.6	9.9	7.7	6.6	8.8	4.4	2.2	12.1	14.3	9.9	00.0	100.
17	5.5	4.4	1.1	2.2	2.2	4.4	9.9	5.5	7.7	8.8	5.5	4.4	2.2	8.8	14.3	13.2	00.0	100.
18	5.5	4.4	2.2	1.1	3.3	6.6	8.8	7.7	3.3	6.6	1.1	8.8	5.5	6.6	15.4	13.2	00.0	100.
19	6.6	5.5	3.3	3.3	3.3	4.4	6.6	6.6	6.6	6.6	4.4	5.5	1.1	8.8	16.5	11.0	00.0	100.
20	12.1	7.7	1.1	00.0	3.3	4.4	5.5	9.9	9.9	3.3	2.2	3.3	9.9	8.8	12.1	6.6	00.0	100.
21	9.9	5.5	1.1	3.3	1.1	7.7	5.5	11.0	6.6	4.4	3.3	3.3	8.8	6.6	14.3	6.6	1.1	100.
22	11.0	6.6	2.2	2.2	4.4	2.2	5.5	8.8	9.9	11.0	00.0	4.4	3.3	7.7	11.0	8.8	1.1	100.
23	9.9	7.7	2.2	00.0	3.3	2.2	6.6	13.2	9.9	6.6	00.0	3.3	4.4	5.5	14.3	8.8	2.2	100.
24	12.1	4.4	2.2	2.2	3.3	4.4	6.6	5.5	13.2	7.7	2.2	5.5	1.1	5.5	11.0	11.0	2.2	100.
ALL	6.7	4.0	2.2	1.3	3.0	3.4	6.8	10.4	11.2	6.3	4.2	4.0	3.9	6.4	13.4	12.4	.5	100.

NUMBER OF OBS = 2184

B31

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.3	6.7	6.7	00.0	6.7	3.3	10.0	3.3	20.0	6.7	3.3	3.3	6.7	3.3	6.7	10.0	00.0	100.
2	10.0	6.7	00.0	6.7	3.3	6.7	3.3	10.0	16.7	3.3	6.7	6.7	00.0	10.0	3.3	6.7	00.0	100.
3	10.0	6.7	3.3	6.7	00.0	6.7	3.3	10.0	13.3	3.3	10.0	3.3	3.3	6.7	3.3	6.7	3.3	100.
4	10.0	6.7	6.7	3.3	6.7	3.3	10.0	3.3	16.7	3.3	6.7	3.3	3.3	10.0	3.3	3.3	00.0	100.
5	20.0	3.3	00.0	6.7	00.0	10.0	6.7	3.3	10.0	6.7	3.3	10.0	3.3	6.7	10.0	00.0	00.0	100.
6	20.0	3.3	00.0	6.7	00.0	16.7	00.0	3.3	13.3	6.7	3.3	3.3	6.7	6.7	6.7	3.3	00.0	100.
7	3.3	6.7	00.0	6.7	6.7	3.3	13.3	10.0	6.7	6.7	00.0	3.3	6.7	16.7	3.3	6.7	00.0	100.
8	6.7	3.3	00.0	00.0	6.7	3.3	20.0	10.0	10.0	00.0	3.3	00.0	00.0	16.7	16.7	3.3	00.0	100.
9	6.7	3.3	00.0	00.0	3.3	3.3	20.0	6.7	13.3	3.3	3.3	00.0	00.0	6.7	23.3	6.7	00.0	100.
10	3.3	3.3	3.3	00.0	3.3	3.3	13.3	16.7	10.0	00.0	3.3	3.3	3.3	6.7	20.0	6.7	00.0	100.
11	6.7	00.0	3.3	00.0	00.0	6.7	13.3	20.0	6.7	00.0	3.3	3.3	3.3	3.3	20.0	10.0	00.0	100.
12	6.7	00.0	3.3	00.0	3.3	3.3	13.3	13.3	10.0	00.0	00.0	6.7	3.3	3.3	23.3	10.0	00.0	100.
13	3.3	3.3	00.0	3.3	3.3	00.0	13.3	16.7	6.7	00.0	00.0	6.7	00.0	10.0	13.3	20.0	00.0	100.
14	6.7	3.3	3.3	00.0	00.0	3.3	13.3	16.7	3.3	3.3	00.0	6.7	3.3	13.3	6.7	16.7	00.0	100.
15	00.0	6.7	6.7	00.0	00.0	3.3	10.0	16.7	6.7	3.3	00.0	6.7	6.7	3.3	16.7	13.3	00.0	100.
16	10.0	00.0	3.3	3.3	00.0	3.3	3.3	23.3	6.7	00.0	00.0	13.3	3.3	3.3	10.0	16.7	00.0	100.
17	00.0	10.0	3.3	3.3	3.3	00.0	10.0	16.7	6.7	00.0	3.3	6.7	6.7	3.3	13.3	13.3	00.0	100.
18	00.0	3.3	6.7	00.0	3.3	3.3	10.0	20.0	3.3	00.0	3.3	6.7	3.3	3.3	10.0	23.3	00.0	100.
19	13.3	6.7	3.3	3.3	3.3	3.3	13.3	16.7	00.0	00.0	3.3	00.0	6.7	3.3	13.3	10.0	00.0	100.
20	16.7	6.7	6.7	3.3	00.0	00.0	10.0	13.3	3.3	00.0	6.7	3.3	3.3	3.3	6.7	16.7	00.0	100.
21	6.7	10.0	3.3	6.7	00.0	3.3	6.7	10.0	6.7	3.3	6.7	3.3	3.3	6.7	3.3	20.0	00.0	100.
22	13.3	3.3	00.0	10.0	00.0	00.0	10.0	16.7	00.0	3.3	6.7	00.0	6.7	6.7	13.3	10.0	00.0	100.
23	10.0	6.7	00.0	6.7	3.3	00.0	10.0	16.7	3.3	3.3	3.3	3.3	6.7	6.7	13.3	6.7	00.0	100.
24	13.3	13.3	3.3	3.3	3.3	3.3	10.0	10.0	10.0	3.3	3.3	3.3	6.7	00.0	10.0	3.3	00.0	100.
ALL	8.3	5.1	2.8	3.3	2.5	3.9	10.3	12.6	8.5	2.5	3.5	4.4	4.0	6.7	11.2	10.1	.1	100.

NUMBER OF OBS = 720

B32

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.2	3.2	00.0	6.5	00.0	9.7	00.0	9.7	22.6	6.5	9.7	9.7	3.2	3.2	3.2	9.7	00.0	100.
2	00.0	6.5	00.0	3.2	6.5	00.0	6.5	12.9	12.9	12.9	3.2	9.7	3.2	9.7	6.5	6.5	00.0	100.
3	6.5	3.2	00.0	6.5	3.2	3.2	6.5	9.7	16.1	6.5	3.2	6.5	00.0	9.7	12.9	3.2	3.2	100.
4	3.2	12.9	00.0	3.2	6.5	00.0	12.9	6.5	19.4	9.7	00.0	3.2	3.2	12.9	6.5	00.0	00.0	100.
5	9.7	3.2	00.0	3.2	00.0	6.5	6.5	16.1	19.4	6.5	00.0	00.0	9.7	3.2	9.7	3.2	3.2	100.
6	9.7	00.0	3.2	00.0	3.2	3.2	6.5	16.1	19.4	12.9	00.0	00.0	3.2	6.5	12.9	3.2	00.0	100.
7	3.2	3.2	6.5	6.5	3.2	6.5	3.2	25.8	6.5	3.2	6.5	00.0	00.0	9.7	3.2	9.7	3.2	100.
8	3.2	9.7	3.2	00.0	3.2	9.7	16.1	12.9	6.5	00.0	6.5	6.5	6.5	00.0	6.5	9.7	00.0	100.
9	6.5	9.7	00.0	00.0	6.5	3.2	16.1	6.5	12.9	3.2	00.0	16.1	3.2	00.0	6.5	9.7	00.0	100.
10	3.2	6.5	00.0	00.0	6.5	12.9	6.5	9.7	9.7	6.5	6.5	9.7	9.7	00.0	6.5	6.5	00.0	100.
11	9.7	3.2	3.2	00.0	3.2	9.7	19.4	6.5	6.5	6.5	9.7	6.5	3.2	00.0	6.5	6.5	00.0	100.
12	12.9	3.2	6.5	3.2	6.5	6.5	12.9	9.7	9.7	3.2	3.2	9.7	3.2	00.0	3.2	6.5	00.0	100.
13	00.0	16.1	00.0	3.2	6.5	6.5	12.9	6.5	6.5	3.2	00.0	9.7	3.2	6.5	3.2	16.1	00.0	100.
14	3.2	3.2	9.7	3.2	3.2	6.5	12.9	9.7	9.7	3.2	00.0	9.7	00.0	6.5	3.2	16.1	00.0	100.
15	6.5	3.2	12.9	3.2	3.2	9.7	9.7	9.7	9.7	3.2	00.0	6.5	3.2	3.2	3.2	12.9	00.0	100.
16	9.7	00.0	3.2	6.5	00.0	12.9	12.9	9.7	3.2	9.7	00.0	6.5	00.0	6.5	00.0	19.4	00.0	100.
17	12.9	00.0	3.2	6.5	6.5	6.5	12.9	16.1	6.5	3.2	3.2	3.2	00.0	6.5	00.0	12.9	00.0	100.
18	12.9	3.2	3.2	00.0	9.7	6.5	9.7	16.1	6.5	9.7	00.0	3.2	00.0	3.2	3.2	12.9	00.0	100.
19	9.7	00.0	9.7	3.2	6.5	9.7	9.7	16.1	00.0	9.7	6.5	00.0	3.2	3.2	6.5	6.5	00.0	100.
20	00.0	00.0	3.2	9.7	3.2	6.5	12.9	12.9	00.0	9.7	6.5	6.5	3.2	00.0	3.2	19.4	3.2	100.
21	6.5	00.0	6.5	6.5	00.0	12.9	6.5	3.2	3.2	12.9	6.5	9.7	00.0	6.5	12.9	6.5	00.0	100.
22	00.0	00.0	3.2	9.7	6.5	6.5	6.5	6.5	9.7	9.7	00.0	9.7	00.0	6.5	12.9	6.5	6.5	100.
23	6.5	3.2	00.0	9.7	3.2	6.5	6.5	9.7	6.5	12.9	3.2	3.2	6.5	00.0	12.9	6.5	3.2	100.
24	00.0	6.5	00.0	3.2	6.5	12.9	9.7	9.7	9.7	9.7	00.0	6.5	6.5	3.2	6.5	9.7	00.0	100.
ALL	5.8	4.2	3.2	4.0	4.3	7.3	9.8	11.2	9.7	7.3	3.1	6.3	3.1	4.4	6.3	9.1	.9	100.

NUMBER OF OBS = 744

B33

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.3	00.0	3.3	00.0	00.0	13.3	13.3	20.0	3.3	3.3	6.7	10.0	6.7	6.7	00.0	100.
2	10.0	3.3	3.3	00.0	00.0	3.3	3.3	13.3	16.7	13.3	00.0	00.0	3.3	10.0	10.0	10.0	00.0	100.
3	13.3	3.3	3.3	00.0	3.3	3.3	00.0	6.7	16.7	16.7	00.0	3.3	3.3	10.0	00.0	13.3	3.3	100.
4	3.3	6.7	00.0	3.3	00.0	3.3	3.3	10.0	16.7	13.3	3.3	3.3	3.3	3.3	6.7	16.7	3.3	100.
5	13.3	3.3	3.3	3.3	3.3	3.3	3.3	10.0	10.0	13.3	3.3	3.3	3.3	3.3	10.0	6.7	3.3	100.
6	3.3	13.3	3.3	3.3	3.3	6.7	00.0	6.7	16.7	10.0	3.3	6.7	00.0	3.3	6.7	3.3	10.0	100.
7	6.7	00.0	10.0	3.3	6.7	6.7	00.0	13.3	30.0	10.0	00.0	00.0	3.3	00.0	6.7	3.3	00.0	100.
8	6.7	6.7	3.3	3.3	3.3	13.3	10.0	10.0	16.7	13.3	3.3	3.3	00.0	3.3	3.3	00.0	00.0	100.
9	3.3	6.7	3.3	6.7	00.0	6.7	16.7	3.3	23.3	13.3	10.0	00.0	00.0	00.0	6.7	00.0	00.0	100.
10	6.7	3.3	00.0	00.0	3.3	6.7	16.7	13.3	16.7	10.0	3.3	10.0	00.0	3.3	3.3	3.3	00.0	100.
11	6.7	3.3	00.0	00.0	00.0	10.0	13.3	16.7	13.3	13.3	00.0	6.7	00.0	3.3	3.3	10.0	00.0	100.
12	13.3	3.3	00.0	3.3	00.0	10.0	6.7	20.0	13.3	10.0	3.3	6.7	00.0	00.0	6.7	3.3	00.0	100.
13	10.0	3.3	3.3	3.3	00.0	6.7	10.0	20.0	16.7	13.3	00.0	00.0	00.0	00.0	3.3	10.0	00.0	100.
14	10.0	10.0	3.3	3.3	00.0	6.7	3.3	23.3	23.3	3.3	3.3	00.0	00.0	00.0	6.7	3.3	00.0	100.
15	10.0	00.0	6.7	6.7	00.0	6.7	6.7	10.0	33.3	3.3	00.0	00.0	00.0	3.3	3.3	10.0	00.0	100.
16	6.7	6.7	3.3	3.3	00.0	6.7	3.3	26.7	13.3	13.3	00.0	00.0	00.0	3.3	3.3	10.0	00.0	100.
17	3.3	6.7	6.7	00.0	6.7	6.7	3.3	16.7	26.7	3.3	3.3	00.0	00.0	3.3	6.7	6.7	00.0	100.
18	3.3	6.7	6.7	00.0	10.0	00.0	6.7	16.7	16.7	13.3	00.0	3.3	00.0	3.3	3.3	10.0	00.0	100.
19	3.3	6.7	6.7	00.0	3.3	3.3	10.0	16.7	13.3	10.0	00.0	6.7	3.3	3.3	3.3	10.0	00.0	100.
20	16.7	00.0	00.0	3.3	3.3	3.3	10.0	16.7	20.0	6.7	3.3	00.0	3.3	3.3	00.0	6.7	3.3	100.
21	6.7	3.3	00.0	00.0	6.7	00.0	3.3	20.0	23.3	00.0	3.3	00.0	3.3	6.7	16.7	6.7	00.0	100.
22	3.3	00.0	00.0	00.0	6.7	00.0	3.3	10.0	30.0	3.3	3.3	6.7	3.3	6.7	10.0	13.3	00.0	100.
23	3.3	3.3	00.0	00.0	00.0	6.7	3.3	3.3	23.3	10.0	00.0	6.7	3.3	3.3	6.7	26.7	00.0	100.
24	6.7	3.3	00.0	00.0	00.0	3.3	3.3	6.7	23.3	13.3	00.0	10.0	6.7	3.3	6.7	13.3	00.0	100.
ALL	7.5	4.3	2.9	1.9	2.6	5.1	5.8	13.5	19.4	10.4	2.1	3.3	1.9	3.8	5.8	8.5	1.0	100.

NUMBER OF OBS = 720

B34

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APR-JUN

HR. OF DAY	WIND DIRECTION																CALM	TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
1	5.5	3.3	3.3	2.2	3.3	4.4	3.3	8.8	18.7	11.0	5.5	5.5	5.5	5.5	5.5	8.8	00.0	100.
2	6.6	5.5	1.1	3.3	3.3	3.3	4.4	12.1	15.4	9.9	3.3	5.5	2.2	9.9	6.6	7.7	00.0	100.
3	9.9	4.4	2.2	4.4	2.2	4.4	3.3	8.8	15.4	8.8	4.4	4.4	2.2	8.8	5.5	7.7	3.3	100.
4	5.5	8.8	2.2	3.3	4.4	2.2	8.8	6.6	17.6	8.8	3.3	3.3	3.3	8.8	5.5	6.6	1.1	100.
5	14.3	3.3	1.1	4.4	1.1	6.6	5.5	9.9	13.2	8.8	2.2	4.4	5.5	4.4	9.9	3.3	2.2	100.
6	11.0	5.5	2.2	3.3	2.2	8.8	2.2	8.8	16.5	9.9	2.2	3.3	3.3	5.5	8.8	3.3	3.3	100.
7	4.4	3.3	5.5	5.5	5.5	5.5	5.5	16.5	14.3	6.6	2.2	1.1	3.3	8.8	4.4	6.6	1.1	100.
8	5.5	6.6	2.2	1.1	4.4	8.8	15.4	11.0	11.0	4.4	4.4	3.3	2.2	6.6	8.8	4.4	00.0	100.
9	5.5	6.6	1.1	2.2	3.3	4.4	17.6	5.5	16.5	6.6	4.4	5.5	1.1	2.2	12.1	5.5	00.0	100.
10	4.4	4.4	1.1	00.0	4.4	7.7	12.1	13.2	12.1	5.5	4.4	7.7	4.4	3.3	9.9	5.5	00.0	100.
11	7.7	2.2	2.2	00.0	1.1	8.8	15.4	14.3	8.8	6.6	4.4	5.5	2.2	2.2	9.9	8.8	00.0	100.
12	11.0	2.2	3.3	2.2	3.3	6.6	11.0	14.3	11.0	4.4	2.2	7.7	2.2	1.1	11.0	6.6	00.0	100.
13	4.4	7.7	1.1	3.3	3.3	4.4	12.1	14.3	9.9	5.5	00.0	5.5	1.1	5.5	6.6	15.4	00.0	100.
14	6.6	5.5	5.5	2.2	1.1	5.5	9.9	16.5	12.1	3.3	1.1	5.5	1.1	6.6	5.5	12.1	00.0	100.
15	5.5	3.3	8.8	3.3	1.1	6.6	8.8	12.1	16.5	3.3	00.0	4.4	3.3	3.3	7.7	12.1	00.0	100.
16	8.8	2.2	3.3	4.4	00.0	7.7	6.6	19.8	7.7	7.7	00.0	6.6	1.1	4.4	4.4	15.4	00.0	100.
17	5.5	5.5	4.4	3.3	5.5	4.4	8.8	16.5	13.2	2.2	3.3	3.3	2.2	4.4	6.6	11.0	00.0	100.
18	5.5	4.4	5.5	00.0	7.7	3.3	8.8	17.6	8.8	7.7	1.1	4.4	1.1	3.3	5.5	15.4	00.0	100.
19	8.8	4.4	6.6	2.2	4.4	5.5	11.0	16.5	4.4	6.6	3.3	2.2	4.4	3.3	7.7	8.8	00.0	100.
20	11.0	2.2	3.3	5.5	2.2	3.3	11.0	14.3	7.7	5.5	5.5	3.3	3.3	2.2	3.3	14.3	2.2	100.
21	6.6	4.4	3.3	4.4	2.2	5.5	5.5	11.0	11.0	5.5	5.5	4.4	2.2	6.6	11.0	11.0	00.0	100.
22	5.5	1.1	1.1	6.6	4.4	2.2	6.6	11.0	13.2	5.5	3.3	5.5	3.3	6.6	12.1	9.9	2.2	100.
23	6.6	4.4	00.0	5.5	2.2	4.4	6.6	9.9	11.0	8.8	2.2	4.4	5.5	3.3	11.0	13.2	1.1	100.
24	6.6	7.7	1.1	2.2	3.3	6.6	7.7	8.8	14.3	8.8	1.1	6.6	6.6	2.2	7.7	8.8	00.0	100.
ALL	7.2	4.5	3.0	3.1	3.2	5.4	8.7	12.4	12.5	6.7	2.9	4.7	3.0	4.9	7.8	9.2	.7	100.

NUMBER OF OBS = 2184

B35

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	9.3	4.4	2.2	2.2	4.4	2.7	5.5	7.1	14.3	10.4	5.5	3.8	3.8	5.5	8.8	8.2	1.6	100.
2	8.8	6.6	1.6	2.7	2.7	2.7	4.4	12.1	13.2	8.2	3.8	4.9	3.3	6.6	9.3	8.2	.5	100.
3	8.2	3.8	2.7	2.7	2.7	2.7	5.5	10.4	14.8	8.2	3.8	4.4	2.7	4.9	9.3	11.0	1.6	100.
4	7.1	4.9	3.3	1.6	3.8	1.6	9.3	8.8	15.9	7.7	2.2	4.4	2.7	6.6	9.3	9.9	.5	100.
5	9.3	3.8	2.2	2.7	1.6	6.6	6.0	12.1	11.0	6.6	1.6	4.9	5.5	6.0	9.3	9.3	1.1	100.
6	7.1	3.8	2.7	2.2	1.6	4.9	4.9	11.5	14.8	7.1	3.3	2.2	2.7	7.7	10.4	11.0	1.6	100.
7	3.3	2.2	4.4	3.3	3.8	3.3	7.7	13.7	13.7	7.1	2.2	.5	2.7	8.8	8.2	13.7	1.1	100.
8	3.8	4.4	1.6	1.6	3.8	5.5	11.5	13.2	12.6	5.5	3.3	2.2	3.3	6.6	10.4	10.4	00.0	100.
9	3.8	4.4	2.2	1.1	4.4	2.7	13.2	9.3	14.8	6.0	3.8	3.3	3.3	3.3	13.2	11.0	00.0	100.
10	4.4	3.8	1.1	00.0	4.4	6.0	8.2	11.5	13.7	6.0	3.3	7.1	4.4	3.8	12.1	9.9	00.0	100.
11	8.2	1.1	2.2	00.0	1.6	6.0	11.5	12.1	12.6	4.9	6.0	3.8	4.4	2.7	10.4	12.1	00.0	100.
12	7.7	3.3	2.2	1.6	2.7	4.4	7.7	13.2	13.2	3.8	6.6	4.9	2.7	2.2	12.6	11.0	00.0	100.
13	3.8	5.5	1.6	1.6	3.3	4.4	8.8	12.6	11.0	5.5	3.3	6.0	2.2	4.9	11.0	14.3	00.0	100.
14	6.6	2.7	3.8	1.6	2.2	4.9	7.1	13.2	13.2	4.9	3.8	5.5	1.1	6.6	11.5	11.0	00.0	100.
15	4.9	2.7	5.5	2.7	1.6	5.5	7.1	11.0	12.6	4.4	5.5	4.4	3.8	6.6	11.5	9.9	00.0	100.
16	5.5	4.4	2.7	2.7	.5	6.0	6.6	14.8	7.7	7.1	4.4	5.5	1.6	8.2	9.3	12.6	00.0	100.
17	5.5	4.9	2.7	2.7	3.8	4.4	9.3	11.0	10.4	5.5	4.4	3.8	2.2	6.6	10.4	12.1	00.0	100.
18	5.5	4.4	3.8	.5	5.5	4.9	8.8	12.6	6.0	7.1	1.1	6.6	3.3	4.9	10.4	14.3	00.0	100.
19	7.7	4.9	4.9	2.7	3.8	4.9	8.8	11.5	5.5	6.6	3.8	3.8	2.7	6.0	12.1	9.9	00.0	100.
20	11.5	4.9	2.2	2.7	2.7	3.8	8.2	12.1	8.8	4.4	3.8	3.3	6.6	5.5	7.7	10.4	1.1	100.
21	8.2	4.9	2.2	3.8	1.6	6.6	5.5	11.0	8.8	4.9	4.4	3.8	5.5	6.6	12.6	8.8	.5	100.
22	8.2	3.8	1.6	4.4	4.4	2.2	6.0	9.9	11.5	8.2	1.6	4.9	3.3	7.1	11.5	9.3	1.6	100.
23	8.2	6.0	1.1	2.7	2.7	3.3	6.6	11.5	10.4	7.7	1.1	3.8	4.9	4.4	12.6	11.0	1.6	100.
24	9.3	6.0	1.6	2.2	3.3	5.5	7.1	7.1	13.7	8.2	1.6	6.0	3.8	3.8	9.3	9.9	1.1	100.
ALL	6.9	4.3	2.6	2.2	3.1	4.4	7.7	11.4	11.9	6.5	3.5	4.3	3.5	5.7	10.6	10.8	.6	100.

NUMBER OF OBS = 4368

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.2	00.0	00.0	9.7	6.5	3.2	19.4	9.7	6.5	00.0	00.0	3.2	6.5	9.7	12.9	00.0	100.
2	6.5	9.7	3.2	6.5	3.2	6.5	9.7	12.9	16.1	00.0	00.0	00.0	00.0	12.9	6.5	3.2	3.2	100.
3	12.9	00.0	00.0	3.2	3.2	6.5	9.7	16.1	9.7	9.7	00.0	6.5	00.0	00.0	6.5	16.1	00.0	100.
4	9.7	6.5	3.2	6.5	00.0	00.0	12.9	16.1	12.9	6.5	3.2	00.0	3.2	00.0	9.7	9.7	00.0	100.
5	12.9	6.5	6.5	6.5	00.0	3.2	9.7	12.9	12.9	6.5	3.2	00.0	6.5	3.2	3.2	6.5	00.0	100.
6	6.5	6.5	00.0	19.4	00.0	3.2	6.5	25.8	6.5	00.0	6.5	00.0	00.0	6.5	12.9	00.0	00.0	100.
7	9.7	6.5	3.2	3.2	3.2	6.5	12.9	19.4	9.7	3.2	3.2	3.2	3.2	6.5	00.0	6.5	00.0	100.
8	12.9	3.2	3.2	00.0	12.9	9.7	6.5	9.7	22.6	6.5	00.0	00.0	3.2	3.2	3.2	3.2	00.0	100.
9	3.2	16.1	3.2	3.2	6.5	9.7	6.5	9.7	22.6	9.7	00.0	00.0	3.2	00.0	00.0	6.5	00.0	100.
10	6.5	6.5	3.2	6.5	6.5	00.0	22.6	9.7	12.9	9.7	3.2	00.0	3.2	00.0	00.0	9.7	00.0	100.
11	22.6	00.0	6.5	3.2	12.9	6.5	9.7	6.5	19.4	6.5	00.0	00.0	00.0	6.5	00.0	00.0	00.0	100.
12	12.9	3.2	6.5	00.0	16.1	9.7	9.7	12.9	19.4	3.2	00.0	3.2	00.0	00.0	00.0	3.2	00.0	100.
13	6.5	6.5	3.2	6.5	9.7	9.7	16.1	19.4	12.9	3.2	3.2	00.0	00.0	00.0	00.0	3.2	00.0	100.
14	9.7	9.7	3.2	6.5	9.7	3.2	12.9	25.8	6.5	9.7	00.0	3.2	00.0	00.0	00.0	00.0	00.0	100.
15	00.0	9.7	6.5	00.0	12.9	00.0	22.6	29.0	3.2	6.5	00.0	3.2	00.0	00.0	00.0	6.5	00.0	100.
16	3.2	6.5	00.0	9.7	3.2	3.2	19.4	22.6	6.5	6.5	6.5	3.2	00.0	3.2	3.2	3.2	00.0	100.
17	3.2	12.9	3.2	3.2	6.5	9.7	6.5	25.8	12.9	6.5	3.2	00.0	00.0	00.0	00.0	6.5	00.0	100.
18	6.5	6.5	6.5	9.7	6.5	6.5	12.9	25.8	6.5	3.2	3.2	3.2	00.0	00.0	3.2	00.0	00.0	100.
19	6.5	00.0	3.2	12.9	6.5	16.1	6.5	22.6	9.7	00.0	3.2	00.0	00.0	3.2	6.5	3.2	00.0	100.
20	3.2	6.5	3.2	3.2	12.9	16.1	3.2	19.4	9.7	00.0	00.0	00.0	3.2	6.5	3.2	6.5	3.2	100.
21	6.5	6.5	3.2	6.5	9.7	6.5	9.7	19.4	9.7	3.2	00.0	00.0	3.2	9.7	3.2	3.2	00.0	100.
22	00.0	9.7	3.2	3.2	12.9	3.2	6.5	19.4	16.1	00.0	00.0	00.0	00.0	9.7	6.5	9.7	00.0	100.
23	9.7	00.0	3.2	6.5	3.2	6.5	16.1	12.9	9.7	3.2	6.5	00.0	00.0	3.2	9.7	6.5	3.2	100.
24	6.5	3.2	00.0	00.0	9.7	6.5	9.7	6.5	22.6	6.5	00.0	00.0	3.2	6.5	12.9	6.5	00.0	100.
ALL	7.8	6.0	3.2	5.2	7.4	6.5	10.9	17.5	12.5	4.8	1.9	1.1	1.5	3.6	4.2	5.5	.4	100.

NUMBER OF OBS = 744

B37

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	6.5	6.5	3.2	6.5	00.0	3.2	12.9	9.7	19.4	3.2	00.0	3.2	00.0	3.2	00.0	22.6	00.0	100.
2	9.7	3.2	6.5	3.2	3.2	6.5	16.1	3.2	19.4	3.2	6.5	00.0	3.2	00.0	3.2	9.7	3.2	100.
3	12.9	00.0	6.5	6.5	00.0	3.2	12.9	12.9	22.6	00.0	3.2	00.0	3.2	6.5	3.2	3.2	3.2	100.
4	16.1	6.5	3.2	3.2	00.0	3.2	3.2	16.1	22.6	3.2	00.0	00.0	3.2	6.5	3.2	9.7	00.0	100.
5	25.8	3.2	00.0	6.5	00.0	3.2	6.5	12.9	16.1	6.5	00.0	6.5	00.0	6.5	3.2	00.0	3.2	100.
6	9.7	6.5	9.7	3.2	00.0	00.0	9.7	9.7	12.9	00.0	00.0	3.2	3.2	9.7	12.9	6.5	3.2	100.
7	6.5	6.5	6.5	00.0	00.0	3.2	9.7	9.7	12.9	00.0	00.0	6.5	9.7	6.5	9.7	12.9	00.0	100.
8	6.5	6.5	3.2	3.2	6.5	00.0	9.7	19.4	12.9	00.0	00.0	00.0	3.2	3.2	19.4	3.2	3.2	100.
9	12.9	12.9	9.7	3.2	3.2	3.2	12.9	9.7	9.7	3.2	3.2	00.0	3.2	3.2	3.2	6.5	00.0	100.
10	3.2	12.9	16.1	9.7	3.2	6.5	12.9	6.5	9.7	3.2	00.0	00.0	6.5	00.0	3.2	6.5	00.0	100.
11	00.0	9.7	12.9	9.7	12.9	6.5	9.7	9.7	9.7	3.2	00.0	00.0	3.2	00.0	9.7	3.2	00.0	100.
12	00.0	6.5	6.5	12.9	6.5	9.7	12.9	16.1	6.5	6.5	00.0	00.0	3.2	3.2	3.2	6.5	00.0	100.
13	3.2	16.1	3.2	6.5	3.2	16.1	9.7	16.1	9.7	3.2	00.0	00.0	00.0	3.2	6.5	3.2	00.0	100.
14	00.0	6.5	9.7	00.0	12.9	9.7	16.1	9.7	9.7	3.2	3.2	00.0	00.0	3.2	3.2	9.7	00.0	100.
15	9.7	6.5	6.5	6.5	3.2	6.5	25.8	6.5	9.7	3.2	3.2	00.0	00.0	3.2	3.2	6.5	00.0	100.
16	3.2	12.9	6.5	3.2	6.5	6.5	22.6	12.9	9.7	3.2	00.0	00.0	00.0	00.0	6.5	6.5	00.0	100.
17	6.5	12.9	9.7	6.5	00.0	9.7	12.9	16.1	9.7	00.0	00.0	00.0	00.0	00.0	3.2	12.9	00.0	100.
18	3.2	12.9	6.5	9.7	3.2	9.7	6.5	19.4	3.2	00.0	6.5	00.0	00.0	00.0	9.7	9.7	00.0	100.
19	6.5	6.5	9.7	6.5	6.5	6.5	16.1	9.7	6.5	00.0	3.2	00.0	00.0	00.0	9.7	12.9	00.0	100.
20	6.5	9.7	3.2	6.5	6.5	3.2	9.7	6.5	9.7	00.0	3.2	00.0	3.2	3.2	12.9	16.1	00.0	100.
21	16.1	6.5	3.2	00.0	3.2	3.2	9.7	6.5	6.5	3.2	00.0	3.2	3.2	6.5	12.9	16.1	00.0	100.
22	12.9	9.7	00.0	3.2	00.0	6.5	9.7	9.7	9.7	00.0	3.2	00.0	3.2	3.2	6.5	22.6	00.0	100.
23	9.7	6.5	3.2	00.0	3.2	3.2	9.7	9.7	12.9	00.0	00.0	00.0	6.5	00.0	9.7	22.6	3.2	100.
24	00.0	3.2	3.2	00.0	6.5	6.5	6.5	16.1	6.5	3.2	3.2	3.2	6.5	6.5	6.5	22.6	00.0	100.
ALL	7.8	7.9	6.2	4.8	3.8	5.6	11.8	11.4	11.6	2.2	1.6	1.2	2.7	3.2	6.9	10.5	.8	100.

NUMBER OF OBS = 744

B38

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	10.0	3.3	00.0	00.0	00.0	3.3	3.3	20.0	20.0	3.3	3.3	3.3	00.0	3.3	10.0	13.3	3.3	100.
2	20.0	00.0	00.0	3.3	00.0	00.0	6.7	16.7	26.7	3.3	00.0	3.3	00.0	3.3	3.3	6.7	6.7	100.
3	10.0	13.3	3.3	00.0	00.0	00.0	6.7	10.0	36.7	00.0	00.0	3.3	00.0	00.0	6.7	3.3	6.7	100.
4	13.3	13.3	6.7	00.0	3.3	00.0	6.7	20.0	10.0	3.3	00.0	6.7	00.0	00.0	6.7	3.3	6.7	100.
5	10.0	10.0	00.0	00.0	00.0	3.3	6.7	20.0	16.7	3.3	00.0	00.0	00.0	3.3	10.0	10.0	6.7	100.
6	10.0	3.3	00.0	00.0	6.7	3.3	10.0	20.0	20.0	00.0	3.3	3.3	00.0	3.3	3.3	10.0	3.3	100.
7	3.3	6.7	3.3	3.3	00.0	6.7	10.0	16.7	23.3	3.3	00.0	00.0	00.0	3.3	6.7	6.7	6.7	100.
8	10.0	6.7	00.0	00.0	00.0	6.7	16.7	10.0	30.0	3.3	00.0	3.3	00.0	3.3	6.7	3.3	00.0	100.
9	10.0	6.7	10.0	00.0	00.0	00.0	16.7	10.0	23.3	3.3	3.3	3.3	00.0	3.3	10.0	00.0	00.0	100.
10	10.0	10.0	6.7	00.0	00.0	00.0	13.3	10.0	13.3	20.0	00.0	3.3	00.0	3.3	3.3	6.7	00.0	100.
11	10.0	10.0	3.3	3.3	3.3	3.3	6.7	13.3	16.7	16.7	3.3	00.0	00.0	3.3	3.3	3.3	00.0	100.
12	10.0	6.7	6.7	00.0	6.7	00.0	6.7	20.0	16.7	10.0	3.3	3.3	00.0	3.3	6.7	00.0	00.0	100.
13	10.0	6.7	6.7	3.3	00.0	00.0	16.7	13.3	20.0	6.7	3.3	00.0	00.0	6.7	6.7	00.0	00.0	100.
14	10.0	00.0	6.7	3.3	3.3	00.0	3.3	16.7	23.3	10.0	00.0	3.3	3.3	6.7	6.7	3.3	00.0	100.
15	3.3	10.0	3.3	00.0	3.3	3.3	6.7	13.3	20.0	6.7	00.0	3.3	6.7	13.3	6.7	00.0	00.0	100.
16	10.0	10.0	00.0	6.7	3.3	3.3	00.0	16.7	23.3	6.7	3.3	00.0	00.0	6.7	3.3	6.7	00.0	100.
17	6.7	13.3	3.3	3.3	00.0	00.0	10.0	16.7	23.3	3.3	3.3	00.0	00.0	6.7	00.0	10.0	00.0	100.
18	6.7	3.3	00.0	6.7	00.0	3.3	3.3	33.3	16.7	3.3	00.0	00.0	00.0	3.3	6.7	13.3	00.0	100.
19	3.3	00.0	00.0	6.7	00.0	00.0	6.7	36.7	10.0	3.3	00.0	3.3	00.0	6.7	3.3	16.7	3.3	100.
20	10.0	00.0	3.3	6.7	00.0	00.0	10.0	30.0	20.0	6.7	00.0	00.0	00.0	3.3	3.3	6.7	00.0	100.
21	10.0	00.0	00.0	3.3	3.3	00.0	10.0	13.3	30.0	3.3	6.7	00.0	3.3	3.3	00.0	10.0	3.3	100.
22	6.7	00.0	00.0	3.3	00.0	3.3	10.0	20.0	26.7	00.0	00.0	3.3	6.7	3.3	10.0	6.7	00.0	100.
23	6.7	00.0	3.3	00.0	00.0	00.0	00.0	26.7	30.0	6.7	00.0	00.0	3.3	3.3	6.7	10.0	3.3	100.
24	13.3	00.0	3.3	00.0	3.3	3.3	3.3	23.3	23.3	3.3	00.0	00.0	00.0	3.3	10.0	6.7	3.3	100.
ALL	9.3	5.6	2.9	2.2	1.5	1.8	7.9	18.6	21.7	5.4	1.4	1.9	1.0	4.2	5.8	6.5	2.2	100.

NUMBER OF OBS = 720

B39

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	8.7	4.3	1.1	2.2	3.3	4.3	6.5	16.3	16.3	4.3	1.1	2.2	1.1	4.3	6.5	16.3	1.1	100.
2	12.0	4.3	3.3	4.3	2.2	4.3	10.9	10.9	20.7	2.2	2.2	1.1	1.1	5.4	4.3	6.5	4.3	100.
3	12.0	4.3	3.3	3.3	1.1	3.3	9.8	13.0	22.8	3.3	1.1	3.3	1.1	2.2	5.4	7.6	3.3	100.
4	13.0	8.7	4.3	3.3	1.1	1.1	7.6	17.4	15.2	4.3	1.1	2.2	2.2	2.2	6.5	7.6	2.2	100.
5	16.3	6.5	2.2	4.3	00.0	3.3	7.6	15.2	15.2	5.4	1.1	2.2	2.2	4.3	5.4	5.4	3.3	100.
6	8.7	5.4	3.3	7.6	2.2	2.2	8.7	18.5	13.0	00.0	3.3	2.2	1.1	6.5	9.8	5.4	2.2	100.
7	6.5	6.5	4.3	2.2	1.1	5.4	10.9	15.2	15.2	2.2	1.1	3.3	4.3	5.4	5.4	8.7	2.2	100.
8	9.8	5.4	2.2	1.1	6.5	5.4	10.9	13.0	21.7	3.3	00.0	1.1	2.2	3.3	9.8	3.3	1.1	100.
9	8.7	12.0	7.6	2.2	3.3	4.3	12.0	9.8	18.5	5.4	2.2	1.1	2.2	2.2	4.3	4.3	00.0	100.
10	6.5	9.8	8.7	5.4	3.3	2.2	16.3	8.7	12.0	10.9	1.1	1.1	3.3	1.1	2.2	7.6	00.0	100.
11	10.9	6.5	7.6	5.4	9.8	5.4	8.7	9.8	15.2	8.7	1.1	00.0	1.1	3.3	4.3	2.2	00.0	100.
12	7.6	5.4	6.5	4.3	9.8	6.5	9.8	16.3	14.1	6.5	1.1	2.2	1.1	2.2	3.3	3.3	00.0	100.
13	6.5	9.8	4.3	5.4	4.3	8.7	14.1	16.3	14.1	4.3	2.2	00.0	00.0	3.3	4.3	2.2	00.0	100.
14	6.5	5.4	6.5	3.3	8.7	4.3	10.9	17.4	13.0	7.6	1.1	3.3	1.1	3.3	3.3	4.3	00.0	100.
15	4.3	8.7	5.4	2.2	6.5	3.3	18.5	16.3	10.9	5.4	1.1	2.2	2.2	5.4	3.3	4.3	00.0	100.
16	5.4	9.8	2.2	6.5	4.3	4.3	14.1	17.4	13.0	5.4	3.3	1.1	00.0	3.3	4.3	5.4	00.0	100.
17	5.4	13.0	5.4	4.3	2.2	6.5	9.8	19.6	15.2	3.3	2.2	00.0	00.0	2.2	1.1	9.8	00.0	100.
18	5.4	7.6	4.3	8.7	3.3	6.5	7.6	26.1	8.7	2.2	3.3	1.1	00.0	1.1	6.5	7.6	00.0	100.
19	5.4	2.2	4.3	8.7	4.3	7.6	9.8	22.8	8.7	1.1	2.2	1.1	00.0	3.3	6.5	10.9	1.1	100.
20	6.5	5.4	3.3	5.4	6.5	6.5	7.6	18.5	13.0	2.2	1.1	00.0	2.2	4.3	6.5	9.8	1.1	100.
21	10.9	4.3	2.2	3.3	5.4	3.3	9.8	13.0	15.2	3.3	2.2	1.1	3.3	6.5	5.4	9.8	1.1	100.
22	6.5	6.5	1.1	3.3	4.3	4.3	8.7	16.3	17.4	00.0	1.1	1.1	3.3	5.4	7.6	13.0	00.0	100.
23	8.7	2.2	3.3	2.2	2.2	3.3	8.7	16.3	17.4	3.3	2.2	00.0	3.3	2.2	8.7	13.0	3.3	100.
24	6.5	2.2	2.2	00.0	6.5	5.4	6.5	15.2	17.4	4.3	1.1	1.1	3.3	5.4	9.8	12.0	1.1	100.
ALL	8.3	6.5	4.1	4.1	4.3	4.7	10.2	15.8	15.2	4.1	1.6	1.4	1.7	3.7	5.6	7.5	1.1	100.

NUMBER OF OBS = 2208

B40

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	6.5	3.2	3.2	00.0	3.2	00.0	6.5	19.4	12.9	6.5	3.2	3.2	00.0	3.2	6.5	16.1	6.5	100.
2	9.7	3.2	00.0	00.0	00.0	00.0	6.5	12.9	25.8	3.2	6.5	3.2	3.2	3.2	3.2	12.9	6.5	100.
3	9.7	3.2	00.0	00.0	3.2	00.0	9.7	9.7	32.3	6.5	3.2	00.0	00.0	00.0	12.9	9.7	00.0	100.
4	9.7	9.7	00.0	00.0	00.0	3.2	12.9	9.7	19.4	6.5	9.7	00.0	00.0	00.0	9.7	3.2	6.5	100.
5	12.9	3.2	00.0	00.0	00.0	3.2	6.5	22.6	19.4	9.7	3.2	3.2	00.0	6.5	6.5	3.2	00.0	100.
6	9.7	6.5	00.0	00.0	00.0	3.2	9.7	16.1	16.1	6.5	12.9	00.0	3.2	6.5	3.2	6.5	00.0	100.
7	16.1	3.2	00.0	00.0	00.0	3.2	9.7	19.4	12.9	3.2	6.5	6.5	3.2	6.5	3.2	3.2	3.2	100.
8	9.7	3.2	00.0	00.0	00.0	00.0	16.1	16.1	12.9	9.7	00.0	3.2	00.0	6.5	3.2	12.9	6.5	100.
9	3.2	6.5	00.0	6.5	00.0	6.5	16.1	19.4	16.1	00.0	3.2	3.2	00.0	00.0	9.7	9.7	00.0	100.
10	9.7	6.5	00.0	00.0	3.2	6.5	19.4	12.9	12.9	12.9	00.0	00.0	00.0	3.2	3.2	9.7	00.0	100.
11	12.9	3.2	00.0	00.0	3.2	12.9	9.7	9.7	16.1	19.4	00.0	00.0	00.0	3.2	00.0	9.7	00.0	100.
12	9.7	3.2	00.0	00.0	3.2	9.7	12.9	9.7	19.4	16.1	00.0	00.0	00.0	00.0	3.2	12.9	00.0	100.
13	00.0	6.5	00.0	3.2	00.0	9.7	9.7	19.4	9.7	19.4	00.0	00.0	00.0	00.0	3.2	19.4	00.0	100.
14	6.5	3.2	3.2	00.0	00.0	9.7	9.7	22.6	12.9	16.1	00.0	00.0	00.0	00.0	3.2	12.9	00.0	100.
15	3.2	6.5	00.0	00.0	6.5	6.5	16.1	19.4	12.9	9.7	3.2	00.0	00.0	3.2	00.0	12.9	00.0	100.
16	3.2	3.2	3.2	3.2	6.5	9.7	9.7	12.9	19.4	9.7	00.0	00.0	00.0	3.2	3.2	12.9	00.0	100.
17	9.7	3.2	3.2	00.0	9.7	6.5	6.5	19.4	19.4	6.5	3.2	00.0	00.0	3.2	00.0	9.7	00.0	100.
18	00.0	3.2	00.0	3.2	6.5	9.7	9.7	16.1	9.7	12.9	9.7	00.0	00.0	00.0	6.5	12.9	00.0	100.
19	9.7	3.2	00.0	00.0	6.5	3.2	9.7	9.7	19.4	3.2	3.2	00.0	6.5	3.2	6.5	12.9	3.2	100.
20	19.4	00.0	00.0	00.0	00.0	6.5	16.1	6.5	19.4	00.0	3.2	00.0	3.2	3.2	12.9	9.7	00.0	100.
21	19.4	00.0	00.0	00.0	00.0	3.2	3.2	22.6	22.6	3.2	3.2	3.2	6.5	00.0	00.0	9.7	3.2	100.
22	16.1	3.2	00.0	00.0	00.0	00.0	6.5	19.4	22.6	9.7	00.0	00.0	00.0	00.0	9.7	9.7	3.2	100.
23	9.7	00.0	00.0	00.0	00.0	00.0	9.7	19.4	29.0	00.0	3.2	00.0	6.5	3.2	6.5	12.9	00.0	100.
24	12.9	00.0	00.0	00.0	00.0	3.2	6.5	19.4	22.6	6.5	3.2	00.0	3.2	9.7	00.0	9.7	3.2	100.
ALL	9.5	3.6	.5	.7	2.2	4.8	10.3	16.0	18.1	8.2	3.4	1.1	1.5	2.8	4.8	10.6	1.7	100.

NUMBER OF OBS = 744

B41

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	10.0	3.3	00.0	00.0	3.3	3.3	00.0	6.7	20.0	3.3	6.7	6.7	00.0	6.7	6.7	13.3	10.0	100.
2	16.7	00.0	00.0	00.0	00.0	3.3	3.3	10.0	23.3	6.7	00.0	6.7	3.3	3.3	13.3	3.3	6.7	100.
3	10.0	00.0	00.0	00.0	00.0	3.3	3.3	6.7	16.7	6.7	00.0	6.7	6.7	3.3	10.0	16.7	10.0	100.
4	10.0	00.0	3.3	00.0	6.7	3.3	00.0	6.7	26.7	10.0	00.0	6.7	3.3	10.0	3.3	6.7	3.3	100.
5	10.0	00.0	00.0	3.3	00.0	3.3	3.3	6.7	20.0	13.3	00.0	6.7	00.0	13.3	6.7	6.7	6.7	100.
6	3.3	6.7	00.0	00.0	3.3	10.0	00.0	6.7	26.7	3.3	6.7	00.0	3.3	10.0	6.7	6.7	6.7	100.
7	6.7	3.3	00.0	3.3	00.0	6.7	3.3	10.0	20.0	10.0	3.3	3.3	3.3	13.3	6.7	3.3	3.3	100.
8	6.7	3.3	00.0	00.0	00.0	6.7	10.0	10.0	13.3	6.7	6.7	00.0	00.0	13.3	13.3	3.3	6.7	100.
9	10.0	3.3	00.0	00.0	3.3	6.7	13.3	16.7	16.7	3.3	3.3	00.0	00.0	20.0	3.3	00.0	00.0	100.
10	6.7	6.7	00.0	6.7	00.0	3.3	20.0	16.7	3.3	10.0	00.0	3.3	3.3	6.7	10.0	3.3	00.0	100.
11	13.3	00.0	6.7	3.3	00.0	10.0	13.3	3.3	10.0	13.3	3.3	3.3	3.3	6.7	6.7	3.3	00.0	100.
12	10.0	3.3	6.7	00.0	3.3	6.7	13.3	3.3	3.3	20.0	6.7	3.3	3.3	6.7	6.7	3.3	00.0	100.
13	10.0	00.0	00.0	3.3	00.0	6.7	10.0	10.0	00.0	20.0	6.7	6.7	00.0	10.0	10.0	6.7	00.0	100.
14	10.0	00.0	00.0	3.3	3.3	6.7	10.0	6.7	3.3	20.0	6.7	3.3	00.0	10.0	13.3	3.3	00.0	100.
15	6.7	00.0	3.3	3.3	3.3	3.3	6.7	6.7	3.3	13.3	10.0	6.7	00.0	13.3	10.0	10.0	00.0	100.
16	6.7	6.7	3.3	6.7	00.0	3.3	6.7	6.7	6.7	10.0	6.7	6.7	3.3	10.0	13.3	3.3	00.0	100.
17	13.3	6.7	3.3	3.3	3.3	00.0	6.7	6.7	10.0	13.3	3.3	3.3	3.3	13.3	10.0	00.0	00.0	100.
18	3.3	6.7	3.3	3.3	00.0	6.7	3.3	3.3	20.0	6.7	3.3	00.0	00.0	16.7	10.0	13.3	00.0	100.
19	10.0	6.7	3.3	00.0	00.0	6.7	6.7	00.0	23.3	3.3	00.0	00.0	6.7	3.3	13.3	13.3	3.3	100.
20	20.0	3.3	3.3	00.0	00.0	3.3	6.7	10.0	20.0	00.0	3.3	00.0	3.3	13.3	3.3	6.7	3.3	100.
21	16.7	00.0	6.7	00.0	00.0	3.3	6.7	10.0	20.0	00.0	3.3	00.0	00.0	6.7	6.7	13.3	6.7	100.
22	16.7	3.3	00.0	3.3	00.0	3.3	3.3	6.7	26.7	3.3	3.3	00.0	00.0	6.7	13.3	3.3	6.7	100.
23	6.7	3.3	3.3	00.0	00.0	3.3	6.7	10.0	13.3	6.7	3.3	3.3	6.7	00.0	16.7	10.0	6.7	100.
24	6.7	3.3	00.0	00.0	00.0	3.3	3.3	3.3	20.0	13.3	3.3	3.3	00.0	10.0	10.0	13.3	6.7	100.
ALL	10.0	2.9	1.9	1.8	1.3	4.9	6.7	7.6	15.3	9.0	3.8	3.3	2.2	9.4	9.3	6.9	3.6	100.

NUMBER OF OBS = 720

B42

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	3.2	00.0	00.0	00.0	00.0	3.2	9.7	3.2	19.4	3.2	6.5	00.0	12.9	9.7	19.4	9.7	00.0	100.
2	3.2	00.0	00.0	00.0	00.0	9.7	3.2	12.9	12.9	6.5	3.2	00.0	6.5	16.1	12.9	12.9	00.0	100.
3	3.2	00.0	00.0	00.0	00.0	6.5	9.7	3.2	22.6	6.5	3.2	3.2	9.7	00.0	22.6	9.7	00.0	100.
4	3.2	00.0	00.0	00.0	00.0	3.2	12.9	3.2	19.4	3.2	00.0	6.5	9.7	19.4	9.7	6.5	3.2	100.
5	6.5	3.2	00.0	00.0	3.2	9.7	3.2	16.1	6.5	6.5	3.2	00.0	12.9	9.7	12.9	6.5	00.0	100.
6	9.7	00.0	00.0	00.0	3.2	9.7	00.0	12.9	12.9	9.7	3.2	00.0	9.7	12.9	16.1	00.0	00.0	100.
7	9.7	3.2	00.0	00.0	00.0	9.7	6.5	9.7	16.1	3.2	00.0	6.5	9.7	6.5	9.7	3.2	6.5	100.
8	9.7	6.5	00.0	00.0	00.0	3.2	6.5	9.7	12.9	9.7	6.5	6.5	9.7	9.7	9.7	00.0	00.0	100.
9	6.5	00.0	3.2	3.2	00.0	3.2	6.5	9.7	19.4	6.5	00.0	6.5	9.7	3.2	12.9	6.5	3.2	100.
10	3.2	6.5	00.0	00.0	6.5	3.2	6.5	16.1	3.2	6.5	3.2	6.5	9.7	9.7	9.7	9.7	00.0	100.
11	3.2	3.2	00.0	00.0	00.0	6.5	9.7	9.7	16.1	3.2	00.0	3.2	9.7	9.7	9.7	16.1	00.0	100.
12	3.2	00.0	3.2	00.0	6.5	00.0	16.1	6.5	6.5	12.9	00.0	6.5	9.7	6.5	9.7	12.9	00.0	100.
13	6.5	3.2	00.0	00.0	00.0	9.7	6.5	3.2	16.1	9.7	00.0	6.5	6.5	6.5	12.9	12.9	00.0	100.
14	3.2	3.2	00.0	00.0	00.0	6.5	9.7	6.5	9.7	9.7	6.5	00.0	3.2	16.1	12.9	12.9	00.0	100.
15	9.7	00.0	00.0	3.2	00.0	3.2	12.9	00.0	12.9	9.7	6.5	3.2	3.2	16.1	12.9	6.5	00.0	100.
16	6.5	3.2	00.0	00.0	3.2	3.2	12.9	6.5	9.7	6.5	00.0	6.5	00.0	12.9	19.4	9.7	00.0	100.
17	3.2	00.0	3.2	6.5	00.0	3.2	9.7	6.5	12.9	6.5	3.2	00.0	12.9	6.5	19.4	6.5	00.0	100.
18	00.0	3.2	00.0	3.2	3.2	3.2	6.5	6.5	19.4	6.5	00.0	3.2	12.9	6.5	16.1	9.7	00.0	100.
19	00.0	00.0	3.2	00.0	00.0	6.5	9.7	00.0	25.8	6.5	00.0	6.5	9.7	3.2	19.4	9.7	00.0	100.
20	6.5	3.2	00.0	00.0	00.0	6.5	9.7	6.5	22.6	6.5	00.0	6.5	6.5	3.2	12.9	6.5	3.2	100.
21	3.2	6.5	00.0	00.0	00.0	6.5	9.7	12.9	16.1	6.5	3.2	3.2	9.7	6.5	6.5	9.7	00.0	100.
22	3.2	3.2	00.0	00.0	00.0	3.2	9.7	9.7	16.1	12.9	00.0	3.2	3.2	12.9	12.9	6.5	3.2	100.
23	3.2	00.0	00.0	00.0	00.0	6.5	6.5	12.9	19.4	00.0	3.2	00.0	6.5	9.7	22.6	9.7	00.0	100.
24	3.2	00.0	00.0	00.0	00.0	3.2	9.7	3.2	19.4	9.7	3.2	3.2	6.5	16.1	16.1	6.5	00.0	100.
ALL	4.7	2.0	.5	.7	1.1	5.4	8.5	7.8	15.3	7.0	2.3	3.6	8.3	9.5	14.1	8.3	.8	100.

NUMBER OF OBS = 744

B43

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	6.5	2.2	1.1	00.0	2.2	2.2	5.4	9.8	17.4	4.3	5.4	3.3	4.3	6.5	10.9	13.0	5.4	100.
2	9.8	1.1	00.0	00.0	00.0	4.3	4.3	12.0	20.7	5.4	3.3	3.3	4.3	7.6	9.8	9.8	4.3	100.
3	7.6	1.1	00.0	00.0	1.1	3.3	7.6	6.5	23.9	6.5	2.2	3.3	5.4	1.1	15.2	12.0	3.3	100.
4	7.6	3.3	1.1	00.0	2.2	3.3	8.7	6.5	21.7	6.5	3.3	4.3	4.3	9.8	7.6	5.4	4.3	100.
5	9.8	2.2	00.0	1.1	1.1	5.4	4.3	15.2	15.2	9.8	2.2	3.3	4.3	9.8	8.7	5.4	2.2	100.
6	7.6	4.3	00.0	00.0	2.2	7.6	3.3	12.0	18.5	6.5	7.6	00.0	5.4	9.8	8.7	4.3	2.2	100.
7	10.9	3.3	00.0	1.1	00.0	6.5	6.5	13.0	16.3	5.4	3.3	5.4	5.4	8.7	6.5	3.3	4.3	100.
8	8.7	4.3	00.0	00.0	00.0	3.3	10.9	12.0	13.0	8.7	4.3	3.3	3.3	9.8	8.7	5.4	4.3	100.
9	6.5	3.3	1.1	3.3	1.1	5.4	12.0	15.2	17.4	3.3	2.2	3.3	3.3	7.6	8.7	5.4	1.1	100.
10	6.5	6.5	00.0	2.2	3.3	4.3	15.2	15.2	6.5	9.8	1.1	3.3	4.3	6.5	7.6	7.6	00.0	100.
11	9.8	2.2	2.2	1.1	1.1	9.8	10.9	7.6	14.1	12.0	1.1	2.2	4.3	6.5	5.4	9.8	00.0	100.
12	7.6	2.2	3.3	00.0	4.3	5.4	14.1	6.5	9.8	16.3	2.2	3.3	4.3	4.3	6.5	9.8	00.0	100.
13	5.4	3.3	00.0	2.2	00.0	8.7	8.7	10.9	8.7	16.3	2.2	4.3	2.2	5.4	8.7	13.0	00.0	100.
14	6.5	2.2	1.1	1.1	1.1	7.6	9.8	12.0	8.7	15.2	4.3	1.1	1.1	8.7	9.8	9.8	00.0	100.
15	6.5	2.2	1.1	2.2	3.3	4.3	12.0	8.7	9.8	10.9	6.5	3.3	1.1	10.9	7.6	9.8	00.0	100.
16	5.4	4.3	2.2	3.3	3.3	5.4	9.8	8.7	12.0	8.7	2.2	4.3	1.1	8.7	12.0	8.7	00.0	100.
17	8.7	3.3	3.3	3.3	4.3	3.3	7.6	10.9	14.1	8.7	3.3	1.1	5.4	7.6	9.8	5.4	00.0	100.
18	1.1	4.3	1.1	3.3	3.3	6.5	6.5	8.7	16.3	8.7	4.3	1.1	4.3	7.6	10.9	12.0	00.0	100.
19	6.5	3.3	2.2	00.0	2.2	5.4	8.7	3.3	22.8	4.3	1.1	2.2	7.6	3.3	13.0	12.0	2.2	100.
20	15.2	2.2	1.1	00.0	00.0	5.4	10.9	7.6	20.7	2.2	2.2	2.2	4.3	6.5	9.8	7.6	2.2	100.
21	13.0	2.2	2.2	00.0	00.0	4.3	6.5	15.2	19.6	3.3	3.3	2.2	5.4	4.3	4.3	10.9	3.3	100.
22	12.0	3.3	00.0	1.1	00.0	2.2	6.5	12.0	21.7	8.7	1.1	1.1	1.1	6.5	12.0	6.5	4.3	100.
23	6.5	1.1	1.1	00.0	00.0	3.3	7.6	14.1	20.7	2.2	3.3	1.1	6.5	4.3	15.2	10.9	2.2	100.
24	7.6	1.1	00.0	00.0	00.0	3.3	6.5	8.7	20.7	9.8	3.3	2.2	3.3	12.0	8.7	9.8	3.3	100.
ALL	8.1	2.9	1.0	1.0	1.5	5.0	8.5	10.5	16.3	8.1	3.1	2.7	4.0	7.2	9.4	8.7	2.0	100.

NUMBER OF OBS = 2208

B44

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	7.6	3.3	1.1	1.1	2.7	3.3	6.0	13.0	16.8	4.3	3.3	2.7	2.7	5.4	8.7	14.7	3.3	100.
2	10.9	2.7	1.6	2.2	1.1	4.3	7.6	11.4	20.7	3.8	2.7	2.2	2.7	6.5	7.1	8.2	4.3	100.
3	9.8	2.7	1.6	1.6	1.1	3.3	8.7	9.8	23.4	4.9	1.6	3.3	3.3	1.6	10.3	9.8	3.3	100.
4	10.3	6.0	2.7	1.6	1.6	2.2	8.2	12.0	18.5	5.4	2.2	3.3	3.3	6.0	7.1	6.5	3.3	100.
5	13.0	4.3	1.1	2.7	.5	4.3	6.0	15.2	15.2	7.6	1.6	2.7	3.3	7.1	7.1	5.4	2.7	100.
6	8.2	4.9	1.6	3.8	2.2	4.9	6.0	15.2	15.8	3.3	5.4	1.1	3.3	8.2	9.2	4.9	2.2	100.
7	8.7	4.9	2.2	1.6	.5	6.0	8.7	14.1	15.8	3.8	2.2	4.3	4.9	7.1	6.0	6.0	3.3	100.
8	9.2	4.9	1.1	.5	3.3	4.3	10.9	12.5	17.4	6.0	2.2	2.2	2.7	6.5	9.2	4.3	2.7	100.
9	7.6	7.6	4.3	2.7	2.2	4.9	12.0	12.5	17.9	4.3	2.2	2.2	2.7	4.9	6.5	4.9	.5	100.
10	6.5	8.2	4.3	3.8	3.3	3.3	15.8	12.0	9.2	10.3	1.1	2.2	3.8	3.8	4.9	7.6	00.0	100.
11	10.3	4.3	4.9	3.3	5.4	7.6	9.8	8.7	14.7	10.3	1.1	1.1	2.7	4.9	4.9	6.0	00.0	100.
12	7.6	3.8	4.9	2.2	7.1	6.0	12.0	11.4	12.0	11.4	1.6	2.7	2.7	3.3	4.9	6.5	00.0	100.
13	6.0	6.5	2.2	3.8	2.2	8.7	11.4	13.6	11.4	10.3	2.2	2.2	1.1	4.3	6.5	7.6	00.0	100.
14	6.5	3.8	3.8	2.2	4.9	6.0	10.3	14.7	10.9	11.4	2.7	2.2	1.1	6.0	6.5	7.1	00.0	100.
15	5.4	5.4	3.3	2.2	4.9	3.8	15.2	12.5	10.3	8.2	3.8	2.7	1.6	8.2	5.4	7.1	00.0	100.
16	5.4	7.1	2.2	4.9	3.8	4.9	12.0	13.0	12.5	7.1	2.7	2.7	.5	6.0	8.2	7.1	00.0	100.
17	7.1	8.2	4.3	3.8	3.3	4.9	8.7	15.2	14.7	6.0	2.7	.5	2.7	4.9	5.4	7.6	00.0	100.
18	3.3	6.0	2.7	6.0	3.3	6.5	7.1	17.4	12.5	5.4	3.8	1.1	2.2	4.3	8.7	9.8	00.0	100.
19	6.0	2.7	3.3	4.3	3.3	6.5	9.2	13.0	15.8	2.7	1.6	1.6	3.8	3.3	9.8	11.4	1.6	100.
20	10.9	3.8	2.2	2.7	3.3	6.0	9.2	13.0	16.8	2.2	1.6	1.1	3.3	5.4	8.2	8.7	1.6	100.
21	12.0	3.3	2.2	1.6	2.7	3.8	8.2	14.1	17.4	3.3	2.7	1.6	4.3	5.4	4.9	10.3	2.2	100.
22	9.2	4.9	.5	2.2	2.2	3.3	7.6	14.1	19.6	4.3	1.1	1.1	2.2	6.0	9.8	9.8	2.2	100.
23	7.6	1.6	2.2	1.1	1.1	3.3	8.2	15.2	19.0	2.7	2.7	.5	4.9	3.3	12.0	12.0	2.7	100.
24	7.1	1.6	1.1	00.0	3.3	4.3	6.5	12.0	19.0	7.1	2.2	1.6	3.3	8.7	9.2	10.9	2.2	100.
ALL	8.2	4.7	2.6	2.6	2.9	4.8	9.4	13.2	15.7	6.1	2.4	2.0	2.9	5.5	7.5	8.1	1.6	100.

NUMBER OF OBS = 4416

B45

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2016

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	8.5	3.8	1.6	1.6	3.6	3.0	5.7	10.1	15.6	7.4	4.4	3.3	3.3	5.5	8.7	11.5	2.5	100.
2	9.8	4.6	1.6	2.5	1.9	3.6	6.0	11.7	16.9	6.0	3.3	3.6	3.0	6.6	8.2	8.2	2.5	100.
3	9.0	3.3	2.2	2.2	1.9	3.0	7.1	10.1	19.1	6.6	2.7	3.8	3.0	3.3	9.8	10.4	2.5	100.
4	8.7	5.5	3.0	1.6	2.7	1.9	8.7	10.4	17.2	6.6	2.2	3.8	3.0	6.3	8.2	8.2	1.9	100.
5	11.2	4.1	1.6	2.7	1.1	5.5	6.0	13.7	13.1	7.1	1.6	3.8	4.4	6.6	8.2	7.4	1.9	100.
6	7.7	4.4	2.2	3.0	1.9	4.9	5.5	13.4	15.3	5.2	4.4	1.6	3.0	7.9	9.8	7.9	1.9	100.
7	6.0	3.6	3.3	2.5	2.2	4.6	8.2	13.9	14.8	5.5	2.2	2.5	3.8	7.9	7.1	9.8	2.2	100.
8	6.6	4.6	1.4	1.1	3.6	4.9	11.2	12.8	15.0	5.7	2.7	2.2	3.0	6.6	9.8	7.4	1.4	100.
9	5.7	6.0	3.3	1.9	3.3	3.8	12.6	10.9	16.4	5.2	3.0	2.7	3.0	4.1	9.8	7.9	.3	100.
10	5.5	6.0	2.7	1.9	3.8	4.6	12.0	11.7	11.5	8.2	2.2	4.6	4.1	3.8	8.5	8.7	00.0	100.
11	9.3	2.7	3.6	1.6	3.6	6.8	10.7	10.4	13.7	7.7	3.6	2.5	3.6	3.8	7.7	9.0	00.0	100.
12	7.7	3.6	3.6	1.9	4.9	5.2	9.8	12.3	12.6	7.7	4.1	3.8	2.7	2.7	8.7	8.7	00.0	100.
13	4.9	6.0	1.9	2.7	2.7	6.6	10.1	13.1	11.2	7.9	2.7	4.1	1.6	4.6	8.7	10.9	00.0	100.
14	6.6	3.3	3.8	1.9	3.6	5.5	8.7	13.9	12.0	8.2	3.3	3.8	1.1	6.3	9.0	9.0	00.0	100.
15	5.2	4.1	4.4	2.5	3.3	4.6	11.2	11.7	11.5	6.3	4.6	3.6	2.7	7.4	8.5	8.5	00.0	100.
16	5.5	5.7	2.5	3.8	2.2	5.5	9.3	13.9	10.1	7.1	3.6	4.1	1.1	7.1	8.7	9.8	00.0	100.
17	6.3	6.6	3.6	3.3	3.6	4.6	9.0	13.1	12.6	5.7	3.6	2.2	2.5	5.7	7.9	9.8	00.0	100.
18	4.4	5.2	3.3	3.3	4.4	5.7	7.9	15.0	9.3	6.3	2.5	3.8	2.7	4.6	9.6	12.0	00.0	100.
19	6.8	3.8	4.1	3.6	3.6	5.7	9.0	12.3	10.7	4.6	2.7	2.7	3.3	4.6	10.9	10.7	.8	100.
20	11.2	4.4	2.2	2.7	3.0	4.9	8.7	12.6	12.8	3.3	2.7	2.2	4.9	5.5	7.9	9.6	1.4	100.
21	10.1	4.1	2.2	2.7	2.2	5.2	6.8	12.6	13.1	4.1	3.6	2.7	4.9	6.0	8.7	9.6	1.4	100.
22	8.7	4.4	1.1	3.3	3.3	2.7	6.8	12.0	15.6	6.3	1.4	3.0	2.7	6.6	10.7	9.6	1.9	100.
23	7.9	3.8	1.6	1.9	1.9	3.3	7.4	13.4	14.8	5.2	1.9	2.2	4.9	3.8	12.3	11.5	2.2	100.
24	8.2	3.8	1.4	1.1	3.3	4.9	6.8	9.6	16.4	7.7	1.9	3.8	3.6	6.3	9.3	10.4	1.6	100.
ALL	7.6	4.5	2.6	2.4	3.0	4.6	8.6	12.3	13.8	6.3	2.9	3.2	3.2	5.6	9.0	9.4	1.1	100.

NUMBER OF OBS = 8784

B46

Wind Direction Frequencies

100-Meter Level

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.5	9.7	00.0	00.0	3.2	6.5	3.2	6.5	19.4	00.0	6.5	00.0	00.0	9.7	12.9	16.1	00.0	100.
2	9.7	3.2	00.0	00.0	3.2	3.2	6.5	6.5	19.4	00.0	3.2	3.2	3.2	6.5	12.9	19.4	00.0	100.
3	6.5	3.2	00.0	00.0	6.5	3.2	3.2	9.7	12.9	3.2	3.2	3.2	3.2	6.5	9.7	25.8	00.0	100.
4	3.2	6.5	00.0	6.5	00.0	3.2	00.0	9.7	16.1	3.2	3.2	3.2	3.2	6.5	9.7	25.8	00.0	100.
5	3.2	6.5	3.2	00.0	00.0	6.5	3.2	6.5	12.9	6.5	3.2	3.2	00.0	6.5	9.7	29.0	00.0	100.
6	00.0	3.2	00.0	6.5	00.0	3.2	3.2	6.5	16.1	00.0	6.5	3.2	00.0	9.7	6.5	35.5	00.0	100.
7	00.0	3.2	00.0	6.5	00.0	3.2	3.2	12.9	9.7	00.0	6.5	00.0	3.2	12.9	12.9	25.8	00.0	100.
8	00.0	00.0	3.2	00.0	3.2	3.2	3.2	9.7	9.7	3.2	3.2	6.5	6.5	3.2	16.1	29.0	00.0	100.
9	00.0	3.2	00.0	00.0	00.0	6.5	00.0	9.7	12.9	3.2	9.7	3.2	3.2	6.5	16.1	25.8	00.0	100.
10	3.2	3.2	00.0	00.0	00.0	6.5	00.0	9.7	9.7	9.7	6.5	00.0	6.5	6.5	9.7	29.0	00.0	100.
11	6.5	3.2	00.0	00.0	00.0	6.5	6.5	6.5	12.9	6.5	3.2	3.2	3.2	6.5	16.1	19.4	00.0	100.
12	00.0	9.7	00.0	00.0	3.2	6.5	3.2	9.7	9.7	3.2	6.5	3.2	6.5	6.5	12.9	19.4	00.0	100.
13	3.2	6.5	00.0	00.0	6.5	3.2	6.5	6.5	16.1	3.2	3.2	9.7	3.2	00.0	19.4	12.9	00.0	100.
14	9.7	00.0	00.0	00.0	6.5	00.0	6.5	9.7	12.9	6.5	00.0	12.9	3.2	00.0	19.4	12.9	00.0	100.
15	00.0	9.7	00.0	00.0	6.5	00.0	9.7	6.5	12.9	00.0	12.9	3.2	6.5	3.2	19.4	9.7	00.0	100.
16	3.2	6.5	00.0	00.0	3.2	3.2	12.9	3.2	9.7	6.5	6.5	9.7	3.2	3.2	22.6	6.5	00.0	100.
17	00.0	9.7	00.0	6.5	3.2	00.0	12.9	6.5	6.5	3.2	6.5	9.7	3.2	6.5	16.1	9.7	00.0	100.
18	3.2	6.5	00.0	3.2	00.0	9.7	12.9	6.5	00.0	6.5	3.2	3.2	19.4	3.2	16.1	6.5	00.0	100.
19	6.5	6.5	00.0	3.2	6.5	6.5	6.5	6.5	3.2	3.2	6.5	3.2	12.9	6.5	12.9	9.7	00.0	100.
20	00.0	12.9	00.0	3.2	00.0	12.9	9.7	6.5	3.2	3.2	3.2	6.5	6.5	12.9	9.7	9.7	00.0	100.
21	6.5	9.7	3.2	00.0	00.0	12.9	6.5	9.7	3.2	3.2	3.2	3.2	9.7	6.5	12.9	9.7	00.0	100.
22	00.0	16.1	00.0	3.2	00.0	9.7	6.5	6.5	6.5	6.5	3.2	3.2	6.5	6.5	9.7	16.1	00.0	100.
23	6.5	6.5	3.2	3.2	6.5	6.5	3.2	6.5	6.5	6.5	3.2	3.2	3.2	9.7	6.5	19.4	00.0	100.
24	3.2	12.9	00.0	3.2	3.2	6.5	6.5	3.2	9.7	3.2	9.7	00.0	3.2	6.5	9.7	19.4	00.0	100.
ALL	3.4	6.6	.5	1.9	2.6	5.4	5.6	7.5	10.5	3.8	5.1	4.2	5.0	6.3	13.3	18.4	00.0	100.

NUMBER OF OBS = 744

B48

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.9	00.0	3.4	6.9	13.8	00.0	00.0	6.9	3.4	13.8	3.4	3.4	10.3	17.2	00.0	100.
2	10.3	3.4	6.9	3.4	3.4	3.4	6.9	6.9	00.0	6.9	6.9	10.3	6.9	00.0	10.3	13.8	00.0	100.
3	6.9	6.9	6.9	3.4	3.4	00.0	6.9	6.9	3.4	10.3	6.9	10.3	3.4	00.0	6.9	17.2	00.0	100.
4	3.4	6.9	3.4	6.9	00.0	6.9	6.9	3.4	3.4	6.9	6.9	10.3	10.3	00.0	00.0	24.1	00.0	100.
5	6.9	3.4	00.0	6.9	3.4	3.4	6.9	6.9	00.0	6.9	10.3	3.4	3.4	6.9	3.4	27.6	00.0	100.
6	10.3	3.4	3.4	6.9	00.0	3.4	3.4	6.9	3.4	3.4	17.2	00.0	00.0	6.9	10.3	20.7	00.0	100.
7	6.9	6.9	3.4	6.9	3.4	00.0	00.0	10.3	3.4	3.4	10.3	6.9	00.0	6.9	3.4	27.6	00.0	100.
8	3.4	3.4	3.4	00.0	10.3	00.0	3.4	10.3	3.4	6.9	3.4	6.9	6.9	6.9	6.9	24.1	00.0	100.
9	00.0	3.4	6.9	00.0	10.3	00.0	00.0	6.9	6.9	6.9	3.4	6.9	6.9	6.9	6.9	27.6	00.0	100.
10	6.9	00.0	00.0	00.0	10.3	6.9	3.4	3.4	10.3	6.9	10.3	3.4	6.9	3.4	3.4	24.1	00.0	100.
11	3.4	00.0	3.4	00.0	3.4	6.9	3.4	3.4	13.8	10.3	10.3	6.9	00.0	6.9	00.0	27.6	00.0	100.
12	6.9	3.4	00.0	00.0	3.4	3.4	10.3	00.0	13.8	6.9	10.3	10.3	00.0	3.4	6.9	20.7	00.0	100.
13	13.8	00.0	00.0	00.0	3.4	6.9	6.9	00.0	6.9	10.3	6.9	6.9	10.3	3.4	6.9	17.2	00.0	100.
14	13.8	00.0	00.0	00.0	3.4	3.4	6.9	3.4	13.8	3.4	10.3	3.4	3.4	10.3	6.9	17.2	00.0	100.
15	3.4	6.9	00.0	3.4	6.9	00.0	6.9	00.0	10.3	00.0	17.2	3.4	3.4	6.9	10.3	20.7	00.0	100.
16	3.4	6.9	00.0	6.9	6.9	00.0	3.4	3.4	6.9	6.9	6.9	3.4	3.4	10.3	6.9	24.1	00.0	100.
17	3.4	10.3	3.4	3.4	3.4	00.0	6.9	00.0	6.9	10.3	3.4	00.0	6.9	6.9	6.9	27.6	00.0	100.
18	10.3	6.9	00.0	10.3	00.0	3.4	3.4	6.9	00.0	6.9	6.9	3.4	3.4	00.0	20.7	17.2	00.0	100.
19	10.3	6.9	00.0	3.4	6.9	3.4	6.9	3.4	00.0	10.3	00.0	6.9	3.4	3.4	13.8	20.7	00.0	100.
20	10.3	6.9	3.4	3.4	6.9	3.4	6.9	00.0	3.4	13.8	3.4	00.0	00.0	00.0	20.7	17.2	00.0	100.
21	10.3	10.3	00.0	3.4	3.4	6.9	6.9	00.0	3.4	10.3	6.9	00.0	3.4	00.0	20.7	13.8	00.0	100.
22	10.3	6.9	6.9	3.4	00.0	10.3	3.4	00.0	3.4	10.3	6.9	3.4	3.4	00.0	17.2	13.8	00.0	100.
23	6.9	6.9	6.9	6.9	3.4	3.4	3.4	3.4	3.4	6.9	6.9	00.0	3.4	3.4	17.2	17.2	00.0	100.
24	3.4	10.3	3.4	3.4	3.4	6.9	3.4	6.9	00.0	10.3	3.4	00.0	6.9	6.9	6.9	24.1	00.0	100.
ALL	7.2	5.2	2.9	3.4	4.3	3.7	5.5	3.9	5.0	7.6	7.5	5.0	4.2	4.3	9.3	21.0	00.0	100.

NUMBER OF OBS = 696

B49

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	9.7	3.2	00.0	6.5	3.2	9.7	12.9	12.9	6.5	6.5	3.2	00.0	00.0	6.5	6.5	12.9	00.0	100.
2	6.5	6.5	3.2	00.0	9.7	3.2	12.9	12.9	12.9	3.2	3.2	00.0	00.0	6.5	6.5	12.9	00.0	100.
3	12.9	00.0	00.0	00.0	3.2	9.7	9.7	9.7	16.1	6.5	3.2	3.2	3.2	3.2	6.5	12.9	00.0	100.
4	6.5	3.2	00.0	00.0	00.0	6.5	19.4	12.9	3.2	9.7	3.2	3.2	3.2	3.2	12.9	12.9	00.0	100.
5	3.2	00.0	3.2	00.0	00.0	3.2	16.1	19.4	9.7	3.2	3.2	3.2	3.2	3.2	12.9	16.1	00.0	100.
6	6.5	00.0	3.2	00.0	00.0	3.2	12.9	19.4	9.7	9.7	00.0	00.0	00.0	9.7	12.9	12.9	00.0	100.
7	3.2	3.2	00.0	00.0	00.0	3.2	6.5	29.0	12.9	3.2	00.0	00.0	00.0	9.7	12.9	16.1	00.0	100.
8	6.5	00.0	00.0	00.0	00.0	3.2	12.9	16.1	19.4	3.2	00.0	00.0	3.2	6.5	9.7	19.4	00.0	100.
9	6.5	3.2	00.0	00.0	00.0	00.0	6.5	12.9	29.0	3.2	3.2	3.2	6.5	00.0	12.9	12.9	00.0	100.
10	3.2	6.5	00.0	00.0	00.0	00.0	9.7	9.7	22.6	6.5	6.5	00.0	3.2	6.5	6.5	19.4	00.0	100.
11	6.5	3.2	00.0	00.0	00.0	00.0	3.2	12.9	19.4	12.9	6.5	3.2	3.2	3.2	9.7	16.1	00.0	100.
12	6.5	3.2	00.0	00.0	00.0	00.0	3.2	12.9	16.1	12.9	12.9	00.0	00.0	6.5	6.5	19.4	00.0	100.
13	00.0	3.2	3.2	00.0	00.0	00.0	3.2	12.9	22.6	6.5	6.5	6.5	00.0	6.5	19.4	9.7	00.0	100.
14	00.0	3.2	00.0	3.2	00.0	00.0	3.2	6.5	22.6	16.1	3.2	6.5	3.2	00.0	19.4	12.9	00.0	100.
15	00.0	3.2	00.0	00.0	00.0	00.0	6.5	9.7	16.1	12.9	6.5	6.5	6.5	9.7	6.5	16.1	00.0	100.
16	00.0	3.2	00.0	00.0	00.0	3.2	9.7	9.7	12.9	6.5	6.5	9.7	3.2	9.7	9.7	16.1	00.0	100.
17	3.2	00.0	00.0	00.0	00.0	3.2	16.1	6.5	12.9	9.7	00.0	6.5	3.2	6.5	12.9	19.4	00.0	100.
18	3.2	00.0	00.0	00.0	00.0	3.2	9.7	9.7	19.4	3.2	00.0	6.5	00.0	6.5	19.4	19.4	00.0	100.
19	3.2	00.0	00.0	3.2	3.2	00.0	9.7	19.4	9.7	6.5	3.2	00.0	00.0	9.7	9.7	22.6	00.0	100.
20	12.9	00.0	00.0	3.2	3.2	3.2	12.9	19.4	3.2	6.5	3.2	00.0	00.0	12.9	6.5	12.9	00.0	100.
21	6.5	12.9	00.0	00.0	6.5	00.0	19.4	12.9	6.5	3.2	00.0	3.2	12.9	3.2	3.2	9.7	00.0	100.
22	00.0	12.9	3.2	3.2	6.5	00.0	19.4	9.7	9.7	3.2	00.0	3.2	3.2	6.5	3.2	16.1	00.0	100.
23	3.2	9.7	3.2	00.0	00.0	3.2	22.6	16.1	9.7	3.2	3.2	00.0	6.5	00.0	9.7	9.7	00.0	100.
24	3.2	9.7	3.2	3.2	3.2	3.2	12.9	19.4	6.5	6.5	3.2	00.0	6.5	3.2	6.5	9.7	00.0	100.
ALL	4.7	3.8	.9	.9	1.6	2.6	11.3	13.8	13.7	6.9	3.4	2.7	3.0	5.8	10.1	14.9	00.0	100.

NUMBER OF OBS = 744

BS0

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	7.7	5.5	2.2	2.2	3.3	7.7	9.9	6.6	8.8	4.4	4.4	4.4	1.1	6.6	9.9	15.4	00.0	100.
2	8.8	4.4	3.3	1.1	5.5	3.3	8.8	8.8	11.0	3.3	4.4	4.4	3.3	4.4	9.9	15.4	00.0	100.
3	8.8	3.3	2.2	1.1	4.4	4.4	6.6	8.8	11.0	6.6	4.4	5.5	3.3	3.3	7.7	18.7	00.0	100.
4	4.4	5.5	1.1	4.4	00.0	5.5	8.8	8.8	7.7	6.6	4.4	5.5	5.5	3.3	7.7	20.9	00.0	100.
5	4.4	3.3	2.2	2.2	1.1	4.4	8.8	11.0	7.7	5.5	5.5	3.3	2.2	5.5	8.8	24.2	00.0	100.
6	5.5	2.2	2.2	4.4	00.0	3.3	6.6	11.0	9.9	4.4	7.7	1.1	00.0	8.8	9.9	23.1	00.0	100.
7	3.3	4.4	1.1	4.4	1.1	2.2	3.3	17.6	8.8	2.2	5.5	2.2	1.1	9.9	9.9	23.1	00.0	100.
8	3.3	1.1	2.2	00.0	4.4	2.2	6.6	12.1	11.0	4.4	2.2	4.4	5.5	5.5	11.0	24.2	00.0	100.
9	2.2	3.3	2.2	00.0	3.3	2.2	2.2	9.9	16.5	4.4	5.5	4.4	5.5	4.4	12.1	22.0	00.0	100.
10	4.4	3.3	00.0	00.0	3.3	4.4	4.4	7.7	14.3	7.7	7.7	1.1	5.5	5.5	6.6	24.2	00.0	100.
11	5.5	2.2	1.1	00.0	1.1	4.4	4.4	7.7	15.4	9.9	6.6	4.4	2.2	5.5	8.8	20.9	00.0	100.
12	4.4	5.5	00.0	00.0	2.2	3.3	5.5	7.7	13.2	7.7	9.9	4.4	2.2	5.5	8.8	19.8	00.0	100.
13	5.5	3.3	1.1	00.0	3.3	3.3	5.5	6.6	15.4	6.6	5.5	7.7	4.4	3.3	15.4	13.2	00.0	100.
14	7.7	1.1	00.0	1.1	3.3	1.1	5.5	6.6	16.5	8.8	4.4	7.7	3.3	3.3	15.4	14.3	00.0	100.
15	1.1	6.6	00.0	1.1	4.4	00.0	7.7	5.5	13.2	4.4	12.1	4.4	5.5	6.6	12.1	15.4	00.0	100.
16	2.2	5.5	00.0	2.2	3.3	2.2	8.8	5.5	9.9	6.6	6.6	7.7	3.3	7.7	13.2	15.4	00.0	100.
17	2.2	6.6	1.1	3.3	2.2	1.1	12.1	4.4	8.8	7.7	3.3	5.5	4.4	6.6	12.1	18.7	00.0	100.
18	5.5	4.4	00.0	4.4	00.0	5.5	8.8	7.7	6.6	5.5	3.3	4.4	7.7	3.3	18.7	14.3	00.0	100.
19	6.6	4.4	00.0	3.3	5.5	3.3	7.7	9.9	4.4	6.6	3.3	3.3	5.5	6.6	12.1	17.6	00.0	100.
20	7.7	6.6	1.1	3.3	3.3	6.6	9.9	8.8	3.3	7.7	3.3	2.2	2.2	8.8	12.1	13.2	00.0	100.
21	7.7	11.0	1.1	1.1	3.3	6.6	11.0	7.7	4.4	5.5	3.3	2.2	8.8	3.3	12.1	11.0	00.0	100.
22	3.3	12.1	3.3	3.3	2.2	6.6	9.9	5.5	6.6	6.6	3.3	3.3	4.4	4.4	9.9	15.4	00.0	100.
23	5.5	7.7	4.4	3.3	3.3	4.4	9.9	8.8	6.6	5.5	4.4	1.1	4.4	4.4	11.0	15.4	00.0	100.
24	3.3	11.0	2.2	3.3	3.3	5.5	7.7	9.9	5.5	6.6	5.5	00.0	5.5	5.5	7.7	17.6	00.0	100.
ALL	5.0	5.2	1.4	2.1	2.8	3.9	7.5	8.5	9.8	6.0	5.3	3.9	4.0	5.5	10.9	18.0	00.0	100.

NUMBER OF OBS = 2184

B51

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.5	9.7	00.0	00.0	3.2	6.5	3.2	6.5	19.4	00.0	6.5	00.0	00.0	9.7	12.9	16.1	00.0	100.
2	9.7	3.2	00.0	00.0	3.2	3.2	6.5	6.5	19.4	00.0	3.2	3.2	3.2	6.5	12.9	19.4	00.0	100.
3	6.5	3.2	00.0	00.0	6.5	3.2	3.2	9.7	12.9	3.2	3.2	3.2	3.2	6.5	9.7	25.8	00.0	100.
4	3.2	6.5	00.0	6.5	00.0	3.2	00.0	9.7	16.1	3.2	3.2	3.2	3.2	6.5	9.7	25.8	00.0	100.
5	3.2	6.5	3.2	00.0	00.0	6.5	3.2	6.5	12.9	6.5	3.2	3.2	00.0	6.5	9.7	29.0	00.0	100.
6	00.0	3.2	00.0	6.5	00.0	3.2	3.2	6.5	16.1	00.0	6.5	3.2	00.0	9.7	6.5	35.5	00.0	100.
7	00.0	3.2	00.0	6.5	00.0	3.2	3.2	12.9	9.7	00.0	6.5	00.0	3.2	12.9	12.9	25.8	00.0	100.
8	00.0	00.0	3.2	00.0	3.2	3.2	3.2	9.7	9.7	3.2	3.2	6.5	6.5	3.2	16.1	29.0	00.0	100.
9	00.0	3.2	00.0	00.0	00.0	6.5	00.0	9.7	12.9	3.2	9.7	3.2	3.2	6.5	16.1	25.8	00.0	100.
10	3.2	3.2	00.0	00.0	00.0	6.5	00.0	9.7	9.7	9.7	6.5	00.0	6.5	6.5	9.7	29.0	00.0	100.
11	6.5	3.2	00.0	00.0	00.0	6.5	6.5	6.5	12.9	6.5	3.2	3.2	3.2	6.5	16.1	19.4	00.0	100.
12	00.0	9.7	00.0	00.0	3.2	6.5	3.2	9.7	9.7	3.2	6.5	3.2	6.5	6.5	12.9	19.4	00.0	100.
13	3.2	6.5	00.0	00.0	6.5	3.2	6.5	6.5	16.1	3.2	3.2	9.7	3.2	00.0	19.4	12.9	00.0	100.
14	9.7	00.0	00.0	00.0	6.5	00.0	6.5	9.7	12.9	6.5	00.0	12.9	3.2	00.0	19.4	12.9	00.0	100.
15	00.0	9.7	00.0	00.0	6.5	00.0	9.7	6.5	12.9	00.0	12.9	3.2	6.5	3.2	19.4	9.7	00.0	100.
16	3.2	6.5	00.0	00.0	3.2	3.2	12.9	3.2	9.7	6.5	6.5	9.7	3.2	3.2	22.6	6.5	00.0	100.
17	00.0	9.7	00.0	6.5	3.2	00.0	12.9	6.5	6.5	3.2	6.5	9.7	3.2	6.5	16.1	9.7	00.0	100.
18	3.2	6.5	00.0	3.2	00.0	9.7	12.9	6.5	00.0	6.5	3.2	3.2	19.4	3.2	16.1	6.5	00.0	100.
19	6.5	6.5	00.0	3.2	6.5	6.5	6.5	6.5	3.2	3.2	6.5	3.2	12.9	6.5	12.9	9.7	00.0	100.
20	00.0	12.9	00.0	3.2	00.0	12.9	9.7	6.5	3.2	3.2	3.2	6.5	6.5	12.9	9.7	9.7	00.0	100.
21	6.5	9.7	3.2	00.0	00.0	12.9	6.5	9.7	3.2	3.2	3.2	3.2	9.7	6.5	12.9	9.7	00.0	100.
22	00.0	16.1	00.0	3.2	00.0	9.7	6.5	6.5	6.5	6.5	3.2	3.2	6.5	6.5	9.7	16.1	00.0	100.
23	6.5	6.5	3.2	3.2	6.5	6.5	3.2	6.5	6.5	6.5	3.2	3.2	3.2	9.7	6.5	19.4	00.0	100.
24	3.2	12.9	00.0	3.2	3.2	6.5	6.5	3.2	9.7	3.2	9.7	00.0	3.2	6.5	9.7	19.4	00.0	100.
ALL	3.4	6.6	.5	1.9	2.6	5.4	5.6	7.5	10.5	3.8	5.1	4.2	5.0	6.3	13.3	18.4	00.0	100.

NUMBER OF OBS = 744

BS2

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.9	00.0	3.4	6.9	13.8	00.0	00.0	6.9	3.4	13.8	3.4	3.4	10.3	17.2	00.0	100.
2	10.3	3.4	6.9	3.4	3.4	3.4	6.9	6.9	00.0	6.9	6.9	10.3	6.9	00.0	10.3	13.8	00.0	100.
3	6.9	6.9	6.9	3.4	3.4	00.0	6.9	6.9	3.4	10.3	6.9	10.3	3.4	00.0	6.9	17.2	00.0	100.
4	3.4	6.9	3.4	6.9	00.0	6.9	6.9	3.4	3.4	6.9	6.9	10.3	10.3	00.0	00.0	24.1	00.0	100.
5	6.9	3.4	00.0	6.9	3.4	3.4	6.9	6.9	00.0	6.9	10.3	3.4	3.4	6.9	3.4	27.6	00.0	100.
6	10.3	3.4	3.4	6.9	00.0	3.4	3.4	6.9	3.4	3.4	17.2	00.0	00.0	6.9	10.3	20.7	00.0	100.
7	6.9	6.9	3.4	6.9	3.4	00.0	00.0	10.3	3.4	3.4	10.3	6.9	00.0	6.9	3.4	27.6	00.0	100.
8	3.4	3.4	3.4	00.0	10.3	00.0	3.4	10.3	3.4	6.9	3.4	6.9	6.9	6.9	6.9	24.1	00.0	100.
9	00.0	3.4	6.9	00.0	10.3	00.0	00.0	6.9	6.9	6.9	3.4	6.9	6.9	6.9	6.9	27.6	00.0	100.
10	6.9	00.0	00.0	00.0	10.3	6.9	3.4	3.4	10.3	6.9	10.3	3.4	6.9	3.4	3.4	24.1	00.0	100.
11	3.4	00.0	3.4	00.0	3.4	6.9	3.4	3.4	13.8	10.3	10.3	6.9	00.0	6.9	00.0	27.6	00.0	100.
12	6.9	3.4	00.0	00.0	3.4	3.4	10.3	00.0	13.8	6.9	10.3	10.3	00.0	3.4	6.9	20.7	00.0	100.
13	13.8	00.0	00.0	00.0	3.4	6.9	6.9	00.0	6.9	10.3	6.9	6.9	10.3	3.4	6.9	17.2	00.0	100.
14	13.8	00.0	00.0	00.0	3.4	3.4	6.9	3.4	13.8	3.4	10.3	3.4	3.4	10.3	6.9	17.2	00.0	100.
15	3.4	6.9	00.0	3.4	6.9	00.0	6.9	00.0	10.3	00.0	17.2	3.4	3.4	6.9	10.3	20.7	00.0	100.
16	3.4	6.9	00.0	6.9	6.9	00.0	3.4	3.4	6.9	6.9	6.9	3.4	3.4	10.3	6.9	24.1	00.0	100.
17	3.4	10.3	3.4	3.4	3.4	00.0	6.9	00.0	6.9	10.3	3.4	00.0	6.9	6.9	6.9	27.6	00.0	100.
18	10.3	6.9	00.0	10.3	00.0	3.4	3.4	6.9	00.0	6.9	6.9	3.4	3.4	00.0	20.7	17.2	00.0	100.
19	10.3	6.9	00.0	3.4	6.9	3.4	6.9	3.4	00.0	10.3	00.0	6.9	3.4	3.4	13.8	20.7	00.0	100.
20	10.3	6.9	3.4	3.4	6.9	3.4	6.9	00.0	3.4	13.8	3.4	00.0	00.0	00.0	20.7	17.2	00.0	100.
21	10.3	10.3	00.0	3.4	3.4	6.9	6.9	00.0	3.4	10.3	6.9	00.0	3.4	00.0	20.7	13.8	00.0	100.
22	10.3	6.9	6.9	3.4	00.0	10.3	3.4	00.0	3.4	10.3	6.9	3.4	3.4	00.0	17.2	13.8	00.0	100.
23	6.9	6.9	6.9	6.9	3.4	3.4	3.4	3.4	3.4	6.9	6.9	00.0	3.4	3.4	17.2	17.2	00.0	100.
24	3.4	10.3	3.4	3.4	3.4	6.9	3.4	6.9	00.0	10.3	3.4	00.0	6.9	6.9	6.9	24.1	00.0	100.
ALL	7.2	5.2	2.9	3.4	4.3	3.7	5.5	3.9	5.0	7.6	7.5	5.0	4.2	4.3	9.3	21.0	00.0	100.

NUMBER OF OBS = 696

B53

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	9.7	3.2	00.0	6.5	3.2	9.7	12.9	12.9	6.5	6.5	3.2	00.0	00.0	6.5	6.5	12.9	00.0	100.
2	6.5	6.5	3.2	00.0	9.7	3.2	12.9	12.9	12.9	3.2	3.2	00.0	00.0	6.5	6.5	12.9	00.0	100.
3	12.9	00.0	00.0	00.0	3.2	9.7	9.7	9.7	16.1	6.5	3.2	3.2	3.2	3.2	6.5	12.9	00.0	100.
4	6.5	3.2	00.0	00.0	00.0	6.5	19.4	12.9	3.2	9.7	3.2	3.2	3.2	3.2	12.9	12.9	00.0	100.
5	3.2	00.0	3.2	00.0	00.0	3.2	16.1	19.4	9.7	3.2	3.2	3.2	3.2	3.2	12.9	16.1	00.0	100.
6	6.5	00.0	3.2	00.0	00.0	3.2	12.9	19.4	9.7	9.7	00.0	00.0	00.0	9.7	12.9	12.9	00.0	100.
7	3.2	3.2	00.0	00.0	00.0	3.2	6.5	29.0	12.9	3.2	00.0	00.0	00.0	9.7	12.9	16.1	00.0	100.
8	6.5	00.0	00.0	00.0	00.0	3.2	12.9	16.1	19.4	3.2	00.0	00.0	3.2	6.5	9.7	19.4	00.0	100.
9	6.5	3.2	00.0	00.0	00.0	00.0	6.5	12.9	29.0	3.2	3.2	3.2	6.5	00.0	12.9	12.9	00.0	100.
10	3.2	6.5	00.0	00.0	00.0	00.0	9.7	9.7	22.6	6.5	6.5	00.0	3.2	6.5	6.5	19.4	00.0	100.
11	6.5	3.2	00.0	00.0	00.0	00.0	3.2	12.9	19.4	12.9	6.5	3.2	3.2	3.2	9.7	16.1	00.0	100.
12	6.5	3.2	00.0	00.0	00.0	00.0	3.2	12.9	16.1	12.9	12.9	00.0	00.0	6.5	6.5	19.4	00.0	100.
13	00.0	3.2	3.2	00.0	00.0	00.0	3.2	12.9	22.6	6.5	6.5	6.5	00.0	6.5	19.4	9.7	00.0	100.
14	00.0	3.2	00.0	3.2	00.0	00.0	3.2	6.5	22.6	16.1	3.2	6.5	3.2	00.0	19.4	12.9	00.0	100.
15	00.0	3.2	00.0	00.0	00.0	00.0	6.5	9.7	16.1	12.9	6.5	6.5	6.5	9.7	6.5	16.1	00.0	100.
16	00.0	3.2	00.0	00.0	00.0	3.2	9.7	9.7	12.9	6.5	6.5	9.7	3.2	9.7	9.7	16.1	00.0	100.
17	3.2	00.0	00.0	00.0	00.0	3.2	16.1	6.5	12.9	9.7	00.0	6.5	3.2	6.5	12.9	19.4	00.0	100.
18	3.2	00.0	00.0	00.0	00.0	3.2	9.7	9.7	19.4	3.2	00.0	6.5	00.0	6.5	19.4	19.4	00.0	100.
19	3.2	00.0	00.0	3.2	3.2	00.0	9.7	19.4	9.7	6.5	3.2	00.0	00.0	9.7	9.7	22.6	00.0	100.
20	12.9	00.0	00.0	3.2	3.2	3.2	12.9	19.4	3.2	6.5	3.2	00.0	00.0	12.9	6.5	12.9	00.0	100.
21	6.5	12.9	00.0	00.0	6.5	00.0	19.4	12.9	6.5	3.2	00.0	3.2	12.9	3.2	3.2	9.7	00.0	100.
22	00.0	12.9	3.2	3.2	6.5	00.0	19.4	9.7	9.7	3.2	00.0	3.2	3.2	6.5	3.2	16.1	00.0	100.
23	3.2	9.7	3.2	00.0	00.0	3.2	22.6	16.1	9.7	3.2	3.2	00.0	6.5	00.0	9.7	9.7	00.0	100.
24	3.2	9.7	3.2	3.2	3.2	3.2	12.9	19.4	6.5	6.5	3.2	00.0	6.5	3.2	6.5	9.7	00.0	100.
ALL	4.7	3.8	.9	.9	1.6	2.6	11.3	13.8	13.7	6.9	3.4	2.7	3.0	5.8	10.1	14.9	00.0	100.

NUMBER OF OBS = 744

BS4

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	7.7	5.5	2.2	2.2	3.3	7.7	9.9	6.6	8.8	4.4	4.4	4.4	1.1	6.6	9.9	15.4	00.0	100.
2	8.8	4.4	3.3	1.1	5.5	3.3	8.8	8.8	11.0	3.3	4.4	4.4	3.3	4.4	9.9	15.4	00.0	100.
3	8.8	3.3	2.2	1.1	4.4	4.4	6.6	8.8	11.0	6.6	4.4	5.5	3.3	3.3	7.7	18.7	00.0	100.
4	4.4	5.5	1.1	4.4	00.0	5.5	8.8	8.8	7.7	6.6	4.4	5.5	5.5	3.3	7.7	20.9	00.0	100.
5	4.4	3.3	2.2	2.2	1.1	4.4	8.8	11.0	7.7	5.5	5.5	3.3	2.2	5.5	8.8	24.2	00.0	100.
6	5.5	2.2	2.2	4.4	00.0	3.3	6.6	11.0	9.9	4.4	7.7	1.1	00.0	8.8	9.9	23.1	00.0	100.
7	3.3	4.4	1.1	4.4	1.1	2.2	3.3	17.6	8.8	2.2	5.5	2.2	1.1	9.9	9.9	23.1	00.0	100.
8	3.3	1.1	2.2	00.0	4.4	2.2	6.6	12.1	11.0	4.4	2.2	4.4	5.5	5.5	11.0	24.2	00.0	100.
9	2.2	3.3	2.2	00.0	3.3	2.2	2.2	9.9	16.5	4.4	5.5	4.4	5.5	4.4	12.1	22.0	00.0	100.
10	4.4	3.3	00.0	00.0	3.3	4.4	4.4	7.7	14.3	7.7	7.7	1.1	5.5	5.5	6.6	24.2	00.0	100.
11	5.5	2.2	1.1	00.0	1.1	4.4	4.4	7.7	15.4	9.9	6.6	4.4	2.2	5.5	8.8	20.9	00.0	100.
12	4.4	5.5	00.0	00.0	2.2	3.3	5.5	7.7	13.2	7.7	9.9	4.4	2.2	5.5	8.8	19.8	00.0	100.
13	5.5	3.3	1.1	00.0	3.3	3.3	5.5	6.6	15.4	6.6	5.5	7.7	4.4	3.3	15.4	13.2	00.0	100.
14	7.7	1.1	00.0	1.1	3.3	1.1	5.5	6.6	16.5	8.8	4.4	7.7	3.3	3.3	15.4	14.3	00.0	100.
15	1.1	6.6	00.0	1.1	4.4	00.0	7.7	5.5	13.2	4.4	12.1	4.4	5.5	6.6	12.1	15.4	00.0	100.
16	2.2	5.5	00.0	2.2	3.3	2.2	8.8	5.5	9.9	6.6	6.6	7.7	3.3	7.7	13.2	15.4	00.0	100.
17	2.2	6.6	1.1	3.3	2.2	1.1	12.1	4.4	8.8	7.7	3.3	5.5	4.4	6.6	12.1	18.7	00.0	100.
18	5.5	4.4	00.0	4.4	00.0	5.5	8.8	7.7	6.6	5.5	3.3	4.4	7.7	3.3	18.7	14.3	00.0	100.
19	6.6	4.4	00.0	3.3	5.5	3.3	7.7	9.9	4.4	6.6	3.3	3.3	5.5	6.6	12.1	17.6	00.0	100.
20	7.7	6.6	1.1	3.3	3.3	6.6	9.9	8.8	3.3	7.7	3.3	2.2	2.2	8.8	12.1	13.2	00.0	100.
21	7.7	11.0	1.1	1.1	3.3	6.6	11.0	7.7	4.4	5.5	3.3	2.2	8.8	3.3	12.1	11.0	00.0	100.
22	3.3	12.1	3.3	3.3	2.2	6.6	9.9	5.5	6.6	6.6	3.3	3.3	4.4	4.4	9.9	15.4	00.0	100.
23	5.5	7.7	4.4	3.3	3.3	4.4	9.9	8.8	6.6	5.5	4.4	1.1	4.4	4.4	11.0	15.4	00.0	100.
24	3.3	11.0	2.2	3.3	3.3	5.5	7.7	9.9	5.5	6.6	5.5	00.0	5.5	5.5	7.7	17.6	00.0	100.
ALL	5.0	5.2	1.4	2.1	2.8	3.9	7.5	8.5	9.8	6.0	5.3	3.9	4.0	5.5	10.9	18.0	00.0	100.

NUMBER OF OBS = 2184

BSS

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.0	4.4	2.7	2.2	3.3	8.2	8.2	8.2	12.6	6.6	4.9	4.9	4.4	3.8	8.2	11.0	00.0	100.
2	7.1	3.8	3.8	1.6	4.4	4.4	8.2	9.3	11.0	8.8	5.5	4.9	3.8	4.4	8.8	9.9	00.0	100.
3	6.6	3.8	2.7	2.7	4.9	4.9	6.6	8.2	12.1	9.3	4.9	5.5	2.7	3.8	7.1	13.7	00.0	100.
4	4.4	6.6	3.3	2.2	2.7	8.2	7.7	8.2	9.9	8.8	4.4	5.5	3.3	4.9	7.7	12.1	00.0	100.
5	4.9	4.4	2.7	2.7	1.1	7.1	8.2	11.0	9.3	9.3	3.8	4.9	2.7	3.8	9.3	14.3	00.0	100.
6	5.5	4.4	2.2	2.7	1.6	5.5	8.8	8.8	13.2	7.1	6.0	1.1	2.7	6.6	9.3	14.3	00.0	100.
7	3.3	4.9	2.2	3.3	3.3	3.8	6.6	13.2	11.5	4.4	6.0	1.1	2.7	8.8	8.8	15.9	00.0	100.
8	5.5	2.7	2.2	1.1	4.4	3.3	11.0	8.2	11.0	6.6	5.5	3.3	4.9	5.5	11.0	13.7	00.0	100.
9	3.3	3.8	2.7	.5	3.3	2.7	8.8	7.7	16.5	5.5	6.0	3.8	5.5	2.7	13.7	13.2	00.0	100.
10	4.9	3.3	1.1	.5	2.7	5.5	9.3	7.1	14.8	7.1	6.6	2.7	6.6	3.8	8.2	15.4	00.0	100.
11	8.2	1.6	1.6	.5	.5	4.4	8.8	11.0	14.3	7.1	6.6	4.4	2.7	4.9	8.2	14.8	00.0	100.
12	7.7	4.4	1.1	1.1	2.2	4.9	7.7	9.9	12.6	7.7	6.0	5.5	3.3	3.3	9.9	12.6	00.0	100.
13	4.9	3.8	2.2	.5	3.8	2.7	8.2	11.0	13.7	5.5	3.3	6.0	4.4	4.4	10.4	14.8	00.0	100.
14	6.0	4.9	1.6	2.7	1.6	2.2	6.6	8.2	17.0	8.2	2.2	5.5	4.9	3.3	9.3	15.4	00.0	100.
15	4.9	4.9	2.2	3.8	2.7	2.2	6.6	9.3	13.2	7.1	6.6	4.4	4.9	5.5	8.8	12.6	00.0	100.
16	5.5	4.9	1.6	3.3	2.2	4.4	7.7	8.2	10.4	9.3	3.8	6.6	3.3	6.0	8.2	14.3	00.0	100.
17	4.9	5.5	2.7	2.2	4.4	2.2	11.5	7.1	9.3	10.4	1.6	5.5	3.3	5.5	8.2	15.4	00.0	100.
18	6.0	4.4	1.6	3.3	2.2	6.0	7.7	11.0	9.3	7.1	2.7	3.8	5.5	3.3	12.1	13.7	00.0	100.
19	8.2	2.7	3.3	3.8	4.9	4.4	7.7	12.1	7.1	8.2	2.7	2.2	5.5	5.5	7.7	13.7	00.0	100.
20	9.3	6.6	1.6	4.4	2.7	5.5	11.5	12.6	5.5	7.1	3.8	2.7	3.3	4.9	7.7	10.4	00.0	100.
21	8.8	7.7	1.6	2.7	4.4	8.2	9.3	12.1	6.0	6.0	3.8	2.2	6.0	2.7	7.7	10.4	00.0	100.
22	7.1	7.1	2.7	3.3	4.4	7.1	8.8	9.9	9.9	6.0	3.3	2.2	4.4	3.8	7.1	12.6	00.0	100.
23	6.0	6.0	3.8	3.3	4.9	6.0	9.3	10.4	9.9	6.0	3.8	1.1	5.5	3.8	6.0	13.7	00.0	100.
24	2.7	8.2	4.4	2.7	4.4	6.6	7.1	11.5	8.2	8.8	4.9	1.1	5.5	4.9	5.5	13.2	00.0	100.
ALL	5.9	4.8	2.4	2.4	3.2	5.0	8.4	9.8	11.2	7.4	4.6	3.8	4.3	4.6	8.7	13.4	00.0	100.

NUMBER OF OBS = 4368

BS6

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	9.7	00.0	9.7	9.7	9.7	16.1	19.4	9.7	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
2	00.0	9.7	19.4	3.2	3.2	12.9	6.5	22.6	16.1	3.2	3.2	00.0	00.0	00.0	00.0	00.0	00.0	100.
3	00.0	9.7	12.9	00.0	12.9	6.5	9.7	16.1	16.1	6.5	3.2	00.0	00.0	00.0	00.0	6.5	00.0	100.
4	3.2	12.9	6.5	6.5	9.7	6.5	3.2	19.4	9.7	12.9	3.2	00.0	3.2	00.0	00.0	3.2	00.0	100.
5	3.2	6.5	3.2	22.6	3.2	6.5	6.5	19.4	9.7	9.7	00.0	3.2	3.2	00.0	00.0	3.2	00.0	100.
6	9.7	3.2	6.5	12.9	6.5	3.2	6.5	22.6	12.9	12.9	00.0	00.0	00.0	3.2	00.0	00.0	00.0	100.
7	6.5	3.2	9.7	3.2	12.9	00.0	12.9	12.9	16.1	9.7	00.0	00.0	3.2	6.5	00.0	3.2	00.0	100.
8	6.5	9.7	3.2	3.2	9.7	9.7	3.2	9.7	16.1	19.4	3.2	00.0	3.2	00.0	00.0	3.2	00.0	100.
9	00.0	16.1	3.2	6.5	3.2	9.7	6.5	6.5	16.1	19.4	3.2	00.0	3.2	00.0	3.2	3.2	00.0	100.
10	3.2	9.7	3.2	00.0	9.7	6.5	9.7	9.7	12.9	19.4	3.2	00.0	00.0	3.2	3.2	6.5	00.0	100.
11	12.9	12.9	00.0	3.2	12.9	6.5	12.9	3.2	12.9	16.1	00.0	00.0	3.2	3.2	00.0	00.0	00.0	100.
12	16.1	00.0	3.2	6.5	12.9	12.9	9.7	3.2	19.4	9.7	3.2	00.0	3.2	00.0	00.0	00.0	00.0	100.
13	3.2	9.7	6.5	3.2	6.5	6.5	19.4	9.7	16.1	12.9	3.2	00.0	00.0	00.0	00.0	3.2	00.0	100.
14	9.7	9.7	3.2	00.0	12.9	3.2	12.9	9.7	19.4	9.7	6.5	3.2	00.0	00.0	00.0	00.0	00.0	100.
15	3.2	9.7	3.2	3.2	6.5	6.5	9.7	9.7	29.0	9.7	3.2	00.0	3.2	00.0	00.0	3.2	00.0	100.
16	6.5	9.7	00.0	3.2	3.2	3.2	12.9	12.9	19.4	3.2	16.1	3.2	00.0	3.2	00.0	3.2	00.0	100.
17	9.7	00.0	6.5	6.5	3.2	6.5	6.5	16.1	22.6	9.7	6.5	00.0	00.0	00.0	3.2	3.2	00.0	100.
18	6.5	6.5	6.5	9.7	00.0	9.7	3.2	16.1	19.4	12.9	3.2	3.2	00.0	00.0	3.2	00.0	00.0	100.
19	00.0	3.2	3.2	9.7	16.1	9.7	16.1	3.2	16.1	9.7	00.0	3.2	3.2	00.0	00.0	6.5	00.0	100.
20	00.0	9.7	3.2	9.7	16.1	6.5	19.4	6.5	12.9	6.5	00.0	00.0	3.2	00.0	3.2	3.2	00.0	100.
21	00.0	3.2	9.7	3.2	12.9	16.1	12.9	12.9	12.9	6.5	00.0	00.0	3.2	00.0	3.2	3.2	00.0	100.
22	00.0	3.2	6.5	3.2	12.9	19.4	12.9	16.1	9.7	6.5	00.0	00.0	00.0	00.0	6.5	3.2	00.0	100.
23	3.2	6.5	6.5	00.0	12.9	9.7	16.1	16.1	19.4	6.5	00.0	00.0	00.0	00.0	00.0	3.2	00.0	100.
24	9.7	9.7	00.0	3.2	6.5	12.9	9.7	16.1	25.8	6.5	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
ALL	5.1	7.5	5.6	5.1	9.0	8.3	10.3	12.8	16.7	10.3	2.6	.7	1.5	.8	1.1	2.6	00.0	100.

NUMBER OF OBS = 744

BS7

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.5	9.7	6.5	9.7	9.7	6.5	12.9	6.5	12.9	9.7	00.0	00.0	00.0	6.5	00.0	3.2	00.0	100.
2	3.2	6.5	16.1	3.2	6.5	6.5	16.1	12.9	9.7	9.7	00.0	00.0	00.0	6.5	00.0	3.2	00.0	100.
3	3.2	12.9	3.2	3.2	3.2	6.5	16.1	16.1	6.5	19.4	00.0	00.0	00.0	00.0	6.5	3.2	00.0	100.
4	6.5	3.2	16.1	00.0	6.5	3.2	12.9	12.9	9.7	16.1	3.2	00.0	00.0	00.0	6.5	3.2	00.0	100.
5	00.0	3.2	12.9	6.5	3.2	9.7	9.7	6.5	12.9	12.9	9.7	00.0	00.0	3.2	3.2	6.5	00.0	100.
6	00.0	3.2	16.1	3.2	6.5	3.2	9.7	9.7	12.9	6.5	3.2	3.2	00.0	12.9	6.5	3.2	00.0	100.
7	3.2	6.5	3.2	12.9	00.0	3.2	12.9	16.1	6.5	6.5	6.5	00.0	00.0	3.2	6.5	12.9	00.0	100.
8	3.2	3.2	3.2	6.5	9.7	3.2	6.5	16.1	6.5	6.5	6.5	00.0	00.0	6.5	6.5	16.1	00.0	100.
9	12.9	3.2	6.5	9.7	6.5	3.2	12.9	6.5	12.9	6.5	00.0	6.5	00.0	6.5	00.0	6.5	00.0	100.
10	9.7	3.2	12.9	6.5	6.5	6.5	9.7	12.9	9.7	6.5	00.0	3.2	3.2	00.0	3.2	6.5	00.0	100.
11	3.2	6.5	6.5	12.9	6.5	3.2	22.6	3.2	9.7	9.7	00.0	00.0	3.2	3.2	3.2	6.5	00.0	100.
12	3.2	6.5	6.5	3.2	12.9	9.7	12.9	16.1	6.5	9.7	00.0	3.2	3.2	00.0	3.2	3.2	00.0	100.
13	00.0	16.1	3.2	6.5	3.2	12.9	6.5	16.1	9.7	6.5	3.2	00.0	00.0	3.2	6.5	6.5	00.0	100.
14	3.2	6.5	6.5	3.2	6.5	16.1	12.9	12.9	3.2	9.7	3.2	00.0	3.2	3.2	3.2	6.5	00.0	100.
15	9.7	6.5	9.7	6.5	00.0	3.2	19.4	16.1	9.7	3.2	6.5	00.0	00.0	00.0	6.5	3.2	00.0	100.
16	00.0	9.7	12.9	3.2	3.2	3.2	19.4	16.1	9.7	6.5	3.2	00.0	00.0	00.0	6.5	6.5	00.0	100.
17	6.5	12.9	12.9	3.2	3.2	3.2	16.1	9.7	9.7	6.5	3.2	00.0	00.0	00.0	3.2	9.7	00.0	100.
18	6.5	3.2	9.7	12.9	3.2	3.2	16.1	9.7	9.7	6.5	00.0	3.2	00.0	00.0	3.2	12.9	00.0	100.
19	00.0	12.9	9.7	6.5	12.9	00.0	16.1	12.9	9.7	3.2	00.0	00.0	00.0	3.2	3.2	9.7	00.0	100.
20	3.2	6.5	16.1	6.5	22.6	6.5	12.9	6.5	6.5	3.2	00.0	00.0	00.0	3.2	00.0	6.5	00.0	100.
21	9.7	9.7	19.4	3.2	3.2	6.5	9.7	19.4	6.5	3.2	00.0	00.0	00.0	3.2	3.2	3.2	00.0	100.
22	6.5	6.5	12.9	12.9	6.5	3.2	16.1	12.9	6.5	3.2	00.0	00.0	00.0	3.2	3.2	6.5	00.0	100.
23	9.7	3.2	19.4	00.0	9.7	3.2	12.9	9.7	12.9	6.5	00.0	00.0	00.0	3.2	3.2	6.5	00.0	100.
24	6.5	6.5	6.5	12.9	6.5	9.7	9.7	6.5	12.9	6.5	00.0	3.2	00.0	6.5	3.2	3.2	00.0	100.
ALL	4.8	7.0	10.3	6.5	6.6	5.6	13.4	11.8	9.3	7.7	2.0	.9	.5	3.2	3.8	6.5	00.0	100.

NUMBER OF OBS = 744

B58

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	3.3	3.3	3.3	6.7	3.3	3.3	3.3	10.0	33.3	3.3	00.0	6.7	3.3	3.3	3.3	10.0	00.0	100.
2	10.0	6.7	00.0	6.7	3.3	3.3	6.7	6.7	36.7	00.0	00.0	00.0	6.7	3.3	3.3	6.7	00.0	100.
3	10.0	10.0	00.0	3.3	6.7	00.0	3.3	13.3	30.0	6.7	00.0	00.0	6.7	00.0	10.0	00.0	00.0	100.
4	10.0	6.7	6.7	3.3	3.3	6.7	00.0	13.3	23.3	10.0	00.0	00.0	10.0	3.3	3.3	00.0	00.0	100.
5	10.0	10.0	3.3	00.0	3.3	6.7	3.3	13.3	26.7	6.7	00.0	00.0	3.3	3.3	6.7	3.3	00.0	100.
6	6.7	13.3	3.3	00.0	00.0	6.7	10.0	13.3	20.0	10.0	00.0	00.0	00.0	6.7	6.7	3.3	00.0	100.
7	6.7	6.7	6.7	3.3	00.0	3.3	10.0	13.3	30.0	3.3	00.0	3.3	00.0	6.7	3.3	3.3	00.0	100.
8	6.7	13.3	3.3	00.0	00.0	3.3	13.3	10.0	26.7	10.0	00.0	00.0	3.3	3.3	6.7	00.0	00.0	100.
9	3.3	10.0	6.7	00.0	3.3	00.0	10.0	13.3	6.7	23.3	3.3	3.3	00.0	3.3	10.0	3.3	00.0	100.
10	6.7	6.7	3.3	6.7	00.0	00.0	10.0	10.0	6.7	26.7	3.3	3.3	00.0	3.3	6.7	6.7	00.0	100.
11	10.0	10.0	00.0	6.7	00.0	3.3	6.7	10.0	6.7	30.0	6.7	00.0	00.0	3.3	3.3	3.3	00.0	100.
12	6.7	3.3	6.7	3.3	3.3	00.0	6.7	10.0	20.0	20.0	3.3	3.3	00.0	00.0	6.7	6.7	00.0	100.
13	13.3	6.7	00.0	6.7	00.0	00.0	10.0	10.0	20.0	16.7	3.3	00.0	00.0	3.3	10.0	00.0	00.0	100.
14	6.7	3.3	3.3	6.7	00.0	3.3	3.3	10.0	23.3	16.7	00.0	3.3	00.0	10.0	6.7	3.3	00.0	100.
15	3.3	10.0	3.3	00.0	3.3	3.3	3.3	6.7	23.3	13.3	00.0	3.3	3.3	13.3	10.0	00.0	00.0	100.
16	6.7	10.0	3.3	3.3	3.3	6.7	00.0	6.7	26.7	10.0	6.7	00.0	00.0	6.7	3.3	6.7	00.0	100.
17	6.7	13.3	00.0	3.3	3.3	00.0	3.3	10.0	30.0	10.0	3.3	00.0	00.0	6.7	3.3	6.7	00.0	100.
18	6.7	00.0	6.7	3.3	3.3	00.0	10.0	16.7	26.7	3.3	3.3	00.0	00.0	00.0	6.7	13.3	00.0	100.
19	10.0	00.0	6.7	3.3	00.0	3.3	6.7	30.0	20.0	3.3	00.0	00.0	00.0	3.3	00.0	13.3	00.0	100.
20	13.3	3.3	3.3	00.0	6.7	3.3	6.7	30.0	20.0	00.0	3.3	3.3	00.0	00.0	00.0	6.7	00.0	100.
21	3.3	6.7	3.3	3.3	3.3	6.7	6.7	26.7	26.7	00.0	3.3	3.3	00.0	00.0	00.0	6.7	00.0	100.
22	3.3	00.0	10.0	3.3	3.3	3.3	6.7	23.3	23.3	3.3	3.3	6.7	3.3	00.0	00.0	6.7	00.0	100.
23	00.0	6.7	3.3	3.3	6.7	00.0	6.7	16.7	30.0	6.7	00.0	3.3	3.3	3.3	3.3	6.7	00.0	100.
24	3.3	6.7	3.3	3.3	3.3	3.3	10.0	10.0	30.0	6.7	3.3	3.3	00.0	6.7	00.0	6.7	00.0	100.
ALL	6.9	6.9	3.8	3.3	2.6	2.9	6.5	13.9	23.6	10.0	1.9	1.9	1.8	3.9	4.7	5.1	00.0	100.

NUMBER OF OBS = 720

B59

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.5	6.5	5.4	7.6	6.5	8.7	10.9	21.7	7.6	00.0	2.2	1.1	3.3	1.1	4.3	00.0	100.
2	4.3	7.6	12.0	4.3	4.3	7.6	9.8	14.1	20.7	4.3	1.1	00.0	2.2	3.3	1.1	3.3	00.0	100.
3	4.3	10.9	5.4	2.2	7.6	4.3	9.8	15.2	17.4	10.9	1.1	00.0	2.2	00.0	5.4	3.3	00.0	100.
4	6.5	7.6	9.8	3.3	6.5	5.4	5.4	15.2	14.1	13.0	2.2	00.0	4.3	1.1	3.3	2.2	00.0	100.
5	4.3	6.5	6.5	9.8	3.3	7.6	6.5	13.0	16.3	9.8	3.3	1.1	2.2	2.2	3.3	4.3	00.0	100.
6	5.4	6.5	8.7	5.4	4.3	4.3	8.7	15.2	15.2	9.8	1.1	1.1	00.0	7.6	4.3	2.2	00.0	100.
7	5.4	5.4	6.5	6.5	4.3	2.2	12.0	14.1	17.4	6.5	2.2	1.1	1.1	5.4	3.3	6.5	00.0	100.
8	5.4	8.7	3.3	3.3	6.5	5.4	7.6	12.0	16.3	12.0	3.3	00.0	2.2	3.3	4.3	6.5	00.0	100.
9	5.4	9.8	5.4	5.4	4.3	4.3	9.8	8.7	12.0	16.3	2.2	3.3	1.1	3.3	4.3	4.3	00.0	100.
10	6.5	6.5	6.5	4.3	5.4	4.3	9.8	10.9	9.8	17.4	2.2	2.2	1.1	2.2	4.3	6.5	00.0	100.
11	8.7	9.8	2.2	7.6	6.5	4.3	14.1	5.4	9.8	18.5	2.2	00.0	2.2	3.3	2.2	3.3	00.0	100.
12	8.7	3.3	5.4	4.3	9.8	7.6	9.8	9.8	15.2	13.0	2.2	2.2	2.2	00.0	3.3	3.3	00.0	100.
13	5.4	10.9	3.3	5.4	3.3	6.5	12.0	12.0	15.2	12.0	3.3	00.0	00.0	2.2	5.4	3.3	00.0	100.
14	6.5	6.5	4.3	3.3	6.5	7.6	9.8	10.9	15.2	12.0	3.3	2.2	1.1	4.3	3.3	3.3	00.0	100.
15	5.4	8.7	5.4	3.3	3.3	4.3	10.9	10.9	20.7	8.7	3.3	1.1	2.2	4.3	5.4	2.2	00.0	100.
16	4.3	9.8	5.4	3.3	3.3	4.3	10.9	12.0	18.5	6.5	8.7	1.1	00.0	3.3	3.3	5.4	00.0	100.
17	7.6	8.7	6.5	4.3	3.3	3.3	8.7	12.0	20.7	8.7	4.3	00.0	00.0	2.2	3.3	6.5	00.0	100.
18	6.5	3.3	7.6	8.7	2.2	4.3	9.8	14.1	18.5	7.6	2.2	2.2	00.0	00.0	4.3	8.7	00.0	100.
19	3.3	5.4	6.5	6.5	9.8	4.3	13.0	15.2	15.2	5.4	00.0	1.1	1.1	2.2	1.1	9.8	00.0	100.
20	5.4	6.5	7.6	5.4	15.2	5.4	13.0	14.1	13.0	3.3	1.1	1.1	1.1	1.1	1.1	5.4	00.0	100.
21	4.3	6.5	10.9	3.3	6.5	9.8	9.8	19.6	15.2	3.3	1.1	1.1	1.1	1.1	2.2	4.3	00.0	100.
22	3.3	3.3	9.8	6.5	7.6	8.7	12.0	17.4	13.0	4.3	1.1	2.2	1.1	1.1	3.3	5.4	00.0	100.
23	4.3	5.4	9.8	1.1	9.8	4.3	12.0	14.1	20.7	6.5	00.0	1.1	1.1	2.2	2.2	5.4	00.0	100.
24	6.5	7.6	3.3	6.5	5.4	8.7	9.8	10.9	22.8	6.5	1.1	2.2	00.0	4.3	1.1	3.3	00.0	100.
ALL	5.6	7.2	6.6	5.0	6.1	5.7	10.1	12.8	16.4	9.3	2.2	1.2	1.3	2.6	3.2	4.7	00.0	100.

NUMBER OF OBS = 2208

B60

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.5	6.5	3.2	3.2	12.9	6.5	16.1	12.9	6.5	3.2	00.0	3.2	3.2	9.7	00.0	100.
2	3.2	3.2	6.5	00.0	00.0	9.7	6.5	9.7	19.4	12.9	6.5	3.2	00.0	3.2	6.5	9.7	00.0	100.
3	3.2	6.5	6.5	00.0	3.2	6.5	6.5	12.9	12.9	16.1	3.2	6.5	00.0	6.5	6.5	3.2	00.0	100.
4	9.7	00.0	6.5	6.5	00.0	3.2	6.5	19.4	12.9	9.7	9.7	6.5	00.0	00.0	6.5	3.2	00.0	100.
5	9.7	00.0	00.0	12.9	00.0	3.2	6.5	12.9	19.4	6.5	12.9	3.2	3.2	3.2	3.2	3.2	00.0	100.
6	6.5	3.2	00.0	3.2	9.7	3.2	6.5	12.9	19.4	9.7	6.5	3.2	3.2	00.0	9.7	3.2	00.0	100.
7	6.5	3.2	00.0	6.5	3.2	3.2	9.7	12.9	16.1	12.9	3.2	3.2	3.2	00.0	9.7	6.5	00.0	100.
8	6.5	00.0	00.0	6.5	00.0	9.7	6.5	12.9	19.4	6.5	6.5	00.0	3.2	3.2	6.5	12.9	00.0	100.
9	12.9	00.0	00.0	3.2	3.2	3.2	12.9	12.9	19.4	6.5	6.5	3.2	00.0	00.0	9.7	6.5	00.0	100.
10	9.7	3.2	00.0	3.2	3.2	00.0	12.9	9.7	19.4	19.4	3.2	00.0	00.0	00.0	6.5	9.7	00.0	100.
11	9.7	3.2	00.0	00.0	3.2	3.2	12.9	9.7	22.6	16.1	3.2	00.0	00.0	00.0	3.2	12.9	00.0	100.
12	9.7	3.2	00.0	00.0	00.0	6.5	16.1	6.5	19.4	16.1	6.5	00.0	00.0	00.0	3.2	12.9	00.0	100.
13	3.2	3.2	3.2	3.2	00.0	6.5	12.9	9.7	19.4	12.9	6.5	00.0	00.0	00.0	3.2	16.1	00.0	100.
14	6.5	3.2	3.2	00.0	00.0	9.7	9.7	16.1	16.1	12.9	6.5	00.0	00.0	00.0	00.0	16.1	00.0	100.
15	6.5	3.2	3.2	00.0	6.5	6.5	16.1	6.5	25.8	6.5	6.5	00.0	00.0	00.0	3.2	9.7	00.0	100.
16	6.5	3.2	3.2	00.0	9.7	3.2	12.9	9.7	22.6	6.5	6.5	00.0	3.2	3.2	00.0	9.7	00.0	100.
17	9.7	3.2	3.2	00.0	6.5	6.5	6.5	22.6	19.4	3.2	6.5	00.0	00.0	3.2	00.0	9.7	00.0	100.
18	9.7	3.2	3.2	00.0	6.5	6.5	6.5	22.6	19.4	9.7	00.0	6.5	00.0	00.0	00.0	6.5	00.0	100.
19	9.7	6.5	00.0	00.0	3.2	6.5	9.7	25.8	9.7	9.7	3.2	00.0	6.5	3.2	00.0	6.5	00.0	100.
20	9.7	12.9	00.0	3.2	00.0	9.7	6.5	22.6	16.1	6.5	3.2	00.0	3.2	3.2	3.2	00.0	00.0	100.
21	9.7	16.1	00.0	3.2	00.0	3.2	9.7	19.4	19.4	6.5	3.2	00.0	00.0	6.5	00.0	3.2	00.0	100.
22	6.5	19.4	3.2	3.2	00.0	00.0	9.7	19.4	22.6	9.7	00.0	00.0	00.0	3.2	00.0	3.2	00.0	100.
23	9.7	6.5	6.5	00.0	3.2	00.0	9.7	12.9	22.6	12.9	3.2	00.0	00.0	3.2	00.0	9.7	00.0	100.
24	3.2	9.7	9.7	3.2	00.0	3.2	6.5	6.5	29.0	12.9	3.2	00.0	00.0	3.2	00.0	9.7	00.0	100.
ALL	7.5	5.0	2.7	2.7	2.7	4.8	9.7	13.8	19.1	10.6	5.1	1.6	1.1	2.0	3.5	8.1	00.0	100.

NUMBER OF OBS = 744

B61

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	10.0	3.3	00.0	6.7	3.3	6.7	6.7	3.3	6.7	20.0	10.0	3.3	3.3	3.3	3.3	10.0	00.0	100.
2	3.3	3.3	3.3	6.7	3.3	3.3	10.0	3.3	13.3	10.0	13.3	3.3	3.3	3.3	10.0	6.7	00.0	100.
3	6.7	00.0	6.7	3.3	3.3	3.3	6.7	6.7	13.3	10.0	10.0	3.3	10.0	00.0	10.0	6.7	00.0	100.
4	6.7	3.3	6.7	00.0	3.3	6.7	3.3	6.7	13.3	6.7	10.0	6.7	10.0	3.3	6.7	6.7	00.0	100.
5	6.7	6.7	3.3	3.3	00.0	10.0	6.7	3.3	13.3	13.3	6.7	3.3	3.3	6.7	10.0	3.3	00.0	100.
6	13.3	3.3	3.3	00.0	00.0	13.3	10.0	3.3	13.3	10.0	6.7	00.0	00.0	13.3	6.7	3.3	00.0	100.
7	10.0	3.3	3.3	00.0	00.0	3.3	10.0	13.3	10.0	13.3	6.7	00.0	00.0	10.0	6.7	10.0	00.0	100.
8	10.0	00.0	6.7	00.0	00.0	3.3	10.0	10.0	16.7	6.7	10.0	00.0	00.0	3.3	16.7	6.7	00.0	100.
9	6.7	00.0	3.3	3.3	00.0	6.7	10.0	10.0	6.7	13.3	10.0	00.0	00.0	13.3	6.7	10.0	00.0	100.
10	6.7	3.3	3.3	00.0	00.0	6.7	13.3	6.7	3.3	13.3	10.0	3.3	6.7	10.0	6.7	6.7	00.0	100.
11	10.0	00.0	3.3	00.0	3.3	6.7	13.3	3.3	00.0	20.0	6.7	00.0	10.0	6.7	6.7	10.0	00.0	100.
12	10.0	6.7	00.0	3.3	00.0	6.7	10.0	10.0	00.0	20.0	10.0	3.3	3.3	6.7	3.3	6.7	00.0	100.
13	6.7	3.3	00.0	3.3	00.0	6.7	10.0	10.0	00.0	13.3	13.3	6.7	00.0	10.0	6.7	10.0	00.0	100.
14	6.7	3.3	00.0	3.3	00.0	13.3	3.3	6.7	3.3	16.7	10.0	6.7	00.0	10.0	10.0	6.7	00.0	100.
15	6.7	3.3	00.0	3.3	6.7	3.3	3.3	3.3	10.0	13.3	10.0	6.7	00.0	10.0	10.0	10.0	00.0	100.
16	6.7	6.7	00.0	3.3	6.7	3.3	3.3	3.3	10.0	13.3	6.7	3.3	6.7	10.0	10.0	6.7	00.0	100.
17	10.0	6.7	3.3	3.3	3.3	3.3	6.7	6.7	6.7	13.3	3.3	3.3	3.3	13.3	10.0	3.3	00.0	100.
18	6.7	6.7	3.3	6.7	3.3	3.3	3.3	10.0	10.0	10.0	3.3	3.3	00.0	10.0	16.7	3.3	00.0	100.
19	13.3	3.3	6.7	3.3	3.3	6.7	00.0	6.7	13.3	13.3	3.3	00.0	00.0	6.7	6.7	13.3	00.0	100.
20	13.3	6.7	10.0	3.3	00.0	10.0	3.3	6.7	10.0	10.0	6.7	00.0	00.0	6.7	6.7	6.7	00.0	100.
21	00.0	10.0	3.3	13.3	00.0	3.3	10.0	6.7	10.0	10.0	3.3	3.3	00.0	6.7	3.3	16.7	00.0	100.
22	6.7	6.7	3.3	10.0	3.3	3.3	3.3	13.3	6.7	13.3	3.3	3.3	00.0	6.7	6.7	10.0	00.0	100.
23	10.0	6.7	3.3	00.0	6.7	13.3	00.0	6.7	10.0	16.7	3.3	3.3	00.0	3.3	6.7	10.0	00.0	100.
24	10.0	3.3	00.0	6.7	3.3	10.0	3.3	3.3	10.0	16.7	6.7	00.0	3.3	3.3	13.3	6.7	00.0	100.
ALL	8.2	4.2	3.2	3.6	2.2	6.5	6.7	6.8	8.7	13.2	7.6	2.8	2.6	7.4	8.3	7.9	00.0	100.

NUMBER OF OBS = 720

B62

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	3.2	00.0	00.0	00.0	00.0	3.2	12.9	3.2	9.7	16.1	3.2	00.0	00.0	9.7	25.8	12.9	00.0	100.
2	6.5	00.0	00.0	00.0	00.0	6.5	6.5	3.2	12.9	16.1	00.0	3.2	3.2	9.7	12.9	19.4	00.0	100.
3	3.2	00.0	00.0	00.0	00.0	6.5	00.0	12.9	3.2	19.4	00.0	00.0	12.9	9.7	9.7	22.6	00.0	100.
4	9.7	00.0	00.0	00.0	00.0	3.2	9.7	6.5	3.2	12.9	6.5	6.5	6.5	12.9	9.7	12.9	00.0	100.
5	6.5	6.5	00.0	00.0	00.0	9.7	00.0	6.5	9.7	3.2	9.7	6.5	3.2	16.1	12.9	9.7	00.0	100.
6	6.5	6.5	00.0	00.0	3.2	6.5	6.5	3.2	6.5	6.5	6.5	6.5	3.2	16.1	9.7	12.9	00.0	100.
7	9.7	3.2	3.2	00.0	00.0	12.9	6.5	3.2	16.1	3.2	00.0	3.2	6.5	16.1	6.5	9.7	00.0	100.
8	9.7	3.2	3.2	00.0	3.2	6.5	9.7	3.2	9.7	9.7	00.0	9.7	6.5	6.5	12.9	6.5	00.0	100.
9	6.5	00.0	00.0	3.2	3.2	6.5	3.2	9.7	9.7	6.5	00.0	12.9	6.5	3.2	12.9	12.9	3.2	100.
10	3.2	00.0	00.0	00.0	6.5	6.5	9.7	6.5	9.7	00.0	6.5	3.2	12.9	6.5	12.9	16.1	00.0	100.
11	6.5	3.2	00.0	00.0	00.0	00.0	19.4	6.5	9.7	6.5	3.2	00.0	6.5	9.7	19.4	9.7	00.0	100.
12	6.5	00.0	00.0	00.0	00.0	6.5	12.9	00.0	16.1	12.9	00.0	3.2	6.5	6.5	16.1	12.9	00.0	100.
13	6.5	00.0	3.2	00.0	00.0	6.5	9.7	3.2	9.7	6.5	9.7	00.0	6.5	9.7	16.1	12.9	00.0	100.
14	3.2	3.2	00.0	00.0	00.0	6.5	9.7	3.2	6.5	12.9	6.5	3.2	3.2	9.7	19.4	12.9	00.0	100.
15	6.5	00.0	3.2	3.2	00.0	3.2	12.9	00.0	12.9	6.5	9.7	3.2	00.0	9.7	22.6	6.5	00.0	100.
16	3.2	00.0	3.2	3.2	00.0	3.2	12.9	6.5	00.0	16.1	3.2	3.2	3.2	9.7	22.6	9.7	00.0	100.
17	3.2	00.0	00.0	9.7	00.0	00.0	9.7	6.5	9.7	9.7	3.2	3.2	6.5	9.7	22.6	6.5	00.0	100.
18	00.0	00.0	00.0	3.2	3.2	6.5	6.5	3.2	12.9	9.7	6.5	00.0	6.5	12.9	19.4	9.7	00.0	100.
19	3.2	00.0	00.0	3.2	00.0	3.2	12.9	3.2	16.1	9.7	6.5	00.0	6.5	6.5	16.1	12.9	00.0	100.
20	00.0	00.0	9.7	00.0	00.0	3.2	12.9	3.2	12.9	16.1	6.5	00.0	6.5	9.7	6.5	12.9	00.0	100.
21	00.0	00.0	9.7	00.0	00.0	3.2	12.9	00.0	9.7	22.6	6.5	00.0	00.0	12.9	6.5	16.1	00.0	100.
22	00.0	3.2	3.2	00.0	3.2	3.2	6.5	6.5	9.7	19.4	6.5	3.2	00.0	12.9	9.7	12.9	00.0	100.
23	00.0	3.2	00.0	3.2	3.2	3.2	9.7	00.0	9.7	22.6	3.2	3.2	3.2	3.2	16.1	16.1	00.0	100.
24	3.2	3.2	00.0	00.0	00.0	6.5	9.7	3.2	9.7	19.4	3.2	00.0	00.0	9.7	19.4	12.9	00.0	100.
ALL	4.4	1.5	1.6	1.2	1.1	5.1	9.3	4.3	9.8	11.8	4.4	3.1	4.8	9.9	14.9	12.5	.1	100.

NUMBER OF OBS = 744

B63

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	5.4	2.2	2.2	4.3	2.2	4.3	10.9	4.3	10.9	16.3	6.5	2.2	1.1	5.4	10.9	10.9	00.0	100.
2	4.3	2.2	3.3	2.2	1.1	6.5	7.6	5.4	15.2	13.0	6.5	3.3	2.2	5.4	9.8	12.0	00.0	100.
3	4.3	2.2	4.3	1.1	2.2	5.4	4.3	10.9	9.8	15.2	4.3	3.3	7.6	5.4	8.7	10.9	00.0	100.
4	8.7	1.1	4.3	2.2	1.1	4.3	6.5	10.9	9.8	9.8	8.7	6.5	5.4	5.4	7.6	7.6	00.0	100.
5	7.6	4.3	1.1	5.4	00.0	7.6	4.3	7.6	14.1	7.6	9.8	4.3	3.3	8.7	8.7	5.4	00.0	100.
6	8.7	4.3	1.1	1.1	4.3	7.6	7.6	6.5	13.0	8.7	6.5	3.3	2.2	9.8	8.7	6.5	00.0	100.
7	8.7	3.3	2.2	2.2	1.1	6.5	8.7	9.8	14.1	9.8	3.3	2.2	3.3	8.7	7.6	8.7	00.0	100.
8	8.7	1.1	3.3	2.2	1.1	6.5	8.7	8.7	15.2	7.6	5.4	3.3	3.3	4.3	12.0	8.7	00.0	100.
9	8.7	00.0	1.1	3.3	2.2	5.4	8.7	10.9	12.0	8.7	5.4	5.4	2.2	5.4	9.8	9.8	1.1	100.
10	6.5	2.2	1.1	1.1	3.3	4.3	12.0	7.6	10.9	10.9	6.5	2.2	6.5	5.4	8.7	10.9	00.0	100.
11	8.7	2.2	1.1	00.0	2.2	3.3	15.2	6.5	10.9	14.1	4.3	00.0	5.4	5.4	9.8	10.9	00.0	100.
12	8.7	3.3	00.0	1.1	00.0	6.5	13.0	5.4	12.0	16.3	5.4	2.2	3.3	4.3	7.6	10.9	00.0	100.
13	5.4	2.2	2.2	2.2	00.0	6.5	10.9	7.6	9.8	10.9	9.8	2.2	2.2	6.5	8.7	13.0	00.0	100.
14	5.4	3.3	1.1	1.1	00.0	9.8	7.6	8.7	8.7	14.1	7.6	3.3	1.1	6.5	9.8	12.0	00.0	100.
15	6.5	2.2	2.2	2.2	4.3	4.3	10.9	3.3	16.3	8.7	8.7	3.3	00.0	6.5	12.0	8.7	00.0	100.
16	5.4	3.3	2.2	2.2	5.4	3.3	9.8	6.5	10.9	12.0	5.4	2.2	4.3	7.6	10.9	8.7	00.0	100.
17	7.6	3.3	2.2	4.3	3.3	3.3	7.6	12.0	12.0	8.7	4.3	2.2	3.3	8.7	10.9	6.5	00.0	100.
18	5.4	3.3	2.2	3.3	4.3	5.4	5.4	12.0	14.1	9.8	3.3	3.3	2.2	7.6	12.0	6.5	00.0	100.
19	8.7	3.3	2.2	2.2	2.2	5.4	7.6	12.0	13.0	10.9	4.3	00.0	4.3	5.4	7.6	10.9	00.0	100.
20	7.6	6.5	6.5	2.2	00.0	7.6	7.6	10.9	13.0	10.9	5.4	00.0	3.3	6.5	5.4	6.5	00.0	100.
21	3.3	8.7	4.3	5.4	00.0	3.3	10.9	8.7	13.0	13.0	4.3	1.1	00.0	8.7	3.3	12.0	00.0	100.
22	4.3	9.8	3.3	4.3	2.2	2.2	6.5	13.0	13.0	14.1	3.3	2.2	00.0	7.6	5.4	8.7	00.0	100.
23	6.5	5.4	3.3	1.1	4.3	5.4	6.5	6.5	14.1	17.4	3.3	2.2	1.1	3.3	7.6	12.0	00.0	100.
24	5.4	5.4	3.3	3.3	1.1	6.5	6.5	4.3	16.3	16.3	4.3	00.0	1.1	5.4	10.9	9.8	00.0	100.
ALL	6.7	3.5	2.5	2.5	2.0	5.5	8.6	8.3	12.6	11.9	5.7	2.5	2.9	6.4	8.9	9.5	.0	100.

NUMBER OF OBS = 2208

B64

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.0	4.3	4.3	4.9	4.9	5.4	9.8	7.6	16.3	12.0	3.3	2.2	1.1	4.3	6.0	7.6	00.0	100.
2	4.3	4.9	7.6	3.3	2.7	7.1	8.7	9.8	17.9	8.7	3.8	1.6	2.2	4.3	5.4	7.6	00.0	100.
3	4.3	6.5	4.9	1.6	4.9	4.9	7.1	13.0	13.6	13.0	2.7	1.6	4.9	2.7	7.1	7.1	00.0	100.
4	7.6	4.3	7.1	2.7	3.8	4.9	6.0	13.0	12.0	11.4	5.4	3.3	4.9	3.3	5.4	4.9	00.0	100.
5	6.0	5.4	3.8	7.6	1.6	7.6	5.4	10.3	15.2	8.7	6.5	2.7	2.7	5.4	6.0	4.9	00.0	100.
6	7.1	5.4	4.9	3.3	4.3	6.0	8.2	10.9	14.1	9.2	3.8	2.2	1.1	8.7	6.5	4.3	00.0	100.
7	7.1	4.3	4.3	4.3	2.7	4.3	10.3	12.0	15.8	8.2	2.7	1.6	2.2	7.1	5.4	7.6	00.0	100.
8	7.1	4.9	3.3	2.7	3.8	6.0	8.2	10.3	15.8	9.8	4.3	1.6	2.7	3.8	8.2	7.6	00.0	100.
9	7.1	4.9	3.3	4.3	3.3	4.9	9.2	9.8	12.0	12.5	3.8	4.3	1.6	4.3	7.1	7.1	.5	100.
10	6.5	4.3	3.8	2.7	4.3	4.3	10.9	9.2	10.3	14.1	4.3	2.2	3.8	3.8	6.5	8.7	00.0	100.
11	8.7	6.0	1.6	3.8	4.3	3.8	14.7	6.0	10.3	16.3	3.3	00.0	3.8	4.3	6.0	7.1	00.0	100.
12	8.7	3.3	2.7	2.7	4.9	7.1	11.4	7.6	13.6	14.7	3.8	2.2	2.7	2.2	5.4	7.1	00.0	100.
13	5.4	6.5	2.7	3.8	1.6	6.5	11.4	9.8	12.5	11.4	6.5	1.1	1.1	4.3	7.1	8.2	00.0	100.
14	6.0	4.9	2.7	2.2	3.3	8.7	8.7	9.8	12.0	13.0	5.4	2.7	1.1	5.4	6.5	7.6	00.0	100.
15	6.0	5.4	3.8	2.7	3.8	4.3	10.9	7.1	18.5	8.7	6.0	2.2	1.1	5.4	8.7	5.4	00.0	100.
16	4.9	6.5	3.8	2.7	4.3	3.8	10.3	9.2	14.7	9.2	7.1	1.6	2.2	5.4	7.1	7.1	00.0	100.
17	7.6	6.0	4.3	4.3	3.3	3.3	8.2	12.0	16.3	8.7	4.3	1.1	1.6	5.4	7.1	6.5	00.0	100.
18	6.0	3.3	4.9	6.0	3.3	4.9	7.6	13.0	16.3	8.7	2.7	2.7	1.1	3.8	8.2	7.6	00.0	100.
19	6.0	4.3	4.3	4.3	6.0	4.9	10.3	13.6	14.1	8.2	2.2	.5	2.7	3.8	4.3	10.3	00.0	100.
20	6.5	6.5	7.1	3.8	7.6	6.5	10.3	12.5	13.0	7.1	3.3	.5	2.2	3.8	3.3	6.0	00.0	100.
21	3.8	7.6	7.6	4.3	3.3	6.5	10.3	14.1	14.1	8.2	2.7	1.1	.5	4.9	2.7	8.2	00.0	100.
22	3.8	6.5	6.5	5.4	4.9	5.4	9.2	15.2	13.0	9.2	2.2	2.2	.5	4.3	4.3	7.1	00.0	100.
23	5.4	5.4	6.5	1.1	7.1	4.9	9.2	10.3	17.4	12.0	1.6	1.6	1.1	2.7	4.9	8.7	00.0	100.
24	6.0	6.5	3.3	4.9	3.3	7.6	8.2	7.6	19.6	11.4	2.7	1.1	.5	4.9	6.0	6.5	00.0	100.
ALL	6.2	5.3	4.6	3.7	4.1	5.6	9.4	10.6	14.5	10.6	3.9	1.8	2.1	4.5	6.0	7.1	.0	100.

NUMBER OF OBS = 4416

B65

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2016

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	6.0	4.4	3.6	3.6	4.1	6.8	9.0	7.9	14.5	9.3	4.1	3.6	2.7	4.1	7.1	9.3	00.0	100.
2	5.7	4.4	5.7	2.5	3.6	5.7	8.5	9.6	14.5	8.7	4.6	3.3	3.0	4.4	7.1	8.7	00.0	100.
3	5.5	5.2	3.8	2.2	4.9	4.9	6.8	10.7	12.8	11.2	3.8	3.6	3.8	3.3	7.1	10.4	00.0	100.
4	6.0	5.5	5.2	2.5	3.3	6.6	6.8	10.7	10.9	10.1	4.9	4.4	4.1	4.1	6.6	8.5	00.0	100.
5	5.5	4.9	3.3	5.2	1.4	7.4	6.8	10.7	12.3	9.0	5.2	3.8	2.7	4.6	7.7	9.6	00.0	100.
6	6.3	4.9	3.6	3.0	3.0	5.7	8.5	9.8	13.7	8.2	4.9	1.6	1.9	7.7	7.9	9.3	00.0	100.
7	5.2	4.6	3.3	3.8	3.0	4.1	8.5	12.6	13.7	6.3	4.4	1.4	2.5	7.9	7.1	11.7	00.0	100.
8	6.3	3.8	2.7	1.9	4.1	4.6	9.6	9.3	13.4	8.2	4.9	2.5	3.8	4.6	9.6	10.7	00.0	100.
9	5.2	4.4	3.0	2.5	3.3	3.8	9.0	8.7	14.2	9.0	4.9	4.1	3.6	3.6	10.4	10.1	.3	100.
10	5.7	3.8	2.5	1.6	3.6	4.9	10.1	8.2	12.6	10.7	5.5	2.5	5.2	3.8	7.4	12.0	00.0	100.
11	8.5	3.8	1.6	2.2	2.5	4.1	11.7	8.5	12.3	11.7	4.9	2.2	3.3	4.6	7.1	10.9	00.0	100.
12	8.2	3.8	1.9	1.9	3.6	6.0	9.6	8.7	13.1	11.2	4.9	3.8	3.0	2.7	7.7	9.8	00.0	100.
13	5.2	5.2	2.5	2.2	2.7	4.6	9.8	10.4	13.1	8.5	4.9	3.6	2.7	4.4	8.7	11.5	00.0	100.
14	6.0	4.9	2.2	2.5	2.5	5.5	7.7	9.0	14.5	10.7	3.8	4.1	3.0	4.4	7.9	11.5	00.0	100.
15	5.5	5.2	3.0	3.3	3.3	3.3	8.7	8.2	15.8	7.9	6.3	3.3	3.0	5.5	8.7	9.0	00.0	100.
16	5.2	5.7	2.7	3.0	3.3	4.1	9.0	8.7	12.6	9.3	5.5	4.1	2.7	5.7	7.7	10.7	00.0	100.
17	6.3	5.7	3.6	3.3	3.8	2.7	9.8	9.6	12.8	9.6	3.0	3.3	2.5	5.5	7.7	10.9	00.0	100.
18	6.0	3.8	3.3	4.6	2.7	5.5	7.7	12.0	12.8	7.9	2.7	3.3	3.3	3.6	10.1	10.7	00.0	100.
19	7.1	3.6	3.8	4.1	5.5	4.6	9.0	12.8	10.7	8.2	2.5	1.4	4.1	4.6	6.0	12.0	00.0	100.
20	7.9	6.6	4.4	4.1	5.2	6.0	10.9	12.6	9.3	7.1	3.6	1.6	2.7	4.4	5.5	8.2	00.0	100.
21	6.3	7.7	4.6	3.6	3.8	7.4	9.8	13.1	10.1	7.1	3.3	1.6	3.3	3.8	5.2	9.3	00.0	100.
22	5.5	6.8	4.6	4.4	4.6	6.3	9.0	12.6	11.5	7.7	2.7	2.2	2.5	4.1	5.7	9.8	00.0	100.
23	5.7	5.7	5.2	2.2	6.0	5.5	9.3	10.4	13.7	9.0	2.7	1.4	3.3	3.3	5.5	11.2	00.0	100.
24	4.4	7.4	3.8	3.8	3.8	7.1	7.7	9.6	13.9	10.1	3.8	1.1	3.0	4.9	5.7	9.8	00.0	100.
ALL	6.0	5.1	3.5	3.1	3.6	5.3	8.9	10.2	12.9	9.0	4.2	2.8	3.2	4.6	7.4	10.2	.0	100.

NUMBER OF OBS = 8784

B66

Precipitation

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	1	1	.00 .00	.00 .01	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02
16	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
16	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
16	1	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
16	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
16	1	6	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02
16	1	7	.00 .06	.00 .01	.00 .01	.00 .00	.00 .01	.00 .00	.00 .02	.00 .05	.01 .03	.01 .04	.06 .00	.13 .00	.44
16	1	8	.01 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.04
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	1	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
16	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 2016

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
16	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
16	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
16	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
16	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
16	1	22	.00 .01	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02
16	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
16	1	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
16	1	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
16	1	26	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
16	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
16	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
16	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
16	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
16	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 - 7
 TOTAL AMOUNT OF PRECIPITATION - .56 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .13 INCHES
 MAXIMUM DAILY PRECIPITATION - .44 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 7 HOUR 12 - .13 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 7 HOUR 10 - .28 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 7 HOUR 11 - .42 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 7 HOUR 9 - .47 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 7 HOUR 9 - .47 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 475
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 3
 TOTAL DAYS WITH PRECIPITATION - 2
 TOTAL AMOUNT OF PRECIPITATION - .03 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .02 INCHES

MONTH OF JANUARY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	23	69	109	141	168
.02	8	30	52	74	93
.03	6	20	27	33	40
.04	5	17	26	32	38
.05	4	17	23	29	35
.07	1	16	23	29	35
.10	1	12	21	27	33
.15	0	7	20	26	32
.20	0	6	13	20	27
.25	0	4	11	18	24
.30	0	0	7	13	19
.35	0	0	4	10	16
.40	0	0	1	8	15
.45	0	0	0	4	10
.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 2016

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
16	2	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
16	2	2	.00 .00	.04 .00	.00 .01	.02 .00	.20 .00	.14 .06	.04 .00	.02 .00	.00 .00	.00 .01	.00 .00	.00 .00	.54
16	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
16	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
16	2	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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 2016

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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	2	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

B73

MONTH OF FEBRUARY

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 696
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 9
 TOTAL DAYS WITH PRECIPITATION - 1
 TOTAL AMOUNT OF PRECIPITATION - .54 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .20 INCHES
 MAXIMUM DAILY PRECIPITATION - .54 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 2 HOUR 5 - .20 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 2 HOUR 2 - .44 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 2 HOUR 2 - .46 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 2 HOUR 2 - .53 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 2 HOUR 2 - .54 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 264
 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 FEBRUARY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	9	25	32	38	44
.02	7	18	28	34	40
.03	5	17	28	34	40
.04	5	17	28	34	40
.05	3	15	26	32	38
.07	2	12	25	31	37
.10	2	7	14	21	27
.15	1	7	13	19	25
.20	1	7	13	19	25
.25	0	6	12	19	25
.30	0	5	11	17	23
.35	0	5	11	17	23
.40	0	5	11	17	23
.45	0	0	6	15	21
.50	0	0	0	2	10
.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 2016

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
16	3	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
16	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
16	3	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
16	3	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
16	3	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
16	3	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.01
16	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
16	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
16	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
16	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
16	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
16	3	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.01
16	3	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
16	3	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .05	.06
16	3	15	.25 .01	.05 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .02	.00 .00	.00 .00	.00 .00	.01 .00	.35
16	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
16	3	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.23 .00	.54 .00	.00 .00	.00 .00	.77

B76

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	3	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
16	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
16	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
16	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
16	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
16	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
16	3	24	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
16	3	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
16	3	26	.00 .01	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.05 .00	.05 .00	.11 .00	.03 .00	.29
16	3	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
16	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
16	3	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
16	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
16	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 - 0
 TOTAL HOURS OF PRECIPITATION - 21
 TOTAL DAYS WITH PRECIPITATION - 7
 TOTAL AMOUNT OF PRECIPITATION - 1.50 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .54 INCHES
 MAXIMUM DAILY PRECIPITATION - .77 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 10 - .54 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 9 - .77 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 9 - .77 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 9 - .77 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 9 - .77 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 78
 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	21	64	101	137	173
.02	11	38	62	80	98
.03	9	26	54	72	90
.04	8	24	46	70	88
.05	8	24	42	66	84
.07	4	21	40	58	76
.10	4	20	38	56	75
.15	3	19	37	55	73
.20	3	18	36	54	72
.25	2	15	33	51	69
.30	1	12	24	36	48
.35	1	10	22	34	47
.40	1	6	12	18	28
.45	1	6	12	18	24
.50	1	6	12	18	24
.60	0	5	11	17	23
.70	0	5	11	17	23
.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

B79

JAN-MAR INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2184
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 53
 TOTAL DAYS WITH PRECIPITATION - 15
 TOTAL AMOUNT OF PRECIPITATION - 2.60 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .54 INCHES
 MAXIMUM DAILY PRECIPITATION - .77 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 10 - .54 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 9 - .77 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 9 - .77 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 9 - .77 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 17 HOUR 9 - .77 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 817
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 3
 TOTAL DAYS WITH PRECIPITATION - 2
 TOTAL AMOUNT OF PRECIPITATION - .03 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .02 INCHES

JAN-MAR INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	53	158	242	316	385
.02	26	86	142	188	231
.03	20	63	109	139	170
.04	18	58	100	136	166
.05	15	56	91	127	157
.07	7	49	88	118	148
.10	7	39	73	104	135
.15	4	33	70	100	130
.20	4	31	62	93	124
.25	2	25	56	88	118
.30	1	17	42	66	90
.35	1	15	37	61	86
.40	1	11	24	43	66
.45	1	6	18	37	55
.50	1	6	12	20	34
.60	0	5	11	17	23
.70	0	5	11	17	23
.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

B81

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	4	1	.00 .00	.00 .00	.00 .02	.01 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04
16	4	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
16	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
16	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
16	4	5	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .02	.00 .03	.00 .08	.00 .01	.00 .00	.14
16	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
16	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
16	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
16	4	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	4	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .02	.05

B82

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	4	18	.04 .06	.00 .01	.01 .00	.00 .00	.00 .00	.01 .00	.00 .00	.03 .00	.09 .00	.10 .00	.03 .00	.14 .00	.52
16	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
16	4	20	.00 .00	.03 .00	.23 .00	.36 .00	.27 .00	.44 .00	.19 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	1.53
16	4	21	.00 .00	.00 .00	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.00 .00	.05
16	4	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
16	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
16	4	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .17	.00 .02	.00 .00	.00 .00	.00 .00	.19
16	4	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
16	4	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.10 .00	.06 .15	.00 .20	.00 .23	.00 .17	.00 .20	.00 .26	1.37
16	4	27	.20 .00	.14 .02	.13 .03	.03 .00	.00 .00	.00 .00	.00 .00	.01 .00	.08 .00	.00 .00	.00 .01	.00 .00	.65
16	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
16	4	29	.00 .00	.00 .00	.00 .00	.00 .01	.00 .06	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .01	.12
16	4	30	.02 .00	.09 .03	.13 .01	.20 .00	.24 .00	.03 .00	.10 .00	.04 .00	.00 .00	.00 .00	.01 .00	.00 .00	.90

MONTH OF APRIL

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 64
TOTAL DAYS WITH PRECIPITATION - 11
TOTAL AMOUNT OF PRECIPITATION - 5.56 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .44 INCHES
MAXIMUM DAILY PRECIPITATION - 1.53 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 6 - .44 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 2 - 1.52 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 19 - 1.71 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 19 - 1.80 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 6 - 1.87 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 9
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	64	142	195	231	263
.02	48	123	177	216	250
.03	42	113	168	208	245
.04	31	100	149	189	225
.05	29	94	145	183	219
.07	26	80	129	165	195
.10	22	65	118	155	185
.15	15	54	92	126	151
.20	11	38	66	91	110
.25	4	34	60	85	105
.30	2	31	58	84	104
.35	2	29	55	80	100
.40	1	27	52	78	98
.45	0	25	51	76	97
.50	0	23	42	68	89
.60	0	21	39	59	74
.70	0	17	36	55	71
.80	0	12	32	53	70
.90	0	11	23	49	67
1.00	0	8	21	34	49
1.10	0	8	20	34	46
1.20	0	7	20	32	44
1.30	0	3	17	29	42
1.40	0	2	15	28	40
1.50	0	2	14	26	40
1.60	0	0	4	11	18
1.70	0	0	3	9	18
1.80	0	0	0	4	13
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

B85

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	5	1	.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
16	5	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
16	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
16	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
16	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
16	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
16	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
16	5	8	.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
16	5	9	.04 .00	.19 .00	.42 .00	.01 .07	.13 .01	.12 .01	.03 .00	.00 .04	.00 1.59	.00 .16	.00 .09	.00 .00	2.91
16	5	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
16	5	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.77 .00	.11 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.88
16	5	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
16	5	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
16	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 .00	.00
16	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
16	5	16	.00 .10	.00 .11	.00 .06	.00 .01	.00 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.07 .00	.39
16	5	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	5	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
16	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
16	5	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04 .00	.02 .00	.00 .00	.00 .00	.00 .00	.06
16	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
16	5	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
16	5	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
16	5	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.02 .00	.00 .00	.03 .00	.00 .00	.00 .00	.00 .00	.08
16	5	25	.11 .00	.01 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.07 .00	.00 .00	.00 .00	.25
16	5	26	.00 .05	.00 .12	.00 .00	.00 .01	.00 .08	.00 .00	.00 .01	.00 .19	.00 .11	.00 .11	.00 .04	.00 .04	.76
16	5	27	.10 .00	.06 .00	.01 .06	.00 .00	.00 .00	.00 .15	.00 .02	.00 .00	.00 .00	.00 .00	.00 .00	.00 .05	.45
16	5	28	.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
16	5	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
16	5	30	.00 .00	.00 .00	.00 .00	.00 .03	.00 .01	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05
16	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 - 59
TOTAL DAYS WITH PRECIPITATION - 13
TOTAL AMOUNT OF PRECIPITATION - 5.92 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.59 INCHES
MAXIMUM DAILY PRECIPITATION - 2.91 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 9 HOUR 21 - 1.59 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 9 HOUR 18 - 1.89 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 9 HOUR 16 - 1.97 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 9 HOUR 5 - 2.16 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 8 HOUR 24 - 2.92 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 MAY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	59	137	206	261	309
.02	45	127	190	243	291
.03	39	119	182	235	283
.04	32	106	165	214	256
.05	27	101	162	211	253
.07	22	84	133	173	204
.10	17	65	113	149	179
.15	7	57	99	138	169
.20	3	43	87	126	161
.25	3	38	78	121	155
.30	3	29	63	101	131
.35	3	28	60	90	117
.40	3	24	49	74	95
.45	2	23	49	73	94
.50	2	21	47	71	91
.60	2	18	46	70	89
.70	2	16	40	64	86
.80	1	14	33	58	80
.90	1	8	20	37	50
1.00	1	6	12	21	29
1.10	1	6	12	18	24
1.20	1	6	12	18	24
1.30	1	6	12	18	24
1.40	1	6	12	18	24
1.50	1	6	12	18	24
1.60	0	6	12	18	24
1.70	0	6	12	18	24
1.80	0	5	11	18	24
1.90	0	0	6	14	20
2.00	0	0	0	4	10

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

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	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
16	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
16	6	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.01
16	6	4	.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
16	6	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
16	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
16	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
16	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
16	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
16	6	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
16	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
16	6	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
16	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
16	6	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
16	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
16	6	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
16	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 2016

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
16	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
16	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
16	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
16	6	21	.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
16	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
16	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
16	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
16	6	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.06 .00	.01 .00	.00 .00	.00 .03	.10
16	6	26	.04 .00	.00 .00	.02 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.08
16	6	27	.00 .00	.00 .00	.00 .00	.00 .78	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.79
16	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
16	6	29	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.09 .00	.00 .00	.00 .00	.00 .00	.11
16	6	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .05	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05

B91

MONTH OF JUNE

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 14
TOTAL DAYS WITH PRECIPITATION - 8
TOTAL AMOUNT OF PRECIPITATION - 1.16 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .78 INCHES
MAXIMUM DAILY PRECIPITATION - .79 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 16 - .78 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 16 - .79 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 16 - .79 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 16 - .79 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 16 - .79 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	14	52	90	122	152
.02	9	38	70	97	121
.03	6	33	59	80	98
.04	5	32	58	80	98
.05	4	30	56	78	96
.07	2	23	47	69	87
.10	1	13	31	53	71
.15	1	6	12	18	30
.20	1	6	12	18	24
.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	1	6	12	18	24
.50	1	6	12	18	24
.60	1	6	12	18	24
.70	1	6	12	18	24
.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

B93

APR-JUN INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2184
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 137
TOTAL DAYS WITH PRECIPITATION - 32
TOTAL AMOUNT OF PRECIPITATION - 12.64 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.59 INCHES
MAXIMUM DAILY PRECIPITATION - 2.91 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 21 - 1.59 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 18 - 1.89 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 16 - 1.97 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 5 - 2.16 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 8 HOUR 24 - 2.92 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 9
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	137	331	493	625	747
.02	102	288	438	563	675
.03	87	265	410	530	639
.04	68	238	373	490	592
.05	60	225	363	476	578
.07	50	187	309	408	493
.10	40	143	262	357	441
.15	23	117	203	282	356
.20	15	87	165	235	300
.25	8	78	150	224	288
.30	6	66	133	203	263
.35	6	63	127	188	245
.40	5	57	113	170	221
.45	3	54	112	167	219
.50	3	50	101	157	207
.60	3	45	97	147	190
.70	3	39	88	137	183
.80	1	26	65	111	151
.90	1	19	43	86	117
1.00	1	14	33	55	78
1.10	1	14	32	52	70
1.20	1	13	32	50	68
1.30	1	9	29	47	66
1.40	1	8	27	46	64
1.50	1	8	26	44	64
1.60	0	6	16	29	42
1.70	0	6	15	27	42
1.80	0	5	11	22	37
1.90	0	0	6	14	20
2.00	0	0	0	4	10

B95

JAN-JUN INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 4368
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 190
TOTAL DAYS WITH PRECIPITATION - 47
TOTAL AMOUNT OF PRECIPITATION - 15.24 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.59 INCHES
MAXIMUM DAILY PRECIPITATION - 2.91 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 21 - 1.59 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 18 - 1.89 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 16 - 1.97 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 5 - 2.16 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 8 HOUR 24 - 2.92 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 826
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 3
TOTAL DAYS WITH PRECIPITATION - 2
TOTAL AMOUNT OF PRECIPITATION - .03 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
MAXIMUM DAILY PRECIPITATION - .02 INCHES

JAN-JUN INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	190	491	743	955	1152
.02	128	374	580	754	915
.03	107	328	519	672	818
.04	86	296	473	627	765
.05	75	281	454	603	735
.07	57	236	397	526	641
.10	47	182	335	461	576
.15	27	150	273	382	486
.20	19	118	227	328	424
.25	10	103	206	312	406
.30	7	83	175	269	353
.35	7	78	164	249	331
.40	6	68	137	213	287
.45	4	60	130	204	274
.50	4	56	113	177	241
.60	3	50	108	164	213
.70	3	44	99	154	206
.80	1	26	65	111	151
.90	1	19	43	86	117
1.00	1	14	33	55	78
1.10	1	14	32	52	70
1.20	1	13	32	50	68
1.30	1	9	29	47	66
1.40	1	8	27	46	64
1.50	1	8	26	44	64
1.60	0	6	16	29	42
1.70	0	6	15	27	42
1.80	0	5	11	22	37
1.90	0	0	6	14	20
2.00	0	0	0	4	10

B97

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	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
16	7	2	.00 .02	.00 .02	.00 .04	.00 .06	.00 .21	.00 .18	.03 .17	.07 .02	.02 .00	.01 .00	.01 .01	.00 .00	.87
16	7	3	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03
16	7	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
16	7	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
16	7	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
16	7	7	.00 .00	.00 .00	.36 .00	.12 .00	.06 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.54
16	7	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
16	7	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
16	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
16	7	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
16	7	12	.55 .00	.84 .00	.06 .00	.00 .00	.01 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	1.48
16	7	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.01 .00	.00 .00	.04
16	7	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
16	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
16	7	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
16	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 2016

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
16	7	18	.00 .01	.00 .01	.00 .00	.00 .00	.00 .00	.51 .00	.10 .00	.18 .00	.00 .00	.00 .00	.00 .00	.01 .00	.82
16	7	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
16	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
16	7	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
16	7	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.01
16	7	23	.00 .00	.00 .00	.02 .00	.16 .00	.01 .00	.04 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.23
16	7	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
16	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
16	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
16	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
16	7	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
16	7	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
16	7	30	.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
16	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 - 40
 TOTAL DAYS WITH PRECIPITATION - 10
 TOTAL AMOUNT OF PRECIPITATION - 4.04 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .84 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.48 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 2 - .84 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 1 - 1.48 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 1 - 1.48 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 1 - 1.48 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 12 HOUR 1 - 1.48 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

B100

MONTH OF JULY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	40	101	155	203	251
.02	25	71	111	148	184
.03	19	64	103	144	181
.04	17	54	91	127	166
.05	15	48	79	109	139
.07	12	46	76	106	136
.10	11	44	75	105	135
.15	9	37	70	100	130
.20	5	33	66	96	126
.25	4	27	52	76	100
.30	4	26	51	75	99
.35	4	26	50	74	98
.40	3	23	48	73	97
.45	3	23	48	72	96
.50	3	22	46	70	94
.60	1	14	33	52	70
.70	1	10	29	48	66
.80	1	6	19	37	55
.90	0	6	12	18	24
1.00	0	5	11	17	23
1.10	0	5	11	17	23
1.20	0	5	11	17	23
1.30	0	5	11	17	23
1.40	0	4	10	16	22
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 2016

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
16	8	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.01
16	8	2	.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
16	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
16	8	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.01
16	8	5	.00 .00	.00 .00	.00 .00	.05 .00	.18 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.23
16	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
16	8	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.05 .00	.02 .00	.00 .00	.00 .00	.00 .00	.08
16	8	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
16	8	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
16	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
16	8	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .93	.00 1.18	2.11
16	8	12	.12 .00	.08 .00	.00 .00	.01 .00	.00 .00	.04 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.27
16	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
16	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
16	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
16	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
16	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 2016

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
16	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
16	8	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .82	.00 .28	.00 .07	.00 .02	.00 .00	.00 .01	.00 .00	.00 .00	1.20
16	8	20	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
16	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
16	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
16	8	23	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .09	.00 1.15	1.25
16	8	24	.77 .00	.12 .00	.03 .00	.00 .00	.00 .00	.00 .38	.00 .07	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	1.37
16	8	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.11 .00	.24 .00	.02 .00	.00 .00	.00 .00	.37
16	8	26	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.07 .00	.00 .00	.01 .00	.00 .00	.00 .00	.10
16	8	27	.00 .00	.00 .00	.00 .00	.00 .00	.05 .00	.04 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.09
16	8	28	.00 .00	.00 .00	.00 .00	.00 .17	.00 .02	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.19
16	8	29	.00 .00	.00 .00	.00 9.99	.00 9.99	.00 .00	.00 .00	.00 .00	.00 .00	.00 .31	.00 .01	.00 .05	.00 .30	.67
16	8	30	.04 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.32 .00	.12 .00	.19 .00	.00 .00	.00 .00	.00 .00	.70
16	8	31	.00 .00	.00 .00	.00 .00	.01 .00	.03 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05

B103

MONTH OF AUGUST

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744
NUMBER OF MISSING HOURS - 2
TOTAL HOURS OF PRECIPITATION - 52
TOTAL DAYS WITH PRECIPITATION - 18
TOTAL AMOUNT OF PRECIPITATION - 8.72 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.18 INCHES
MAXIMUM DAILY PRECIPITATION - 2.11 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 24 - 1.18 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 23 - 2.32 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 23 - 2.38 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 23 - 2.38 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 23 HOUR 23 - 2.61 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	52	150	234	298	343
.02	38	110	185	247	294
.03	33	102	176	240	286
.04	30	100	173	238	286
.05	27	97	169	234	284
.07	23	88	154	214	264
.10	18	67	119	173	219
.15	14	65	114	157	196
.20	11	55	98	136	167
.25	10	50	87	119	143
.30	9	48	85	117	142
.35	6	44	82	114	139
.40	5	34	68	99	123
.45	5	33	68	98	122
.50	5	27	57	86	116
.60	5	27	57	85	115
.70	5	22	50	77	108
.80	4	20	43	70	100
.90	3	19	42	66	90
1.00	2	17	40	65	89
1.10	2	17	36	61	85
1.20	0	13	31	56	80
1.30	0	11	23	42	60
1.40	0	10	23	35	47
1.50	0	10	22	34	46
1.60	0	10	22	34	46
1.70	0	10	22	34	46
1.80	0	10	22	34	46
1.90	0	10	22	34	46
2.00	0	10	22	34	46

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

BI05

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	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
16	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
16	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
16	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
16	9	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
16	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
16	9	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.06 .00	.03 .00	.00 .00	.11
16	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
16	9	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .05	.00 .32	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.37
16	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
16	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
16	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
16	9	13	.00 .00	.00 .03	.20 .00	.09 .01	.32 .01	.05 .01	.00 .00	.00 .00	.10 .00	.07 .00	.01 .00	.00 .00	.90
16	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
16	9	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
16	9	16	.00 .00	.00 .00	.03 .00	.08 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.11
16	9	17	.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

B106

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	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
16	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
16	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
16	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
16	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
16	9	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
16	9	24	.00 .00	.00 .00	.00 .46	.00 .05	.00 .33	.00 .03	.00 .07	.00 .12	.00 .01	.00 .16	.00 .22	.00 .06	1.51
16	9	25	.00 .00	.00 .00	.00 .00	.07 .00	.04 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.11
16	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
16	9	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
16	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
16	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
16	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 - 31
TOTAL DAYS WITH PRECIPITATION - 7
TOTAL AMOUNT OF PRECIPITATION - 3.12 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .46 INCHES
MAXIMUM DAILY PRECIPITATION - 1.51 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 15 - .46 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 15 - 1.06 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 15 - 1.51 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 15 - 1.62 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 24 HOUR 15 - 1.62 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	31	69	105	141	177
.02	25	62	92	122	152
.03	24	60	90	120	150
.04	20	56	86	116	146
.05	19	55	85	115	145
.07	14	50	81	111	141
.10	9	47	77	107	137
.15	7	33	51	69	87
.20	6	30	50	68	86
.25	4	27	46	64	82
.30	4	26	44	62	80
.35	1	25	43	61	79
.40	1	19	31	43	55
.45	1	18	31	43	55
.50	0	16	30	42	54
.60	0	12	26	39	51
.70	0	5	20	33	45
.80	0	4	17	29	41
.90	0	2	10	19	31
1.00	0	1	9	15	21
1.10	0	0	5	13	19
1.20	0	0	5	11	17
1.30	0	0	4	10	16
1.40	0	0	4	10	16
1.50	0	0	3	9	15
1.60	0	0	0	4	10
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 - 2
 TOTAL HOURS OF PRECIPITATION - 123
 TOTAL DAYS WITH PRECIPITATION - 35
 TOTAL AMOUNT OF PRECIPITATION - 15.88 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - 1.18 INCHES
 MAXIMUM DAILY PRECIPITATION - 2.11 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 24 - 1.18 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.32 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 23 HOUR 23 - 2.61 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	123	320	495	649	789
.02	88	243	388	517	634
.03	76	226	369	504	621
.04	67	210	350	481	602
.05	61	200	333	458	571
.07	49	184	311	431	541
.10	38	158	271	385	491
.15	30	135	235	326	413
.20	22	118	214	300	379
.25	18	104	185	259	325
.30	17	100	180	254	321
.35	11	95	175	249	316
.40	9	76	147	215	275
.45	9	74	147	213	273
.50	8	65	133	198	264
.60	6	53	116	176	236
.70	6	37	99	158	219
.80	5	30	79	136	196
.90	3	27	64	103	145
1.00	2	23	60	97	133
1.10	2	22	52	91	127
1.20	0	18	47	84	120
1.30	0	16	38	69	99
1.40	0	14	37	61	85
1.50	0	10	25	43	61
1.60	0	10	22	38	56
1.70	0	10	22	34	46
1.80	0	10	22	34	46
1.90	0	10	22	34	46
2.00	0	10	22	34	46

B111

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	10	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
16	10	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
16	10	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
16	10	4	.00 .04	.00 .41	.00 .02	.00 .02	.00 .00	.00 .01	.00 .00	.00 .01	.00 .14	.00 .00	.00 .00	.00 .00	.65
16	10	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
16	10	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .03	.00 .02	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.06
16	10	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
16	10	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
16	10	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
16	10	10	.00 .01	.00 .00	.00 .05	.00 .00	.00 .00	.00 .00	.22 .00	.08 .01	.00 .00	.02 .00	.01 .00	.00 .00	.40
16	10	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
16	10	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.04
16	10	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
16	10	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
16	10	15	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
16	10	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
16	10	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

B112

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	10	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
16	10	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
16	10	20	.00 .00	.03 .00	.12 .00	.05 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.20
16	10	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
16	10	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
16	10	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
16	10	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
16	10	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
16	10	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
16	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
16	10	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
16	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
16	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
16	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 - 0
 TOTAL HOURS OF PRECIPITATION - 24
 TOTAL DAYS WITH PRECIPITATION - 7
 TOTAL AMOUNT OF PRECIPITATION - 1.37 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .41 INCHES
 MAXIMUM DAILY PRECIPITATION - .65 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 4 HOUR 14 - .41 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 4 HOUR 13 - .50 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 4 HOUR 13 - .65 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 4 HOUR 13 - .65 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 4 HOUR 13 - .65 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 2
 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

B114

MONTH OF OCTOBER

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	24	70	112	154	196
.02	16	52	82	112	142
.03	10	46	76	106	136
.04	8	43	73	103	133
.05	7	38	63	87	111
.07	5	27	49	67	85
.10	4	25	46	64	82
.15	2	23	43	61	79
.20	2	16	35	53	71
.25	1	11	23	35	47
.30	1	11	23	35	47
.35	1	6	16	28	40
.40	1	6	12	23	35
.45	0	6	12	18	24
.50	0	1	8	14	20
.60	0	0	5	11	17
.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

BIIS

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	11	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
16	11	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05 .00	.01 .00	.06
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	11	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
16	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
16	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
16	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
16	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
16	11	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
16	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
16	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 2016

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
16	11	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
16	11	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
16	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
16	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
16	11	22	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.07 .05	.00 .51	.09 .24	.07 .02	.03 .00	.07 .00	.00 .00	1.16
16	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
16	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
16	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
16	11	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
16	11	27	.00 .03	.00 .01	.00 .01	.00 .02	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.07
16	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
16	11	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
16	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

B117

MONTH OF NOVEMBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 16
 TOTAL DAYS WITH PRECIPITATION - 3
 TOTAL AMOUNT OF PRECIPITATION - 1.29 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .51 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.16 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 22 HOUR 19 - .51 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 22 HOUR 18 - .82 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 22 HOUR 9 - .97 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 22 HOUR 5 - 1.16 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 22 HOUR 5 - 1.16 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 32
 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

B118

MONTH OF NOVEMBER

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	16	37	56	74	92
.02	12	35	54	72	90
.03	10	33	52	70	88
.04	8	31	50	68	86
.05	8	29	48	66	84
.07	6	21	35	47	59
.10	2	15	24	30	36
.15	2	14	24	30	36
.20	2	12	23	29	35
.25	1	11	22	28	34
.30	1	7	20	26	32
.35	1	6	12	19	25
.40	1	6	12	18	24
.45	1	6	12	18	24
.50	1	6	12	18	24
.60	0	5	12	18	24
.70	0	5	12	18	24
.80	0	4	11	17	23
.90	0	0	2	9	15
1.00	0	0	0	6	12
1.10	0	0	0	4	10
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

B119

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2016

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
16	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
16	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
16	12	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .01	.00 .03	.00 .02	.00 .03	.00 .06	.00 .05	.21
16	12	4	.05 .00	.06 .00	.06 .00	.06 .00	.04 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.28
16	12	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
16	12	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	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
16	12	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.01
16	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 2016

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
16	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
16	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
16	12	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01
16	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
16	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
16	12	23	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.01 .00	.01 .00	.04
16	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
16	12	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .13	.00 .02	.02 .03	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.21
16	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
16	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
16	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
16	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
16	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
16	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

MONTH OF DECEMBER

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 24
 TOTAL DAYS WITH PRECIPITATION - 6
 TOTAL AMOUNT OF PRECIPITATION - .76 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .13 INCHES
 MAXIMUM DAILY PRECIPITATION - .28 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 17 - .13 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 3 HOUR 23 - .34 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 3 HOUR 19 - .48 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 3 HOUR 18 - .49 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 3 HOUR 18 - .49 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 429
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 1
 TOTAL DAYS WITH PRECIPITATION - 1
 TOTAL AMOUNT OF PRECIPITATION - .01 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .01 INCHES

MONTH OF DECEMBER

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	24	56	88	118	148
.02	14	37	59	77	95
.03	11	32	54	72	90
.04	8	24	42	60	78
.05	7	22	34	46	58
.07	1	19	31	43	55
.10	1	18	30	42	54
.15	0	15	28	40	52
.20	0	8	14	26	38
.25	0	5	12	18	24
.30	0	3	10	16	22
.35	0	0	8	14	20
.40	0	0	6	12	18
.45	0	0	3	9	15
.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 - 0
 TOTAL HOURS OF PRECIPITATION - 64
 TOTAL DAYS WITH PRECIPITATION - 16
 TOTAL AMOUNT OF PRECIPITATION - 3.42 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .51 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.16 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 11 DAY 22 HOUR 19 - .51 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 11 DAY 22 HOUR 18 - .82 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 11 DAY 22 HOUR 9 - .97 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 11 DAY 22 HOUR 5 - 1.16 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 11 DAY 22 HOUR 5 - 1.16 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 463
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 1
 TOTAL DAYS WITH PRECIPITATION - 1
 TOTAL AMOUNT OF PRECIPITATION - .01 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .01 INCHES

OCT-DEC INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	64	163	256	346	436
.02	42	124	195	261	327
.03	31	111	182	248	314
.04	24	98	165	231	297
.05	22	89	145	199	253
.07	12	67	115	157	199
.10	7	58	100	136	172
.15	4	52	95	131	167
.20	4	36	72	108	144
.25	2	27	57	81	105
.30	2	21	53	77	101
.35	2	12	36	61	85
.40	2	12	30	53	77
.45	1	12	27	45	63
.50	1	7	20	32	44
.60	0	5	17	29	41
.70	0	5	12	18	24
.80	0	4	11	17	23
.90	0	0	2	9	15
1.00	0	0	0	6	12
1.10	0	0	0	4	10
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 - 2
 TOTAL HOURS OF PRECIPITATION - 187
 TOTAL DAYS WITH PRECIPITATION - 51
 TOTAL AMOUNT OF PRECIPITATION - 19.30 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - 1.18 INCHES
 MAXIMUM DAILY PRECIPITATION - 2.11 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 24 - 1.18 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.32 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 23 HOUR 23 - 2.61 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 463
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 1
 TOTAL DAYS WITH PRECIPITATION - 1
 TOTAL AMOUNT OF PRECIPITATION - .01 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .01 INCHES

JUL-DEC INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	187	483	751	995	1225
.02	130	367	583	778	961
.03	107	337	551	752	935
.04	91	308	515	712	899
.05	83	289	478	657	824
.07	61	251	426	588	740
.10	45	216	371	521	663
.15	34	187	330	457	580
.20	26	154	286	408	523
.25	20	131	242	340	430
.30	19	121	233	331	422
.35	13	107	211	310	401
.40	11	88	177	268	352
.45	10	86	174	258	336
.50	9	72	153	230	308
.60	6	58	133	205	277
.70	6	42	111	176	243
.80	5	34	90	153	219
.90	3	27	66	112	160
1.00	2	23	60	103	145
1.10	2	22	52	95	137
1.20	0	18	47	84	120
1.30	0	16	38	69	99
1.40	0	14	37	61	85
1.50	0	10	25	43	61
1.60	0	10	22	38	56
1.70	0	10	22	34	46
1.80	0	10	22	34	46
1.90	0	10	22	34	46
2.00	0	10	22	34	46

B127

JAN-DEC INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 8784
 NUMBER OF MISSING HOURS - 2
 TOTAL HOURS OF PRECIPITATION - 377
 TOTAL DAYS WITH PRECIPITATION - 98
 TOTAL AMOUNT OF PRECIPITATION - 34.54 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - 1.59 INCHES
 MAXIMUM DAILY PRECIPITATION - 2.91 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 9 HOUR 21 - 1.59 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.32 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 11 HOUR 23 - 2.38 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 8 HOUR 24 - 2.92 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 1289
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 4
 TOTAL DAYS WITH PRECIPITATION - 3
 TOTAL AMOUNT OF PRECIPITATION - .04 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .01 INCHES
 MAXIMUM DAILY PRECIPITATION - .02 INCHES

JAN-DEC INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	377	974	1498	1960	2393
.02	258	741	1167	1542	1892
.03	214	665	1074	1434	1769
.04	177	604	992	1349	1680
.05	158	570	936	1270	1575
.07	118	487	823	1114	1381
.10	92	398	706	982	1239
.15	61	337	603	839	1066
.20	45	272	513	736	947
.25	30	234	448	652	836
.30	26	204	408	600	775
.35	20	185	375	559	732
.40	17	156	314	481	639
.45	14	146	304	462	610
.50	13	128	266	407	549
.60	9	108	241	369	490
.70	9	86	210	330	449
.80	6	60	155	264	370
.90	4	46	109	198	277
1.00	3	37	93	158	223
1.10	3	36	84	147	207
1.20	1	31	79	134	188
1.30	1	25	67	116	165
1.40	1	22	64	107	149
1.50	1	18	51	87	125
1.60	0	16	38	67	98
1.70	0	16	37	61	88
1.80	0	15	33	56	83
1.90	0	10	28	48	66
2.00	0	10	22	38	56

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 (CNS). 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 (ΔT) for the 100-meter JFDs and the 60-meter to 10-meter ΔT for the 10-meter JFDs.

JFDs of 10-Meter Wind vs. Delta T

January-March 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
12.51-18.50	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	2	6
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	5
TOTAL	2	0	0	0	0	0	0	2	8	0	0	0	0	0	0	2	14

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	3
7.51-12.50	3	0	0	0	0	0	0	1	0	1	0	0	0	0	0	9	14
12.51-18.50	2	2	0	0	0	0	0	5	2	1	3	0	0	0	3	9	27
18.51-24.00	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	3
>24.00	0	0	0	0	0	0	0	0	3	1	0	0	0	0	2	0	6
TOTAL	5	3	0	0	1	0	0	7	5	4	4	0	0	0	5	19	53

B132

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	1	3	3	0	0	2	2	2	1	1	4	1	1	1	0	0	22
7.51-12.50	6	3	0	0	0	0	0	1	2	2	0	0	0	0	3	18	35
12.51-18.50	3	0	0	0	0	0	1	7	5	3	6	0	0	2	3	13	43
18.51-24.00	0	0	0	0	0	0	0	0	4	3	1	0	0	0	1	2	11
>24.00	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	3
TOTAL	10	6	3	0	0	2	3	11	14	9	11	1	1	3	7	33	114

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	3	8	2	6	1	2	2	2	2	2	1	1	2	0	3	40
3.51- 7.50	12	23	18	8	25	23	37	25	12	2	14	15	12	9	17	14	266
7.51-12.50	30	22	3	3	12	14	26	44	23	12	14	16	10	34	78	65	406
12.51-18.50	15	6	2	5	5	3	12	20	39	8	8	3	4	19	96	70	315
18.51-24.00	8	0	0	0	0	0	4	2	11	5	0	0	3	3	19	14	69
>24.00	2	0	0	0	0	0	0	1	7	2	0	0	0	2	0	0	14
TOTAL	70	54	31	18	48	41	81	94	94	31	38	35	30	69	210	166	1110

B133

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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																	1
1.01- 3.50	4	19	5	3	7	6	5	13	14	7	1	2	2	5	7	6	106
3.51- 7.50	20	6	6	6	4	16	23	27	21	7	5	13	12	22	25	16	229
7.51-12.50	11	0	0	0	1	7	22	28	15	22	14	6	15	22	12	14	189
12.51-18.50	3	0	0	0	0	0	7	9	17	20	1	1	1	2	3	1	65
18.51-24.00	0	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	6
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	38	25	11	9	12	29	57	77	71	58	21	22	30	51	47	37	596

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	2	2	2	1	2	2	5	14	13	16	5	8	2	5	5	7	91
3.51- 7.50	7	1	0	0	0	0	1	8	9	0	2	2	4	5	4	3	46
7.51-12.50	1	0	0	0	0	0	1	2	2	4	1	10	8	3	1	0	33
12.51-18.50	0	0	0	0	0	0	1	0	2	0	0	0	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	10	3	2	1	2	2	8	24	26	20	8	20	14	13	10	10	176

B134

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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																	7
1.01- 3.50	3	3	2	0	1	0	1	7	25	14	5	7	9	2	8	3	90
3.51- 7.50	0	1	0	0	0	0	0	2	4	0	2	0	0	1	2	1	13
7.51-12.50	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
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	3	4	2	0	1	0	1	9	29	16	7	7	9	3	10	4	112

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																	11
1.01- 3.50	12	27	17	6	16	9	13	36	54	39	13	18	14	14	20	19	327
3.51- 7.50	40	35	27	14	30	41	63	64	47	11	27	31	29	38	48	34	579
7.51-12.50	52	25	3	3	13	21	49	77	42	43	29	32	33	59	94	106	681
12.51-18.50	24	8	2	5	5	3	21	42	67	32	18	4	5	23	105	95	459
18.51-24.00	8	0	0	0	0	0	4	3	20	10	2	0	3	3	20	17	90
>24.00	2	0	0	0	0	0	0	2	17	3	0	0	0	2	2	0	28
TOTAL	138	95	49	28	64	74	150	224	247	138	89	85	84	139	289	271	2175

B135

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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: 2175

TOTAL NUMBER OF MISSING OBSERVATIONS: 9

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.6 %

MEAN WIND SPEED FOR THIS PERIOD: 9.3 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.64	2.44	5.24	51.03	27.40	8.09	5.15

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	2	0	0	0	0	0	0	2	8	0	0	0	0	0	0	2	0
B	5	3	0	0	1	0	0	7	5	4	4	0	0	0	5	19	0
C	10	6	3	0	0	2	3	11	14	9	11	1	1	3	7	33	0
D	70	54	31	18	48	41	81	94	94	31	38	35	30	69	210	166	0
E	38	25	11	9	12	29	57	77	71	58	21	22	30	51	47	37	1
F	10	3	2	1	2	2	8	24	26	20	8	20	14	13	10	10	3
G	3	4	2	0	1	0	1	9	29	16	7	7	9	3	10	4	7
TOTAL	138	95	49	28	64	74	150	224	247	138	89	85	84	139	289	271	11

B136

JFDs of 10-Meter Wind vs. Delta T

April-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	3	0	0	0	0	5	2	1	0	0	0	0	0	0	0	2	13
12.51-18.50	1	0	0	0	0	2	6	1	0	0	0	0	0	0	0	0	10
18.51-24.00	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL	5	0	0	0	0	7	8	3	2	0	0	0	0	0	0	2	27

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	2	2	0	0	0	1	0	0	2	0	0	0	0	0	1	0	8
7.51-12.50	4	1	0	0	0	3	4	4	0	1	0	0	0	0	1	3	21
12.51-18.50	1	0	0	0	0	0	3	12	0	0	0	0	0	0	0	5	21
18.51-24.00	0	0	0	0	0	0	2	6	0	0	0	0	0	0	0	0	8
>24.00	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4
TOTAL	7	3	0	0	0	4	9	24	4	1	0	0	0	0	2	8	62

B138

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	0	1	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	3	3	2	0	1	2	3	0	5	1	0	1	0	0	1	2	24
7.51-12.50	4	2	0	0	1	2	6	13	4	1	0	0	0	1	1	4	39
12.51-18.50	4	0	0	0	0	0	1	16	10	0	0	0	0	0	5	7	43
18.51-24.00	0	0	0	0	0	0	1	5	1	0	0	1	0	0	1	2	11
>24.00	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
TOTAL	11	5	2	0	3	4	12	34	20	2	0	4	0	1	8	15	121

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	1	2	7	1	5	6	5	3	6	3	1	1	0	0	0	2	43
3.51- 7.50	23	34	21	17	13	24	18	23	22	8	6	17	13	9	8	25	281
7.51-12.50	25	12	17	14	15	21	48	36	32	16	15	23	7	22	27	41	371
12.51-18.50	8	2	1	2	4	3	30	33	29	25	10	6	4	18	30	23	228
18.51-24.00	0	0	0	0	0	0	1	8	9	2	0	5	0	3	8	5	41
>24.00	0	0	0	0	0	0	0	0	2	0	0	1	0	0	7	0	10
TOTAL	57	50	46	34	37	54	102	103	100	54	32	53	24	52	80	96	974

B139

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	8	6	4	7	8	6	2	10	13	11	2	6	4	2	3	13	105
3.51- 7.50	21	20	3	19	12	21	12	29	38	19	11	7	7	6	8	17	250
7.51-12.50	16	10	3	4	6	20	34	37	37	31	6	5	5	17	19	14	264
12.51-18.50	4	2	1	1	2	2	2	10	6	6	0	3	1	2	4	2	48
18.51-24.00	2	0	0	1	0	1	1	0	2	0	0	0	0	0	0	0	7
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	51	38	11	32	28	50	51	86	96	67	19	21	17	27	34	46	674

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																	8
1.01- 3.50	8	5	4	1	0	1	2	7	18	13	2	4	4	8	12	12	101
3.51- 7.50	10	2	1	1	0	0	3	5	20	8	0	6	6	3	2	4	71
7.51-12.50	0	0	0	0	0	0	0	1	7	2	0	1	3	6	1	0	21
12.51-18.50	0	0	0	0	0	1	0	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	18	7	5	2	0	2	5	13	45	23	2	11	13	17	15	16	202

B140

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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																	7
1.01- 3.50	2	1	0	0	0	0	0	4	10	2	8	6	12	9	26	20	100
3.51- 7.50	1	0	0	0	0	0	0	0	0	0	1	2	3	2	4	0	13
7.51-12.50	0	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	4
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	3	1	0	0	0	0	0	4	10	2	10	11	15	11	30	20	124

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																	15
1.01- 3.50	19	14	15	9	14	13	10	24	47	29	13	17	20	19	41	47	351
3.51- 7.50	60	61	27	37	26	48	36	57	87	36	18	33	29	20	24	48	647
7.51-12.50	52	25	20	18	22	51	94	92	80	51	22	32	15	46	49	64	733
12.51-18.50	18	4	2	3	6	8	42	72	45	31	10	9	5	20	39	37	351
18.51-24.00	3	0	0	1	0	1	5	20	12	2	0	6	0	3	9	7	69
>24.00	0	0	0	0	0	0	0	2	6	0	0	3	0	0	7	0	18
TOTAL	152	104	64	68	68	121	187	267	277	149	63	100	69	108	169	203	2184

B141

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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: 2184

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 8.6 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.24	2.84	5.54	44.60	30.86	9.25	5.68

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	5	0	0	0	0	7	8	3	2	0	0	0	0	0	0	2	0
B	7	3	0	0	0	4	9	24	4	1	0	0	0	0	2	8	0
C	11	5	2	0	3	4	12	34	20	2	0	4	0	1	8	15	0
D	57	50	46	34	37	54	102	103	100	54	32	53	24	52	80	96	0
E	51	38	11	32	28	50	51	86	96	67	19	21	17	27	34	46	0
F	18	7	5	2	0	2	5	13	45	23	2	11	13	17	15	16	8
G	3	1	0	0	0	0	0	4	10	2	10	11	15	11	30	20	7
TOTAL	152	104	64	68	68	121	187	267	277	149	63	100	69	108	169	203	15

B142

JFDs of 10-Meter Wind vs. Delta T

January-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	4	0	0	0	0	5	2	2	0	0	0	0	0	0	0	2	15
12.51-18.50	2	0	0	0	0	2	6	2	2	0	0	0	0	0	0	2	16
18.51-24.00	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	3
>24.00	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
TOTAL	7	0	0	0	0	7	8	5	10	0	0	0	0	0	0	4	41

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	2	3	0	0	1	1	0	0	2	1	0	0	0	0	1	0	11
7.51-12.50	7	1	0	0	0	3	4	5	0	2	0	0	0	0	1	12	35
12.51-18.50	3	2	0	0	0	0	3	17	2	1	3	0	0	0	3	14	48
18.51-24.00	0	0	0	0	0	0	2	7	0	0	1	0	0	0	0	1	11
>24.00	0	0	0	0	0	0	0	2	5	1	0	0	0	0	2	0	10
TOTAL	12	6	0	0	1	4	9	31	9	5	4	0	0	0	7	27	115

B144

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	0	1	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	4	6	5	0	1	4	5	2	6	2	4	2	1	1	1	2	46
7.51-12.50	10	5	0	0	1	2	6	14	6	3	0	0	0	1	4	22	74
12.51-18.50	7	0	0	0	0	0	2	23	15	3	6	0	0	2	8	20	86
18.51-24.00	0	0	0	0	0	0	1	5	5	3	1	1	0	0	2	4	22
>24.00	0	0	0	0	0	0	0	1	2	0	0	2	0	0	0	0	5
TOTAL	21	11	5	0	3	6	15	45	34	11	11	5	1	4	15	48	235

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	4	5	15	3	11	7	7	5	8	5	3	2	1	2	0	5	83
3.51- 7.50	35	57	39	25	38	47	55	48	34	10	20	32	25	18	25	39	547
7.51-12.50	55	34	20	17	27	35	74	80	55	28	29	39	17	56	105	106	777
12.51-18.50	23	8	3	7	9	6	42	53	68	33	18	9	8	37	126	93	543
18.51-24.00	8	0	0	0	0	0	5	10	20	7	0	5	3	6	27	19	110
>24.00	2	0	0	0	0	0	0	1	9	2	0	1	0	2	7	0	24
TOTAL	127	104	77	52	85	95	183	197	194	85	70	88	54	121	290	262	2084

BIAS

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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																	1
1.01- 3.50	12	25	9	10	15	12	7	23	27	18	3	8	6	7	10	19	211
3.51- 7.50	41	26	9	25	16	37	35	56	59	26	16	20	19	28	33	33	479
7.51-12.50	27	10	3	4	7	27	56	65	52	53	20	11	20	39	31	28	453
12.51-18.50	7	2	1	1	2	2	9	19	23	26	1	4	2	4	7	3	113
18.51-24.00	2	0	0	1	0	1	1	0	6	2	0	0	0	0	0	0	13
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	89	63	22	41	40	79	108	163	167	125	40	43	47	78	81	83	1270

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																	11
1.01- 3.50	10	7	6	2	2	3	7	21	31	29	7	12	6	13	17	19	192
3.51- 7.50	17	3	1	1	0	0	4	13	29	8	2	8	10	8	6	7	117
7.51-12.50	1	0	0	0	0	0	1	3	9	6	1	11	11	9	2	0	54
12.51-18.50	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	4
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	28	10	7	3	2	4	13	37	71	43	10	31	27	30	25	26	378

B146

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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																	14
1.01- 3.50	5	4	2	0	1	0	1	11	35	16	13	13	21	11	34	23	190
3.51- 7.50	1	1	0	0	0	0	0	2	4	0	3	2	3	3	6	1	26
7.51-12.50	0	0	0	0	0	0	0	0	0	2	1	3	0	0	0	0	6
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	6	5	2	0	1	0	1	13	39	18	17	18	24	14	40	24	236

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																	26
1.01- 3.50	31	41	32	15	30	22	23	60	101	68	26	35	34	33	61	66	678
3.51- 7.50	100	96	54	51	56	89	99	121	134	47	45	64	58	58	72	82	1226
7.51-12.50	104	50	23	21	35	72	143	169	122	94	51	64	48	105	143	170	1414
12.51-18.50	42	12	4	8	11	11	63	114	112	63	28	13	10	43	144	132	810
18.51-24.00	11	0	0	1	0	1	9	23	32	12	2	6	3	6	29	24	159
>24.00	2	0	0	0	0	0	0	4	23	3	0	3	0	2	9	0	46
TOTAL	290	199	113	96	132	195	337	491	524	287	152	185	153	247	458	474	4359

B147

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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: 4359

TOTAL NUMBER OF MISSING OBSERVATIONS: 9

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 8.9 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.94	2.64	5.39	47.81	29.14	8.67	5.41

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	7	0	0	0	0	7	8	5	10	0	0	0	0	0	0	4	0
B	12	6	0	0	1	4	9	31	9	5	4	0	0	0	7	27	0
C	21	11	5	0	3	6	15	45	34	11	11	5	1	4	15	48	0
D	127	104	77	52	85	95	183	197	194	85	70	88	54	121	290	262	0
E	89	63	22	41	40	79	108	163	167	125	40	43	47	78	81	83	1
F	28	10	7	3	2	4	13	37	71	43	10	31	27	30	25	26	11
G	6	5	2	0	1	0	1	13	39	18	17	18	24	14	40	24	14
TOTAL	290	199	113	96	132	195	337	491	524	287	152	185	153	247	458	474	26

B148

Stability Classes by Hour of Day

10-Meter Wind vs. Delta T

January-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16	1	1	E	E	E	E	E	F	F	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16	1	2	E	F	E	E	E	E	F	E	F	E	D	D	D	D	D	D	E	F	E	E	E	E	E	E
16	1	3	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	4	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	5	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
16	1	6	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	7	D	D	D	E	E	D	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	D
16	1	8	D	D	D	C	B	B	C	C	C	C	C	C	C	C	C	D	D	D	D	C	C	C	C	C
16	1	9	C	C	C	C	C	B	C	C	C	B	B	A	B	A	B	B	C	C	D	D	D	C	D	D
16	1	10	D	D	D	D	D	D	D	D	D	C	D	D	C	C	B	C	D	D	E	E	E	E	E	F
16	1	11	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16	1	13	E	E	E	E	E	F	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	E	E	E
16	1	14	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	F	E	F
16	1	15	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D
16	1	16	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	17	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	G	G
16	1	18	G	F	F	F	G	G	F	G	G	E	E	E	D	D	D	D	E	E	E	E	E	E	D	D
16	1	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
16	1	20	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	21	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
16	1	22	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	23	D	D	D	D	D	D	D	D	D	D	D	D	D	D	B	A	A	C	D	D	D	D	D	D
16	1	24	E	E	E	E	E	E	E	E	F	E	E	E	D	D	D	D	D	E	E	E	E	E	E	E
16	1	25	E	E	E	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	G
16	1	27	F	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	E	E	E	E	E	F	F	F
16	1	28	F	F	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	F	G	G
16	1	29	F	F	F	F	E	E	F	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16	1	30	F	G	G	G	G	G	G	G	G	F	E	E	D	D	D	D	E	E	F	F	F	F	F	F
16	1	31	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	G	G
16	2	1	F	F	F	G	G	G	G	F	F	E	D	D	D	D	D	D	D	E	E	E	E	D	D	D
16	2	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D	D
16	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	2	4	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
16	2	5	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
16	2	6	F	E	E	E	F	F	E	F	F	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16	2	7	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	9	D	D	D	D	D	D	D	D	D	D	C	B	B	C	C	D	D	D	D	E	E	E	E	F
16	2	10	F	E	E	E	D	D	D	D	D	D	D	D	C	D	D	D	D	E	E	E	E	D	D	D
16	2	11	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	E	E	E	D	D
16	2	12	D	D	D	D	D	D	D	D	D	C	C	C	C	C	C	D	D	D	D	D	D	D	D	D
16	2	13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	14	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G

B150

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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	
16 2 15	G	F	F	F	F	F	F	G	E	D	D	D	D	D	D	D	D	D	F	G	G	F	E	E	
16 2 16	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G	G	G	
16 2 17	F	F	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	E	F	E	E	E	E	E	
16 2 18	E	E	E	E	E	E	E	E	E	D	D	C	D	D	D	D	D	E	F	E	E	E	E	E	
16 2 19	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G	F	E	E	
16 2 20	E	F	F	F	F	G	G	G	F	D	D	C	C	B	B	B	D	D	E	E	E	E	D	E	
16 2 21	E	E	E	E	E	E	E	E	D	D	C	B	A	B	B	C	D	D	E	E	E	E	E	E	
16 2 22	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 2 23	E	E	E	E	E	F	F	F	F	D	D	C	D	D	D	D	D	D	E	D	D	D	D	E	
16 2 24	E	E	D	D	D	D	D	D	D	D	B	B	B	B	B	D	D	D	E	E	E	E	D	D	
16 2 25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F
16 2 26	G	F	F	E	E	E	F	E	D	D	C	C	B	B	C	D	D	D	E	G	G	G	G	G	
16 2 27	G	G	G	G	G	G	G	G	E	D	D	C	C	C	C	D	D	D	E	E	E	E	E	E	
16 2 28	E	E	E	E	E	E	E	E	D	D	C	B	B	C	B	C	D	D	E	F	F	G	G	G	
16 2 29	G	G	G	G	F	G	F	E	D	D	C	C	B	B	B	D	D	D	D	D	D	D	D	D	
16 3 1	D	D	D	D	D	D	D	D	D	D	C	C	C	B	B	B	D	D	D	E	E	E	E	E	
16 3 2	E	E	E	E	E	D	D	D	D	D	C	B	B	B	C	C	D	E	E	E	E	D	D	E	
16 3 3	D	E	D	D	D	D	D	D	C	A	B	B	B	B	B	C	D	E	E	E	F	F	F	F	
16 3 4	G	G	E	E	E	E	E	E	D	D	B	C	C	A	C	D	D	D	E	E	F	G	G	F	
16 3 5	G	G	G	G	G	G	F	G	F	C	C	C	C	B	C	C	D	D	E	E	E	E	F	E	
16 3 6	E	E	E	E	E	E	E	E	D	D	D	C	B	D	D	D	D	E	E	E	E	E	E	E	
16 3 7	E	E	E	E	E	E	E	E	D	D	C	B	A	A	A	C	D	D	D	D	D	D	D	D	
16 3 8	D	D	D	D	E	E	E	E	D	D	C	C	B	C	D	D	D	D	E	E	E	E	D	D	
16 3 9	D	E	E	E	E	E	E	E	D	D	C	C	C	C	C	D	D	D	E	F	G	G	G	G	
16 3 10	G	G	G	G	G	G	G	F	D	D	C	C	B	C	C	D	D	D	E	E	F	F	E	E	
16 3 11	E	E	E	F	F	F	F	F	D	D	C	B	B	A	A	B	C	D	E	F	E	F	F	F	
16 3 12	F	F	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16 3 13	D	D	D	E	D	E	E	D	B	C	D	C	D	C	D	D	D	D	E	E	E	E	F	F	
16 3 14	F	F	E	E	F	F	F	F	D	D	-	-	-	-	-	E	D	D	D	E	E	E	E	E	
16 3 15	E	D	E	E	F	F	F	-	-	-	-	-	D	D	D	D	D	D	E	E	D	D	E	E	
16 3 16	E	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	E	E	F	F	F	F	
16 3 17	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E	E	
16 3 18	E	E	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 3 19	E	E	E	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D	
16 3 20	D	E	E	D	E	E	E	D	D	C	D	C	D	C	D	D	D	D	E	G	G	G	G	G	
16 3 21	G	G	G	G	F	F	F	E	D	D	C	C	A	B	B	C	D	D	E	E	E	E	E	E	
16 3 22	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 3 23	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	D	E	D	D	D	D	D	
16 3 24	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	E	E	E	F	G	G	
16 3 25	G	G	G	G	F	F	F	E	D	D	C	C	D	D	D	D	D	D	E	E	E	E	E	E	
16 3 26	E	E	E	E	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16 3 27	D	D	D	D	D	D	D	D	D	D	C	D	C	D	C	D	D	D	E	F	G	G	G	G	
16 3 28	G	G	G	G	F	F	E	E	D	D	D	C	C	C	C	D	D	D	E	E	F	F	F	F	
16 3 29	F	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E	
16 3 30	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	E	

B151

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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			
16	3	31	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D			
16	4	1	D	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	E	F		
16	4	2	F	E	E	E	E	E	E	D	D	D	D	B	C	C	C	C	D	D	E	F	G	F	G	F			
16	4	3	F	F	F	F	E	E	E	D	D	D	D	C	C	C	D	D	D	D	E	E	E	E	E	E			
16	4	4	E	E	F	E	E	E	E	D	D	C	C	B	B	C	C	D	D	D	E	E	F	E	E	E			
16	4	5	E	E	E	E	E	E	D	D	D	D	D	B	C	B	B	D	E	E	E	E	E	E	E	F			
16	4	6	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E			
16	4	7	E	E	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E			
16	4	8	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	C	D	D	E	E	E	E	E	E			
16	4	9	E	E	E	E	E	E	E	D	D	C	B	A	A	A	B	B	C	D	E	E	E	E	E	E			
16	4	10	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E			
16	4	11	E	E	E	E	E	E	E	D	D	C	B	B	B	B	C	C	D	D	E	E	F	F	E	F			
16	4	12	G	G	G	G	G	G	F	D	D	D	C	C	B	C	C	C	D	D	E	E	E	E	E	E			
16	4	13	E	E	F	F	F	E	D	D	D	C	C	C	B	C	D	D	D	D	E	F	F	F	F	E			
16	4	14	E	E	E	E	F	F	F	E	D	D	C	C	B	A	C	C	D	D	E	E	E	E	F	F			
16	4	15	F	F	F	F	F	F	E	D	D	C	B	B	A	B	C	C	D	D	D	E	E	E	E	E			
16	4	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	C	D	D	E	E	E	E	E	E	E			
16	4	17	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E		
16	4	18	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
16	4	19	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E		
16	4	20	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E		
16	4	21	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E		
16	4	22	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F		
16	4	23	E	E	F	E	E	E	E	D	D	D	D	C	D	D	C	D	D	D	E	E	E	E	E	E	E		
16	4	24	E	E	E	E	E	E	E	E	D	D	B	A	B	B	A	B	D	D	E	E	E	E	E	E	E		
16	4	25	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G	F	E		
16	4	26	E	E	E	D	D	E	E	E	E	D	D	D	D	D	D	D	E	E	F	G	F	E	E	E	E		
16	4	27	E	E	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
16	4	28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D		
16	4	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	D		
16	4	30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E		
16	5	1	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	
16	5	2	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G	
16	5	3	G	F	F	F	F	F	F	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F	
16	5	4	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G	
16	5	5	G	E	F	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	G	F	G	G	G	G	
16	5	6	G	G	G	G	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E	E	E	
16	5	7	E	E	E	E	E	F	F	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	E	E	E	
16	5	8	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16	5	9	E	E	D	D	E	D	E	D	D	D	D	D	D	D	D	D	D	E	F	E	E	E	E	E	E	E	
16	5	10	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E	E	E	
16	5	11	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	E	E	
16	5	12	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	E	
16	5	13	G	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	5	14	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	

B152

PROGRAM: JFD VERSION: PC-1.2
 NEPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16 5 15	G	G	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16 5 16	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 5 17	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
16 5 18	G	G	F	F	F	F	E	D	D	D	C	C	C	C	C	C	D	D	D	D	E	F	E	E
16 5 19	E	E	D	E	E	E	D	D	D	C	C	C	C	C	C	D	D	D	D	E	D	D	D	E
16 5 20	D	D	D	D	D	D	D	D	D	D	D	B	D	D	C	D	D	D	D	D	E	E	E	E
16 5 21	E	E	F	F	E	E	D	D	C	C	C	B	B	B	C	A	D	D	D	D	E	E	E	E
16 5 22	E	E	E	E	E	E	D	D	D	C	B	C	B	B	C	C	C	D	D	D	D	D	D	D
16 5 23	D	D	D	D	D	D	C	D	C	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D
16 5 24	D	D	E	D	D	E	E	E	D	E	E	D	D	D	B	B	C	D	D	E	E	E	D	D
16 5 25	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F
16 5 26	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E
16 5 27	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
16 5 28	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G
16 5 29	G	G	G	G	G	G	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	E	E	E
16 5 30	E	E	F	F	F	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E
16 5 31	E	E	E	E	E	E	D	D	D	D	D	D	C	C	C	D	D	D	D	E	F	G	G	G
16 6 1	G	G	F	G	E	E	D	D	C	D	D	D	C	D	D	D	D	D	D	F	F	G	G	G
16 6 2	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
16 6 3	F	F	F	F	F	F	F	E	D	D	D	C	C	D	D	D	D	D	E	E	E	E	F	E
16 6 4	E	E	E	F	E	E	E	D	D	D	C	C	C	D	C	D	D	D	D	E	E	F	G	F
16 6 5	F	F	F	F	F	E	D	D	D	B	B	C	C	C	D	D	D	D	E	E	G	G	G	F
16 6 6	G	G	F	F	E	E	E	D	D	D	C	C	C	C	B	D	D	D	E	E	E	F	F	F
16 6 7	F	F	F	E	F	F	F	E	D	D	B	C	C	B	C	B	D	D	D	G	G	G	G	G
16 6 8	G	G	F	F	G	F	F	D	D	C	B	B	B	B	D	D	D	D	D	E	E	E	E	E
16 6 9	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 6 10	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 6 11	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	E	F	F	F	E	E
16 6 12	E	E	F	F	F	F	E	D	D	D	C	C	B	D	B	C	D	D	E	E	E	E	E	E
16 6 13	E	E	E	E	E	E	D	D	D	B	C	D	B	C	D	D	D	D	D	E	E	E	E	E
16 6 14	E	E	E	E	E	E	D	D	D	C	B	D	D	C	D	D	D	D	E	E	E	F	G	G
16 6 15	F	F	F	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	E	E
16 6 16	E	G	G	G	G	G	F	D	C	C	D	D	D	C	D	D	D	D	D	E	E	F	F	F
16 6 17	F	F	F	E	E	E	D	D	D	B	B	A	A	A	A	B	C	D	D	E	E	E	E	D
16 6 18	D	D	D	D	E	E	D	D	D	B	A	A	B	A	A	C	D	D	D	D	E	E	F	F
16 6 19	G	F	F	G	G	F	E	D	D	D	C	C	C	C	C	D	D	D	D	E	E	E	E	E
16 6 20	E	E	E	E	E	E	D	D	D	D	C	B	A	A	A	A	B	D	D	D	E	E	E	E
16 6 21	E	E	E	D	D	E	D	D	D	C	B	A	B	C	D	D	E	E	F	F	F	F	F	
16 6 22	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16 6 23	E	E	E	F	F	E	D	D	C	D	C	B	A	A	A	B	D	D	D	E	F	G	G	G
16 6 24	F	F	F	E	E	E	D	D	D	C	A	B	B	B	D	D	D	D	D	D	E	E	E	E
16 6 25	E	D	E	E	E	E	D	D	E	E	D	D	D	D	D	D	E	E	F	F	F	F	E	D
16 6 26	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G
16 6 27	G	G	G	G	G	F	F	E	D	D	C	C	B	D	E	F	D	E	E	E	F	G	G	G
16 6 28	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G

B153

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16	6	29	G	G	F	E	E	E	E	E	D	D	D	D	D	C	C	D	D	D	D	E	E	E	F	E
16	6	30	E	F	E	E	E	E	D	D	D	D	D	D	C	C	D	D	E	E	E	E	E	F	E	E

B154

JFDs of 10-Meter Wind vs. Delta T

July-September 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7.51-12.50	0	2	0	0	0	0	0	1	2	2	2	0	0	0	0	0	9
12.51-18.50	0	0	0	0	0	0	0	3	17	7	0	0	0	0	0	0	27
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	2	0	1	0	0	0	4	20	9	2	0	0	0	0	0	38

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4
7.51-12.50	6	2	1	0	0	2	2	5	3	3	0	0	0	0	0	0	24
12.51-18.50	3	0	0	0	0	0	3	5	6	3	0	0	0	0	0	0	20
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	9	2	2	1	1	3	5	10	9	6	0	0	0	0	0	0	48

B156

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
3.51- 7.50	4	10	10	5	10	2	6	1	1	1	0	1	0	0	0	1	52
7.51-12.50	6	4	1	1	4	7	11	12	8	4	0	1	0	1	5	1	66
12.51-18.50	1	0	0	0	0	1	6	4	8	3	0	0	0	0	1	0	24
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	11	15	11	6	14	10	23	17	18	8	0	2	0	1	7	2	145

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	2	14	12	8	12	2	5	8	3	2	0	2	3	2	3	8	86
3.51- 7.50	31	56	33	32	31	21	38	25	19	15	8	6	7	13	10	17	362
7.51-12.50	17	6	1	5	15	23	56	40	40	13	3	4	0	9	16	19	267
12.51-18.50	3	1	0	1	0	0	13	34	18	1	0	1	0	2	6	4	84
18.51-24.00	0	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	5
>24.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	53	78	46	46	58	46	113	111	80	31	11	13	10	26	35	48	805

B157

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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																	5
1.01- 3.50	26	27	16	20	6	12	14	21	18	6	6	4	7	10	11	33	237
3.51- 7.50	38	16	10	7	11	21	52	74	66	6	2	6	2	8	14	12	345
7.51-12.50	9	2	2	5	0	7	17	72	47	7	1	0	0	3	5	9	186
12.51-18.50	2	0	0	1	0	0	0	11	1	1	1	0	0	0	1	2	20
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	1	1
TOTAL	75	45	28	33	17	40	83	178	132	20	10	10	9	21	31	57	794

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																	12
1.01- 3.50	15	7	5	3	3	2	2	7	18	10	6	0	5	11	19	39	152
3.51- 7.50	8	0	0	0	0	0	1	15	49	4	0	2	1	4	3	5	92
7.51-12.50	1	0	0	0	0	1	0	0	2	2	1	0	3	1	1	0	12
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	24	7	5	3	3	3	3	22	69	16	7	2	9	16	23	44	268

B158

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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																	8
1.01- 3.50	3	0	0	0	1	0	0	4	6	4	4	5	5	15	21	15	83
3.51- 7.50	2	0	0	0	0	0	0	0	1	0	2	0	4	1	7	0	17
7.51-12.50	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	5	0	0	0	1	0	0	4	7	4	6	5	10	17	28	15	110

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																	25
1.01- 3.50	46	49	33	31	22	16	21	40	45	22	16	11	20	38	55	95	560
3.51- 7.50	83	82	54	46	53	45	97	115	136	26	12	15	14	26	34	35	873
7.51-12.50	39	16	5	11	19	40	86	130	102	31	7	5	4	14	27	29	565
12.51-18.50	9	1	0	2	0	1	22	57	50	15	1	1	0	3	8	6	176
18.51-24.00	0	0	0	0	0	0	1	4	2	0	0	0	0	0	0	0	7
>24.00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
TOTAL	177	149	92	90	94	102	227	346	335	94	36	32	38	81	124	166	2208

B159

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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: 2208

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 6.5 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.72	2.17	6.57	36.46	35.96	12.14	4.98

B160

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	2	0	1	0	0	0	4	20	9	2	0	0	0	0	0	0
B	9	2	2	1	1	3	5	10	9	6	0	0	0	0	0	0	0
C	11	15	11	6	14	10	23	17	18	8	0	2	0	1	7	2	0
D	53	78	46	46	58	46	113	111	80	31	11	13	10	26	35	48	0
E	75	45	28	33	17	40	83	178	132	20	10	10	9	21	31	57	5
F	24	7	5	3	3	3	3	22	69	16	7	2	9	16	23	44	12
G	5	0	0	0	1	0	0	4	7	4	6	5	10	17	28	15	8
TOTAL	177	149	92	90	94	102	227	346	335	94	36	32	38	81	124	166	25

JFDs of 10-Meter Wind vs. Delta T

October-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
12.51-18.50	2	0	0	0	0	0	0	0	0	0	0	0	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	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	4

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	1	0	0	0	0	0	2	1	2	1	0	0	0	0	0	1	8
12.51-18.50	3	0	0	0	0	0	0	2	0	5	0	0	0	0	0	0	10
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	4	0	0	0	0	0	2	3	2	6	0	0	0	0	0	1	18

B162

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	1	3	0	1	1	5	2	0	2	0	0	0	0	0	0	2	17
7.51-12.50	3	0	2	0	1	3	4	5	9	4	0	0	0	0	1	10	42
12.51-18.50	2	0	0	0	0	0	2	1	0	6	0	0	0	0	0	0	11
18.51-24.00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	4	2	1	2	8	9	6	11	11	0	0	0	0	1	12	73

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	9	2	5	2	6	2	2	2	3	1	6	1	4	6	7	61
3.51- 7.50	17	9	8	6	7	27	26	19	8	9	10	12	9	18	22	21	228
7.51-12.50	29	7	0	5	3	22	51	25	27	27	6	8	13	16	33	54	326
12.51-18.50	23	1	0	0	0	1	22	11	16	25	5	1	4	38	43	32	222
18.51-24.00	0	0	0	0	0	0	1	1	0	3	1	0	0	4	9	0	19
>24.00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4
TOTAL	73	26	10	16	12	56	102	58	53	67	23	27	27	80	116	114	860

B163

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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																	4
1.01- 3.50	9	14	1	3	8	7	14	16	9	5	2	5	4	4	3	10	114
3.51- 7.50	20	17	5	3	6	20	23	33	43	16	11	5	11	16	23	19	271
7.51-12.50	11	1	3	0	2	19	26	31	35	19	11	4	8	16	24	9	219
12.51-18.50	6	0	0	0	0	0	6	11	18	10	1	0	0	3	5	1	61
18.51-24.00	0	0	0	0	0	0	1	1	4	1	0	0	0	0	1	0	8
>24.00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
TOTAL	46	32	9	6	16	46	70	92	112	51	25	14	23	39	56	39	680

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																	11
1.01- 3.50	10	2	1	0	1	1	1	19	20	9	7	5	10	14	8	10	118
3.51- 7.50	18	2	0	0	0	0	2	27	88	8	3	8	13	11	7	2	189
7.51-12.50	3	0	0	0	0	0	0	1	20	2	1	2	2	2	1	0	34
12.51-18.50	0	0	0	0	0	0	0	0	1	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	31	4	1	0	1	1	3	47	129	19	11	15	25	27	16	12	353

B164

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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																	30
1.01- 3.50	6	2	1	0	1	0	1	22	47	23	11	3	12	14	18	14	175
3.51- 7.50	3	1	0	0	0	0	0	2	5	0	0	0	1	0	0	0	12
7.51-12.50	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3
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	9	3	1	0	1	0	1	24	53	24	11	3	13	15	18	14	220

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																	45
1.01- 3.50	28	28	5	8	12	14	19	59	78	40	21	19	27	36	35	41	470
3.51- 7.50	59	32	13	10	14	52	53	81	146	33	24	25	34	45	52	44	717
7.51-12.50	47	8	5	5	6	44	83	64	95	54	18	14	23	35	59	74	634
12.51-18.50	36	1	0	0	0	1	30	25	35	46	6	1	4	41	48	33	307
18.51-24.00	0	0	0	0	0	0	2	2	4	5	1	0	0	4	10	0	28
>24.00	1	0	0	0	0	0	0	0	3	0	0	0	0	0	3	0	7
TOTAL	171	69	23	23	32	111	187	231	361	178	70	59	88	161	207	192	2208

B165

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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: 2208

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 7.5 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.18	.82	3.31	38.95	30.80	15.99	9.96

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	2	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
B	4	0	0	0	0	0	2	3	2	6	0	0	0	0	0	1	0
C	6	4	2	1	2	8	9	6	11	11	0	0	0	0	1	12	0
D	73	26	10	16	12	56	102	58	53	67	23	27	27	80	116	114	0
E	46	32	9	6	16	46	70	92	112	51	25	14	23	39	56	39	4
F	31	4	1	0	1	1	3	47	129	19	11	15	25	27	16	12	11
G	9	3	1	0	1	0	1	24	53	24	11	3	13	15	18	14	30
TOTAL	171	69	23	23	32	111	187	231	361	178	70	59	88	161	207	192	45

JFDs of 10-Meter Wind vs. Delta T

July-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7.51-12.50	0	2	0	0	0	0	0	2	3	2	2	0	0	0	0	0	11
12.51-18.50	2	0	0	0	0	0	0	3	17	7	0	0	0	0	0	0	29
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	2	0	1	0	0	0	5	21	9	2	0	0	0	0	0	42

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4
7.51-12.50	7	2	1	0	0	2	4	6	5	4	0	0	0	0	0	1	32
12.51-18.50	6	0	0	0	0	0	3	7	6	8	0	0	0	0	0	0	30
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	13	2	2	1	1	3	7	13	11	12	0	0	0	0	0	1	66

B168

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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	2	0	0	0	0	1	0	0	0	0	0	0	0	1	0	4
3.51- 7.50	5	13	10	6	11	7	8	1	3	1	0	1	0	0	0	3	69
7.51-12.50	9	4	3	1	5	10	15	17	17	8	0	1	0	1	6	11	108
12.51-18.50	3	0	0	0	0	1	8	5	8	9	0	0	0	0	1	0	35
18.51-24.00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	17	19	13	7	16	18	32	23	29	19	0	2	0	1	8	14	218

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	23	14	13	14	8	7	10	5	5	1	8	4	6	9	15	147
3.51- 7.50	48	65	41	38	38	48	64	44	27	24	18	18	16	31	32	38	590
7.51-12.50	46	13	1	10	18	45	107	65	67	40	9	12	13	25	49	73	593
12.51-18.50	26	2	0	1	0	1	35	45	34	26	5	2	4	40	49	36	306
18.51-24.00	0	0	0	0	0	0	2	5	0	3	1	0	0	4	9	0	24
>24.00	1	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	5
TOTAL	126	104	56	62	70	102	215	169	133	98	34	40	37	106	151	162	1665

B169

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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																	9
1.01- 3.50	35	41	17	23	14	19	28	37	27	11	8	9	11	14	14	43	351
3.51- 7.50	58	33	15	10	17	41	75	107	109	22	13	11	13	24	37	31	616
7.51-12.50	20	3	5	5	2	26	43	103	82	26	12	4	8	19	29	18	405
12.51-18.50	8	0	0	1	0	0	6	22	19	11	2	0	0	3	6	3	81
18.51-24.00	0	0	0	0	0	0	1	1	4	1	0	0	0	0	1	0	8
>24.00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	4
TOTAL	121	77	37	39	33	86	153	270	244	71	35	24	32	60	87	96	1474

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																	23
1.01- 3.50	25	9	6	3	4	3	3	26	38	19	13	5	15	25	27	49	270
3.51- 7.50	26	2	0	0	0	0	3	42	137	12	3	10	14	15	10	7	281
7.51-12.50	4	0	0	0	0	1	0	1	22	4	2	2	5	3	2	0	46
12.51-18.50	0	0	0	0	0	0	0	0	1	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	55	11	6	3	4	4	6	69	198	35	18	17	34	43	39	56	621

B170

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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																	38
1.01- 3.50	9	2	1	0	2	0	1	26	53	27	15	8	17	29	39	29	258
3.51- 7.50	5	1	0	0	0	0	0	2	6	0	2	0	5	1	7	0	29
7.51-12.50	0	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	4
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	14	3	1	0	2	0	1	28	60	28	17	8	23	32	46	29	330

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																	70
1.01- 3.50	74	77	38	39	34	30	40	99	123	62	37	30	47	74	90	136	1030
3.51- 7.50	142	114	67	56	67	97	150	196	282	59	36	40	48	71	86	79	1590
7.51-12.50	86	24	10	16	25	84	169	194	197	85	25	19	27	49	86	103	1199
12.51-18.50	45	2	0	2	0	2	52	82	85	61	7	2	4	44	56	39	483
18.51-24.00	0	0	0	0	0	0	3	6	6	5	1	0	0	4	10	0	35
>24.00	1	1	0	0	0	0	0	0	3	0	0	0	0	0	3	1	9
TOTAL	348	218	115	113	126	213	414	577	696	272	106	91	126	242	331	358	4416

B171

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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: 4416

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 7.0 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES						
A	B	C	D	E	F	G
.95	1.49	4.94	37.70	33.38	14.06	7.47

	DISTRIBUTION OF WIND DIRECTION VS STABILITY																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	2	2	0	1	0	0	0	5	21	9	2	0	0	0	0	0	0
B	13	2	2	1	1	3	7	13	11	12	0	0	0	0	0	1	0
C	17	19	13	7	16	18	32	23	29	19	0	2	0	1	8	14	0
D	126	104	56	62	70	102	215	169	133	98	34	40	37	106	151	162	0
E	121	77	37	39	33	86	153	270	244	71	35	24	32	60	87	96	9
F	55	11	6	3	4	4	6	69	198	35	18	17	34	43	39	56	23
G	14	3	1	0	2	0	1	28	60	28	17	8	23	32	46	29	38
TOTAL	348	218	115	113	126	213	414	577	696	272	106	91	126	242	331	358	70

B172

Stability Classes by Hour of Day

10-Meter Wind vs. Delta T

July-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 7 1	F	F	E	E	E	E	E	D	D	D	D	D	C	D	C	D	D	D	E	E	E	E	E	E
16 7 2	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 7 3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 7 4	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16 7 5	F	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	F	F	E	E	E
16 7 6	E	E	E	E	F	E	E	E	D	D	D	C	C	D	D	D	D	D	D	E	E	E	E	E
16 7 7	E	E	E	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	E	F	F	G	G
16 7 8	E	E	F	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	F	G
16 7 9	F	F	G	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 7 10	E	E	E	E	E	E	D	D	D	D	D	C	D	D	C	D	D	D	E	E	E	E	E	E
16 7 11	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 7 12	D	E	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
16 7 13	E	F	E	E	E	E	E	E	E	E	F	D	D	D	D	D	D	D	E	F	G	G	F	F
16 7 14	F	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
16 7 15	G	G	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E
16 7 16	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	D	E	E	E	E	E
16 7 17	E	E	E	E	E	E	E	E	E	D	D	D	D	D	E	E	E	E	E	E	F	E	E	F
16 7 18	F	E	D	E	E	E	E	D	D	D	D	D	D	E	D	D	D	D	D	D	D	E	E	E
16 7 19	E	E	E	E	E	E	E	D	D	D	D	D	E	D	D	D	D	D	D	E	E	E	E	E
16 7 20	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 7 21	E	E	E	F	F	F	F	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E
16 7 22	F	F	F	F	F	F	F	E	D	C	B	C	C	D	D	E	E	E	E	E	E	E	E	E
16 7 23	E	E	E	F	F	F	F	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E	F	F
16 7 24	E	F	F	G	F	F	E	D	D	D	D	D	D	D	E	E	E	E	E	F	F	G	G	G
16 7 25	F	F	F	E	F	E	E	D	D	D	D	C	C	C	D	D	D	D	E	F	F	F	F	F
16 7 26	F	G	G	G	F	F	F	D	D	D	C	D	C	C	C	C	D	D	E	E	F	F	F	F
16 7 27	G	G	G	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
16 7 28	F	G	F	F	F	E	E	D	D	D	C	B	A	C	A	C	D	D	E	E	E	E	E	E
16 7 29	E	E	E	F	E	E	E	D	D	D	C	B	B	B	B	D	D	D	E	E	F	E	E	E
16 7 30	F	F	F	F	F	F	E	E	D	C	D	D	D	D	D	D	D	D	D	E	F	F	F	F
16 7 31	E	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	E	E	E	D	E
16 8 1	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D
16 8 2	D	D	D	E	E	E	F	G	E	D	C	C	D	C	C	D	D	D	E	F	G	E	E	E
16 8 3	E	E	E	E	E	E	E	E	E	D	C	D	B	C	C	D	D	D	D	D	E	E	E	E
16 8 4	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	D	D	D	E	E	E	E	E	E
16 8 5	E	E	E	E	E	E	E	D	D	D	D	D	C	C	C	C	D	D	D	E	E	F	F	F
16 8 6	F	E	E	E	E	E	E	D	D	C	C	C	B	B	B	C	D	D	D	E	E	E	E	E
16 8 7	F	E	E	E	E	E	E	E	D	D	D	D	D	D	C	C	D	D	D	E	E	E	E	E
16 8 8	E	D	D	E	D	D	D	D	D	D	C	C	D	C	C	D	D	D	D	E	E	D	D	D
16 8 9	D	E	E	E	E	E	E	D	D	D	B	C	B	C	C	D	D	D	D	E	E	E	E	E
16 8 10	E	D	E	E	E	E	E	D	D	C	C	B	B	C	B	C	D	E	D	D	E	E	E	E
16 8 11	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	D	D	E	E	E	D	D
16 8 12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E
16 8 13	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	E	G	F	F	F	F

B174

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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		
16 8 14	G	G	G	G	G	G	F	E	D	C	C	C	D	D	D	D	D	D	E	F	G	G	G	G		
16 8 15	G	G	G	F	F	G	F	E	D	D	D	D	C	D	D	D	D	D	E	F	G	F	F	F		
16 8 16	F	F	F	F	E	E	E	D	D	C	C	C	C	B	C	D	D	D	E	E	E	E	E	E		
16 8 17	E	E	F	F	F	F	E	D	D	D	C	A	B	C	C	C	D	D	E	E	G	F	F	F		
16 8 18	F	E	F	F	F	F	E	D	D	D	D	B	D	D	D	D	D	D	E	E	F	F	E	E	F	
16 8 19	F	F	E	E	F	E	E	D	D	D	D	D	C	C	D	E	D	E	D	D	E	E	E	E	E	
16 8 20	E	E	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	E	F	G	G	G	G	
16 8 21	E	F	E	E	F	E	E	D	D	D	C	D	D	C	D	C	D	D	D	D	F	F	F	F	F	
16 8 22	E	E	F	F	F	F	F	E	D	C	B	B	B	B	C	C	D	E	E	E	E	F	E	E	E	
16 8 23	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	D	
16 8 24	E	F	F	E	E	F	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	E	E	E
16 8 25	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	F	F	F	F	F	F	
16 8 26	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	
16 8 27	E	E	E	E	D	E	E	D	D	D	D	C	D	C	D	D	D	D	D	E	F	G	G	G	G	
16 8 28	F	F	E	E	F	E	E	D	D	D	D	C	D	D	C	D	D	E	F	E	E	E	E	F	E	
16 8 29	E	E	E	E	E	E	E	D	D	D	D	D	D	C	D	D	D	D	E	E	E	E	E	E	E	
16 8 30	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 8 31	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	G	G	F	F
16 9 1	F	F	G	G	F	F	F	D	D	D	D	C	C	D	D	D	D	D	D	E	E	F	F	E	E	
16 9 2	E	E	E	E	E	E	E	D	D	D	C	B	B	C	D	D	D	D	D	E	E	F	E	F	F	
16 9 3	E	E	E	F	F	E	E	D	D	D	B	A	C	D	C	B	D	D	E	E	E	E	E	E	E	
16 9 4	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	B	C	D	D	E	E	E	E	E	E	
16 9 5	E	E	E	E	E	E	E	D	D	C	A	A	A	A	A	C	D	D	D	E	E	E	E	E	E	
16 9 6	E	E	E	E	E	E	E	D	C	A	A	A	A	A	A	C	D	D	D	E	E	E	E	E	E	
16 9 7	E	E	E	E	E	E	E	D	D	D	D	D	C	B	D	D	D	D	E	E	E	E	F	F	F	
16 9 8	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 9 9	E	E	E	E	E	E	D	D	D	C	B	B	C	D	D	D	D	D	D	D	D	D	E	E	E	
16 9 10	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	E	G	G	G	G	G	G	
16 9 11	F	F	F	F	F	F	F	E	D	B	A	A	A	A	A	A	C	D	E	F	E	E	E	E	E	
16 9 12	E	E	E	E	E	E	E	D	C	B	A	A	A	A	A	C	C	D	E	E	E	E	E	E	E	
16 9 13	D	D	D	D	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16 9 14	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F	
16 9 15	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16 9 16	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	G	F	G	F	
16 9 17	E	E	F	E	E	F	F	E	D	C	D	C	D	D	D	D	D	D	E	G	G	G	F	G	F	
16 9 18	G	G	G	G	F	F	F	E	D	B	A	A	A	A	A	B	C	D	F	F	F	F	E	F	F	
16 9 19	E	E	E	F	F	F	F	E	D	A	A	A	A	C	D	D	D	D	E	E	F	E	E	F	F	
16 9 20	F	F	F	F	F	E	E	E	D	D	D	D	C	C	D	C	D	D	E	E	F	E	E	E	E	
16 9 21	E	E	E	E	E	E	E	D	C	D	C	A	C	D	E	E	E	E	E	E	E	E	E	E	E	
16 9 22	E	E	E	E	E	E	E	E	D	C	B	B	A	B	A	C	D	E	E	E	E	E	E	E	E	
16 9 23	E	E	E	F	F	F	F	E	D	D	D	D	B	B	C	C	D	E	F	F	F	F	F	F	F	
16 9 24	F	E	E	E	E	E	E	E	D	D	C	B	B	C	D	E	D	D	E	E	E	E	E	E	D	
16 9 25	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	F	F	G	G
16 9 26	G	G	F	E	F	E	E	E	D	D	D	D	C	D	D	D	D	D	E	G	G	G	F	F	G	
16 9 27	G	F	E	F	G	F	F	E	D	D	D	C	D	D	D	D	D	D	F	G	G	G	G	G	G	

B175

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 9 28	G	G	G	F	E	E	E	D	D	C	B	B	B	B	C	C	D	D	E	F	E	E	F	E
16 9 29	E	E	E	E	E	E	E	D	D	D	C	B	B	C	C	D	D	E	F	G	G	G	G	G
16 9 30	G	G	G	G	F	F	F	E	D	D	C	C	C	C	D	D	D	F	G	E	E	E	F	F
16 10 1	G	G	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	E
16 10 2	F	E	E	F	E	F	G	D	D	C	C	D	C	C	D	E	E	E	E	F	E	E	E	E
16 10 3	E	F	E	E	E	E	E	D	D	C	C	B	B	D	C	D	D	D	E	E	E	E	E	E
16 10 4	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E	E
16 10 5	E	E	E	E	E	E	F	E	D	D	C	C	C	C	D	D	E	E	F	F	F	G	G	G
16 10 6	F	E	F	F	F	F	F	E	D	D	C	D	D	D	D	D	E	E	D	D	D	D	D	D
16 10 7	D	D	D	E	E	E	E	D	D	D	D	D	C	D	D	D	D	F	G	G	G	G	F	F
16 10 8	F	F	F	F	F	F	F	E	D	D	C	B	B	B	C	D	D	E	F	G	G	G	G	G
16 10 9	G	G	G	G	G	G	G	E	D	D	D	C	C	C	D	D	E	F	F	F	F	F	F	F
16 10 10	F	E	E	F	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	F	E	E	F	E
16 10 11	E	E	E	E	E	E	E	E	D	D	C	C	C	B	D	D	E	E	G	G	E	D	E	D
16 10 12	D	D	D	D	D	E	D	D	D	D	D	C	D	C	D	D	D	E	F	F	F	F	F	F
16 10 13	F	F	G	F	G	G	G	E	D	D	C	C	C	D	D	D	E	E	E	E	E	E	E	E
16 10 14	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 10 15	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G	G
16 10 16	G	G	G	F	F	F	F	E	E	E	D	C	B	B	C	D	E	E	E	E	E	E	E	E
16 10 17	F	F	F	E	F	F	F	E	D	D	C	C	C	D	D	D	D	E	G	G	F	G	G	F
16 10 18	E	E	E	E	E	E	E	D	D	D	C	C	C	D	C	D	D	F	G	G	G	G	G	G
16 10 19	G	G	G	G	G	G	F	E	E	D	D	C	C	C	D	D	E	E	E	E	E	E	E	E
16 10 20	D	E	E	E	E	D	D	D	D	D	C	C	C	C	D	D	D	E	F	F	G	G	G	G
16 10 21	G	G	G	G	G	G	G	E	D	C	D	B	B	C	D	D	D	E	F	F	F	F	F	F
16 10 22	F	F	F	F	F	G	G	F	E	D	D	D	C	C	C	D	D	F	F	F	F	F	F	G
16 10 23	F	F	F	F	E	E	E	F	D	C	B	A	B	C	C	D	E	F	F	F	F	E	F	E
16 10 24	E	E	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	E	E	E	E	E	E	E
16 10 25	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	E	E
16 10 26	E	D	E	E	E	D	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	F
16 10 27	F	F	G	G	G	G	G	E	D	C	B	A	A	C	C	D	F	F	F	F	F	F	F	F
16 10 28	F	F	F	E	E	E	E	E	D	C	B	B	C	D	D	D	E	E	F	F	F	F	E	E
16 10 29	F	G	G	G	F	F	F	G	E	C	C	C	D	C	D	D	E	E	E	D	D	D	D	D
16 10 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	E	E	E	E
16 10 31	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	G	G	G	G	G
16 11 1	F	F	F	G	F	F	F	E	D	C	C	D	D	D	D	D	D	E	E	E	E	E	E	E
16 11 2	E	E	E	E	E	E	E	E	D	D	E	D	D	D	D	D	D	E	E	E	E	E	E	E
16 11 3	E	E	F	F	F	G	G	G	E	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G
16 11 4	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F
16 11 5	F	F	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	E	F	F	F	F	G	F
16 11 6	E	E	G	G	G	F	F	F	E	D	D	D	D	D	D	D	D	E	E	F	E	E	E	F
16 11 7	F	E	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	D	E	E
16 11 8	D	D	D	E	E	E	E	D	D	C	B	B	A	B	C	D	D	E	E	E	F	F	F	F
16 11 9	F	F	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	E	F	G	G	G	G	F
16 11 10	F	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	G	G	F	E
16 11 11	E	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	E	E	F	F	F	F	G

B176

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 11 12	G	G	G	G	G	G	G	G	G	E	D	C	C	D	D	D	E	F	F	F	F	F	F	E
16 11 13	F	F	F	F	F	G	F	E	E	D	D	D	D	D	D	D	E	F	F	F	F	F	F	G
16 11 14	G	G	G	G	G	G	G	G	G	D	D	D	D	D	D	D	E	E	G	G	G	G	G	G
16 11 15	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	E	F	F	F	F	F	G	G
16 11 16	G	G	G	G	G	G	G	F	E	D	D	C	D	D	D	D	E	E	E	E	E	E	E	E
16 11 17	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 11 18	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D
16 11 19	D	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	F	G	G	G	F	G	G
16 11 20	G	G	F	F	E	E	E	E	D	D	D	D	C	D	D	D	D	E	E	E	E	E	E	E
16 11 21	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 11 22	E	D	E	E	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D
16 11 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
16 11 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
16 11 25	D	D	D	E	D	D	D	E	E	D	D	D	D	D	D	D	D	E	F	G	G	G	F	F
16 11 26	F	F	F	F	F	F	F	F	E	E	D	D	D	D	D	D	E	E	E	F	F	F	F	G
16 11 27	G	F	F	F	E	E	F	F	F	E	D	D	D	E	E	E	E	E	E	E	E	E	E	E
16 11 28	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 11 29	E	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 11 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16 12 1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E	E	F
16 12 2	G	G	G	G	F	G	G	G	G	E	D	D	D	D	D	D	D	E	G	G	E	E	E	F
16 12 3	F	G	G	G	F	G	F	F	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 4	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F	F
16 12 5	F	F	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	E	E	F	E	F	F	F
16 12 6	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E
16 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	D
16 12 8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
16 12 9	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 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
16 12 11	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 12	E	E	E	F	F	G	F	E	E	D	D	D	D	D	D	D	D	E	F	E	E	E	E	D
16 12 13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G
16 12 14	F	E	E	E	E	F	G	F	E	D	C	D	D	D	D	D	D	D	E	E	E	F	F	F
16 12 15	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 16	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 17	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 18	D	D	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 19	E	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 20	F	F	G	F	E	F	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F
16 12 21	E	F	E	F	F	F	F	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 22	E	E	E	E	F	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	F	E	E
16 12 23	E	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E	F
16 12 24	F	G	G	G	G	F	E	E	E	D	D	D	D	D	D	D	D	E	E	D	D	D	E	E
16 12 25	E	E	E	E	E	E	E	E	D	E	E	E	E	D	D	D	D	E	E	E	E	F	E	F
16 12 26	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F

B177

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 12 27	E	E	F	F	F	F	G	G	E	E	D	D	D	D	D	D	E	F	F	G	F	F	F	F
16 12 28	F	F	F	E	F	F	F	E	E	E	E	E	E	D	D	D	E	F	F	F	F	E	E	E
16 12 29	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	E	F	F
16 12 30	F	F	F	E	G	G	F	G	F	E	E	D	D	D	D	E	E	E	E	E	E	E	F	F
16 12 31	F	E	E	E	E	F	F	E	E	D	D	D	D	D	D	D	E	F	G	G	G	G	G	G

B178

JFDs of 10-Meter Wind vs. Delta T

January-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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	1	0	0	0	0	0	0	0	0	0	0	0	0	1
7.51-12.50	4	2	0	0	0	5	2	4	3	2	2	0	0	0	0	2	26
12.51-18.50	4	0	0	0	0	2	6	5	19	7	0	0	0	0	0	2	45
18.51-24.00	1	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	4
>24.00	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
TOTAL	9	2	0	1	0	7	8	10	31	9	2	0	0	0	0	4	83

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	0	0	0	0	0	0	0	0	0	0
3.51- 7.50	2	3	1	1	2	2	0	0	2	1	0	0	0	0	1	0	15
7.51-12.50	14	3	1	0	0	5	8	11	5	6	0	0	0	0	1	13	67
12.51-18.50	9	2	0	0	0	0	6	24	8	9	3	0	0	0	3	14	78
18.51-24.00	0	0	0	0	0	0	2	7	0	0	1	0	0	0	0	1	11
>24.00	0	0	0	0	0	0	0	2	5	1	0	0	0	0	2	0	10
TOTAL	25	8	2	1	2	7	16	44	20	17	4	0	0	0	7	28	181

B180

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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	2	0	0	1	0	2	0	0	0	0	0	0	0	1	0	6
3.51- 7.50	9	19	15	6	12	11	13	3	9	3	4	3	1	1	1	5	115
7.51-12.50	19	9	3	1	6	12	21	31	23	11	0	1	0	2	10	33	182
12.51-18.50	10	0	0	0	0	1	10	28	23	12	6	0	0	2	9	20	121
18.51-24.00	0	0	0	0	0	0	1	5	6	4	1	1	0	0	2	4	24
>24.00	0	0	0	0	0	0	0	1	2	0	0	2	0	0	0	0	5
TOTAL	38	30	18	7	19	24	47	68	63	30	11	7	1	5	23	62	453

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	9	28	29	16	25	15	14	15	13	10	4	10	5	8	9	20	230
3.51- 7.50	83	122	80	63	76	95	119	92	61	34	38	50	41	49	57	77	1137
7.51-12.50	101	47	21	27	45	80	181	145	122	68	38	51	30	81	154	179	1370
12.51-18.50	49	10	3	8	9	7	77	98	102	59	23	11	12	77	175	129	849
18.51-24.00	8	0	0	0	0	0	7	15	20	10	1	5	3	10	36	19	134
>24.00	3	1	0	0	0	0	0	1	9	2	0	1	0	2	10	0	29
TOTAL	253	208	133	114	155	197	398	366	327	183	104	128	91	227	441	424	3749

B181

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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																	10
1.01- 3.50	47	66	26	33	29	31	35	60	54	29	11	17	17	21	24	62	562
3.51- 7.50	99	59	24	35	33	78	110	163	168	48	29	31	32	52	70	64	1095
7.51-12.50	47	13	8	9	9	53	99	168	134	79	32	15	28	58	60	46	858
12.51-18.50	15	2	1	2	2	2	15	41	42	37	3	4	2	7	13	6	194
18.51-24.00	2	0	0	1	0	1	2	1	10	3	0	0	0	0	1	0	21
>24.00	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	4
TOTAL	210	140	59	80	73	165	261	433	411	196	75	67	79	138	168	179	2744

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																	34
1.01- 3.50	35	16	12	5	6	6	10	47	69	48	20	17	21	38	44	68	462
3.51- 7.50	43	5	1	1	0	0	7	55	166	20	5	18	24	23	16	14	398
7.51-12.50	5	0	0	0	0	1	1	4	31	10	3	13	16	12	4	0	100
12.51-18.50	0	0	0	0	0	1	1	0	3	0	0	0	0	0	0	0	5
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	83	21	13	6	6	8	19	106	269	78	28	48	61	73	64	82	999

B182

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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																	52
1.01- 3.50	14	6	3	0	3	0	2	37	88	43	28	21	38	40	73	52	448
3.51- 7.50	6	2	0	0	0	0	0	4	10	0	5	2	8	4	13	1	55
7.51-12.50	0	0	0	0	0	0	0	0	1	3	1	3	1	1	0	0	10
12.51-18.50	0	0	0	0	0	0	0	0	0	0	0	0	0	1	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	20	8	3	0	3	0	2	41	99	46	34	26	47	46	86	53	566

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																	96
1.01- 3.50	105	118	70	54	64	52	63	159	224	130	63	65	81	107	151	202	1708
3.51- 7.50	242	210	121	107	123	186	249	317	416	106	81	104	106	129	158	161	2816
7.51-12.50	190	74	33	37	60	156	312	363	319	179	76	83	75	154	229	273	2613
12.51-18.50	87	14	4	10	11	13	115	196	197	124	35	15	14	87	200	171	1293
18.51-24.00	11	0	0	1	0	1	12	29	38	17	3	6	3	10	39	24	194
>24.00	3	1	0	0	0	0	0	4	26	3	0	3	0	2	12	1	55
TOTAL	638	417	228	209	258	408	751	1068	1220	559	258	276	279	489	789	832	8775

B183

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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: 8775

TOTAL NUMBER OF MISSING OBSERVATIONS: 9

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.9 %

MEAN WIND SPEED FOR THIS PERIOD: 8.0 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.95	2.06	5.16	42.72	31.27	11.38	6.45

B184

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	9	2	0	1	0	7	8	10	31	9	2	0	0	0	0	4	0
B	25	8	2	1	2	7	16	44	20	17	4	0	0	0	7	28	0
C	38	30	18	7	19	24	47	68	63	30	11	7	1	5	23	62	0
D	253	208	133	114	155	197	398	366	327	183	104	128	91	227	441	424	0
E	210	140	59	80	73	165	261	433	411	196	75	67	79	138	168	179	10
F	83	21	13	6	6	8	19	106	269	78	28	48	61	73	64	82	34
G	20	8	3	0	3	0	2	41	99	46	34	26	47	46	86	53	52
TOTAL	638	417	228	209	258	408	751	1068	1220	559	258	276	279	489	789	832	96

JFDs of 100-Meter Wind vs. Delta T

January-March 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	0	0	0	0	0	0	0	1
TOTAL	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1

B186

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	0	0	0	0	0
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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	3	5
12.51-18.50	8	1	0	0	0	0	0	0	6	2	0	0	0	0	1	5	23
18.51-24.00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	1	4	6	0	0	0	0	0	4	15
TOTAL	8	2	0	0	0	0	2	3	11	8	0	0	0	0	1	12	47

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	2	2	0	2	1	3	1	1	1	0	1	0	2	0	0	0	16
3.51- 7.50	6	17	5	10	9	13	22	20	16	7	8	16	9	5	6	5	174
7.51-12.50	10	42	7	3	9	14	26	19	26	10	10	13	8	12	44	62	315
12.51-18.50	25	17	4	1	1	12	28	26	36	30	16	8	8	15	69	145	441
18.51-24.00	17	2	0	1	3	0	5	14	24	8	11	2	3	7	32	65	194
>24.00	14	2	1	6	5	0	5	7	24	12	2	0	1	6	13	30	128
TOTAL	74	82	17	23	28	42	87	87	127	67	48	39	31	45	164	307	1268

B187

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	2	0	0	2	1	0	0	0	2	0	0	0	0	0	8
3.51- 7.50	1	2	1	4	1	6	4	11	1	2	2	0	0	0	0	5	40
7.51-12.50	13	9	5	8	20	15	17	20	17	6	4	7	10	5	15	18	189
12.51-18.50	8	4	0	5	3	8	17	29	18	9	12	12	8	11	15	18	177
18.51-24.00	5	0	0	1	1	5	11	15	11	12	19	8	12	16	15	4	135
>24.00	1	0	0	0	0	1	2	1	8	14	2	0	1	11	0	1	42
TOTAL	28	16	8	18	25	37	52	76	55	43	41	27	31	43	45	46	591

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	0	1	2	0	0	0	0	0	0	0	1	0	2	1	8
3.51- 7.50	1	6	3	2	3	3	1	4	1	1	3	3	2	2	1	8	44
7.51-12.50	1	5	1	0	2	2	10	6	12	5	2	4	8	4	3	4	69
12.51-18.50	1	0	0	0	0	0	8	3	6	2	5	1	1	6	4	4	41
18.51-24.00	0	0	0	0	0	0	1	1	0	0	2	4	7	9	5	1	30
>24.00	0	0	0	0	0	0	0	0	0	0	3	0	2	4	0	0	9
TOTAL	3	12	4	3	7	5	20	14	19	8	15	12	21	25	15	18	201

B188

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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	0	0	0	0	0	0	1	0	1	2	1	2	1	3	11
3.51- 7.50	1	1	2	1	0	0	1	2	0	0	1	2	2	1	3	3	20
7.51-12.50	0	0	0	0	0	0	3	4	1	1	2	3	1	3	4	3	25
12.51-18.50	0	0	0	0	0	0	0	0	1	2	7	1	0	0	2	1	14
18.51-24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
>24.00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
TOTAL	1	1	2	1	0	0	4	6	3	3	14	8	4	6	13	10	76

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	2	4	2	3	3	5	2	1	2	0	4	2	4	2	3	4	43
3.51- 7.50	9	26	11	17	13	22	29	38	18	10	14	21	13	8	10	21	280
7.51-12.50	24	57	13	11	31	31	57	49	56	22	18	27	27	24	66	90	603
12.51-18.50	42	22	4	6	4	20	53	58	67	45	40	22	17	32	91	173	696
18.51-24.00	22	2	0	2	4	5	17	31	36	20	33	14	22	32	55	70	365
>24.00	15	2	1	6	5	1	7	9	37	32	9	0	4	21	13	35	197
TOTAL	114	113	31	45	60	84	165	186	216	129	118	86	87	119	238	393	2184

B189

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 3/31/16

*** JAN-MAR 2016 ***

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: 2184

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 14.5 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.00	.05	2.15	58.06	27.06	9.20	3.48

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
C	8	2	0	0	0	0	2	3	11	8	0	0	0	0	1	12	0
D	74	82	17	23	28	42	87	87	127	67	48	39	31	45	164	307	0
E	28	16	8	18	25	37	52	76	55	43	41	27	31	43	45	46	0
F	3	12	4	3	7	5	20	14	19	8	15	12	21	25	15	18	0
G	1	1	2	1	0	0	4	6	3	3	14	8	4	6	13	10	0
TOTAL	114	113	31	45	60	84	165	186	216	129	118	86	87	119	238	393	0

B190

JFDs of 100-Meter Wind vs. Delta T

April-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

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	0	0	1	0	0	0	0	0	0	0	0	0	1
7.51-12.50	1	0	0	0	0	2	7	1	0	0	0	0	0	0	0	2	13
12.51-18.50	0	1	0	0	0	0	6	1	0	0	0	0	0	0	0	0	8
18.51-24.00	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	6
>24.00	0	0	0	0	0	0	0	4	5	0	0	0	0	0	0	0	9
TOTAL	2	1	0	0	0	2	15	10	5	0	0	0	0	0	0	2	37

B192

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	0	0	0	0	0
3.51- 7.50	2	3	0	0	0	0	1	0	3	0	0	1	0	0	0	0	10
7.51-12.50	4	1	0	0	0	1	2	3	0	0	0	0	0	1	2	4	18
12.51-18.50	5	1	0	0	0	0	4	8	12	1	0	0	0	0	0	6	37
18.51-24.00	3	0	0	0	0	0	0	5	5	0	0	0	0	0	3	6	22
>24.00	0	0	0	0	0	0	2	3	6	0	0	4	0	0	2	3	20
TOTAL	14	5	0	0	0	1	9	19	26	1	0	5	0	1	7	19	107

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	1	0	1	6	3	3	5	1	3	1	2	1	0	1	1	0	29
3.51- 7.50	14	24	12	9	7	18	15	9	20	12	8	7	13	7	6	10	191
7.51-12.50	27	22	25	9	10	16	33	27	30	11	7	13	22	11	16	30	309
12.51-18.50	32	5	8	10	16	22	45	45	31	40	12	7	15	15	24	42	369
18.51-24.00	8	4	2	10	4	8	11	25	30	19	11	10	7	11	20	23	203
>24.00	4	0	1	0	7	1	3	7	16	15	4	5	0	2	14	9	88
TOTAL	86	55	49	44	47	68	112	114	130	98	44	43	57	47	81	114	1189

B193

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	0	0	0	0	2	0	1	0	0	2	0	1	0	3	0	9
3.51- 7.50	4	4	1	4	2	8	5	7	3	1	2	1	3	2	5	3	55
7.51-12.50	12	16	8	4	8	20	15	21	15	13	6	4	6	7	7	8	170
12.51-18.50	19	9	6	3	9	12	18	28	36	37	12	9	6	2	8	18	232
18.51-24.00	5	3	1	0	2	1	11	13	28	18	4	5	1	3	13	4	112
>24.00	1	0	0	1	0	1	0	1	8	3	0	2	2	1	4	0	24
TOTAL	41	32	16	12	21	44	49	71	90	72	26	21	19	15	40	33	602

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	1	0	0	2	1	0	0	0	0	0	1	0	0	0	6
3.51- 7.50	3	0	0	2	2	5	4	6	2	3	3	3	0	1	1	6	41
7.51-12.50	4	2	6	1	3	9	7	9	12	11	7	4	5	5	3	10	98
12.51-18.50	0	0	0	0	1	1	2	8	4	3	5	1	7	8	3	1	44
18.51-24.00	0	0	0	0	0	0	0	0	1	1	0	0	2	1	2	1	8
>24.00	0	0	0	0	0	1	0	0	0	0	0	0	4	1	0	0	6
TOTAL	7	3	7	3	6	18	14	23	19	18	15	8	19	16	9	18	203

B194

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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	1	2	1	1	0	1	1	0	1	0	0	0	0	0	9
3.51- 7.50	1	1	1	0	2	2	1	1	1	2	2	0	0	1	1	0	16
7.51-12.50	1	0	0	0	1	1	1	2	2	0	0	1	0	0	1	2	12
12.51-18.50	0	0	0	0	0	0	0	0	1	0	0	0	3	1	1	0	6
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	0	0	1	0	0	0	1
TOTAL	3	1	2	2	4	4	2	4	5	2	3	1	5	2	3	2	45

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	2	1	3	8	4	8	6	3	4	1	5	1	2	1	4	0	53
3.51- 7.50	24	32	14	15	13	33	27	23	29	18	15	12	16	11	13	19	314
7.51-12.50	49	41	39	14	22	49	65	63	59	35	20	22	33	24	29	56	620
12.51-18.50	56	16	14	13	26	35	75	90	84	81	29	17	31	26	36	68	697
18.51-24.00	17	7	3	10	6	9	23	47	64	38	15	15	11	15	38	34	352
>24.00	5	0	1	1	7	3	5	15	35	18	4	11	7	4	20	12	148
TOTAL	153	97	74	61	78	137	201	241	275	191	88	78	100	81	140	189	2184

B195

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/16 - 6/30/16

*** APR-JUN 2016 ***

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: 2184

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 13.9 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.05	1.69	4.90	54.44	27.56	9.29	2.06

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	0	0	0	0	0	0	0	0	0	0	0	0	1	0
B	2	1	0	0	0	2	15	10	5	0	0	0	0	0	0	2	0
C	14	5	0	0	0	1	9	19	26	1	0	5	0	1	7	19	0
D	86	55	49	44	47	68	112	114	130	98	44	43	57	47	81	114	0
E	41	32	16	12	21	44	49	71	90	72	26	21	19	15	40	33	0
F	7	3	7	3	6	18	14	23	19	18	15	8	19	16	9	18	0
G	3	1	2	2	4	4	2	4	5	2	3	1	5	2	3	2	0
TOTAL	153	97	74	61	78	137	201	241	275	191	88	78	100	81	140	189	0

B196

JFDs of 100-Meter Wind vs. Delta T

January-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0
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	1	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	1
7.51-12.50	1	0	0	0	0	2	7	1	0	0	0	0	0	0	0	2	13
12.51-18.50	0	1	0	0	0	0	6	1	0	0	0	0	0	0	0	0	8
18.51-24.00	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0	6
>24.00	0	0	0	0	0	0	0	4	6	0	0	0	0	0	0	0	10
TOTAL	2	1	0	0	0	2	15	10	6	0	0	0	0	0	0	2	38

B198

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	0	0	0	0	0
3.51- 7.50	2	3	0	0	0	0	2	1	3	0	0	1	0	0	0	0	12
7.51-12.50	4	2	0	0	0	1	3	3	0	0	0	0	0	1	2	7	23
12.51-18.50	13	2	0	0	0	0	4	8	18	3	0	0	0	0	1	11	60
18.51-24.00	3	0	0	0	0	0	0	6	6	0	0	0	0	0	3	6	24
>24.00	0	0	0	0	0	0	2	4	10	6	0	4	0	0	2	7	35
TOTAL	22	7	0	0	0	1	11	22	37	9	0	5	0	1	8	31	154

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	1	8	4	6	6	2	4	1	3	1	2	1	1	0	45
3.51- 7.50	20	41	17	19	16	31	37	29	36	19	16	23	22	12	12	15	365
7.51-12.50	37	64	32	12	19	30	59	46	56	21	17	26	30	23	60	92	624
12.51-18.50	57	22	12	11	17	34	73	71	67	70	28	15	23	30	93	187	810
18.51-24.00	25	6	2	11	7	8	16	39	54	27	22	12	10	18	52	88	397
>24.00	18	2	2	6	12	1	8	14	40	27	6	5	1	8	27	39	216
TOTAL	160	137	66	67	75	110	199	201	257	165	92	82	88	92	245	421	2457

B199

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	2	0	0	4	1	1	0	0	4	0	1	0	3	0	17
3.51- 7.50	5	6	2	8	3	14	9	18	4	3	4	1	3	2	5	8	95
7.51-12.50	25	25	13	12	28	35	32	41	32	19	10	11	16	12	22	26	359
12.51-18.50	27	13	6	8	12	20	35	57	54	46	24	21	14	13	23	36	409
18.51-24.00	10	3	1	1	3	6	22	28	39	30	23	13	13	19	28	8	247
>24.00	2	0	0	1	0	2	2	2	16	17	2	2	3	12	4	1	66
TOTAL	69	48	24	30	46	81	101	147	145	115	67	48	50	58	85	79	1193

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	2	1	1	2	2	1	0	0	0	0	0	2	0	2	1	14
3.51- 7.50	4	6	3	4	5	8	5	10	3	4	6	6	2	3	2	14	85
7.51-12.50	5	7	7	1	5	11	17	15	24	16	9	8	13	9	6	14	167
12.51-18.50	1	0	0	0	1	1	10	11	10	5	10	2	8	14	7	5	85
18.51-24.00	0	0	0	0	0	0	1	1	1	1	2	4	9	10	7	2	38
>24.00	0	0	0	0	0	1	0	0	0	0	3	0	6	5	0	0	15
TOTAL	10	15	11	6	13	23	34	37	38	26	30	20	40	41	24	36	404

B200

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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	1	2	1	1	0	1	2	0	2	2	1	2	1	3	20
3.51- 7.50	2	2	3	1	2	2	2	3	1	2	3	2	2	2	4	3	36
7.51-12.50	1	0	0	0	1	1	4	6	3	1	2	4	1	3	5	5	37
12.51-18.50	0	0	0	0	0	0	0	0	2	2	7	1	3	1	3	1	20
18.51-24.00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	3	0	5
>24.00	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	3
TOTAL	4	2	4	3	4	4	6	10	8	5	17	9	9	8	16	12	121

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	4	5	5	11	7	13	8	4	6	1	9	3	6	3	7	4	96
3.51- 7.50	33	58	25	32	26	55	56	61	47	28	29	33	29	19	23	40	594
7.51-12.50	73	98	52	25	53	80	122	112	115	57	38	49	60	48	95	146	1223
12.51-18.50	98	38	18	19	30	55	128	148	151	126	69	39	48	58	127	241	1393
18.51-24.00	39	9	3	12	10	14	40	78	100	58	48	29	33	47	93	104	717
>24.00	20	2	2	7	12	4	12	24	72	50	13	11	11	25	33	47	345
TOTAL	267	210	105	106	138	221	366	427	491	320	206	164	187	200	378	582	4368

B201

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16

*** JAN-JUN 2016 ***

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: 4368

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 14.2 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.02	.87	3.53	56.25	27.31	9.25	2.77

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	0	0	0	0	0	0	0	0	0	0	0	0	1	0
B	2	1	0	0	0	2	15	10	6	0	0	0	0	0	0	2	0
C	22	7	0	0	0	1	11	22	37	9	0	5	0	1	8	31	0
D	160	137	66	67	75	110	199	201	257	165	92	82	88	92	245	421	0
E	69	48	24	30	46	81	101	147	145	115	67	48	50	58	85	79	0
F	10	15	11	6	13	23	34	37	38	26	30	20	40	41	24	36	0
G	4	2	4	3	4	4	6	10	8	5	17	9	9	8	16	12	0
TOTAL	267	210	105	106	138	221	366	427	491	320	206	164	187	200	378	582	0

B202

Stability Classes by Hour of Day

100-Meter Wind vs. Delta T

January-June 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16	1	1	F	F	E	E	E	E	F	F	F	E	D	D	D	D	D	E	E	E	E	E	E	E	E	F
16	1	2	F	E	E	E	E	F	F	F	F	E	D	D	D	D	D	D	E	F	E	E	F	E	E	E
16	1	3	D	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	4	D	D	D	D	D	D	D	D	D	D	D	D	D	C	C	C	D	D	E	E	E	E	E	E
16	1	5	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16	1	6	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	7	D	D	D	E	E	E	E	E	E	E	E	E	E	D	E	E	E	E	E	E	E	E	E	E
16	1	8	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	9	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	10	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16	1	11	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D
16	1	12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
16	1	13	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	F	F	E	F	E	E
16	1	14	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	F	F	F	E	E	F
16	1	15	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D
16	1	16	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	17	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	G	F
16	1	18	G	G	G	F	G	F	G	F	G	G	E	E	E	D	D	D	D	E	E	E	E	E	E	D
16	1	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
16	1	20	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	21	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	22	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	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
16	1	24	E	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E
16	1	25	E	F	E	E	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	1	26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
16	1	27	F	F	F	F	F	F	F	F	E	E	D	D	D	D	D	D	E	E	E	E	E	F	F	F
16	1	28	F	F	F	E	E	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	F	F	F	F
16	1	29	F	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16	1	30	E	F	F	G	G	G	G	G	G	F	F	E	D	D	D	D	E	E	E	F	E	F	F	F
16	1	31	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	G
16	2	1	F	F	F	F	G	G	G	G	F	E	D	D	D	D	D	D	E	E	E	E	E	E	D	D
16	2	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D	D
16	2	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	2	4	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E
16	2	5	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16	2	6	F	E	E	E	E	F	E	F	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16	2	7	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	9	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	F	F
16	2	10	F	F	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D	D
16	2	11	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D
16	2	12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	2	14	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	F

B204

PROGRAM: JFD VERSION: PC-1.2.
 NEPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16 2 15	F	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	F	F	G	F	E	E
16 2 16	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	F
16 2 17	F	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	E	E	E
16 2 18	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 2 19	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	F	F
16 2 20	E	F	F	F	F	F	F	G	F	D	D	D	D	C	C	C	D	D	E	E	E	E	D	D
16 2 21	E	D	E	E	E	E	E	E	D	D	D	C	C	C	D	D	D	D	E	E	E	E	D	D
16 2 22	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 2 23	E	E	E	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	E
16 2 24	E	D	D	D	D	D	D	D	D	D	D	C	D	C	D	D	D	D	E	E	E	E	D	D
16 2 25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
16 2 26	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
16 2 27	G	G	G	G	G	G	G	G	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 2 28	E	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	E	E	F	F	G	G
16 2 29	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D
16 3 1	D	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	E	E	E	E	E
16 3 2	E	E	E	E	E	D	D	D	D	D	D	D	C	D	D	D	D	D	E	F	E	D	D	E
16 3 3	D	E	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	D	E	E	E	F	F
16 3 4	F	F	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	E	E	F	F	G	F
16 3 5	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 3 6	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 3 7	E	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D
16 3 8	D	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D
16 3 9	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16 3 10	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E
16 3 11	E	E	E	E	F	F	F	F	E	D	D	C	C	C	C	D	D	D	E	E	E	F	F	F
16 3 12	F	F	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 3 13	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F
16 3 14	F	F	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 3 15	E	D	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	D	E	E
16 3 16	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16 3 17	F	F	F	F	E	F	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 3 18	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16 3 19	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 3 20	D	D	D	D	E	E	D	D	D	C	D	D	D	D	D	D	D	D	D	E	F	F	G	G
16 3 21	G	F	F	F	F	F	F	E	D	D	C	C	B	C	C	C	D	D	D	E	E	D	D	D
16 3 22	D	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 3 23	E	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	E	D	D	D	D	D
16 3 24	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F
16 3 25	F	F	F	F	F	F	F	E	D	D	C	C	D	D	D	D	D	D	D	E	E	E	E	E
16 3 26	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 3 27	D	D	D	D	D	D	D	D	D	D	C	D	C	D	D	D	D	D	D	E	F	F	G	G
16 3 28	G	G	G	G	F	F	E	D	D	D	C	C	D	D	D	D	D	D	D	E	E	F	E	F
16 3 29	F	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	D	D	D	D	E	E
16 3 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D

B205

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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			
16	3	31	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D			
16	4	1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F		
16	4	2	F	E	E	E	E	E	E	D	D	D	D	C	C	C	C	D	D	D	D	E	E	F	F	F	F		
16	4	3	F	E	E	E	E	E	E	D	D	D	D	C	C	C	C	D	D	D	D	E	E	E	E	E			
16	4	4	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	D	D	E	E	E	E	E			
16	4	5	E	E	D	D	D	D	D	D	D	D	C	C	B	C	D	D	D	D	E	E	E	E	E	F			
16	4	6	E	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E			
16	4	7	E	E	E	F	F	F	F	E	D	D	C	C	C	C	D	D	D	D	D	E	E	E	E	E			
16	4	8	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	C	D	D	D	D	E	E	E	E			
16	4	9	E	D	E	E	E	E	E	D	D	C	C	B	B	B	B	C	D	D	D	E	E	E	E	D	E		
16	4	10	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E		
16	4	11	D	D	D	D	D	D	D	D	D	C	C	C	C	C	C	D	D	D	D	E	E	E	E	E	F		
16	4	12	F	F	F	G	G	F	E	D	D	D	C	C	C	C	C	C	D	D	D	E	E	E	E	E	E		
16	4	13	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	D	E	F	E	E	E	E		
16	4	14	E	E	E	E	E	F	F	E	D	D	C	C	C	B	C	C	D	D	D	E	E	E	E	F	E		
16	4	15	F	F	F	F	F	F	E	D	D	C	B	B	B	B	D	C	D	D	D	D	E	E	E	E	E		
16	4	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	C	D	D	D	E	E	E	E	E	E		
16	4	17	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	
16	4	18	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	4	19	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
16	4	20	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16	4	21	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	E	E	
16	4	22	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
16	4	23	E	E	E	E	E	E	E	D	D	D	C	D	D	C	D	D	D	D	D	E	E	E	E	E	E	E	
16	4	24	E	E	E	E	E	E	E	E	D	D	C	B	B	B	B	C	D	D	D	D	E	E	E	E	E	E	
16	4	25	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E	E	
16	4	26	E	E	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	F	F	E	E	E	E	D	
16	4	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	D	D	
16	4	28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	4	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	D	D	
16	4	30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
16	5	1	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16	5	2	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	F	
16	5	3	F	F	F	F	F	F	F	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
16	5	4	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G	
16	5	5	G	F	F	F	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	G	F	
16	5	6	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
16	5	7	E	E	E	E	E	F	F	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	5	8	D	D	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	5	9	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	E	E	E	E	
16	5	10	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E	E	
16	5	11	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E	E	
16	5	12	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	F	G	G	G	G	
16	5	13	G	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16	5	14	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	

B206

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16	5	15	G	G	F	F	E	F	F	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	5	16	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	5	17	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
16	5	18	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	5	19	E	E	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	5	20	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	5	21	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	5	22	E	E	E	E	E	E	E	D	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	D
16	5	23	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	5	24	D	D	D	D	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D
16	5	25	E	E	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E
16	5	26	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D
16	5	27	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D
16	5	28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
16	5	29	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16	5	30	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	D	E	E	E	D	E	E
16	5	31	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16	6	1	G	G	F	G	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	G	G
16	6	2	G	G	G	F	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F
16	6	3	F	F	F	F	F	F	F	E	D	D	D	D	C	D	D	D	D	D	D	E	E	F	F	E
16	6	4	E	E	F	F	F	F	E	D	D	C	C	C	D	D	D	D	D	D	D	E	E	E	F	E
16	6	5	E	F	F	E	F	E	D	D	C	C	C	C	C	D	D	D	D	D	D	E	F	F	F	F
16	6	6	G	F	F	F	F	F	E	D	D	C	C	C	C	C	D	D	D	D	D	E	E	E	E	E
16	6	7	E	E	E	E	E	F	E	D	D	C	C	D	C	D	C	D	D	D	D	F	F	G	G	G
16	6	8	G	G	F	F	F	F	E	D	D	C	B	B	C	D	D	D	D	D	D	D	E	E	E	E
16	6	9	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16	6	10	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16	6	11	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16	6	12	E	E	F	F	F	E	E	D	D	D	D	C	D	C	D	D	D	D	D	D	E	E	E	E
16	6	13	E	E	E	E	E	E	D	D	D	C	C	D	C	D	D	D	D	D	D	D	E	E	E	E
16	6	14	E	E	E	E	E	E	D	D	D	C	C	D	D	C	D	D	D	D	D	D	E	F	G	G
16	6	15	F	E	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	F	F	E	E	E
16	6	16	E	F	F	F	G	G	F	E	D	C	D	D	D	D	D	D	D	D	D	D	E	F	F	F
16	6	17	F	E	E	E	E	E	D	D	D	B	C	B	B	B	B	B	D	D	D	D	E	E	D	D
16	6	18	D	D	D	E	E	E	D	D	C	B	B	B	B	B	B	C	D	D	D	D	E	E	F	F
16	6	19	F	F	E	F	F	F	E	D	D	C	D	D	C	D	D	D	D	D	D	D	E	E	E	E
16	6	20	E	E	E	E	E	D	D	D	D	C	C	B	A	B	B	C	D	D	D	D	D	D	E	E
16	6	21	E	E	E	D	D	D	D	D	C	B	B	B	C	D	D	D	D	D	D	E	E	E	E	F
16	6	22	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
16	6	23	E	E	E	E	E	E	D	D	D	C	C	C	B	B	C	D	D	D	D	D	F	F	G	F
16	6	24	F	F	F	E	E	E	D	D	D	C	B	C	C	C	D	D	D	D	D	D	D	D	D	D
16	6	25	D	D	E	E	E	E	D	D	D	E	D	D	D	D	D	D	D	D	D	E	E	E	E	D
16	6	26	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
16	6	27	F	F	G	G	G	F	F	E	D	D	C	D	C	D	E	F	E	E	E	E	E	F	F	F
16	6	28	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G

B207

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 6/30/16
 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
16 6 29	F	F	F	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	E	E	E	E
16 6 30	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	D	D	E	E	E	E	E

B208

JFDs of 100-Meter Wind vs. Delta T

July-September 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	2	0	0	0	0	0	0	0	2
TOTAL	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2

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	0	0	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12.51-18.50	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	1	6
18.51-24.00	0	0	0	0	0	0	0	2	5	6	0	0	0	0	0	0	13
>24.00	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	9
TOTAL	0	1	0	0	0	0	0	2	9	16	0	0	0	0	0	1	29

B210

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	0	0	0	0	0
3.51- 7.50	0	1	0	1	5	3	1	0	0	0	0	0	0	0	0	0	11
7.51-12.50	6	4	2	1	2	4	5	0	0	1	0	0	0	0	0	0	25
12.51-18.50	5	0	0	0	0	1	2	2	5	8	2	1	0	0	0	0	26
18.51-24.00	0	0	0	0	0	0	0	3	10	5	0	0	0	0	0	0	18
>24.00	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	3
TOTAL	11	5	2	2	7	8	8	5	17	15	2	1	0	0	0	0	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	6	4	5	3	7	4	4	6	3	0	1	3	2	4	2	5	59
3.51- 7.50	24	34	17	22	20	22	28	12	16	7	11	5	7	8	8	11	252
7.51-12.50	9	46	29	27	16	14	63	34	15	21	14	3	0	7	5	13	316
12.51-18.50	11	4	4	7	18	13	28	44	32	27	3	0	1	6	22	19	239
18.51-24.00	8	1	1	0	2	0	7	15	28	21	0	3	0	0	2	0	88
>24.00	3	0	0	1	0	0	3	6	32	3	0	0	0	0	0	1	49
TOTAL	61	89	56	60	63	53	133	117	126	79	29	14	10	25	39	49	1003

B211

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	0	2	5	3	1	1	0	1	1	0	0	0	0	2	2	18
3.51- 7.50	2	11	12	5	11	10	11	8	3	2	0	1	1	1	3	3	84
7.51-12.50	11	28	40	11	30	22	33	61	25	16	5	1	4	4	7	17	315
12.51-18.50	22	3	4	2	7	12	23	54	69	42	1	1	2	4	8	7	261
18.51-24.00	3	0	2	2	1	1	2	20	65	13	3	1	2	0	2	4	121
>24.00	3	0	0	0	0	0	0	0	17	2	0	0	0	0	0	0	22
TOTAL	41	42	60	25	52	46	70	143	180	76	9	4	9	9	22	33	821

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	1	1	1	0	0	1	0	0	0	0	5
3.51- 7.50	2	7	6	9	4	5	4	0	4	1	1	0	2	0	2	4	51
7.51-12.50	3	6	9	10	4	10	5	10	6	7	3	0	1	6	3	2	85
12.51-18.50	4	0	3	0	5	0	0	5	7	11	2	2	2	6	3	3	53
18.51-24.00	0	0	0	0	0	1	0	0	1	3	1	1	1	1	0	3	12
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
TOTAL	9	13	18	19	14	16	10	16	19	22	7	4	6	15	8	12	208

B212

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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	0	0	0	0	0	1	0	1	1	0	1	0	0	10
3.51- 7.50	2	2	4	3	0	1	0	1	0	0	0	0	0	0	0	1	14
7.51-12.50	0	1	8	0	0	0	2	1	2	1	0	1	3	4	0	0	23
12.51-18.50	0	0	0	0	0	0	0	0	3	0	0	1	0	4	1	2	11
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
TOTAL	3	6	14	3	0	1	2	2	7	1	1	3	3	9	1	6	62

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	7	9	8	11	5	6	7	6	1	2	5	2	5	4	7	92
3.51- 7.50	30	55	39	40	40	41	44	21	23	10	12	6	10	9	13	19	412
7.51-12.50	29	86	88	49	52	50	108	106	48	46	22	5	8	21	15	32	765
12.51-18.50	42	7	11	9	30	26	53	105	117	92	8	5	5	20	34	32	596
18.51-24.00	11	1	3	2	3	2	9	40	109	48	4	5	3	1	4	10	255
>24.00	6	0	0	1	0	0	3	6	57	12	0	0	0	2	0	1	88
TOTAL	125	156	150	109	136	124	223	285	360	209	48	26	28	58	70	101	2208

B213

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 9/30/16

*** JUL-SEP 2016 ***

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: 2208

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 12.3 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.09	1.31	3.76	45.43	37.18	9.42	2.81

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
B	0	1	0	0	0	0	0	2	9	16	0	0	0	0	0	1	0
C	11	5	2	2	7	8	8	5	17	15	2	1	0	0	0	0	0
D	61	89	56	60	63	53	133	117	126	79	29	14	10	25	39	49	0
E	41	42	60	25	52	46	70	143	180	76	9	4	9	9	22	33	0
F	9	13	18	19	14	16	10	16	19	22	7	4	6	15	8	12	0
G	3	6	14	3	0	1	2	2	7	1	1	3	3	9	1	6	0
TOTAL	125	156	150	109	136	124	223	285	360	209	48	26	28	58	70	101	0

B214

JFDs of 100-Meter Wind vs. Delta T

October-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

B216

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2
7.51-12.50	1	1	0	2	0	3	3	2	3	0	0	0	0	0	0	3	18
12.51-18.50	7	0	0	0	0	0	2	0	5	2	2	0	0	0	0	3	21
18.51-24.00	0	0	0	0	0	0	0	2	0	0	3	0	0	0	0	0	5
>24.00	0	0	0	0	0	0	0	0	1	2	1	0	0	0	0	0	4
TOTAL	8	1	0	2	0	4	6	4	9	4	6	0	0	0	0	6	50

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	3	3	0	1	3	3	2	1	1	1	4	2	3	3	6	39
3.51- 7.50	12	10	3	6	8	7	18	9	5	7	7	6	6	10	12	13	139
7.51-12.50	21	12	9	4	5	32	21	21	20	23	10	9	10	10	21	39	267
12.51-18.50	20	5	3	6	4	19	52	21	26	29	15	3	6	25	39	68	341
18.51-24.00	23	1	0	0	1	6	12	19	14	16	8	2	3	23	36	20	184
>24.00	4	0	0	0	0	0	2	2	22	10	2	0	0	6	17	1	66
TOTAL	83	31	18	16	19	67	108	74	88	86	43	24	27	77	128	147	1036

B217

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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																	1
1.01- 3.50	1	3	1	0	0	0	2	0	0	1	1	0	2	2	1	3	17
3.51- 7.50	7	4	4	2	5	3	4	6	3	1	1	0	0	0	3	7	50
7.51-12.50	9	6	10	12	2	13	23	12	24	15	6	10	3	3	9	13	170
12.51-18.50	15	5	7	0	2	18	16	36	62	21	17	7	9	9	21	15	260
18.51-24.00	7	2	0	2	0	0	9	17	19	19	11	4	8	8	17	2	125
>24.00	5	0	0	0	0	0	2	1	19	3	2	0	0	7	5	0	44
TOTAL	44	20	22	16	9	34	56	72	127	60	38	21	22	29	56	40	667

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	3	1	0	0	1	1	1	1	0	1	0	1	2	1	1	14
3.51- 7.50	3	5	3	5	5	5	9	5	2	6	2	2	0	3	3	3	61
7.51-12.50	6	7	4	4	6	1	3	14	14	23	6	3	1	4	3	8	107
12.51-18.50	1	4	1	1	1	0	1	5	14	51	7	1	4	9	3	1	104
18.51-24.00	0	0	0	0	0	0	0	0	4	14	6	0	3	9	3	0	39
>24.00	1	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	4
TOTAL	11	19	9	10	12	7	14	25	37	94	22	6	9	28	13	13	329

B218

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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	2	1	0	1	0	2	1	1	2	1	0	12
3.51- 7.50	3	4	3	7	5	6	2	6	5	2	2	1	2	0	1	1	50
7.51-12.50	0	2	3	1	0	2	1	0	10	11	9	2	0	4	0	0	45
12.51-18.50	0	0	1	0	0	0	2	0	1	5	3	0	1	1	0	0	14
18.51-24.00	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	1	4
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	4	6	7	8	5	10	6	6	17	19	19	4	4	7	2	2	126

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																	1
1.01- 3.50	5	9	5	0	1	6	7	3	3	2	5	5	6	9	6	10	82
3.51- 7.50	25	23	13	20	23	22	34	26	15	16	12	9	8	13	19	24	302
7.51-12.50	37	28	26	23	13	51	51	49	71	72	31	24	14	21	33	63	607
12.51-18.50	43	14	12	7	7	37	73	62	108	108	44	11	20	44	63	87	740
18.51-24.00	30	3	0	2	1	6	21	38	37	50	30	6	14	40	56	23	357
>24.00	10	0	0	0	0	0	4	3	44	15	6	0	0	14	22	1	119
TOTAL	150	77	56	52	45	122	190	181	278	263	128	55	62	141	199	208	2208

B219

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/16 - 12/31/16

*** OCT-DEC 2016 ***

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: 2208

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 13.7 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.00	.00	2.26	46.92	30.21	14.90	5.71

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	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C	8	1	0	2	0	4	6	4	9	4	6	0	0	0	0	6	0
D	83	31	18	16	19	67	108	74	88	86	43	24	27	77	128	147	0
E	44	20	22	16	9	34	56	72	127	60	38	21	22	29	56	40	1
F	11	19	9	10	12	7	14	25	37	94	22	6	9	28	13	13	0
G	4	6	7	8	5	10	6	6	17	19	19	4	4	7	2	2	0
TOTAL	150	77	56	52	45	122	190	181	278	263	128	55	62	141	199	208	1

B220

JFDs of 100-Meter Wind vs. Delta T

July-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	2	0	0	0	0	0	0	0	2
TOTAL	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2

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	0	0	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12.51-18.50	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0	1	6
18.51-24.00	0	0	0	0	0	0	0	2	5	6	0	0	0	0	0	0	13
>24.00	0	0	0	0	0	0	0	0	3	6	0	0	0	0	0	0	9
TOTAL	0	1	0	0	0	0	0	2	9	16	0	0	0	0	0	1	29

B222

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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	0	0	0	0	0
3.51- 7.50	0	1	0	1	5	4	2	0	0	0	0	0	0	0	0	0	13
7.51-12.50	7	5	2	3	2	7	8	2	3	1	0	0	0	0	0	3	43
12.51-18.50	12	0	0	0	0	1	4	2	10	10	4	1	0	0	0	3	47
18.51-24.00	0	0	0	0	0	0	4	5	10	5	3	0	0	0	0	0	23
>24.00	0	0	0	0	0	0	0	0	3	3	1	0	0	0	0	0	7
TOTAL	19	6	2	4	7	12	14	9	26	19	8	1	0	0	0	6	133

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	9	7	8	3	8	7	7	8	4	1	2	7	4	7	5	11	98
3.51- 7.50	36	44	20	28	28	29	46	21	21	14	18	11	13	18	20	24	391
7.51-12.50	30	58	38	31	21	46	84	55	35	44	24	12	10	17	26	52	583
12.51-18.50	31	9	7	13	22	32	80	65	58	56	18	3	7	31	61	87	580
18.51-24.00	31	2	1	0	3	6	19	34	42	37	8	5	3	23	38	20	272
>24.00	7	0	0	1	0	0	5	8	54	13	2	0	0	6	17	2	115
TOTAL	144	120	74	76	82	120	241	191	214	165	72	38	37	102	167	196	2039

B223

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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																	1
1.01- 3.50	1	3	3	5	3	1	3	0	1	2	1	0	2	2	3	5	35
3.51- 7.50	9	15	16	7	16	13	15	14	6	3	1	1	1	1	6	10	134
7.51-12.50	20	34	50	23	32	35	56	73	49	31	11	11	7	7	16	30	485
12.51-18.50	37	8	11	2	9	30	39	90	131	63	18	8	11	13	29	22	521
18.51-24.00	10	2	2	4	1	1	11	37	84	32	14	5	10	8	19	6	246
>24.00	8	0	0	0	0	0	2	1	36	5	2	0	0	7	5	0	66
TOTAL	85	62	82	41	61	80	126	215	307	136	47	25	31	38	78	73	1488

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	3	1	0	1	1	2	2	2	0	1	1	1	2	1	1	19
3.51- 7.50	5	12	9	14	9	10	13	5	6	7	3	2	2	3	5	7	112
7.51-12.50	9	13	13	14	10	11	8	24	20	30	9	3	2	10	6	10	192
12.51-18.50	5	4	4	1	6	0	1	10	21	62	9	3	6	15	6	4	157
18.51-24.00	0	0	0	0	0	1	0	0	5	17	7	1	4	10	3	3	51
>24.00	1	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	6
TOTAL	20	32	27	29	26	23	24	41	56	116	29	10	15	43	21	25	537

B224

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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	2	3	2	0	0	2	1	0	2	0	3	2	1	3	1	0	22
3.51- 7.50	5	6	7	10	5	7	2	7	5	2	2	1	2	0	1	2	64
7.51-12.50	0	3	11	1	0	2	3	1	12	12	9	3	3	8	0	0	68
12.51-18.50	0	0	1	0	0	0	2	0	4	5	3	1	1	5	1	2	25
18.51-24.00	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	4	7
>24.00	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
TOTAL	7	12	21	11	5	11	8	8	24	20	20	7	7	16	3	8	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																	1
1.01- 3.50	12	16	14	8	12	11	13	10	9	3	7	10	8	14	10	17	174
3.51- 7.50	55	78	52	60	63	63	78	47	38	26	24	15	18	22	32	43	714
7.51-12.50	66	114	114	72	65	101	159	155	119	118	53	29	22	42	48	95	1372
12.51-18.50	85	21	23	16	37	63	126	167	225	200	52	16	25	64	97	119	1336
18.51-24.00	41	4	3	4	4	8	30	78	146	98	34	11	17	41	60	33	612
>24.00	16	0	0	1	0	0	7	9	101	27	6	0	0	16	22	2	207
TOTAL	275	233	206	161	181	246	413	466	638	472	176	81	90	199	269	309	4416

B225

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16

*** JUL-DEC 2016 ***

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: 4416

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 13.0 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.05	.66	3.01	46.17	33.70	12.16	4.26

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	0	0	0	0	0	2	0	0	0	0	0	0	0	0
B	0	1	0	0	0	0	0	2	9	16	0	0	0	0	0	1	0
C	19	6	2	4	7	12	14	9	26	19	8	1	0	0	0	6	0
D	144	120	74	76	82	120	241	191	214	165	72	38	37	102	167	196	0
E	85	62	82	41	61	80	126	215	307	136	47	25	31	38	78	73	1
F	20	32	27	29	26	23	24	41	56	116	29	10	15	43	21	25	0
G	7	12	21	11	5	11	8	8	24	20	20	7	7	16	3	8	0
TOTAL	275	233	206	161	181	246	413	466	638	472	176	81	90	199	269	309	1

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Stability Classes by Hour of Day

100-Meter Wind vs. Delta T

July-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16	7	1	E	E	E	E	E	E	D	D	D	D	D	D	C	D	C	D	D	D	E	E	E	E	E	E
16	7	2	E	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	7	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	7	4	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16	7	5	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16	7	6	E	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	D	E	E	E	E
16	7	7	E	E	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
16	7	8	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F
16	7	9	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	7	10	E	E	E	D	E	E	D	D	D	D	D	D	D	C	D	D	D	D	D	E	E	E	E	E
16	7	11	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D
16	7	12	D	E	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	7	13	E	E	E	E	E	E	D	D	E	E	F	E	D	D	D	D	D	D	E	F	F	F	F	F
16	7	14	E	F	G	G	G	F	F	E	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G	G
16	7	15	G	G	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	7	16	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	D	D	E	E	E	E
16	7	17	E	E	E	E	E	E	D	E	E	E	D	D	D	E	E	E	E	E	E	E	F	F	E	F
16	7	18	F	E	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
16	7	19	E	E	E	E	E	E	E	D	D	D	D	D	E	D	D	D	D	D	D	D	E	E	E	E
16	7	20	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16	7	21	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16	7	22	E	E	E	E	E	E	E	D	D	C	B	C	C	D	D	D	D	E	E	E	E	E	E	E
16	7	23	E	E	E	E	G	E	F	E	E	E	E	D	D	E	E	E	E	E	E	E	E	E	E	E
16	7	24	E	E	F	F	E	F	E	D	D	D	D	D	D	E	E	E	E	E	E	E	F	F	F	F
16	7	25	F	F	E	E	E	E	E	D	D	D	C	D	C	C	D	D	D	D	D	E	E	F	F	F
16	7	26	F	F	F	F	F	F	F	D	D	D	D	D	C	C	C	C	D	D	E	E	F	F	F	F
16	7	27	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
16	7	28	F	F	F	F	E	E	D	D	D	C	C	B	D	C	D	D	D	D	E	E	E	E	E	E
16	7	29	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	D	E	E	E	E	E
16	7	30	E	E	F	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	E
16	7	31	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16	8	1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	E	E	E	E
16	8	2	D	D	D	D	D	E	E	F	F	D	D	C	C	D	C	D	D	D	D	E	F	F	E	E
16	8	3	E	E	E	E	E	E	E	D	D	D	C	D	B	C	C	D	D	D	D	D	D	D	E	E
16	8	4	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	E	D
16	8	5	E	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	8	6	F	E	E	E	E	E	E	D	D	D	D	D	C	C	C	D	D	D	D	E	E	E	E	E
16	8	7	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
16	8	8	E	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D
16	8	9	E	E	E	E	E	E	E	D	D	D	D	D	C	C	D	D	D	D	D	E	E	E	E	E
16	8	10	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	D	D	E	E	E
16	8	11	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D
16	8	12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	E
16	8	13	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 8 14	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
16 8 15	G	G	F	F	F	G	F	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E
16 8 16	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 8 17	E	E	E	F	F	E	D	D	D	D	C	C	D	D	D	D	D	D	E	E	F	F	F	E
16 8 18	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
16 8 19	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E
16 8 20	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G
16 8 21	F	F	F	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F
16 8 22	E	E	F	F	F	F	E	E	D	D	D	D	C	C	D	D	D	D	E	E	E	E	E	E
16 8 23	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
16 8 24	E	E	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 8 25	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
16 8 26	F	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
16 8 27	E	E	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	F
16 8 28	F	F	E	E	F	F	F	D	D	D	D	D	D	D	D	D	D	F	F	E	E	F	F	E
16 8 29	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	D	E	E
16 8 30	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 8 31	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E
16 9 1	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E	E
16 9 2	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E
16 9 3	E	E	E	F	E	E	E	E	D	D	D	B	D	D	D	D	D	D	E	E	E	E	E	E
16 9 4	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 9 5	E	E	E	E	E	E	E	D	D	D	B	B	A	A	B	D	D	D	E	E	E	E	E	E
16 9 6	E	E	E	E	E	E	E	D	C	B	B	B	B	C	D	D	D	D	E	E	E	E	E	E
16 9 7	E	E	E	E	E	E	E	E	D	E	D	D	D	C	D	D	D	D	E	E	E	F	F	F
16 9 8	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 9 9	E	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	D	E	E
16 9 10	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G	G
16 9 11	F	F	F	F	F	F	F	E	D	C	B	B	B	B	C	D	D	D	E	E	E	E	E	E
16 9 12	E	E	E	E	E	E	E	D	D	C	C	B	B	C	C	D	D	D	E	E	E	E	E	E
16 9 13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 9 14	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 9 15	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 9 16	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
16 9 17	E	E	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G	F	F
16 9 18	G	G	G	F	F	F	F	E	D	C	B	B	C	B	C	C	D	D	E	F	E	E	E	E
16 9 19	E	E	E	E	E	E	E	E	D	C	C	C	C	C	D	D	D	D	E	E	E	E	F	F
16 9 20	F	F	F	F	E	E	E	D	D	D	D	C	C	C	D	C	D	D	E	E	E	E	E	E
16 9 21	E	E	E	E	E	E	D	D	D	C	D	B	C	D	E	C	D	D	E	E	E	E	E	E
16 9 22	D	E	E	E	E	E	E	D	D	C	B	B	B	B	C	D	D	D	E	E	E	E	E	E
16 9 23	E	E	E	E	E	E	F	E	D	D	D	C	C	C	C	D	D	D	E	E	F	E	E	F
16 9 24	F	E	E	E	E	E	E	D	D	D	C	B	B	D	D	E	E	E	E	E	E	D	D	E
16 9 25	D	D	D	E	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	F	F
16 9 26	G	G	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	G	G	G	F	F
16 9 27	G	G	F	G	G	F	F	F	D	D	D	D	D	D	D	D	D	D	E	G	G	G	G	G

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 9 28	G	G	F	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	E	E	E	E	E	E
16 9 29	E	E	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	E	F	G	G	G	G
16 9 30	G	G	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	F	G	E	E	E	E
16 10 1	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 10 2	E	E	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 10 3	E	E	E	E	E	E	E	E	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	E
16 10 4	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E	E
16 10 5	E	E	E	F	E	E	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
16 10 6	F	E	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D
16 10 7	D	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
16 10 8	F	F	F	F	F	F	F	E	D	D	C	C	C	C	C	D	D	D	E	F	G	G	G	G
16 10 9	G	G	G	G	G	G	G	G	E	D	D	D	D	D	C	D	D	D	E	E	F	E	E	E
16 10 10	E	E	E	E	E	E	D	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 10 11	E	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	E	F	G	E	D	D
16 10 12	D	D	D	D	D	D	D	D	D	D	D	C	D	C	D	D	D	D	E	E	F	F	F	F
16 10 13	F	F	F	F	F	F	F	F	E	D	D	D	D	C	D	D	D	D	E	E	E	E	E	E
16 10 14	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D
16 10 15	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
16 10 16	F	F	F	F	F	F	F	E	E	D	D	D	C	C	C	D	D	D	E	E	E	E	E	E
16 10 17	E	E	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	D	E	F	G	F	G	G
16 10 18	E	E	E	E	E	E	E	E	D	D	D	C	C	C	D	D	D	D	E	F	G	G	G	G
16 10 19	G	G	F	G	G	F	F	E	E	D	D	C	C	C	D	D	D	D	E	E	D	E	E	D
16 10 20	D	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	E	E	F	F	F	F
16 10 21	G	G	G	G	G	G	G	G	E	D	C	D	C	C	C	D	D	D	E	E	F	E	E	E
16 10 22	F	F	F	F	F	F	F	F	E	D	D	C	C	C	D	D	D	D	E	E	F	F	E	E
16 10 23	F	E	E	E	E	E	F	F	D	D	C	C	C	C	D	D	D	D	E	E	F	F	E	E
16 10 24	E	E	E	E	E	E	E	E	D	D	D	C	C	C	D	D	D	D	E	E	E	E	E	E
16 10 25	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D
16 10 26	D	D	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
16 10 27	F	F	F	F	G	G	G	G	F	D	D	C	C	C	D	D	D	D	E	E	E	E	E	E
16 10 28	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	E	E
16 10 29	E	G	G	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D
16 10 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	D	D
16 10 31	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G
16 11 1	F	F	F	F	F	E	E	E	E	D	D	C	D	D	D	D	D	D	E	E	E	E	D	D
16 11 2	E	E	E	E	E	E	E	E	D	D	E	D	D	D	D	D	D	D	D	E	E	E	E	E
16 11 3	E	E	E	E	E	F	F	F	E	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G
16 11 4	G	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	E	F	F	F	F	F
16 11 5	F	F	F	F	F	G	G	G	F	E	D	D	D	D	D	D	D	D	E	E	F	F	F	E
16 11 6	E	E	F	F	F	F	F	F	E	D	D	C	D	D	D	D	D	D	E	E	E	E	E	F
16 11 7	E	E	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
16 11 8	E	E	E	D	D	E	E	D	D	D	C	C	C	C	D	D	D	D	E	E	E	F	F	F
16 11 9	F	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	F	F	G	G	G	G
16 11 10	G	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	F	F	G	F
16 11 11	E	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	E	F	F	F	E	F

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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		
16 11 12	G	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	E	E	F	F	F	E	E		
16 11 13	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	E	F	E	F		
16 11 14	F	F	F	G	G	G	F	G	F	D	D	D	D	D	D	D	D	E	F	F	G	G	G	G		
16 11 15	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	E	F	E	E	F	F	G	G	
16 11 16	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	
16 11 17	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	D	E	E	E	E	
16 11 18	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
16 11 19	D	D	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	G	
16 11 20	G	F	F	F	E	E	E	E	E	D	D	D	D	C	D	D	D	D	E	E	E	E	E	E	E	
16 11 21	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	D	E	D	D	D	
16 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	D	
16 11 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	D	
16 11 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	D	
16 11 25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F	
16 11 26	F	F	F	F	F	F	F	F	E	E	E	D	D	D	D	D	D	D	E	E	E	F	F	F	F	
16 11 27	F	F	F	F	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	
16 11 28	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	F	E	E	E	E
16 11 29	E	E	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 11 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F	F	
16 12 2	F	F	G	F	F	F	G	G	F	E	D	D	D	D	D	D	D	D	F	F	E	E	E	E	E	
16 12 3	F	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	D	E	D	E	D
16 12 4	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	F	
16 12 5	F	F	F	F	F	F	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	F	E	D	
16 12 6	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	E	E	E
16 12 7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D	D
16 12 8	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 9	F	F	F	E	E	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 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	D	D
16 12 11	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 12	E	E	E	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D	D	D
16 12 13	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	E
16 12 14	F	E	E	E	E	F	F	F	E	D	C	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
16 12 15	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 16	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 17	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 18	D	D	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16 12 19	E	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E
16 12 20	E	F	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F	E
16 12 21	E	F	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	D	E	E	E
16 12 22	E	E	E	E	F	E	E	E	F	E	D	D	D	D	D	D	D	D	E	E	E	F	E	E	E	E
16 12 23	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F	F	F
16 12 24	F	G	G	G	G	G	G	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
16 12 25	D	D	D	D	D	E	E	D	D	D	D	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E
16 12 26	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	E	F	F

B231

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/16 - 12/31/16
 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
16 12 27	E	E	F	F	F	F	G	G	E	D	D	D	D	D	D	D	E	E	F	F	F	F	F	F
16 12 28	E	F	F	F	F	F	E	E	E	E	E	E	D	D	D	D	E	E	E	F	F	E	E	E
16 12 29	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	F	F	F	E	F	F	F
16 12 30	F	F	F	F	G	G	F	F	F	E	D	D	D	D	D	D	E	E	E	E	E	E	E	F
16 12 31	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F	F

JFDs of 100-Meter Wind vs. Delta T

January-December 2016

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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	0	0	0	0	0	0	0
3.51- 7.50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	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	2	0	0	0	0	0	0	0	2
TOTAL	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	3

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	0	0	1	0	0	0	0	0	0	0	0	0	1
7.51-12.50	1	1	0	0	0	2	7	1	0	0	0	0	0	0	0	2	14
12.51-18.50	0	1	0	0	0	0	6	1	1	4	0	0	0	0	0	1	14
18.51-24.00	1	0	0	0	0	0	1	6	5	6	0	0	0	0	0	0	19
>24.00	0	0	0	0	0	0	0	4	9	6	0	0	0	0	0	0	19
TOTAL	2	2	0	0	0	2	15	12	15	16	0	0	0	0	0	3	67

B234

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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	0	0	0	0	0
3.51- 7.50	2	4	0	1	5	4	4	1	3	0	0	1	0	0	0	0	25
7.51-12.50	11	7	2	3	2	8	11	5	3	1	0	0	0	1	2	10	66
12.51-18.50	25	2	0	0	0	1	8	10	28	13	4	1	0	0	1	14	107
18.51-24.00	3	0	0	0	0	0	0	11	16	5	3	0	0	0	3	6	47
>24.00	0	0	0	0	0	0	2	4	13	9	1	4	0	0	2	7	42
TOTAL	41	13	2	4	7	13	25	31	63	28	8	6	0	1	8	37	287

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	12	9	9	11	12	13	13	10	8	2	5	8	6	8	6	11	143
3.51- 7.50	56	85	37	47	44	60	83	50	57	33	34	34	35	30	32	39	756
7.51-12.50	67	122	70	43	40	76	143	101	91	65	41	38	40	40	86	144	1207
12.51-18.50	88	31	19	24	39	66	153	136	125	126	46	18	30	61	154	274	1390
18.51-24.00	56	8	3	11	10	14	35	73	96	64	30	17	13	41	90	108	669
>24.00	25	2	2	7	12	1	13	22	94	40	8	5	1	14	44	41	331
TOTAL	304	257	140	143	157	230	440	392	471	330	164	120	125	194	412	617	4496

B235

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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																	1
1.01- 3.50	1	4	5	5	3	5	4	1	1	2	5	0	3	2	6	5	52
3.51- 7.50	14	21	18	15	19	27	24	32	10	6	5	2	4	3	11	18	229
7.51-12.50	45	59	63	35	60	70	88	114	81	50	21	22	23	19	38	56	844
12.51-18.50	64	21	17	10	21	50	74	147	185	109	42	29	25	26	52	58	930
18.51-24.00	20	5	3	5	4	7	33	65	123	62	37	18	23	27	47	14	493
>24.00	10	0	0	1	0	2	4	3	52	22	4	2	3	19	9	1	132
TOTAL	154	110	106	71	107	161	227	362	452	251	114	73	81	96	163	152	2681

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	5	2	1	3	3	3	2	2	0	1	1	3	2	3	2	33
3.51- 7.50	9	18	12	18	14	18	18	15	9	11	9	8	4	6	7	21	197
7.51-12.50	14	20	20	15	15	22	25	39	44	46	18	11	15	19	12	24	359
12.51-18.50	6	4	4	1	7	1	11	21	31	67	19	5	14	29	13	9	242
18.51-24.00	0	0	0	0	0	1	1	1	6	18	9	5	13	20	10	5	89
>24.00	1	0	0	0	0	1	0	0	2	0	3	0	6	8	0	0	21
TOTAL	30	47	38	35	39	46	58	78	94	142	59	30	55	84	45	61	941

B236

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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	3	3	3	2	1	3	1	1	4	0	5	4	2	5	2	3	42
3.51- 7.50	7	8	10	11	7	9	4	10	6	4	5	3	4	2	5	5	100
7.51-12.50	1	3	11	1	1	3	7	7	15	13	11	7	4	11	5	5	105
12.51-18.50	0	0	1	0	0	0	2	0	6	7	10	2	4	6	4	3	45
18.51-24.00	0	0	0	0	0	0	0	0	0	1	3	0	1	0	3	4	12
>24.00	0	0	0	0	0	0	0	0	1	0	3	0	1	0	0	0	5
TOTAL	11	14	25	14	9	15	14	18	32	25	37	16	16	24	19	20	309

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																	1
1.01- 3.50	16	21	19	19	19	24	21	14	15	4	16	13	14	17	17	21	270
3.51- 7.50	88	136	77	92	89	118	134	108	85	54	53	48	47	41	55	83	1308
7.51-12.50	139	212	166	97	118	181	281	267	234	175	91	78	82	90	143	241	2595
12.51-18.50	183	59	41	35	67	118	254	315	376	326	121	55	73	122	224	360	2729
18.51-24.00	80	13	6	16	14	22	70	156	246	156	82	40	50	88	153	137	1329
>24.00	36	2	2	8	12	4	19	33	173	77	19	11	11	41	55	49	552
TOTAL	542	443	311	267	319	467	779	893	1129	792	382	245	277	399	647	891	8784

B237

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2016
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/16 - 12/31/16

*** JAN-DEC 2016 ***

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: 8784

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 13.6 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 0

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 0

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.03	.76	3.27	51.18	30.52	10.71	3.52

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	0	0	0	0	0	2	0	0	0	0	0	0	1	0
B	2	2	0	0	0	2	15	12	15	16	0	0	0	0	0	3	0
C	41	13	2	4	7	13	25	31	63	28	8	6	0	1	8	37	0
D	304	257	140	143	157	230	440	392	471	330	164	120	125	194	412	617	0
E	154	110	106	71	107	161	227	362	452	251	114	73	81	96	163	152	1
F	30	47	38	35	39	46	58	78	94	142	59	30	55	84	45	61	0
G	11	14	25	14	9	15	14	18	32	25	37	16	16	24	19	20	0
TOTAL	542	443	311	267	319	467	779	893	1129	792	382	245	277	399	647	891	1

B238

ATMOSPHERIC DIFFUSION ESTIMATES

The tables of atmospheric diffusion estimates in this section were generated using the latest version of the computer code XOQDOQ included as part of NRC Dose 2.3.20 (ORNL 2015). Data are given for 22 distances and 16 compass points (directions from site) centered on the Cooper Nuclear Station (CNS). Tables are presented for the ground-level (vent) and elevated (stack) release options separately, and for the following time periods in 2016: January-March, April-June, January-June, July-September, October-December, July-December, and January-December.

The most recent 5-year average X/Q, depleted X/Q, and D/Q values for CNS have been calculated and compared to the 2016 annual values provided herein. The differences in both peak directions and magnitudes were small and were likely the result of minor year-to-year climatological fluctuations. The most recent 5-year average X/Q, depleted X/Q, and D/Q values are representative of conditions around CNS and are available for use in dose calculations as necessary.

Atmospheric Diffusion Estimates

Ground Level Releases

January-March 2016

VENTS GROUND LEVEL RELEASES - JAN-MAR 2016
 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	2.432E-05	8.194E-06	4.388E-06	2.195E-06	8.781E-07	4.740E-07	2.997E-07	2.088E-07	1.553E-07	1.210E-07	9.756E-08
SSW	2.612E-05	8.999E-06	4.831E-06	2.412E-06	9.616E-07	5.181E-07	3.271E-07	2.276E-07	1.691E-07	1.316E-07	1.061E-07
SW	1.550E-05	5.298E-06	2.820E-06	1.404E-06	5.581E-07	2.999E-07	1.890E-07	1.313E-07	9.734E-08	7.566E-08	6.090E-08
WSW	6.188E-06	2.220E-06	1.221E-06	6.143E-07	2.410E-07	1.282E-07	8.015E-08	5.530E-08	4.078E-08	3.153E-08	2.526E-08
W	1.560E-05	5.483E-06	2.957E-06	1.477E-06	5.813E-07	3.100E-07	1.941E-07	1.342E-07	9.906E-08	7.669E-08	6.152E-08
WNW	1.442E-05	5.182E-06	2.849E-06	1.433E-06	5.614E-07	2.986E-07	1.866E-07	1.287E-07	9.490E-08	7.337E-08	5.878E-08
NW	2.672E-05	9.342E-06	5.101E-06	2.567E-06	1.015E-06	5.432E-07	3.411E-07	2.362E-07	1.748E-07	1.355E-07	1.089E-07
NNW	5.415E-05	1.776E-05	9.553E-06	4.818E-06	1.955E-06	1.066E-06	6.792E-07	4.761E-07	3.558E-07	2.783E-07	2.253E-07
N	8.089E-05	2.515E-05	1.298E-05	6.461E-06	2.701E-06	1.503E-06	9.722E-07	6.898E-07	5.207E-07	4.109E-07	3.352E-07
NNE	5.086E-05	1.568E-05	8.197E-06	4.115E-06	1.721E-06	9.574E-07	6.193E-07	4.394E-07	3.316E-07	2.617E-07	2.134E-07
NE	2.313E-05	7.327E-06	3.820E-06	1.904E-06	7.810E-07	4.289E-07	2.749E-07	1.936E-07	1.452E-07	1.140E-07	9.256E-08
ENE	2.978E-05	9.332E-06	4.919E-06	2.475E-06	1.025E-06	5.665E-07	3.646E-07	2.576E-07	1.938E-07	1.525E-07	1.240E-07
E	2.802E-05	8.796E-06	4.542E-06	2.258E-06	9.408E-07	5.223E-07	3.373E-07	2.390E-07	1.803E-07	1.421E-07	1.158E-07
ESE	2.640E-05	8.942E-06	4.863E-06	2.455E-06	9.849E-07	5.326E-07	3.372E-07	2.352E-07	1.750E-07	1.364E-07	1.100E-07
SE	4.631E-05	1.546E-05	8.164E-06	4.064E-06	1.637E-06	8.878E-07	5.634E-07	3.936E-07	2.934E-07	2.290E-07	1.850E-07
SSE	3.653E-05	1.230E-05	6.564E-06	3.276E-06	1.296E-06	6.946E-07	4.367E-07	3.029E-07	2.243E-07	1.742E-07	1.401E-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	8.084E-08	4.172E-08	2.712E-08	1.564E-08	1.063E-08	7.898E-09	6.204E-09	5.063E-09	4.249E-09	3.642E-09	3.174E-09
SSW	8.782E-08	4.520E-08	2.932E-08	1.685E-08	1.143E-08	8.476E-09	6.647E-09	5.418E-09	4.541E-09	3.888E-09	3.386E-09
SW	5.036E-08	2.580E-08	1.668E-08	9.547E-09	6.457E-09	4.779E-09	3.742E-09	3.046E-09	2.551E-09	2.183E-09	1.899E-09
WSW	2.080E-08	1.048E-08	6.687E-09	3.750E-09	2.496E-09	1.823E-09	1.412E-09	1.138E-09	9.450E-10	8.022E-10	6.931E-10
W	5.072E-08	2.566E-08	1.644E-08	9.280E-09	6.206E-09	4.552E-09	3.538E-09	2.862E-09	2.383E-09	2.029E-09	1.757E-09
WNW	4.841E-08	2.438E-08	1.556E-08	8.735E-09	5.820E-09	4.255E-09	3.297E-09	2.660E-09	2.209E-09	1.877E-09	1.622E-09
NW	8.987E-08	4.568E-08	2.937E-08	1.665E-08	1.117E-08	8.215E-09	6.398E-09	5.184E-09	4.322E-09	3.683E-09	3.194E-09
NNW	1.873E-07	9.780E-08	6.411E-08	3.736E-08	2.557E-08	1.909E-08	1.506E-08	1.233E-08	1.038E-08	8.918E-09	7.789E-09
N	2.805E-07	1.503E-07	1.002E-07	5.985E-08	4.166E-08	3.151E-08	2.512E-08	2.075E-08	1.759E-08	1.522E-08	1.337E-08
NNE	1.786E-07	9.561E-08	6.376E-08	3.803E-08	2.646E-08	2.000E-08	1.593E-08	1.315E-08	1.115E-08	9.640E-09	8.466E-09
NE	7.716E-08	4.074E-08	2.692E-08	1.588E-08	1.097E-08	8.253E-09	6.549E-09	5.391E-09	4.558E-09	3.932E-09	3.447E-09
ENE	1.036E-07	5.497E-08	3.644E-08	2.156E-08	1.492E-08	1.123E-08	8.915E-09	7.341E-09	6.207E-09	5.356E-09	4.696E-09
E	9.688E-08	5.176E-08	3.447E-08	2.053E-08	1.427E-08	1.078E-08	8.583E-09	7.084E-09	6.004E-09	5.190E-09	4.558E-09
ESE	9.118E-08	4.707E-08	3.060E-08	1.762E-08	1.196E-08	8.870E-09	6.958E-09	5.671E-09	4.753E-09	4.070E-09	3.544E-09
SE	1.535E-07	7.969E-08	5.202E-08	3.015E-08	2.057E-08	1.532E-08	1.206E-08	9.866E-09	8.294E-09	7.121E-09	6.215E-09
SSE	1.158E-07	5.923E-08	3.827E-08	2.189E-08	1.482E-08	1.097E-08	8.596E-09	7.000E-09	5.863E-09	5.017E-09	4.367E-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	4.259E-06	9.912E-07	3.098E-07	1.575E-07	9.830E-08	4.393E-08	1.596E-08	7.949E-09	5.079E-09	3.648E-09
SSW	4.682E-06	1.087E-06	3.382E-07	1.715E-07	1.069E-07	4.761E-08	1.721E-08	8.532E-09	5.435E-09	3.895E-09
SW	2.741E-06	6.313E-07	1.955E-07	9.877E-08	6.137E-08	2.720E-08	9.759E-09	4.812E-09	3.056E-09	2.187E-09
WSW	1.173E-06	2.738E-07	8.303E-08	4.140E-08	2.547E-08	1.109E-08	3.846E-09	1.838E-09	1.143E-09	8.041E-10
W	2.861E-06	6.598E-07	2.010E-07	1.006E-07	6.201E-08	2.713E-08	9.506E-09	4.588E-09	2.873E-09	2.033E-09
WNW	2.738E-06	6.382E-07	1.933E-07	9.636E-08	5.926E-08	2.580E-08	8.957E-09	4.289E-09	2.670E-09	1.881E-09
NW	4.917E-06	1.150E-06	3.530E-07	1.774E-07	1.097E-07	4.825E-08	1.704E-08	8.277E-09	5.202E-09	3.691E-09
NNW	9.271E-06	2.196E-06	7.012E-07	3.606E-07	2.269E-07	1.027E-07	3.806E-08	1.921E-08	1.237E-08	8.932E-09
N	1.279E-05	3.004E-06	1.001E-06	5.272E-07	3.374E-07	1.570E-07	6.074E-08	3.166E-08	2.080E-08	1.524E-08
NNE	8.046E-06	1.913E-06	6.375E-07	3.358E-07	2.148E-07	9.989E-08	3.860E-08	2.009E-08	1.318E-08	9.652E-09
NE	3.748E-06	8.742E-07	2.834E-07	1.471E-07	9.321E-08	4.269E-08	1.615E-08	8.296E-09	5.405E-09	3.938E-09
ENE	4.813E-06	1.143E-06	3.756E-07	1.963E-07	1.249E-07	5.753E-08	2.191E-08	1.129E-08	7.359E-09	5.364E-09
E	4.472E-06	1.047E-06	3.473E-07	1.825E-07	1.166E-07	5.410E-08	2.084E-08	1.083E-08	7.101E-09	5.197E-09
ESE	4.699E-06	1.110E-06	3.485E-07	1.775E-07	1.109E-07	4.955E-08	1.799E-08	8.928E-09	5.689E-09	4.078E-09
SE	7.964E-06	1.843E-06	5.820E-07	2.975E-07	1.864E-07	8.380E-08	3.075E-08	1.542E-08	9.895E-09	7.133E-09
SSE	6.376E-06	1.469E-06	4.519E-07	2.277E-07	1.412E-07	6.248E-08	2.239E-08	1.105E-08	7.023E-09	5.027E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2016
 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	2.429E-05	8.176E-06	4.374E-06	2.186E-06	8.723E-07	4.698E-07	2.963E-07	2.060E-07	1.528E-07	1.187E-07	9.549E-08
SSW	2.608E-05	8.973E-06	4.811E-06	2.398E-06	9.534E-07	5.120E-07	3.223E-07	2.236E-07	1.656E-07	1.285E-07	1.032E-07
SW	1.548E-05	5.282E-06	2.808E-06	1.396E-06	5.532E-07	2.963E-07	1.861E-07	1.289E-07	9.526E-08	7.380E-08	5.921E-08
WSW	6.181E-06	2.216E-06	1.217E-06	6.116E-07	2.394E-07	1.271E-07	7.924E-08	5.455E-08	4.013E-08	3.096E-08	2.474E-08
W	1.558E-05	5.469E-06	2.946E-06	1.470E-06	5.768E-07	3.068E-07	1.916E-07	1.321E-07	9.723E-08	7.507E-08	6.004E-08
WNW	1.440E-05	5.172E-06	2.841E-06	1.427E-06	5.582E-07	2.962E-07	1.848E-07	1.272E-07	9.359E-08	7.222E-08	5.774E-08
NW	2.669E-05	9.324E-06	5.087E-06	2.558E-06	1.009E-06	5.389E-07	3.377E-07	2.334E-07	1.723E-07	1.333E-07	1.069E-07
NNW	5.407E-05	1.771E-05	9.514E-06	4.792E-06	1.939E-06	1.054E-06	6.696E-07	4.679E-07	3.486E-07	2.719E-07	2.194E-07
N	8.073E-05	2.506E-05	1.291E-05	6.415E-06	2.671E-06	1.481E-06	9.541E-07	6.743E-07	5.071E-07	3.986E-07	3.238E-07
NNE	5.075E-05	1.562E-05	8.151E-06	4.084E-06	1.701E-06	9.428E-07	6.074E-07	4.292E-07	3.227E-07	2.536E-07	2.060E-07
NE	2.309E-05	7.304E-06	3.803E-06	1.893E-06	7.738E-07	4.236E-07	2.705E-07	1.898E-07	1.419E-07	1.110E-07	8.986E-08
ENE	2.972E-05	9.301E-06	4.895E-06	2.459E-06	1.015E-06	5.589E-07	3.584E-07	2.524E-07	1.892E-07	1.483E-07	1.202E-07
E	2.797E-05	8.766E-06	4.520E-06	2.243E-06	9.315E-07	5.153E-07	3.316E-07	2.341E-07	1.759E-07	1.382E-07	1.122E-07
ESE	2.637E-05	8.923E-06	4.848E-06	2.444E-06	9.785E-07	5.280E-07	3.335E-07	2.320E-07	1.722E-07	1.339E-07	1.078E-07
SE	4.625E-05	1.543E-05	8.135E-06	4.045E-06	1.625E-06	8.790E-07	5.563E-07	3.876E-07	2.881E-07	2.242E-07	1.806E-07
SSE	3.649E-05	1.227E-05	6.544E-06	3.262E-06	1.288E-06	6.884E-07	4.318E-07	2.987E-07	2.207E-07	1.709E-07	1.371E-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	7.892E-08	4.022E-08	2.582E-08	1.451E-08	9.618E-09	6.970E-09	5.344E-09	4.258E-09	3.490E-09	2.924E-09	2.491E-09
SSW	8.519E-08	4.315E-08	2.756E-08	1.535E-08	1.009E-08	7.254E-09	5.519E-09	4.366E-09	3.553E-09	2.956E-09	2.501E-09
SW	4.881E-08	2.459E-08	1.564E-08	8.660E-09	5.669E-09	4.062E-09	3.081E-09	2.431E-09	1.974E-09	1.638E-09	1.383E-09
WSW	2.033E-08	1.012E-08	6.383E-09	3.496E-09	2.273E-09	1.622E-09	1.228E-09	9.676E-10	7.854E-10	6.520E-10	5.510E-10
W	4.936E-08	2.463E-08	1.556E-08	8.531E-09	5.545E-09	3.954E-09	2.989E-09	2.352E-09	1.905E-09	1.579E-09	1.332E-09
WNW	4.745E-08	2.365E-08	1.495E-08	8.219E-09	5.366E-09	3.844E-09	2.920E-09	2.310E-09	1.881E-09	1.567E-09	1.329E-09
NW	8.803E-08	4.426E-08	2.815E-08	1.561E-08	1.025E-08	7.380E-09	5.628E-09	4.465E-09	3.648E-09	3.046E-09	2.589E-09
NNW	1.818E-07	9.353E-08	6.038E-08	3.413E-08	2.268E-08	1.645E-08	1.261E-08	1.004E-08	8.219E-09	6.874E-09	5.848E-09
N	2.699E-07	1.418E-07	9.275E-08	5.329E-08	3.573E-08	2.606E-08	2.004E-08	1.599E-08	1.311E-08	1.097E-08	9.334E-09
NNE	1.717E-07	9.009E-08	5.889E-08	3.378E-08	2.262E-08	1.648E-08	1.266E-08	1.009E-08	8.261E-09	6.907E-09	5.870E-09
NE	7.465E-08	3.874E-08	2.516E-08	1.434E-08	9.586E-09	6.981E-09	5.367E-09	4.283E-09	3.514E-09	2.943E-09	2.507E-09
ENE	9.998E-08	5.212E-08	3.393E-08	1.938E-08	1.295E-08	9.421E-09	7.235E-09	5.767E-09	4.725E-09	3.953E-09	3.362E-09
E	9.349E-08	4.904E-08	3.206E-08	1.842E-08	1.235E-08	9.015E-09	6.940E-09	5.544E-09	4.551E-09	3.813E-09	3.249E-09
ESE	8.911E-08	4.545E-08	2.919E-08	1.641E-08	1.088E-08	7.883E-09	6.044E-09	4.817E-09	3.949E-09	3.309E-09	2.820E-09
SE	1.495E-07	7.646E-08	4.919E-08	2.769E-08	1.835E-08	1.329E-08	1.017E-08	8.094E-09	6.625E-09	5.540E-09	4.713E-09
SSE	1.130E-07	5.709E-08	3.642E-08	2.030E-08	1.340E-08	9.673E-09	7.394E-09	5.877E-09	4.807E-09	4.018E-09	3.418E-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	4.246E-06	9.853E-07	3.064E-07	1.550E-07	9.623E-08	4.242E-08	1.485E-08	7.026E-09	4.276E-09	2.932E-09
SSW	4.663E-06	1.078E-06	3.334E-07	1.680E-07	1.040E-07	4.556E-08	1.572E-08	7.316E-09	4.386E-09	2.964E-09
SW	2.730E-06	6.263E-07	1.926E-07	9.668E-08	5.968E-08	2.599E-08	8.882E-09	4.098E-09	2.443E-09	1.643E-09
WSW	1.170E-06	2.722E-07	8.212E-08	4.076E-08	2.495E-08	1.073E-08	3.594E-09	1.638E-09	9.726E-10	6.541E-10
W	2.850E-06	6.553E-07	1.985E-07	9.874E-08	6.054E-08	2.609E-08	8.765E-09	3.992E-09	2.364E-09	1.584E-09
WNW	2.731E-06	6.349E-07	1.915E-07	9.505E-08	5.822E-08	2.507E-08	8.446E-09	3.880E-09	2.321E-09	1.572E-09
NW	4.904E-06	1.144E-06	3.496E-07	1.749E-07	1.077E-07	4.682E-08	1.602E-08	7.445E-09	4.486E-09	3.055E-09
NNW	9.236E-06	2.180E-06	6.915E-07	3.535E-07	2.210E-07	9.842E-08	3.487E-08	1.657E-08	1.008E-08	6.892E-09
N	1.272E-05	2.974E-06	9.826E-07	5.135E-07	3.260E-07	1.485E-07	5.426E-08	2.623E-08	1.605E-08	1.100E-08
NNE	8.004E-06	1.894E-06	6.255E-07	3.268E-07	2.074E-07	9.435E-08	3.440E-08	1.659E-08	1.013E-08	6.924E-09
NE	3.732E-06	8.669E-07	2.791E-07	1.439E-07	9.050E-08	4.069E-08	1.463E-08	7.030E-09	4.300E-09	2.951E-09
ENE	4.791E-06	1.133E-06	3.695E-07	1.916E-07	1.210E-07	5.467E-08	1.976E-08	9.487E-09	5.790E-09	3.963E-09
E	4.452E-06	1.038E-06	3.416E-07	1.782E-07	1.130E-07	5.137E-08	1.875E-08	9.075E-09	5.565E-09	3.823E-09
ESE	4.685E-06	1.104E-06	3.448E-07	1.747E-07	1.086E-07	4.793E-08	1.679E-08	7.946E-09	4.837E-09	3.317E-09
SE	7.938E-06	1.831E-06	5.749E-07	2.922E-07	1.820E-07	8.056E-08	2.832E-08	1.339E-08	8.128E-09	5.555E-09
SSE	6.358E-06	1.460E-06	4.470E-07	2.240E-07	1.382E-07	6.034E-08	2.081E-08	9.754E-09	5.903E-09	4.030E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2016
 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	2.301E-05	7.478E-06	3.907E-06	1.919E-06	7.443E-07	3.915E-07	2.420E-07	1.652E-07	1.206E-07	9.236E-08	7.331E-08
SSW	2.471E-05	8.211E-06	4.300E-06	2.108E-06	8.147E-07	4.276E-07	2.639E-07	1.799E-07	1.312E-07	1.003E-07	7.957E-08
SW	1.466E-05	4.834E-06	2.510E-06	1.227E-06	4.728E-07	2.475E-07	1.524E-07	1.037E-07	7.549E-08	5.767E-08	4.567E-08
WSW	5.855E-06	2.026E-06	1.087E-06	5.371E-07	2.043E-07	1.059E-07	6.471E-08	4.376E-08	3.167E-08	2.408E-08	1.899E-08
W	1.476E-05	5.003E-06	2.632E-06	1.291E-06	4.926E-07	2.559E-07	1.567E-07	1.061E-07	7.689E-08	5.852E-08	4.619E-08
WNW	1.364E-05	4.729E-06	2.537E-06	1.253E-06	4.760E-07	2.467E-07	1.507E-07	1.019E-07	7.376E-08	5.607E-08	4.422E-08
NW	2.528E-05	8.526E-06	4.542E-06	2.245E-06	8.606E-07	4.488E-07	2.755E-07	1.870E-07	1.358E-07	1.036E-07	8.188E-08
NNW	5.122E-05	1.620E-05	8.503E-06	4.211E-06	1.657E-06	8.800E-07	5.480E-07	3.763E-07	2.760E-07	2.122E-07	1.691E-07
N	7.651E-05	2.294E-05	1.155E-05	5.644E-06	2.287E-06	1.239E-06	7.833E-07	5.444E-07	4.033E-07	3.127E-07	2.509E-07
NNE	4.810E-05	1.431E-05	7.293E-06	3.594E-06	1.457E-06	7.893E-07	4.989E-07	3.467E-07	2.568E-07	1.991E-07	1.597E-07
NE	2.188E-05	6.685E-06	3.400E-06	1.664E-06	6.615E-07	3.539E-07	2.216E-07	1.529E-07	1.126E-07	8.686E-08	6.940E-08
ENE	2.817E-05	8.514E-06	4.377E-06	2.162E-06	8.681E-07	4.673E-07	2.939E-07	2.034E-07	1.502E-07	1.161E-07	9.294E-08
E	2.650E-05	8.025E-06	4.042E-06	1.973E-06	7.967E-07	4.308E-07	2.719E-07	1.888E-07	1.397E-07	1.082E-07	8.679E-08
ESE	2.498E-05	8.161E-06	4.330E-06	2.146E-06	8.349E-07	4.400E-07	2.723E-07	1.861E-07	1.359E-07	1.041E-07	8.270E-08
SE	4.381E-05	1.411E-05	7.268E-06	3.553E-06	1.387E-06	7.330E-07	4.547E-07	3.113E-07	2.277E-07	1.747E-07	1.389E-07
SSE	3.456E-05	1.122E-05	5.844E-06	2.864E-06	1.099E-06	5.737E-07	3.526E-07	2.396E-07	1.742E-07	1.330E-07	1.053E-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	5.984E-08	2.910E-08	1.796E-08	9.512E-09	6.027E-09	4.209E-09	3.127E-09	2.424E-09	1.939E-09	1.588E-09	1.325E-09
SSW	6.490E-08	3.144E-08	1.935E-08	1.020E-08	6.435E-09	4.479E-09	3.317E-09	2.563E-09	2.044E-09	1.670E-09	1.390E-09
SW	3.721E-08	1.794E-08	1.100E-08	5.770E-09	3.630E-09	2.520E-09	1.862E-09	1.437E-09	1.144E-09	9.334E-10	7.761E-10
WSW	1.541E-08	7.312E-09	4.433E-09	2.286E-09	1.419E-09	9.751E-10	7.148E-10	5.479E-10	4.339E-10	3.522E-10	2.917E-10
W	3.752E-08	1.788E-08	1.087E-08	5.631E-09	3.507E-09	2.416E-09	1.775E-09	1.363E-09	1.080E-09	8.780E-10	7.276E-10
WNW	3.588E-08	1.704E-08	1.034E-08	5.337E-09	3.320E-09	2.286E-09	1.678E-09	1.288E-09	1.022E-09	8.305E-10	6.886E-10
NW	6.659E-08	3.191E-08	1.949E-08	1.016E-08	6.362E-09	4.404E-09	3.247E-09	2.502E-09	1.990E-09	1.623E-09	1.349E-09
NNW	1.384E-07	6.807E-08	4.233E-08	2.262E-08	1.441E-08	1.010E-08	7.527E-09	5.847E-09	4.684E-09	3.841E-09	3.208E-09
N	2.068E-07	1.042E-07	6.584E-08	3.597E-08	2.324E-08	1.647E-08	1.237E-08	9.670E-09	7.787E-09	6.413E-09	5.377E-09
NNE	1.316E-07	6.626E-08	4.186E-08	2.284E-08	1.475E-08	1.044E-08	7.836E-09	6.123E-09	4.927E-09	4.056E-09	3.399E-09
NE	5.697E-08	2.831E-08	1.774E-08	9.582E-09	6.155E-09	4.342E-09	3.251E-09	2.536E-09	2.038E-09	1.676E-09	1.404E-09
ENE	7.642E-08	3.816E-08	2.398E-08	1.299E-08	8.352E-09	5.894E-09	4.412E-09	3.441E-09	2.765E-09	2.274E-09	1.904E-09
E	7.148E-08	3.592E-08	2.267E-08	1.236E-08	7.981E-09	5.651E-09	4.242E-09	3.315E-09	2.669E-09	2.198E-09	1.843E-09
ESE	6.753E-08	3.285E-08	2.028E-08	1.073E-08	6.791E-09	4.738E-09	3.517E-09	2.724E-09	2.178E-09	1.783E-09	1.487E-09
SE	1.136E-07	5.551E-08	3.438E-08	1.828E-08	1.161E-08	8.121E-09	6.039E-09	4.685E-09	3.749E-09	3.072E-09	2.564E-09
SSE	8.571E-08	4.131E-08	2.535E-08	1.332E-08	8.399E-09	5.846E-09	4.331E-09	3.350E-09	2.674E-09	2.186E-09	1.822E-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	3.817E-06	8.486E-07	2.512E-07	1.226E-07	7.397E-08	3.098E-08	9.841E-09	4.261E-09	2.440E-09	1.594E-09
SSW	4.195E-06	9.300E-07	2.739E-07	1.333E-07	8.029E-08	3.350E-08	1.056E-08	4.536E-09	2.581E-09	1.677E-09
SW	2.456E-06	5.403E-07	1.583E-07	7.676E-08	4.609E-08	1.914E-08	5.981E-09	2.553E-09	1.447E-09	9.376E-10
WSW	1.051E-06	2.345E-07	6.732E-08	3.223E-08	1.917E-08	7.831E-09	2.378E-09	9.893E-10	5.521E-10	3.540E-10
W	2.563E-06	5.649E-07	1.629E-07	7.823E-08	4.663E-08	1.913E-08	5.852E-09	2.451E-09	1.373E-09	8.823E-10
WNW	2.453E-06	5.467E-07	1.568E-07	7.506E-08	4.464E-08	1.825E-08	5.551E-09	2.318E-09	1.298E-09	8.346E-10
NW	4.407E-06	9.852E-07	2.863E-07	1.382E-07	8.264E-08	3.410E-08	1.055E-08	4.463E-09	2.520E-09	1.630E-09
NNW	8.306E-06	1.879E-06	5.678E-07	2.804E-07	1.705E-07	7.226E-08	2.335E-08	1.022E-08	5.884E-09	3.856E-09
N	1.146E-05	2.567E-06	8.093E-07	4.091E-07	2.529E-07	1.099E-07	3.695E-08	1.664E-08	9.723E-09	6.437E-09
NNE	7.208E-06	1.635E-06	5.155E-07	2.605E-07	1.610E-07	6.994E-08	2.347E-08	1.055E-08	6.157E-09	4.071E-09
NE	3.359E-06	7.476E-07	2.294E-07	1.143E-07	6.997E-08	2.998E-08	9.871E-09	4.389E-09	2.551E-09	1.683E-09
ENE	4.312E-06	9.775E-07	3.040E-07	1.524E-07	9.369E-08	4.036E-08	1.337E-08	5.957E-09	3.461E-09	2.282E-09
E	4.007E-06	8.954E-07	2.810E-07	1.417E-07	8.747E-08	3.794E-08	1.271E-08	5.708E-09	3.334E-09	2.206E-09
ESE	4.210E-06	9.507E-07	2.825E-07	1.381E-07	8.343E-08	3.497E-08	1.110E-08	4.797E-09	2.743E-09	1.790E-09
SE	7.138E-06	1.578E-06	4.716E-07	2.314E-07	1.401E-07	5.902E-08	1.890E-08	8.219E-09	4.715E-09	3.084E-09
SSE	5.715E-06	1.258E-06	3.664E-07	1.772E-07	1.062E-07	4.408E-08	1.380E-08	5.921E-09	3.373E-09	2.196E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2016
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	1.473E-07	4.981E-08	2.558E-08	1.216E-08	4.368E-09	2.166E-09	1.275E-09	8.351E-10	5.876E-10	4.355E-10	3.356E-10
SSW	1.017E-07	3.438E-08	1.765E-08	8.392E-09	3.015E-09	1.495E-09	8.803E-10	5.764E-10	4.056E-10	3.006E-10	2.316E-10
SW	5.246E-08	1.774E-08	9.109E-09	4.331E-09	1.556E-09	7.714E-10	4.542E-10	2.974E-10	2.093E-10	1.551E-10	1.195E-10
WSW	2.988E-08	1.010E-08	5.188E-09	2.466E-09	8.860E-10	4.394E-10	2.587E-10	1.694E-10	1.192E-10	8.834E-11	6.807E-11
W	6.837E-08	2.312E-08	1.187E-08	5.644E-09	2.027E-09	1.005E-09	5.920E-10	3.876E-10	2.727E-10	2.021E-10	1.558E-10
WNW	7.893E-08	2.669E-08	1.370E-08	6.515E-09	2.340E-09	1.161E-09	6.834E-10	4.475E-10	3.149E-10	2.333E-10	1.798E-10
NW	1.600E-07	5.412E-08	2.779E-08	1.321E-08	4.745E-09	2.353E-09	1.386E-09	9.073E-10	6.384E-10	4.731E-10	3.646E-10
NNW	2.397E-07	8.107E-08	4.162E-08	1.979E-08	7.108E-09	3.525E-09	2.076E-09	1.359E-09	9.563E-10	7.087E-10	5.461E-10
N	2.657E-07	8.984E-08	4.613E-08	2.193E-08	7.878E-09	3.907E-09	2.300E-09	1.506E-09	1.060E-09	7.854E-10	6.053E-10
NNE	1.487E-07	5.030E-08	2.583E-08	1.228E-08	4.410E-09	2.187E-09	1.288E-09	8.432E-10	5.933E-10	4.397E-10	3.389E-10
NE	9.537E-08	3.225E-08	1.656E-08	7.872E-09	2.828E-09	1.402E-09	8.257E-10	5.407E-10	3.804E-10	2.819E-10	2.173E-10
ENE	9.139E-08	3.091E-08	1.587E-08	7.544E-09	2.710E-09	1.344E-09	7.913E-10	5.181E-10	3.646E-10	2.702E-10	2.082E-10
E	9.028E-08	3.053E-08	1.568E-08	7.452E-09	2.677E-09	1.328E-09	7.817E-10	5.118E-10	3.601E-10	2.669E-10	2.057E-10
ESE	1.484E-07	5.018E-08	2.577E-08	1.225E-08	4.400E-09	2.182E-09	1.285E-09	8.413E-10	5.920E-10	4.387E-10	3.381E-10
SE	3.086E-07	1.044E-07	5.359E-08	2.548E-08	9.151E-09	4.538E-09	2.672E-09	1.750E-09	1.231E-09	9.125E-10	7.032E-10
SSE	2.891E-07	9.777E-08	5.020E-08	2.387E-08	8.573E-09	4.251E-09	2.503E-09	1.639E-09	1.153E-09	8.548E-10	6.587E-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	2.666E-10	1.184E-10	7.174E-11	3.626E-11	2.195E-11	1.472E-11	1.054E-11	7.918E-12	6.156E-12	4.918E-12	4.014E-12
SSW	1.840E-10	8.174E-11	4.952E-11	2.503E-11	1.515E-11	1.016E-11	7.278E-12	5.465E-12	4.249E-12	3.394E-12	2.770E-12
SW	9.495E-11	4.218E-11	2.555E-11	1.292E-11	7.817E-12	5.241E-12	3.755E-12	2.820E-12	2.193E-12	1.751E-12	1.430E-12
WSW	5.408E-11	2.402E-11	1.455E-11	7.356E-12	4.452E-12	2.985E-12	2.139E-12	1.606E-12	1.249E-12	9.975E-13	8.142E-13
W	1.237E-10	5.497E-11	3.330E-11	1.683E-11	1.019E-11	6.830E-12	4.894E-12	3.675E-12	2.857E-12	2.283E-12	1.863E-12
WNW	1.429E-10	6.346E-11	3.844E-11	1.943E-11	1.176E-11	7.885E-12	5.650E-12	4.242E-12	3.299E-12	2.635E-12	2.151E-12
NW	2.896E-10	1.287E-10	7.794E-11	3.940E-11	2.384E-11	1.599E-11	1.146E-11	8.602E-12	6.688E-12	5.343E-12	4.361E-12
NNW	4.339E-10	1.927E-10	1.168E-10	5.901E-11	3.572E-11	2.395E-11	1.716E-11	1.289E-11	1.002E-11	8.003E-12	6.532E-12
N	4.809E-10	2.136E-10	1.294E-10	6.540E-11	3.959E-11	2.654E-11	1.902E-11	1.428E-11	1.110E-11	8.870E-12	7.240E-12
NNE	2.692E-10	1.196E-10	7.244E-11	3.662E-11	2.216E-11	1.486E-11	1.065E-11	7.995E-12	6.216E-12	4.966E-12	4.053E-12
NE	1.726E-10	7.668E-11	4.645E-11	2.348E-11	1.421E-11	9.527E-12	6.827E-12	5.126E-12	3.986E-12	3.184E-12	2.599E-12
ENE	1.654E-10	7.348E-11	4.451E-11	2.250E-11	1.362E-11	9.130E-12	6.542E-12	4.912E-12	3.820E-12	3.051E-12	2.490E-12
E	1.634E-10	7.259E-11	4.397E-11	2.223E-11	1.345E-11	9.019E-12	6.463E-12	4.853E-12	3.773E-12	3.014E-12	2.460E-12
ESE	2.686E-10	1.193E-10	7.228E-11	3.653E-11	2.211E-11	1.483E-11	1.062E-11	7.977E-12	6.202E-12	4.954E-12	4.044E-12
SE	5.586E-10	2.482E-10	1.503E-10	7.598E-11	4.599E-11	3.083E-11	2.209E-11	1.659E-11	1.290E-11	1.030E-11	8.410E-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	2.500E-08	5.121E-09	1.337E-09	6.004E-10	3.396E-10	1.306E-10	3.779E-11	1.498E-11	7.997E-12	4.950E-12
SSW	1.725E-08	3.534E-09	9.226E-10	4.144E-10	2.344E-10	9.015E-11	2.608E-11	1.034E-11	5.520E-12	3.416E-12
SW	8.903E-09	1.824E-09	4.761E-10	2.138E-10	1.210E-10	4.652E-11	1.346E-11	5.334E-12	2.848E-12	1.763E-12
WSW	5.071E-09	1.039E-09	2.712E-10	1.218E-10	6.890E-11	2.649E-11	7.665E-12	3.038E-12	1.622E-12	1.004E-12
W	1.160E-08	2.377E-09	6.205E-10	2.787E-10	1.576E-10	6.062E-11	1.754E-11	6.951E-12	3.712E-12	2.298E-12
WNW	1.339E-08	2.744E-09	7.163E-10	3.217E-10	1.820E-10	6.998E-11	2.025E-11	8.024E-12	4.285E-12	2.652E-12
NW	2.716E-08	5.563E-09	1.452E-09	6.523E-10	3.690E-10	1.419E-10	4.105E-11	1.627E-11	8.688E-12	5.378E-12
NNW	4.068E-08	8.333E-09	2.175E-09	9.771E-10	5.527E-10	2.126E-10	6.149E-11	2.437E-11	1.301E-11	8.056E-12
N	4.509E-08	9.236E-09	2.411E-09	1.083E-09	6.126E-10	2.356E-10	6.815E-11	2.701E-11	1.442E-11	8.928E-12
NNE	2.524E-08	5.170E-09	1.350E-09	6.062E-10	3.429E-10	1.319E-10	3.815E-11	1.512E-11	8.075E-12	4.998E-12
NE	1.619E-08	3.315E-09	8.655E-10	3.887E-10	2.199E-10	8.456E-11	2.446E-11	9.696E-12	5.178E-12	3.205E-12
ENE	1.551E-08	3.177E-09	8.294E-10	3.725E-10	2.107E-10	8.103E-11	2.344E-11	9.291E-12	4.962E-12	3.071E-12
E	1.532E-08	3.138E-09	8.193E-10	3.680E-10	2.082E-10	8.005E-11	2.316E-11	9.179E-12	4.901E-12	3.034E-12
ESE	2.519E-08	5.159E-09	1.347E-09	6.049E-10	3.422E-10	1.316E-10	3.807E-11	1.509E-11	8.057E-12	4.987E-12
SE	5.238E-08	1.073E-08	2.801E-09	1.258E-09	7.116E-10	2.737E-10	7.917E-11	3.138E-11	1.676E-11	1.037E-11
SSE	4.907E-08	1.005E-08	2.624E-09	1.178E-09	6.666E-10	2.564E-10	7.416E-11	2.939E-11	1.570E-11	9.716E-12

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE OF INTEREST	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	3.8E-06	3.8E-06	3.3E-06	2.2E-08
A	Site Boundary	SSW	.82	3.8E-06	3.8E-06	3.4E-06	1.4E-08
A	Site Boundary	SW	.97	1.5E-06	1.5E-06	1.3E-06	4.6E-09
A	Site Boundary	WSW	.93	7.4E-07	7.4E-07	6.5E-07	3.0E-09
A	Site Boundary	W	.91	1.8E-06	1.8E-06	1.6E-06	7.1E-09
A	Site Boundary	WNW	.94	1.7E-06	1.7E-06	1.5E-06	7.7E-09
A	Site Boundary	NW	.81	4.2E-06	4.2E-06	3.8E-06	2.3E-08
A	Site Boundary	NNW	.69	1.1E-05	1.1E-05	9.7E-06	4.8E-08
A	Site Boundary	N	.67	1.5E-05	1.5E-05	1.4E-05	5.5E-08
A	Site Boundary	NNE	.60	1.2E-05	1.2E-05	1.1E-05	3.7E-08
A	Site Boundary	NE	.62	5.1E-06	5.1E-06	4.6E-06	2.3E-08
A	Site Boundary	ENE	.59	7.2E-06	7.2E-06	6.5E-06	2.4E-08
A	Site Boundary	E	.53	8.1E-06	8.1E-06	7.4E-06	2.8E-08
A	Site Boundary	ESE	.54	8.0E-06	8.0E-06	7.3E-06	4.5E-08
A	Site Boundary	SE	.65	1.0E-05	1.0E-05	9.2E-06	6.8E-08
A	Site Boundary	SSE	.81	5.4E-06	5.4E-06	4.8E-06	4.1E-08
A	Nearest Res	SSW	3.00	2.3E-07	2.2E-07	1.8E-07	5.8E-10
A	Nearest Res	SW	1.70	4.2E-07	4.2E-07	3.6E-07	1.1E-09
A	Nearest Res	WSW	1.90	1.4E-07	1.4E-07	1.2E-07	5.0E-10
A	Nearest Res	W	1.00	1.5E-06	1.5E-06	1.3E-06	5.6E-09
A	Nearest Res	WNW	1.70	4.3E-07	4.2E-07	3.6E-07	1.7E-09
A	Nearest Res	NW	.90	3.3E-06	3.3E-06	2.9E-06	1.7E-08
A	Nearest Res	NNW	1.90	1.2E-06	1.2E-06	9.8E-07	4.0E-09
A	Nearest Res	N	2.90	7.3E-07	7.2E-07	5.8E-07	1.6E-09
A	Nearest Res	NNE	1.70	1.3E-06	1.3E-06	1.1E-06	3.2E-09
A	Nearest Res	ENE	1.70	7.9E-07	7.8E-07	6.6E-07	2.0E-09
A	Nearest Res	E	2.20	4.3E-07	4.3E-07	3.5E-07	1.1E-09
A	Nearest Res	ESE	2.80	2.7E-07	2.7E-07	2.1E-07	9.9E-10
A	Nearest Res	SE	3.00	3.9E-07	3.9E-07	3.1E-07	1.7E-09
A	Nearest Res	SSE	3.00	3.0E-07	3.0E-07	2.4E-07	1.6E-09
A	Nearest Cow	NNW	3.50	3.6E-07	3.5E-07	2.8E-07	9.6E-10
A	Nearest Garde	SSW	3.00	2.3E-07	2.2E-07	1.8E-07	5.8E-10
A	Nearest Garde	SW	2.20	2.5E-07	2.4E-07	2.0E-07	6.1E-10
A	Nearest Garde	NNW	3.00	4.8E-07	4.7E-07	3.8E-07	1.4E-09
A	Nearest Garde	ENE	1.70	7.9E-07	7.8E-07	6.6E-07	2.0E-09
A	Nearest Garde	ESE	2.30	4.0E-07	4.0E-07	3.3E-07	1.6E-09
A	Nearest Garde	SSE	3.00	3.0E-07	3.0E-07	2.4E-07	1.6E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

April-June 2016

VENTS GROUND LEVEL RELEASES - APR-JUN 2016
 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	3.321E-05	1.098E-05	5.983E-06	3.031E-06	1.218E-06	6.595E-07	4.180E-07	2.917E-07	2.172E-07	1.694E-07	1.368E-07
SSW	2.352E-05	8.064E-06	4.399E-06	2.218E-06	8.801E-07	4.723E-07	2.972E-07	2.062E-07	1.528E-07	1.187E-07	9.546E-08
SW	1.522E-05	5.262E-06	2.872E-06	1.449E-06	5.696E-07	3.035E-07	1.899E-07	1.311E-07	9.671E-08	7.482E-08	5.997E-08
WSW	1.346E-05	4.876E-06	2.694E-06	1.357E-06	5.333E-07	2.841E-07	1.778E-07	1.228E-07	9.066E-08	7.016E-08	5.625E-08
W	1.302E-05	4.785E-06	2.618E-06	1.307E-06	5.074E-07	2.681E-07	1.667E-07	1.145E-07	8.411E-08	6.484E-08	5.180E-08
WNW	1.943E-05	7.012E-06	3.832E-06	1.917E-06	7.469E-07	3.956E-07	2.465E-07	1.696E-07	1.248E-07	9.631E-08	7.704E-08
NW	2.251E-05	7.944E-06	4.307E-06	2.151E-06	8.358E-07	4.418E-07	2.748E-07	1.889E-07	1.388E-07	1.071E-07	8.558E-08
NNW	4.325E-05	1.458E-05	7.865E-06	3.948E-06	1.574E-06	8.484E-07	5.358E-07	3.729E-07	2.770E-07	2.157E-07	1.738E-07
N	7.272E-05	2.347E-05	1.266E-05	6.412E-06	2.614E-06	1.429E-06	9.124E-07	6.405E-07	4.793E-07	3.754E-07	3.042E-07
NNE	3.796E-05	1.252E-05	6.905E-06	3.528E-06	1.428E-06	7.770E-07	4.941E-07	3.457E-07	2.580E-07	2.015E-07	1.629E-07
NE	2.267E-05	7.109E-06	3.629E-06	1.793E-06	7.496E-07	4.171E-07	2.699E-07	1.915E-07	1.446E-07	1.141E-07	9.308E-08
ENE	2.854E-05	9.127E-06	4.788E-06	2.393E-06	9.841E-07	5.413E-07	3.472E-07	2.447E-07	1.837E-07	1.442E-07	1.172E-07
E	3.410E-05	1.041E-05	5.316E-06	2.642E-06	1.116E-06	6.248E-07	4.061E-07	2.892E-07	2.190E-07	1.733E-07	1.416E-07
ESE	3.440E-05	1.066E-05	5.572E-06	2.796E-06	1.165E-06	6.469E-07	4.176E-07	2.958E-07	2.230E-07	1.757E-07	1.432E-07
SE	6.873E-05	2.077E-05	1.054E-05	5.223E-06	2.212E-06	1.241E-06	8.079E-07	5.760E-07	4.365E-07	3.456E-07	2.827E-07
SSE	6.807E-05	2.139E-05	1.111E-05	5.535E-06	2.294E-06	1.269E-06	8.172E-07	5.778E-07	4.350E-07	3.425E-07	2.788E-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	1.134E-07	5.873E-08	3.826E-08	2.211E-08	1.505E-08	1.119E-08	8.794E-09	7.179E-09	6.025E-09	5.165E-09	4.502E-09
SSW	7.890E-08	4.033E-08	2.603E-08	1.484E-08	1.001E-08	7.388E-09	5.771E-09	4.688E-09	3.918E-09	3.345E-09	2.906E-09
SW	4.940E-08	2.492E-08	1.593E-08	8.956E-09	5.977E-09	4.376E-09	3.396E-09	2.743E-09	2.281E-09	1.939E-09	1.678E-09
WSW	4.636E-08	2.341E-08	1.497E-08	8.419E-09	5.614E-09	4.106E-09	3.183E-09	2.569E-09	2.134E-09	1.813E-09	1.567E-09
W	4.256E-08	2.123E-08	1.346E-08	7.483E-09	4.956E-09	3.606E-09	2.783E-09	2.238E-09	1.853E-09	1.570E-09	1.354E-09
WNW	6.336E-08	3.176E-08	2.022E-08	1.130E-08	7.504E-09	5.473E-09	4.234E-09	3.410E-09	2.829E-09	2.400E-09	2.072E-09
NW	7.034E-08	3.519E-08	2.237E-08	1.249E-08	8.304E-09	6.063E-09	4.694E-09	3.784E-09	3.142E-09	2.667E-09	2.305E-09
NNW	1.440E-07	7.420E-08	4.819E-08	2.774E-08	1.885E-08	1.400E-08	1.099E-08	8.964E-09	7.518E-09	6.442E-09	5.612E-09
N	2.531E-07	1.326E-07	8.711E-08	5.092E-08	3.493E-08	2.613E-08	2.064E-08	1.692E-08	1.425E-08	1.225E-08	1.071E-08
NNE	1.353E-07	7.032E-08	4.592E-08	2.661E-08	1.813E-08	1.348E-08	1.060E-08	8.655E-09	7.265E-09	6.229E-09	5.429E-09
NE	7.790E-08	4.174E-08	2.785E-08	1.664E-08	1.158E-08	8.764E-09	6.987E-09	5.773E-09	4.897E-09	4.237E-09	3.723E-09
ENE	9.768E-08	5.160E-08	3.409E-08	2.009E-08	1.386E-08	1.042E-08	8.258E-09	6.792E-09	5.737E-09	4.947E-09	4.334E-09
E	1.187E-07	6.404E-08	4.291E-08	2.577E-08	1.801E-08	1.366E-08	1.091E-08	9.031E-09	7.670E-09	6.644E-09	5.845E-09
ESE	1.197E-07	6.386E-08	4.248E-08	2.526E-08	1.753E-08	1.323E-08	1.052E-08	8.677E-09	7.348E-09	6.348E-09	5.572E-09
SE	2.372E-07	1.282E-07	8.608E-08	5.183E-08	3.628E-08	2.756E-08	2.204E-08	1.826E-08	1.552E-08	1.345E-08	1.184E-08
SSE	2.329E-07	1.239E-07	8.233E-08	4.887E-08	3.398E-08	2.557E-08	2.034E-08	1.677E-08	1.420E-08	1.227E-08	1.076E-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	5.783E-06	1.373E-06	4.319E-07	2.203E-07	1.378E-07	6.179E-08	2.256E-08	1.126E-08	7.201E-09	5.174E-09
SSW	4.244E-06	9.961E-07	3.075E-07	1.551E-07	9.621E-08	4.254E-08	1.518E-08	7.440E-09	4.704E-09	3.352E-09
SW	2.771E-06	6.466E-07	1.966E-07	9.819E-08	6.046E-08	2.636E-08	9.181E-09	4.411E-09	2.753E-09	1.944E-09
WSW	2.585E-06	6.056E-07	1.842E-07	9.204E-08	5.671E-08	2.476E-08	8.628E-09	4.139E-09	2.579E-09	1.817E-09
W	2.517E-06	5.788E-07	1.728E-07	8.545E-08	5.224E-08	2.251E-08	7.688E-09	3.637E-09	2.247E-09	1.574E-09
WNW	3.688E-06	8.509E-07	2.555E-07	1.267E-07	7.768E-08	3.365E-08	1.159E-08	5.519E-09	3.424E-09	2.406E-09
NW	4.157E-06	9.530E-07	2.850E-07	1.410E-07	8.630E-08	3.730E-08	1.282E-08	6.113E-09	3.799E-09	2.674E-09
NNW	7.615E-06	1.779E-06	5.540E-07	2.810E-07	1.752E-07	7.814E-08	2.833E-08	1.409E-08	8.992E-09	6.453E-09
N	1.228E-05	2.931E-06	9.414E-07	4.858E-07	3.063E-07	1.391E-07	5.185E-08	2.628E-08	1.696E-08	1.227E-08
NNE	6.651E-06	1.605E-06	5.102E-07	2.615E-07	1.641E-07	7.391E-08	2.713E-08	1.357E-08	8.681E-09	6.240E-09
NE	3.586E-06	8.338E-07	2.778E-07	1.464E-07	9.368E-08	4.360E-08	1.688E-08	8.805E-09	5.786E-09	4.242E-09
ENE	4.688E-06	1.100E-06	3.580E-07	1.861E-07	1.180E-07	5.406E-08	2.043E-08	1.047E-08	6.809E-09	4.954E-09
E	5.259E-06	1.237E-06	4.177E-07	2.216E-07	1.425E-07	6.680E-08	2.613E-08	1.372E-08	9.050E-09	6.652E-09
ESE	5.469E-06	1.297E-06	4.300E-07	2.258E-07	1.441E-07	6.677E-08	2.565E-08	1.329E-08	8.698E-09	6.357E-09
SE	1.045E-05	2.450E-06	8.307E-07	4.417E-07	2.845E-07	1.337E-07	5.253E-08	2.768E-08	1.830E-08	1.347E-08
SSE	1.092E-05	2.559E-06	8.419E-07	4.406E-07	2.806E-07	1.297E-07	4.965E-08	2.570E-08	1.681E-08	1.228E-08

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VENTS GROUND LEVEL RELEASES - APR-JUN 2016
 2.260 DAY DECAY, UNDELETED
 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	3.316E-05	1.096E-05	5.960E-06	3.015E-06	1.208E-06	6.524E-07	4.123E-07	2.869E-07	2.130E-07	1.656E-07	1.333E-07
SSW	2.349E-05	8.045E-06	4.383E-06	2.207E-06	8.735E-07	4.674E-07	2.934E-07	2.030E-07	1.500E-07	1.162E-07	9.320E-08
SW	1.519E-05	5.249E-06	2.861E-06	1.441E-06	5.649E-07	3.001E-07	1.872E-07	1.289E-07	9.480E-08	7.312E-08	5.843E-08
WSW	1.344E-05	4.867E-06	2.687E-06	1.352E-06	5.303E-07	2.820E-07	1.761E-07	1.214E-07	8.945E-08	6.909E-08	5.529E-08
W	1.301E-05	4.777E-06	2.611E-06	1.302E-06	5.046E-07	2.661E-07	1.651E-07	1.132E-07	8.303E-08	6.388E-08	5.094E-08
WNW	1.941E-05	7.000E-06	3.822E-06	1.911E-06	7.431E-07	3.929E-07	2.443E-07	1.679E-07	1.233E-07	9.498E-08	7.584E-08
NW	2.249E-05	7.932E-06	4.297E-06	2.145E-06	8.320E-07	4.392E-07	2.727E-07	1.872E-07	1.373E-07	1.057E-07	8.437E-08
NNW	4.320E-05	1.454E-05	7.837E-06	3.929E-06	1.563E-06	8.399E-07	5.290E-07	3.672E-07	2.721E-07	2.112E-07	1.698E-07
N	7.260E-05	2.339E-05	1.260E-05	6.373E-06	2.589E-06	1.411E-06	8.979E-07	6.283E-07	4.686E-07	3.657E-07	2.954E-07
NNE	3.790E-05	1.248E-05	6.874E-06	3.507E-06	1.415E-06	7.673E-07	4.863E-07	3.392E-07	2.523E-07	1.964E-07	1.583E-07
NE	2.263E-05	7.083E-06	3.610E-06	1.781E-06	7.415E-07	4.110E-07	2.648E-07	1.872E-07	1.408E-07	1.107E-07	8.992E-08
ENE	2.850E-05	9.099E-06	4.766E-06	2.379E-06	9.749E-07	5.345E-07	3.417E-07	2.400E-07	1.796E-07	1.405E-07	1.138E-07
E	3.404E-05	1.037E-05	5.286E-06	2.622E-06	1.103E-06	6.152E-07	3.983E-07	2.825E-07	2.130E-07	1.678E-07	1.366E-07
ESE	3.433E-05	1.062E-05	5.542E-06	2.776E-06	1.153E-06	6.373E-07	4.099E-07	2.892E-07	2.171E-07	1.705E-07	1.383E-07
SE	6.858E-05	2.068E-05	1.047E-05	5.180E-06	2.184E-06	1.220E-06	7.907E-07	5.613E-07	4.235E-07	3.338E-07	2.719E-07
SSE	6.793E-05	2.131E-05	1.105E-05	5.494E-06	2.268E-06	1.249E-06	8.015E-07	5.644E-07	4.231E-07	3.318E-07	2.689E-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	1.103E-07	5.627E-08	3.613E-08	2.029E-08	1.343E-08	9.719E-09	7.437E-09	5.916E-09	4.841E-09	4.048E-09	3.444E-09
SSW	7.682E-08	3.872E-08	2.465E-08	1.367E-08	8.972E-09	6.448E-09	4.907E-09	3.885E-09	3.166E-09	2.638E-09	2.236E-09
SW	4.799E-08	2.384E-08	1.501E-08	8.191E-09	5.307E-09	3.774E-09	2.846E-09	2.235E-09	1.808E-09	1.496E-09	1.260E-09
WSW	4.547E-08	2.273E-08	1.440E-08	7.939E-09	5.191E-09	3.724E-09	2.832E-09	2.242E-09	1.828E-09	1.524E-09	1.293E-09
W	4.177E-08	2.064E-08	1.297E-08	7.076E-09	4.600E-09	3.285E-09	2.489E-09	1.965E-09	1.597E-09	1.329E-09	1.125E-09
WNW	6.227E-08	3.094E-08	1.952E-08	1.072E-08	6.999E-09	5.019E-09	3.817E-09	3.024E-09	2.467E-09	2.059E-09	1.750E-09
NW	6.924E-08	3.436E-08	2.166E-08	1.190E-08	7.789E-09	5.598E-09	4.268E-09	3.389E-09	2.772E-09	2.319E-09	1.975E-09
NNW	1.402E-07	7.127E-08	4.565E-08	2.557E-08	1.691E-08	1.223E-08	9.353E-09	7.439E-09	6.087E-09	5.091E-09	4.331E-09
N	2.449E-07	1.262E-07	8.152E-08	4.610E-08	3.063E-08	2.220E-08	1.701E-08	1.353E-08	1.107E-08	9.256E-09	7.870E-09
NNE	1.310E-07	6.699E-08	4.305E-08	2.416E-08	1.595E-08	1.151E-08	8.785E-09	6.969E-09	5.687E-09	4.744E-09	4.025E-09
NE	7.495E-08	3.937E-08	2.576E-08	1.480E-08	9.923E-09	7.236E-09	5.565E-09	4.440E-09	3.640E-09	3.046E-09	2.591E-09
ENE	9.453E-08	4.909E-08	3.190E-08	1.819E-08	1.215E-08	8.843E-09	6.797E-09	5.425E-09	4.450E-09	3.729E-09	3.177E-09
E	1.141E-07	6.031E-08	3.962E-08	2.289E-08	1.539E-08	1.125E-08	8.672E-09	6.931E-09	5.690E-09	4.768E-09	4.061E-09
ESE	1.152E-07	6.027E-08	3.933E-08	2.251E-08	1.505E-08	1.096E-08	8.418E-09	6.711E-09	5.498E-09	4.600E-09	3.913E-09
SE	2.271E-07	1.201E-07	7.891E-08	4.553E-08	3.059E-08	2.233E-08	1.717E-08	1.370E-08	1.123E-08	9.389E-09	7.982E-09
SSE	2.238E-07	1.167E-07	7.593E-08	4.330E-08	2.888E-08	2.097E-08	1.606E-08	1.277E-08	1.044E-08	8.710E-09	7.390E-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	5.761E-06	1.363E-06	4.262E-07	2.161E-07	1.344E-07	5.932E-08	2.076E-08	9.797E-09	5.941E-09	4.060E-09
SSW	4.230E-06	9.894E-07	3.037E-07	1.523E-07	9.395E-08	4.093E-08	1.402E-08	6.505E-09	3.903E-09	2.646E-09
SW	2.760E-06	6.418E-07	1.940E-07	9.627E-08	5.892E-08	2.528E-08	8.425E-09	3.811E-09	2.247E-09	1.501E-09
WSW	2.578E-06	6.026E-07	1.825E-07	9.083E-08	5.574E-08	2.408E-08	8.153E-09	3.758E-09	2.253E-09	1.528E-09
W	2.511E-06	5.759E-07	1.713E-07	8.436E-08	5.138E-08	2.193E-08	7.284E-09	3.317E-09	1.975E-09	1.333E-09
WNW	3.679E-06	8.470E-07	2.534E-07	1.252E-07	7.649E-08	3.283E-08	1.102E-08	5.066E-09	3.039E-09	2.066E-09
NW	4.148E-06	9.491E-07	2.829E-07	1.395E-07	8.510E-08	3.647E-08	1.224E-08	5.650E-09	3.405E-09	2.326E-09
NNW	7.590E-06	1.767E-06	5.472E-07	2.761E-07	1.711E-07	7.520E-08	2.618E-08	1.232E-08	7.471E-09	5.105E-09
N	1.223E-05	2.907E-06	9.269E-07	4.750E-07	2.975E-07	1.327E-07	4.709E-08	2.237E-08	1.359E-08	9.281E-09
NNE	6.623E-06	1.592E-06	5.024E-07	2.558E-07	1.595E-07	7.058E-08	2.471E-08	1.160E-08	7.000E-09	4.757E-09
NE	3.569E-06	8.255E-07	2.728E-07	1.426E-07	9.052E-08	4.123E-08	1.507E-08	7.284E-09	4.457E-09	3.054E-09
ENE	4.668E-06	1.091E-06	3.524E-07	1.820E-07	1.146E-07	5.155E-08	1.855E-08	8.905E-09	5.446E-09	3.738E-09
E	5.232E-06	1.224E-06	4.098E-07	2.157E-07	1.375E-07	6.307E-08	2.328E-08	1.133E-08	6.956E-09	4.779E-09
ESE	5.442E-06	1.284E-06	4.222E-07	2.199E-07	1.393E-07	6.317E-08	2.293E-08	1.103E-08	6.737E-09	4.612E-09
SE	1.039E-05	2.421E-06	8.135E-07	4.287E-07	2.737E-07	1.256E-07	4.631E-08	2.247E-08	1.375E-08	9.412E-09
SSE	1.086E-05	2.532E-06	8.261E-07	4.287E-07	2.708E-07	1.224E-07	4.414E-08	2.111E-08	1.282E-08	8.733E-09

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VENTS GROUND LEVEL RELEASES - APR-JUN 2016
 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	3.142E-05	1.002E-05	5.326E-06	2.649E-06	1.032E-06	5.444E-07	3.373E-07	2.306E-07	1.686E-07	1.292E-07	1.027E-07
SSW	2.226E-05	7.359E-06	3.916E-06	1.939E-06	7.458E-07	3.899E-07	2.399E-07	1.631E-07	1.186E-07	9.056E-08	7.168E-08
SW	1.439E-05	4.802E-06	2.557E-06	1.266E-06	4.826E-07	2.505E-07	1.532E-07	1.036E-07	7.504E-08	5.706E-08	4.501E-08
WSW	1.273E-05	4.450E-06	2.399E-06	1.187E-06	4.522E-07	2.348E-07	1.437E-07	9.725E-08	7.047E-08	5.362E-08	4.232E-08
W	1.232E-05	4.368E-06	2.331E-06	1.143E-06	4.303E-07	2.215E-07	1.346E-07	9.065E-08	6.539E-08	4.956E-08	3.898E-08
WNW	1.838E-05	6.400E-06	3.412E-06	1.677E-06	6.334E-07	3.270E-07	1.992E-07	1.343E-07	9.704E-08	7.364E-08	5.799E-08
NW	2.130E-05	7.251E-06	3.835E-06	1.881E-06	7.089E-07	3.652E-07	2.221E-07	1.497E-07	1.080E-07	8.190E-08	6.444E-08
NNW	4.092E-05	1.330E-05	7.002E-06	3.451E-06	1.334E-06	7.005E-07	4.324E-07	2.949E-07	2.151E-07	1.646E-07	1.305E-07
N	6.879E-05	2.141E-05	1.127E-05	5.603E-06	2.214E-06	1.179E-06	7.357E-07	5.060E-07	3.716E-07	2.860E-07	2.281E-07
NNE	3.591E-05	1.142E-05	6.146E-06	3.083E-06	1.210E-06	6.411E-07	3.984E-07	2.731E-07	2.000E-07	1.536E-07	1.222E-07
NE	2.144E-05	6.485E-06	3.229E-06	1.567E-06	6.347E-07	3.439E-07	2.174E-07	1.511E-07	1.120E-07	8.682E-08	6.968E-08
ENE	2.700E-05	8.327E-06	4.261E-06	2.091E-06	8.335E-07	4.466E-07	2.800E-07	1.933E-07	1.424E-07	1.099E-07	8.784E-08
E	3.226E-05	9.496E-06	4.730E-06	2.307E-06	9.444E-07	5.151E-07	3.272E-07	2.282E-07	1.695E-07	1.318E-07	1.072E-07
ESE	3.254E-05	9.726E-06	4.958E-06	2.443E-06	9.867E-07	5.334E-07	3.365E-07	2.335E-07	1.727E-07	1.337E-07	1.072E-07
SE	6.501E-05	1.895E-05	9.372E-06	4.561E-06	1.872E-06	1.023E-06	6.504E-07	4.542E-07	3.377E-07	2.627E-07	2.114E-07
SSE	6.438E-05	1.951E-05	9.882E-06	4.835E-06	1.942E-06	1.046E-06	6.583E-07	4.559E-07	3.368E-07	2.605E-07	2.086E-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	8.386E-08	4.090E-08	2.528E-08	1.341E-08	8.497E-09	5.935E-09	4.407E-09	3.415E-09	2.730E-09	2.234E-09	1.864E-09
SSW	5.837E-08	2.810E-08	1.721E-08	9.011E-09	5.659E-09	3.925E-09	2.898E-09	2.235E-09	1.779E-09	1.451E-09	1.206E-09
SW	3.652E-08	1.734E-08	1.052E-08	5.426E-09	3.370E-09	2.317E-09	1.698E-09	1.301E-09	1.030E-09	8.357E-10	6.915E-10
WSW	3.437E-08	1.636E-08	9.946E-09	5.148E-09	3.205E-09	2.208E-09	1.622E-09	1.246E-09	9.886E-10	8.040E-10	6.669E-10
W	3.156E-08	1.485E-08	8.948E-09	4.580E-09	2.834E-09	1.943E-09	1.422E-09	1.089E-09	8.613E-10	6.989E-10	5.785E-10
WNW	4.700E-08	2.232E-08	1.345E-08	6.919E-09	4.295E-09	2.953E-09	2.167E-09	1.662E-09	1.318E-09	1.071E-09	8.880E-10
NW	5.220E-08	2.464E-08	1.489E-08	7.657E-09	4.759E-09	3.276E-09	2.406E-09	1.848E-09	1.467E-09	1.193E-09	9.904E-10
NNW	1.065E-07	5.170E-08	3.187E-08	1.684E-08	1.066E-08	7.436E-09	5.518E-09	4.273E-09	3.414E-09	2.793E-09	2.329E-09
N	1.869E-07	9.215E-08	5.740E-08	3.075E-08	1.962E-08	1.377E-08	1.026E-08	7.973E-09	6.387E-09	5.238E-09	4.376E-09
NNE	9.992E-08	4.888E-08	3.028E-08	1.608E-08	1.019E-08	7.114E-09	5.280E-09	4.088E-09	3.265E-09	2.670E-09	2.225E-09
NE	5.743E-08	2.893E-08	1.829E-08	9.996E-09	6.460E-09	4.577E-09	3.438E-09	2.688E-09	2.165E-09	1.783E-09	1.495E-09
ENE	7.213E-08	3.586E-08	2.247E-08	1.213E-08	7.783E-09	5.486E-09	4.104E-09	3.200E-09	2.571E-09	2.113E-09	1.769E-09
E	8.751E-08	4.437E-08	2.817E-08	1.548E-08	1.004E-08	7.130E-09	5.366E-09	4.203E-09	3.389E-09	2.795E-09	2.346E-09
ESE	8.825E-08	4.427E-08	2.791E-08	1.518E-08	9.781E-09	6.914E-09	5.183E-09	4.046E-09	3.254E-09	2.677E-09	2.242E-09
SE	1.746E-07	8.871E-08	5.639E-08	3.102E-08	2.014E-08	1.431E-08	1.077E-08	8.439E-09	6.805E-09	5.611E-09	4.708E-09
SSE	1.716E-07	8.586E-08	5.403E-08	2.933E-08	1.887E-08	1.333E-08	9.983E-09	7.787E-09	6.258E-09	5.145E-09	4.307E-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	5.180E-06	1.175E-06	3.499E-07	1.713E-07	1.036E-07	4.351E-08	1.386E-08	6.007E-09	3.438E-09	2.244E-09
SSW	3.802E-06	8.527E-07	2.492E-07	1.206E-07	7.235E-08	2.999E-08	9.344E-09	3.977E-09	2.251E-09	1.457E-09
SW	2.482E-06	5.535E-07	1.593E-07	7.636E-08	4.544E-08	1.857E-08	5.644E-09	2.350E-09	1.311E-09	8.398E-10
WSW	2.316E-06	5.188E-07	1.494E-07	7.170E-08	4.272E-08	1.751E-08	5.351E-09	2.240E-09	1.255E-09	8.079E-10
W	2.256E-06	4.959E-07	1.402E-07	6.658E-08	3.937E-08	1.594E-08	4.774E-09	1.972E-09	1.097E-09	7.024E-10
WNW	3.305E-06	7.291E-07	2.073E-07	9.878E-08	5.856E-08	2.383E-08	7.204E-09	2.997E-09	1.675E-09	1.076E-09
NW	3.726E-06	8.167E-07	2.313E-07	1.100E-07	6.508E-08	2.643E-08	7.976E-09	3.324E-09	1.862E-09	1.199E-09
NNW	6.823E-06	1.523E-06	4.489E-07	2.186E-07	1.317E-07	5.507E-08	1.743E-08	7.528E-09	4.301E-09	2.805E-09
N	1.100E-05	2.507E-06	7.621E-07	3.774E-07	2.300E-07	9.776E-08	3.172E-08	1.392E-08	8.022E-09	5.259E-09
NNE	5.956E-06	1.373E-06	4.130E-07	2.032E-07	1.232E-07	5.196E-08	1.662E-08	7.201E-09	4.115E-09	2.681E-09
NE	3.214E-06	7.125E-07	2.246E-07	1.136E-07	7.022E-08	3.054E-08	1.027E-08	4.624E-09	2.703E-09	1.790E-09
ENE	4.200E-06	9.411E-07	2.897E-07	1.446E-07	8.856E-08	3.797E-08	1.250E-08	5.546E-09	3.218E-09	2.121E-09
E	4.712E-06	1.056E-06	3.377E-07	1.719E-07	1.068E-07	4.676E-08	1.588E-08	7.200E-09	4.225E-09	2.805E-09
ESE	4.900E-06	1.109E-06	3.478E-07	1.752E-07	1.080E-07	4.677E-08	1.561E-08	6.986E-09	4.069E-09	2.687E-09
SE	9.361E-06	2.092E-06	6.712E-07	3.424E-07	2.130E-07	9.344E-08	3.182E-08	1.445E-08	8.483E-09	5.630E-09
SSE	9.779E-06	2.187E-06	6.807E-07	3.418E-07	2.103E-07	9.077E-08	3.017E-08	1.347E-08	7.832E-09	5.164E-09

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VENTS GROUND LEVEL RELEASES - APR-JUN 2016
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	1.620E-07	5.478E-08	2.813E-08	1.337E-08	4.804E-09	2.382E-09	1.403E-09	9.185E-10	6.463E-10	4.790E-10	3.691E-10	
SSW	1.108E-07	3.746E-08	1.923E-08	9.144E-09	3.285E-09	1.629E-09	9.592E-10	6.280E-10	4.419E-10	3.275E-10	2.524E-10	
SW	6.821E-08	2.306E-08	1.184E-08	5.630E-09	2.022E-09	1.003E-09	5.905E-10	3.867E-10	2.721E-10	2.016E-10	1.554E-10	
WSW	7.220E-08	2.441E-08	1.253E-08	5.959E-09	2.141E-09	1.062E-09	6.251E-10	4.093E-10	2.880E-10	2.134E-10	1.645E-10	
W	7.211E-08	2.438E-08	1.252E-08	5.952E-09	2.138E-09	1.060E-09	6.243E-10	4.088E-10	2.877E-10	2.132E-10	1.643E-10	
WNW	1.284E-07	4.342E-08	2.229E-08	1.060E-08	3.807E-09	1.888E-09	1.112E-09	7.279E-10	5.122E-10	3.796E-10	2.925E-10	
NW	1.985E-07	6.712E-08	3.446E-08	1.638E-08	5.885E-09	2.918E-09	1.718E-09	1.125E-09	7.917E-10	5.868E-10	4.522E-10	
NNW	2.840E-07	9.605E-08	4.931E-08	2.344E-08	8.421E-09	4.176E-09	2.459E-09	1.610E-09	1.133E-09	8.397E-10	6.471E-10	
N	2.960E-07	1.001E-07	5.139E-08	2.443E-08	8.776E-09	4.352E-09	2.563E-09	1.678E-09	1.181E-09	8.751E-10	6.743E-10	
NNE	1.592E-07	5.385E-08	2.765E-08	1.315E-08	4.722E-09	2.342E-09	1.379E-09	9.028E-10	6.353E-10	4.708E-10	3.628E-10	
NE	6.757E-08	2.285E-08	1.173E-08	5.578E-09	2.003E-09	9.936E-10	5.850E-10	3.831E-10	2.695E-10	1.998E-10	1.539E-10	
ENE	1.068E-07	3.612E-08	1.855E-08	8.818E-09	3.167E-09	1.571E-09	9.249E-10	6.056E-10	4.261E-10	3.158E-10	2.434E-10	
E	7.440E-08	2.516E-08	1.292E-08	6.141E-09	2.206E-09	1.094E-09	6.441E-10	4.218E-10	2.968E-10	2.199E-10	1.695E-10	
ESE	1.159E-07	3.918E-08	2.012E-08	9.564E-09	3.436E-09	1.704E-09	1.003E-09	6.569E-10	4.622E-10	3.425E-10	2.640E-10	
SE	1.822E-07	6.160E-08	3.163E-08	1.504E-08	5.401E-09	2.678E-09	1.577E-09	1.033E-09	7.266E-10	5.385E-10	4.150E-10	
SSE	2.178E-07	7.364E-08	3.781E-08	1.798E-08	6.457E-09	3.202E-09	1.885E-09	1.235E-09	8.687E-10	6.438E-10	4.961E-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	2.932E-10	1.303E-10	7.890E-11	3.988E-11	2.414E-11	1.618E-11	1.160E-11	8.708E-12	6.771E-12	5.409E-12	4.415E-12	
SSW	2.005E-10	8.907E-11	5.395E-11	2.727E-11	1.651E-11	1.107E-11	7.930E-12	5.955E-12	4.630E-12	3.698E-12	3.019E-12	
SW	1.234E-10	5.484E-11	3.322E-11	1.679E-11	1.016E-11	6.814E-12	4.882E-12	3.666E-12	2.850E-12	2.277E-12	1.859E-12	
WSW	1.307E-10	5.805E-11	3.516E-11	1.777E-11	1.076E-11	7.212E-12	5.168E-12	3.881E-12	3.017E-12	2.410E-12	1.967E-12	
W	1.305E-10	5.798E-11	3.512E-11	1.775E-11	1.074E-11	7.204E-12	5.162E-12	3.876E-12	3.014E-12	2.407E-12	1.965E-12	
WNW	2.324E-10	1.032E-10	6.254E-11	3.161E-11	1.913E-11	1.283E-11	9.191E-12	6.902E-12	5.366E-12	4.286E-12	3.499E-12	
NW	3.592E-10	1.596E-10	9.666E-11	4.886E-11	2.957E-11	1.983E-11	1.421E-11	1.067E-11	8.295E-12	6.626E-12	5.408E-12	
NNW	5.141E-10	2.284E-10	1.383E-10	6.992E-11	4.232E-11	2.837E-11	2.033E-11	1.527E-11	1.187E-11	9.482E-12	7.739E-12	
N	5.357E-10	2.380E-10	1.442E-10	7.287E-11	4.410E-11	2.957E-11	2.119E-11	1.591E-11	1.237E-11	9.882E-12	8.066E-12	
NNE	2.882E-10	1.280E-10	7.756E-11	3.920E-11	2.373E-11	1.591E-11	1.140E-11	8.560E-12	6.655E-12	5.316E-12	4.339E-12	
NE	1.223E-10	5.433E-11	3.291E-11	1.663E-11	1.007E-11	6.750E-12	4.837E-12	3.632E-12	2.824E-12	2.256E-12	1.841E-12	
ENE	1.933E-10	8.589E-11	5.203E-11	2.630E-11	1.592E-11	1.067E-11	7.647E-12	5.742E-12	4.465E-12	3.566E-12	2.911E-12	
E	1.347E-10	5.982E-11	3.623E-11	1.831E-11	1.109E-11	7.432E-12	5.326E-12	3.999E-12	3.109E-12	2.484E-12	2.027E-12	
ESE	2.097E-10	9.316E-11	5.643E-11	2.852E-11	1.726E-11	1.158E-11	8.294E-12	6.228E-12	4.842E-12	3.868E-12	3.157E-12	
SE	3.297E-10	1.465E-10	8.872E-11	4.484E-11	2.714E-11	1.820E-11	1.304E-11	9.791E-12	7.613E-12	6.081E-12	4.964E-12	
SSE	3.941E-10	1.751E-10	1.061E-10	5.361E-11	3.245E-11	2.175E-11	1.559E-11	1.171E-11	9.101E-12	7.270E-12	5.934E-12	

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***** 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	2.749E-08	5.632E-09	1.470E-09	6.603E-10	3.735E-10	1.436E-10	4.156E-11	1.647E-11	8.796E-12	5.444E-12		
SSW	1.880E-08	3.851E-09	1.005E-09	4.515E-10	2.554E-10	9.823E-11	2.842E-11	1.126E-11	6.014E-12	3.723E-12		
SW	1.157E-08	2.371E-09	6.189E-10	2.780E-10	1.573E-10	6.048E-11	1.750E-11	6.934E-12	3.703E-12	2.292E-12		
WSW	1.225E-08	2.510E-09	6.552E-10	2.942E-10	1.665E-10	6.401E-11	1.852E-11	7.340E-12	3.919E-12	2.426E-12		
W	1.224E-08	2.507E-09	6.544E-10	2.939E-10	1.663E-10	6.394E-11	1.850E-11	7.331E-12	3.915E-12	2.423E-12		
WNW	2.179E-08	4.463E-09	1.165E-09	5.233E-10	2.960E-10	1.138E-10	3.294E-11	1.305E-11	6.971E-12	4.315E-12		
NW	3.368E-08	6.899E-09	1.801E-09	8.089E-10	4.576E-10	1.760E-10	5.091E-11	2.018E-11	1.078E-11	6.669E-12		
NNW	4.820E-08	9.873E-09	2.577E-09	1.158E-09	6.549E-10	2.518E-10	7.286E-11	2.888E-11	1.542E-11	9.544E-12		
N	5.023E-08	1.029E-08	2.686E-09	1.206E-09	6.825E-10	2.625E-10	7.593E-11	3.009E-11	1.607E-11	9.947E-12		
NNE	2.703E-08	5.536E-09	1.445E-09	6.490E-10	3.672E-10	1.412E-10	4.085E-11	1.619E-11	8.646E-12	5.351E-12		
NE	1.147E-08	2.349E-09	6.132E-10	2.754E-10	1.558E-10	5.991E-11	1.733E-11	6.870E-12	3.668E-12	2.271E-12		
ENE	1.813E-08	3.713E-09	9.694E-10	4.354E-10	2.463E-10	9.472E-11	2.740E-11	1.086E-11	5.800E-12	3.590E-12		
E	1.263E-08	2.586E-09	6.751E-10	3.032E-10	1.715E-10	6.597E-11	1.908E-11	7.564E-12	4.039E-12	2.500E-12		
ESE	1.966E-08	4.028E-09	1.051E-09	4.722E-10	2.672E-10	1.027E-10	2.972E-11	1.178E-11	6.291E-12	3.894E-12		
SE	3.091E-08	6.332E-09	1.653E-09	7.424E-10	4.200E-10	1.615E-10	4.672E-11	1.852E-11	9.889E-12	6.121E-12		
SSE	3.696E-08	7.570E-09	1.976E-09	8.875E-10	5.021E-10	1.931E-10	5.586E-11	2.214E-11	1.182E-11	7.318E-12		

VENTS GROUND LEVEL RELEASES - APR-JUN 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE	OF	DIRECTION	DIST.	X/Q	X/Q		
ID	LOCATION	FROM SITE	(MI)	(SEC/M3)	(SEC/M3)		
				NO	2.26 DAY		
				DECAY	DECAY		
				UNDEPLETED	UNDEPLETED		
				DEPLETED	D/Q		
				(SEC/M3)	(PER SQ.METER)		
				8.0 DAY			
				DECAY			
A	Site Boundary	S	.80	5.2E-06	5.1E-06	4.6E-06	2.4E-08
A	Site Boundary	SSW	.82	3.5E-06	3.5E-06	3.1E-06	1.5E-08
A	Site Boundary	SW	.97	1.5E-06	1.5E-06	1.3E-06	6.0E-09
A	Site Boundary	WSW	.93	1.6E-06	1.6E-06	1.4E-06	7.3E-09
A	Site Boundary	W	.91	1.6E-06	1.6E-06	1.4E-06	7.5E-09
A	Site Boundary	WNW	.94	2.2E-06	2.2E-06	2.0E-06	1.3E-08
A	Site Boundary	NW	.81	3.6E-06	3.6E-06	3.2E-06	2.8E-08
A	Site Boundary	NNW	.69	9.0E-06	8.9E-06	8.0E-06	5.7E-08
A	Site Boundary	N	.67	1.5E-05	1.5E-05	1.3E-05	6.1E-08
A	Site Boundary	NNE	.60	9.5E-06	9.5E-06	8.6E-06	4.0E-08
A	Site Boundary	NE	.62	4.9E-06	4.9E-06	4.4E-06	1.6E-08
A	Site Boundary	ENE	.59	7.0E-06	7.0E-06	6.4E-06	2.8E-08
A	Site Boundary	E	.53	9.6E-06	9.5E-06	8.7E-06	2.3E-08
A	Site Boundary	ESE	.54	9.4E-06	9.4E-06	8.6E-06	3.5E-08
A	Site Boundary	SE	.65	1.3E-05	1.3E-05	1.2E-05	4.0E-08
A	Site Boundary	SSE	.81	9.2E-06	9.1E-06	8.1E-06	3.1E-08
A	Nearest Res	SSW	3.00	2.1E-07	2.0E-07	1.6E-07	6.3E-10
A	Nearest Res	SW	1.70	4.3E-07	4.3E-07	3.6E-07	1.5E-09
A	Nearest Res	WSW	1.90	3.2E-07	3.1E-07	2.6E-07	1.2E-09
A	Nearest Res	W	1.00	1.3E-06	1.3E-06	1.1E-06	6.0E-09
A	Nearest Res	WNW	1.70	5.6E-07	5.6E-07	4.7E-07	2.8E-09
A	Nearest Res	NW	.90	2.8E-06	2.8E-06	2.4E-06	2.2E-08
A	Nearest Res	NNW	1.90	9.5E-07	9.4E-07	7.8E-07	4.7E-09
A	Nearest Res	N	2.90	6.8E-07	6.7E-07	5.4E-07	1.8E-09
A	Nearest Res	NNE	1.70	1.1E-06	1.1E-06	9.1E-07	3.5E-09
A	Nearest Res	ENE	1.70	7.6E-07	7.5E-07	6.3E-07	2.3E-09
A	Nearest Res	E	2.20	5.2E-07	5.1E-07	4.2E-07	8.7E-10
A	Nearest Res	ESE	2.80	3.4E-07	3.3E-07	2.7E-07	7.7E-10
A	Nearest Res	SE	3.00	5.8E-07	5.6E-07	4.5E-07	1.0E-09
A	Nearest Res	SSE	3.00	5.8E-07	5.6E-07	4.6E-07	1.2E-09
A	Nearest Cow	NNW	3.50	2.8E-07	2.7E-07	2.2E-07	1.1E-09
A	Nearest Garde	SSW	3.00	2.1E-07	2.0E-07	1.6E-07	6.3E-10
A	Nearest Garde	SW	2.20	2.5E-07	2.4E-07	2.0E-07	8.0E-10
A	Nearest Garde	NNW	3.00	3.7E-07	3.7E-07	2.9E-07	1.6E-09
A	Nearest Garde	ENE	1.70	7.6E-07	7.5E-07	6.3E-07	2.3E-09
A	Nearest Garde	ESE	2.30	4.9E-07	4.8E-07	4.0E-07	1.2E-09
A	Nearest Garde	SSE	3.00	5.8E-07	5.6E-07	4.6E-07	1.2E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

January-June 2016

VENTS GROUND LEVEL RELEASES - JAN-JUN 2016
 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	2.856E-05	9.532E-06	5.154E-06	2.596E-06	1.041E-06	5.628E-07	3.563E-07	2.484E-07	1.849E-07	1.441E-07	1.163E-07
SSW	2.462E-05	8.468E-06	4.580E-06	2.297E-06	9.135E-07	4.911E-07	3.096E-07	2.151E-07	1.596E-07	1.241E-07	9.989E-08
SW	1.526E-05	5.252E-06	2.831E-06	1.418E-06	5.605E-07	2.998E-07	1.882E-07	1.303E-07	9.639E-08	7.473E-08	6.002E-08
WSW	9.855E-06	3.560E-06	1.964E-06	9.891E-07	3.884E-07	2.069E-07	1.294E-07	8.938E-08	6.595E-08	5.102E-08	4.090E-08
W	1.439E-05	5.157E-06	2.801E-06	1.399E-06	5.472E-07	2.906E-07	1.814E-07	1.250E-07	9.213E-08	7.119E-08	5.700E-08
WNW	1.698E-05	6.112E-06	3.349E-06	1.680E-06	6.561E-07	3.481E-07	2.172E-07	1.496E-07	1.102E-07	8.512E-08	6.814E-08
NW	2.472E-05	8.672E-06	4.721E-06	2.368E-06	9.292E-07	4.946E-07	3.093E-07	2.135E-07	1.575E-07	1.219E-07	9.768E-08
NNW	4.896E-05	1.624E-05	8.752E-06	4.406E-06	1.775E-06	9.626E-07	6.109E-07	4.269E-07	3.182E-07	2.484E-07	2.007E-07
N	7.648E-05	2.421E-05	1.277E-05	6.412E-06	2.647E-06	1.460E-06	9.384E-07	6.624E-07	4.979E-07	3.915E-07	3.183E-07
NNE	4.446E-05	1.412E-05	7.565E-06	3.830E-06	1.578E-06	8.688E-07	5.577E-07	3.932E-07	2.953E-07	2.320E-07	1.885E-07
NE	2.306E-05	7.266E-06	3.751E-06	1.863E-06	7.711E-07	4.263E-07	2.745E-07	1.940E-07	1.460E-07	1.149E-07	9.354E-08
ENE	2.935E-05	9.286E-06	4.885E-06	2.451E-06	1.012E-06	5.578E-07	3.584E-07	2.529E-07	1.900E-07	1.494E-07	1.214E-07
E	3.103E-05	9.595E-06	4.924E-06	2.447E-06	1.027E-06	5.729E-07	3.713E-07	2.638E-07	1.994E-07	1.575E-07	1.286E-07
ESE	3.037E-05	9.791E-06	5.209E-06	2.621E-06	1.073E-06	5.888E-07	3.768E-07	2.651E-07	1.987E-07	1.558E-07	1.264E-07
SE	5.745E-05	1.809E-05	9.331E-06	4.632E-06	1.920E-06	1.062E-06	6.843E-07	4.839E-07	3.643E-07	2.868E-07	2.335E-07
SSE	5.238E-05	1.687E-05	8.844E-06	4.409E-06	1.797E-06	9.827E-07	6.277E-07	4.409E-07	3.301E-07	2.586E-07	2.097E-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	9.638E-08	4.982E-08	3.243E-08	1.872E-08	1.273E-08	9.461E-09	7.433E-09	6.067E-09	5.091E-09	4.364E-09	3.803E-09
SSW	8.263E-08	4.238E-08	2.742E-08	1.570E-08	1.062E-08	7.855E-09	6.149E-09	5.003E-09	4.188E-09	3.581E-09	3.114E-09
SW	4.954E-08	2.517E-08	1.618E-08	9.177E-09	6.165E-09	4.538E-09	3.538E-09	2.869E-09	2.394E-09	2.042E-09	1.772E-09
WSW	3.370E-08	1.700E-08	1.087E-08	6.107E-09	4.070E-09	2.976E-09	2.306E-09	1.861E-09	1.545E-09	1.313E-09	1.134E-09
W	4.692E-08	2.359E-08	1.505E-08	8.439E-09	5.620E-09	4.108E-09	3.184E-09	2.569E-09	2.134E-09	1.813E-09	1.568E-09
WNW	5.607E-08	2.817E-08	1.796E-08	1.005E-08	6.688E-09	4.884E-09	3.781E-09	3.048E-09	2.530E-09	2.148E-09	1.855E-09
NW	8.049E-08	4.064E-08	2.600E-08	1.465E-08	9.793E-09	7.180E-09	5.579E-09	4.511E-09	3.754E-09	3.195E-09	2.766E-09
NNW	1.666E-07	8.651E-08	5.649E-08	3.275E-08	2.235E-08	1.665E-08	1.310E-08	1.071E-08	9.004E-09	7.727E-09	6.742E-09
N	2.656E-07	1.408E-07	9.324E-08	5.512E-08	3.811E-08	2.868E-08	2.276E-08	1.874E-08	1.584E-08	1.367E-08	1.198E-08
NNE	1.572E-07	8.307E-08	5.490E-08	3.235E-08	2.231E-08	1.675E-08	1.327E-08	1.091E-08	9.212E-09	7.938E-09	6.950E-09
NE	7.813E-08	4.156E-08	2.760E-08	1.638E-08	1.137E-08	8.575E-09	6.821E-09	5.626E-09	4.764E-09	4.116E-09	3.613E-09
ENE	1.013E-07	5.365E-08	3.551E-08	2.097E-08	1.449E-08	1.089E-08	8.643E-09	7.113E-09	6.011E-09	5.185E-09	4.544E-09
E	1.077E-07	5.784E-08	3.865E-08	2.313E-08	1.612E-08	1.221E-08	9.738E-09	8.051E-09	6.831E-09	5.912E-09	5.197E-09
ESE	1.053E-07	5.540E-08	3.650E-08	2.142E-08	1.473E-08	1.104E-08	8.734E-09	7.170E-09	6.048E-09	5.207E-09	4.556E-09
SE	1.951E-07	1.038E-07	6.897E-08	4.095E-08	2.840E-08	2.143E-08	1.704E-08	1.406E-08	1.190E-08	1.028E-08	9.026E-09
SSE	1.746E-07	9.173E-08	6.040E-08	3.545E-08	2.441E-08	1.831E-08	1.450E-08	1.191E-08	1.005E-08	8.661E-09	7.583E-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	4.990E-06	1.174E-06	3.682E-07	1.875E-07	1.171E-07	5.244E-08	1.910E-08	9.522E-09	6.086E-09	4.372E-09
SSW	4.429E-06	1.033E-06	3.202E-07	1.619E-07	1.007E-07	4.468E-08	1.605E-08	7.910E-09	5.020E-09	3.588E-09
SW	2.741E-06	6.353E-07	1.948E-07	9.783E-08	6.049E-08	2.659E-08	9.395E-09	4.572E-09	2.879E-09	2.046E-09
WSW	1.885E-06	4.412E-07	1.341E-07	6.696E-08	4.123E-08	1.799E-08	6.260E-09	3.000E-09	1.868E-09	1.316E-09
W	2.701E-06	6.225E-07	1.880E-07	9.356E-08	5.747E-08	2.498E-08	8.656E-09	4.142E-09	2.579E-09	1.817E-09
WNW	3.221E-06	7.466E-07	2.251E-07	1.119E-07	6.870E-08	2.983E-08	1.031E-08	4.924E-09	3.060E-09	2.153E-09
NW	4.553E-06	1.056E-06	3.204E-07	1.599E-07	9.848E-08	4.299E-08	1.501E-08	7.236E-09	4.528E-09	3.202E-09
NNW	8.485E-06	1.998E-06	6.311E-07	3.227E-07	2.022E-07	9.096E-08	3.340E-08	1.675E-08	1.075E-08	7.740E-09
N	1.249E-05	2.956E-06	9.671E-07	5.043E-07	3.205E-07	1.474E-07	5.603E-08	2.883E-08	1.879E-08	1.369E-08
NNE	7.361E-06	1.763E-06	5.749E-07	2.991E-07	1.898E-07	8.702E-08	3.290E-08	1.684E-08	1.094E-08	7.949E-09
NE	3.693E-06	8.604E-07	2.828E-07	1.479E-07	9.417E-08	4.349E-08	1.665E-08	8.618E-09	5.639E-09	4.122E-09
ENE	4.781E-06	1.130E-06	3.694E-07	1.925E-07	1.223E-07	5.618E-08	2.132E-08	1.095E-08	7.130E-09	5.193E-09
E	4.861E-06	1.141E-06	3.821E-07	2.019E-07	1.294E-07	6.039E-08	2.346E-08	1.226E-08	8.068E-09	5.919E-09
ESE	5.077E-06	1.202E-06	3.887E-07	2.013E-07	1.273E-07	5.809E-08	2.180E-08	1.110E-08	7.189E-09	5.215E-09
SE	9.190E-06	2.142E-06	7.050E-07	3.690E-07	2.351E-07	1.086E-07	4.160E-08	2.153E-08	1.409E-08	1.030E-08
SSE	8.656E-06	2.015E-06	6.476E-07	3.345E-07	2.112E-07	9.621E-08	3.609E-08	1.841E-08	1.194E-08	8.675E-09

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2016
 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	2.853E-05	9.509E-06	5.136E-06	2.584E-06	1.033E-06	5.573E-07	3.519E-07	2.447E-07	1.816E-07	1.412E-07	1.136E-07
SSW	2.459E-05	8.447E-06	4.563E-06	2.285E-06	9.063E-07	4.859E-07	3.054E-07	2.116E-07	1.566E-07	1.214E-07	9.743E-08
SW	1.524E-05	5.238E-06	2.819E-06	1.411E-06	5.558E-07	2.965E-07	1.855E-07	1.281E-07	9.444E-08	7.300E-08	5.845E-08
WSW	9.845E-06	3.553E-06	1.958E-06	9.852E-07	3.861E-07	2.052E-07	1.281E-07	8.828E-08	6.500E-08	5.019E-08	4.015E-08
W	1.437E-05	5.145E-06	2.791E-06	1.393E-06	5.435E-07	2.880E-07	1.793E-07	1.233E-07	9.062E-08	6.985E-08	5.580E-08
WNW	1.696E-05	6.102E-06	3.340E-06	1.673E-06	6.525E-07	3.456E-07	2.152E-07	1.480E-07	1.088E-07	8.385E-08	6.700E-08
NW	2.470E-05	8.657E-06	4.708E-06	2.360E-06	9.242E-07	4.910E-07	3.065E-07	2.112E-07	1.555E-07	1.200E-07	9.603E-08
NNW	4.889E-05	1.620E-05	8.718E-06	4.383E-06	1.760E-06	9.521E-07	6.025E-07	4.198E-07	3.120E-07	2.428E-07	1.956E-07
N	7.634E-05	2.413E-05	1.271E-05	6.370E-06	2.620E-06	1.440E-06	9.223E-07	6.487E-07	4.859E-07	3.806E-07	3.084E-07
NNE	4.438E-05	1.407E-05	7.526E-06	3.803E-06	1.561E-06	8.566E-07	5.478E-07	3.848E-07	2.879E-07	2.253E-07	1.824E-07
NE	2.302E-05	7.241E-06	3.733E-06	1.850E-06	7.632E-07	4.204E-07	2.696E-07	1.899E-07	1.424E-07	1.117E-07	9.053E-08
ENE	2.930E-05	9.256E-06	4.862E-06	2.435E-06	1.002E-06	5.504E-07	3.524E-07	2.478E-07	1.856E-07	1.453E-07	1.177E-07
E	3.097E-05	9.560E-06	4.898E-06	2.429E-06	1.016E-06	5.646E-07	3.645E-07	2.580E-07	1.943E-07	1.529E-07	1.243E-07
ESE	3.032E-05	9.762E-06	5.187E-06	2.606E-06	1.064E-06	5.818E-07	3.711E-07	2.602E-07	1.944E-07	1.520E-07	1.229E-07
SE	5.735E-05	1.803E-05	9.284E-06	4.602E-06	1.901E-06	1.048E-06	6.723E-07	4.736E-07	3.552E-07	2.786E-07	2.259E-07
SSE	5.229E-05	1.681E-05	8.803E-06	4.382E-06	1.779E-06	9.699E-07	6.173E-07	4.321E-07	3.223E-07	2.517E-07	2.033E-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	9.394E-08	4.792E-08	3.077E-08	1.729E-08	1.146E-08	8.302E-09	6.361E-09	5.066E-09	4.150E-09	3.474E-09	2.959E-09
SSW	8.037E-08	4.062E-08	2.591E-08	1.441E-08	9.469E-09	6.810E-09	5.185E-09	4.105E-09	3.344E-09	2.785E-09	2.360E-09
SW	4.809E-08	2.406E-08	1.523E-08	8.375E-09	5.457E-09	3.897E-09	2.949E-09	2.322E-09	1.883E-09	1.561E-09	1.317E-09
WSW	3.301E-08	1.648E-08	1.042E-08	5.734E-09	3.742E-09	2.680E-09	2.035E-09	1.608E-09	1.309E-09	1.090E-09	9.238E-10
W	4.582E-08	2.276E-08	1.434E-08	7.842E-09	5.096E-09	3.635E-09	2.750E-09	2.166E-09	1.757E-09	1.458E-09	1.231E-09
WNW	5.503E-08	2.738E-08	1.729E-08	9.496E-09	6.199E-09	4.443E-09	3.377E-09	2.672E-09	2.179E-09	1.817E-09	1.542E-09
NW	7.897E-08	3.948E-08	2.501E-08	1.381E-08	9.053E-09	6.510E-09	4.962E-09	3.938E-09	3.217E-09	2.688E-09	2.287E-09
NNW	1.619E-07	8.282E-08	5.327E-08	2.998E-08	1.987E-08	1.439E-08	1.102E-08	8.764E-09	7.172E-09	5.996E-09	5.100E-09
N	2.564E-07	1.335E-07	8.680E-08	4.952E-08	3.307E-08	2.405E-08	1.847E-08	1.472E-08	1.206E-08	1.009E-08	8.584E-09
NNE	1.515E-07	7.863E-08	5.101E-08	2.899E-08	1.930E-08	1.400E-08	1.072E-08	8.530E-09	6.975E-09	5.825E-09	4.947E-09
NE	7.533E-08	3.933E-08	2.563E-08	1.466E-08	9.808E-09	7.144E-09	5.491E-09	4.380E-09	3.590E-09	3.005E-09	2.557E-09
ENE	9.787E-08	5.091E-08	3.310E-08	1.888E-08	1.260E-08	9.169E-09	7.042E-09	5.615E-09	4.602E-09	3.851E-09	3.278E-09
E	1.037E-07	5.463E-08	3.581E-08	2.064E-08	1.386E-08	1.013E-08	7.803E-09	6.235E-09	5.119E-09	4.289E-09	3.654E-09
ESE	1.020E-07	5.281E-08	3.423E-08	1.945E-08	1.296E-08	9.417E-09	7.229E-09	5.763E-09	4.723E-09	3.954E-09	3.366E-09
SE	1.880E-07	9.818E-08	6.399E-08	3.659E-08	2.446E-08	1.780E-08	1.367E-08	1.090E-08	8.925E-09	7.465E-09	6.348E-09
SSE	1.686E-07	8.701E-08	5.626E-08	3.185E-08	2.117E-08	1.534E-08	1.175E-08	9.339E-09	7.633E-09	6.373E-09	5.411E-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	4.973E-06	1.166E-06	3.638E-07	1.842E-07	1.145E-07	5.052E-08	1.770E-08	8.368E-09	5.087E-09	3.484E-09
SSW	4.413E-06	1.026E-06	3.160E-07	1.589E-07	9.820E-08	4.291E-08	1.477E-08	6.869E-09	4.124E-09	2.793E-09
SW	2.731E-06	6.305E-07	1.921E-07	9.588E-08	5.892E-08	2.548E-08	8.602E-09	3.934E-09	2.334E-09	1.566E-09
WSW	1.880E-06	4.388E-07	1.327E-07	6.601E-08	4.048E-08	1.746E-08	5.891E-09	2.705E-09	1.616E-09	1.093E-09
W	2.693E-06	6.187E-07	1.859E-07	9.205E-08	5.627E-08	2.414E-08	8.065E-09	3.670E-09	2.177E-09	1.463E-09
WNW	3.213E-06	7.430E-07	2.231E-07	1.105E-07	6.756E-08	2.904E-08	9.762E-09	4.485E-09	2.686E-09	1.822E-09
NW	4.542E-06	1.051E-06	3.175E-07	1.579E-07	9.682E-08	4.182E-08	1.418E-08	6.569E-09	3.956E-09	2.696E-09
NNW	8.454E-06	1.984E-06	6.227E-07	3.164E-07	1.971E-07	8.725E-08	3.066E-08	1.450E-08	8.801E-09	6.013E-09
N	1.243E-05	2.929E-06	9.510E-07	4.923E-07	3.105E-07	1.400E-07	5.049E-08	2.422E-08	1.478E-08	1.012E-08
NNE	7.325E-06	1.746E-06	5.649E-07	2.918E-07	1.837E-07	8.256E-08	2.957E-08	1.410E-08	8.564E-09	5.841E-09
NE	3.676E-06	8.524E-07	2.779E-07	1.443E-07	9.116E-08	4.124E-08	1.494E-08	7.193E-09	4.396E-09	3.012E-09
ENE	4.760E-06	1.120E-06	3.634E-07	1.880E-07	1.186E-07	5.343E-08	1.925E-08	9.235E-09	5.637E-09	3.861E-09
E	4.837E-06	1.129E-06	3.753E-07	1.967E-07	1.251E-07	5.717E-08	2.100E-08	1.019E-08	6.258E-09	4.300E-09
ESE	5.056E-06	1.192E-06	3.829E-07	1.971E-07	1.238E-07	5.549E-08	1.985E-08	9.486E-09	5.786E-09	3.964E-09
SE	9.147E-06	2.122E-06	6.929E-07	3.599E-07	2.275E-07	1.029E-07	3.728E-08	1.792E-08	1.094E-08	7.484E-09
SSE	8.618E-06	1.998E-06	6.372E-07	3.268E-07	2.048E-07	9.148E-08	3.253E-08	1.546E-08	9.377E-09	6.390E-09

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2016
 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	2.702E-05	8.699E-06	4.588E-06	2.269E-06	8.822E-07	4.647E-07	2.876E-07	1.965E-07	1.435E-07	1.100E-07	8.733E-08
SSW	2.329E-05	7.728E-06	4.077E-06	2.008E-06	7.741E-07	4.054E-07	2.498E-07	1.701E-07	1.238E-07	9.464E-08	7.499E-08
SW	1.444E-05	4.792E-06	2.520E-06	1.240E-06	4.749E-07	2.475E-07	1.518E-07	1.030E-07	7.478E-08	5.698E-08	4.504E-08
WSW	9.324E-06	3.249E-06	1.749E-06	8.648E-07	3.293E-07	1.709E-07	1.045E-07	7.075E-08	5.125E-08	3.898E-08	3.076E-08
W	1.361E-05	4.706E-06	2.493E-06	1.223E-06	4.639E-07	2.400E-07	1.465E-07	9.893E-08	7.155E-08	5.435E-08	4.284E-08
WNW	1.606E-05	5.579E-06	2.982E-06	1.469E-06	5.563E-07	2.877E-07	1.755E-07	1.185E-07	8.567E-08	6.506E-08	5.127E-08
NW	2.339E-05	7.915E-06	4.204E-06	2.071E-06	7.879E-07	4.087E-07	2.499E-07	1.691E-07	1.225E-07	9.314E-08	7.350E-08
NNW	4.632E-05	1.482E-05	7.791E-06	3.851E-06	1.504E-06	7.946E-07	4.929E-07	3.375E-07	2.469E-07	1.895E-07	1.506E-07
N	7.234E-05	2.209E-05	1.137E-05	5.602E-06	2.242E-06	1.204E-06	7.564E-07	5.230E-07	3.858E-07	2.981E-07	2.385E-07
NNE	4.206E-05	1.288E-05	6.732E-06	3.346E-06	1.336E-06	7.165E-07	4.494E-07	3.104E-07	2.288E-07	1.766E-07	1.412E-07
NE	2.182E-05	6.629E-06	3.338E-06	1.627E-06	6.530E-07	3.516E-07	2.212E-07	1.532E-07	1.131E-07	8.750E-08	7.007E-08
ENE	2.776E-05	8.472E-06	4.348E-06	2.142E-06	8.567E-07	4.601E-07	2.889E-07	1.997E-07	1.473E-07	1.138E-07	9.100E-08
E	2.935E-05	8.753E-06	4.381E-06	2.137E-06	8.695E-07	4.724E-07	2.992E-07	2.082E-07	1.544E-07	1.199E-07	9.628E-08
ESE	2.873E-05	8.933E-06	4.636E-06	2.290E-06	9.093E-07	4.859E-07	3.039E-07	2.095E-07	1.541E-07	1.188E-07	9.483E-08
SE	5.435E-05	1.651E-05	8.303E-06	4.047E-06	1.626E-06	8.762E-07	5.516E-07	3.820E-07	2.822E-07	2.184E-07	1.749E-07
SSE	4.955E-05	1.539E-05	7.871E-06	3.852E-06	1.522E-06	8.107E-07	5.060E-07	3.482E-07	2.558E-07	1.970E-07	1.571E-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	7.132E-08	3.473E-08	2.146E-08	1.137E-08	7.207E-09	5.034E-09	3.740E-09	2.899E-09	2.318E-09	1.898E-09	1.584E-09
SSW	6.111E-08	2.951E-08	1.812E-08	9.522E-09	5.996E-09	4.166E-09	3.082E-09	2.380E-09	1.896E-09	1.548E-09	1.288E-09
SW	3.661E-08	1.752E-08	1.068E-08	5.557E-09	3.474E-09	2.400E-09	1.767E-09	1.359E-09	1.079E-09	8.782E-10	7.286E-10
WSW	2.497E-08	1.188E-08	7.215E-09	3.729E-09	2.320E-09	1.597E-09	1.172E-09	8.999E-10	7.135E-10	5.799E-10	4.807E-10
W	3.474E-08	1.646E-08	9.972E-09	5.138E-09	3.190E-09	2.193E-09	1.608E-09	1.233E-09	9.766E-10	7.930E-10	6.568E-10
WNW	4.158E-08	1.970E-08	1.193E-08	6.150E-09	3.821E-09	2.629E-09	1.929E-09	1.480E-09	1.174E-09	9.540E-10	7.909E-10
NW	5.967E-08	2.841E-08	1.727E-08	8.953E-09	5.588E-09	3.859E-09	2.841E-09	2.185E-09	1.737E-09	1.415E-09	1.175E-09
NNW	1.232E-07	6.023E-08	3.731E-08	1.984E-08	1.260E-08	8.817E-09	6.556E-09	5.086E-09	4.069E-09	3.333E-09	2.782E-09
N	1.960E-07	9.773E-08	6.135E-08	3.321E-08	2.134E-08	1.505E-08	1.127E-08	8.784E-09	7.058E-09	5.802E-09	4.857E-09
NNE	1.159E-07	5.764E-08	3.611E-08	1.948E-08	1.248E-08	8.783E-09	6.561E-09	5.107E-09	4.097E-09	3.364E-09	2.812E-09
NE	5.764E-08	2.884E-08	1.815E-08	9.860E-09	6.352E-09	4.491E-09	3.367E-09	2.629E-09	2.115E-09	1.741E-09	1.458E-09
ENE	7.477E-08	3.725E-08	2.337E-08	1.264E-08	8.116E-09	5.723E-09	4.283E-09	3.339E-09	2.682E-09	2.205E-09	1.846E-09
E	7.941E-08	4.011E-08	2.540E-08	1.391E-08	9.002E-09	6.385E-09	4.800E-09	3.756E-09	3.027E-09	2.495E-09	2.093E-09
ESE	7.779E-08	3.852E-08	2.407E-08	1.295E-08	8.280E-09	5.823E-09	4.348E-09	3.384E-09	2.715E-09	2.229E-09	1.864E-09
SE	1.439E-07	7.202E-08	4.534E-08	2.463E-08	1.586E-08	1.121E-08	8.403E-09	6.559E-09	5.275E-09	4.340E-09	3.636E-09
SSE	1.288E-07	6.369E-08	3.975E-08	2.136E-08	1.366E-08	9.606E-09	7.171E-09	5.580E-09	4.475E-09	3.673E-09	3.070E-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	4.471E-06	1.005E-06	2.984E-07	1.459E-07	8.811E-08	3.696E-08	1.176E-08	5.096E-09	2.918E-09	1.906E-09
SSW	3.969E-06	8.843E-07	2.594E-07	1.259E-07	7.567E-08	3.147E-08	9.866E-09	4.220E-09	2.396E-09	1.555E-09
SW	2.456E-06	5.438E-07	1.578E-07	7.606E-08	4.546E-08	1.872E-08	5.770E-09	2.433E-09	1.369E-09	8.824E-10
WSW	1.689E-06	3.779E-07	1.087E-07	5.215E-08	3.105E-08	1.272E-08	3.877E-09	1.620E-09	9.068E-10	5.828E-10
W	2.421E-06	5.331E-07	1.524E-07	7.282E-08	4.325E-08	1.764E-08	5.346E-09	2.225E-09	1.243E-09	7.970E-10
WNW	2.887E-06	6.397E-07	1.826E-07	8.719E-08	5.177E-08	2.111E-08	6.400E-09	2.667E-09	1.492E-09	9.587E-10
NW	4.081E-06	9.045E-07	2.599E-07	1.246E-07	7.420E-08	3.041E-08	9.306E-09	3.913E-09	2.202E-09	1.421E-09
NNW	7.602E-06	1.710E-06	5.112E-07	2.509E-07	1.520E-07	6.403E-08	2.051E-08	8.922E-09	5.118E-09	3.347E-09
N	1.119E-05	2.527E-06	7.825E-07	3.916E-07	2.404E-07	1.034E-07	3.419E-08	1.521E-08	8.836E-09	5.824E-09
NNE	6.593E-06	1.507E-06	4.651E-07	2.322E-07	1.423E-07	6.103E-08	2.006E-08	8.880E-09	5.138E-09	3.377E-09
NE	3.309E-06	7.356E-07	2.288E-07	1.148E-07	7.063E-08	3.049E-08	1.014E-08	4.538E-09	2.644E-09	1.747E-09
ENE	4.284E-06	9.660E-07	2.989E-07	1.495E-07	9.174E-08	3.942E-08	1.302E-08	5.785E-09	3.358E-09	2.213E-09
E	4.355E-06	9.748E-07	3.090E-07	1.566E-07	9.703E-08	4.230E-08	1.428E-08	6.449E-09	3.777E-09	2.504E-09
ESE	4.548E-06	1.028E-06	3.147E-07	1.565E-07	9.562E-08	4.082E-08	1.334E-08	5.888E-09	3.404E-09	2.238E-09
SE	8.235E-06	1.831E-06	5.703E-07	2.864E-07	1.763E-07	7.613E-08	2.534E-08	1.133E-08	6.597E-09	4.356E-09
SSE	7.756E-06	1.724E-06	5.241E-07	2.598E-07	1.585E-07	6.753E-08	2.203E-08	9.714E-09	5.613E-09	3.687E-09

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2016
 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	1.546E-07	5.228E-08	2.684E-08	1.276E-08	4.584E-09	2.273E-09	1.339E-09	8.765E-10	6.168E-10	4.571E-10	3.522E-10
SSW	1.062E-07	3.590E-08	1.843E-08	8.763E-09	3.148E-09	1.561E-09	9.192E-10	6.019E-10	4.235E-10	3.139E-10	2.419E-10
SW	6.032E-08	2.040E-08	1.047E-08	4.979E-09	1.789E-09	8.870E-10	5.223E-10	3.420E-10	2.406E-10	1.783E-10	1.374E-10
WSW	5.109E-08	1.728E-08	8.871E-09	4.217E-09	1.515E-09	7.513E-10	4.424E-10	2.897E-10	2.038E-10	1.510E-10	1.164E-10
W	7.027E-08	2.376E-08	1.220E-08	5.801E-09	2.084E-09	1.033E-09	6.084E-10	3.984E-10	2.803E-10	2.077E-10	1.601E-10
WNW	1.037E-07	3.508E-08	1.801E-08	8.562E-09	3.076E-09	1.525E-09	8.981E-10	5.881E-10	4.138E-10	3.067E-10	2.363E-10
NW	1.793E-07	6.064E-08	3.114E-08	1.480E-08	5.317E-09	2.637E-09	1.553E-09	1.017E-09	7.154E-10	5.301E-10	4.085E-10
NNW	2.620E-07	8.860E-08	4.549E-08	2.163E-08	7.769E-09	3.853E-09	2.268E-09	1.485E-09	1.045E-09	7.746E-10	5.969E-10
N	2.808E-07	9.495E-08	4.875E-08	2.318E-08	8.326E-09	4.129E-09	2.431E-09	1.592E-09	1.120E-09	8.301E-10	6.397E-10
NNE	1.540E-07	5.209E-08	2.675E-08	1.272E-08	4.567E-09	2.265E-09	1.334E-09	8.733E-10	6.145E-10	4.554E-10	3.509E-10
NE	8.149E-08	2.756E-08	1.415E-08	6.727E-09	2.416E-09	1.198E-09	7.055E-10	4.620E-10	3.251E-10	2.409E-10	1.857E-10
ENE	9.919E-08	3.354E-08	1.722E-08	8.187E-09	2.941E-09	1.458E-09	8.588E-10	5.623E-10	3.957E-10	2.932E-10	2.260E-10
E	8.231E-08	2.783E-08	1.429E-08	6.794E-09	2.441E-09	1.210E-09	7.127E-10	4.666E-10	3.284E-10	2.433E-10	1.875E-10
ESE	1.321E-07	4.466E-08	2.293E-08	1.090E-08	3.916E-09	1.942E-09	1.144E-09	7.488E-10	5.269E-10	3.905E-10	3.009E-10
SE	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	7.249E-10	5.587E-10
SSE	2.534E-07	8.568E-08	4.399E-08	2.091E-08	7.513E-09	3.726E-09	2.194E-09	1.436E-09	1.011E-09	7.491E-10	5.772E-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	2.798E-10	1.243E-10	7.530E-11	3.806E-11	2.304E-11	1.545E-11	1.107E-11	8.311E-12	6.462E-12	5.162E-12	4.213E-12
SSW	1.921E-10	8.536E-11	5.171E-11	2.614E-11	1.582E-11	1.061E-11	7.600E-12	5.706E-12	4.437E-12	3.544E-12	2.893E-12
SW	1.092E-10	4.850E-11	2.938E-11	1.485E-11	8.988E-12	6.026E-12	4.318E-12	3.242E-12	2.521E-12	2.014E-12	1.644E-12
WSW	9.247E-11	4.108E-11	2.488E-11	1.258E-11	7.613E-12	5.104E-12	3.657E-12	2.746E-12	2.135E-12	1.706E-12	1.392E-12
W	1.272E-10	5.650E-11	3.423E-11	1.730E-11	1.047E-11	7.020E-12	5.030E-12	3.777E-12	2.937E-12	2.346E-12	1.915E-12
WNW	1.877E-10	8.340E-11	5.052E-11	2.554E-11	1.546E-11	1.036E-11	7.425E-12	5.576E-12	4.335E-12	3.463E-12	2.827E-12
NW	3.246E-10	1.442E-10	8.734E-11	4.415E-11	2.672E-11	1.791E-11	1.284E-11	9.639E-12	7.494E-12	5.987E-12	4.886E-12
NNW	4.742E-10	2.107E-10	1.276E-10	6.450E-11	3.904E-11	2.617E-11	1.876E-11	1.408E-11	1.095E-11	8.747E-12	7.139E-12
N	5.082E-10	2.258E-10	1.368E-10	6.912E-11	4.184E-11	2.805E-11	2.010E-11	1.509E-11	1.174E-11	9.374E-12	7.651E-12
NNE	2.788E-10	1.239E-10	7.503E-11	3.792E-11	2.295E-11	1.539E-11	1.103E-11	8.280E-12	6.438E-12	5.143E-12	4.198E-12
NE	1.475E-10	6.552E-11	3.969E-11	2.006E-11	1.214E-11	8.141E-12	5.833E-12	4.380E-12	3.406E-12	2.720E-12	2.221E-12
ENE	1.795E-10	7.975E-11	4.831E-11	2.442E-11	1.478E-11	9.909E-12	7.100E-12	5.331E-12	4.145E-12	3.311E-12	2.703E-12
E	1.490E-10	6.618E-11	4.009E-11	2.026E-11	1.226E-11	8.223E-12	5.892E-12	4.424E-12	3.440E-12	2.748E-12	2.243E-12
ESE	2.391E-10	1.062E-10	6.433E-11	3.251E-11	1.968E-11	1.319E-11	9.455E-12	7.099E-12	5.520E-12	4.409E-12	3.599E-12
SE	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	8.186E-12	6.682E-12
SSE	4.586E-10	2.037E-10	1.234E-10	6.237E-11	3.775E-11	2.531E-11	1.814E-11	1.362E-11	1.059E-11	8.459E-12	6.904E-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	2.624E-08	5.375E-09	1.403E-09	6.302E-10	3.565E-10	1.371E-10	3.966E-11	1.572E-11	8.394E-12	5.196E-12
SSW	1.802E-08	3.690E-09	9.634E-10	4.327E-10	2.448E-10	9.413E-11	2.723E-11	1.079E-11	5.764E-12	3.568E-12
SW	1.024E-08	2.097E-09	5.474E-10	2.459E-10	1.391E-10	5.349E-11	1.547E-11	6.133E-12	3.275E-12	2.027E-12
WSW	8.671E-09	1.776E-09	4.637E-10	2.082E-10	1.178E-10	4.530E-11	1.311E-11	5.194E-12	2.774E-12	1.717E-12
W	1.193E-08	2.443E-09	6.377E-10	2.864E-10	1.620E-10	6.231E-11	1.803E-11	7.144E-12	3.815E-12	2.361E-12
WNW	1.760E-08	3.606E-09	9.413E-10	4.228E-10	2.392E-10	9.197E-11	2.661E-11	1.055E-11	5.631E-12	3.486E-12
NW	3.043E-08	6.234E-09	1.627E-09	7.309E-10	4.135E-10	1.590E-10	4.600E-11	1.823E-11	9.736E-12	6.026E-12
NNW	4.446E-08	9.108E-09	2.378E-09	1.068E-09	6.041E-10	2.323E-10	6.721E-11	2.664E-11	1.422E-11	8.804E-12
N	4.765E-08	9.761E-09	2.548E-09	1.144E-09	6.474E-10	2.490E-10	7.203E-11	2.855E-11	1.524E-11	9.436E-12
NNE	2.614E-08	5.355E-09	1.398E-09	6.278E-10	3.552E-10	1.366E-10	3.951E-11	1.566E-11	8.363E-12	5.176E-12
NE	1.383E-08	2.833E-09	7.395E-10	3.321E-10	1.879E-10	7.225E-11	2.090E-11	8.285E-12	4.424E-12	2.738E-12
ENE	1.683E-08	3.448E-09	9.001E-10	4.043E-10	2.287E-10	8.795E-11	2.544E-11	1.008E-11	5.385E-12	3.333E-12
E	1.397E-08	2.861E-09	7.470E-10	3.355E-10	1.898E-10	7.298E-11	2.111E-11	8.368E-12	4.469E-12	2.766E-12
ESE	2.242E-08	4.591E-09	1.199E-09	5.383E-10	3.045E-10	1.171E-10	3.388E-11	1.343E-11	7.171E-12	4.438E-12
SE	4.162E-08	8.524E-09	2.225E-09	9.994E-10	5.654E-10	2.174E-10	6.290E-11	2.493E-11	1.331E-11	8.240E-12
SSE	4.300E-08	8.808E-09	2.299E-09	1.033E-09	5.842E-10	2.247E-10	6.499E-11	2.576E-11	1.376E-11	8.514E-12

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE (MI)	DIST. (MI)	X/Q (SEC/M3) NO DECAY	X/Q (SEC/M3) 2.26 DAY DECAY	X/Q (SEC/M3) 8.0 DAY DECAY	D/Q (PER SQ.METER)
A	Site Boundary	S	.80	4.4E-06	4.4E-06	3.9E-06	2.3E-08
A	Site Boundary	SSW	.82	3.7E-06	3.6E-06	3.2E-06	1.4E-08
A	Site Boundary	SW	.97	1.5E-06	1.5E-06	1.3E-06	5.3E-09
A	Site Boundary	WSW	.93	1.2E-06	1.2E-06	1.0E-06	5.2E-09
A	Site Boundary	W	.91	1.7E-06	1.7E-06	1.5E-06	7.3E-09
A	Site Boundary	WNW	.94	2.0E-06	2.0E-06	1.7E-06	1.0E-08
A	Site Boundary	NW	.81	3.9E-06	3.9E-06	3.5E-06	2.5E-08
A	Site Boundary	NNW	.69	1.0E-05	9.9E-06	8.9E-06	5.3E-08
A	Site Boundary	N	.67	1.5E-05	1.5E-05	1.3E-05	5.8E-08
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	9.6E-06	3.9E-08
A	Site Boundary	NE	.62	5.0E-06	5.0E-06	4.5E-06	1.9E-08
A	Site Boundary	ENE	.59	7.2E-06	7.1E-06	6.5E-06	2.6E-08
A	Site Boundary	E	.53	8.8E-06	8.8E-06	8.0E-06	2.6E-08
A	Site Boundary	ESE	.54	8.7E-06	8.7E-06	7.9E-06	4.0E-08
A	Site Boundary	SE	.65	1.2E-05	1.2E-05	1.1E-05	5.4E-08
A	Site Boundary	SSE	.81	7.3E-06	7.3E-06	6.5E-06	3.6E-08
A	Nearest Res	SSW	3.00	2.2E-07	2.1E-07	1.7E-07	6.0E-10
A	Nearest Res	SW	1.70	4.3E-07	4.2E-07	3.6E-07	1.3E-09
A	Nearest Res	WSW	1.90	2.3E-07	2.3E-07	1.9E-07	8.5E-10
A	Nearest Res	W	1.00	1.4E-06	1.4E-06	1.2E-06	5.8E-09
A	Nearest Res	WNW	1.70	5.0E-07	4.9E-07	4.2E-07	2.3E-09
A	Nearest Res	NW	.90	3.1E-06	3.0E-06	2.7E-06	1.9E-08
A	Nearest Res	NNW	1.90	1.1E-06	1.1E-06	8.9E-07	4.4E-09
A	Nearest Res	N	2.90	7.1E-07	6.9E-07	5.6E-07	1.7E-09
A	Nearest Res	NNE	1.70	1.2E-06	1.2E-06	1.0E-06	3.4E-09
A	Nearest Res	ENE	1.70	7.8E-07	7.7E-07	6.5E-07	2.2E-09
A	Nearest Res	E	2.20	4.7E-07	4.7E-07	3.9E-07	9.6E-10
A	Nearest Res	ESE	2.80	3.0E-07	3.0E-07	2.4E-07	8.8E-10
A	Nearest Res	SE	3.00	4.8E-07	4.7E-07	3.8E-07	1.4E-09
A	Nearest Res	SSE	3.00	4.4E-07	4.3E-07	3.5E-07	1.4E-09
A	Nearest Cow	NNW	3.50	3.2E-07	3.1E-07	2.5E-07	1.0E-09
A	Nearest Garde	SSW	3.00	2.2E-07	2.1E-07	1.7E-07	6.0E-10
A	Nearest Garde	SW	2.20	2.5E-07	2.4E-07	2.0E-07	7.1E-10
A	Nearest Garde	NNW	3.00	4.3E-07	4.2E-07	3.4E-07	1.5E-09
A	Nearest Garde	ENE	1.70	7.8E-07	7.7E-07	6.5E-07	2.2E-09
A	Nearest Garde	ESE	2.30	4.4E-07	4.4E-07	3.6E-07	1.4E-09
A	Nearest Garde	SSE	3.00	4.4E-07	4.3E-07	3.5E-07	1.4E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

July-September 2016

VENTS GROUND LEVEL RELEASES - JUL-SEP 2016
 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	5.486E-05	1.831E-05	1.004E-05	5.100E-06	2.056E-06	1.115E-06	7.080E-07	4.948E-07	3.688E-07	2.879E-07	2.326E-07
SSW	4.125E-05	1.457E-05	7.985E-06	4.015E-06	1.574E-06	8.374E-07	5.235E-07	3.613E-07	2.665E-07	2.061E-07	1.652E-07
SW	2.689E-05	9.452E-06	5.174E-06	2.601E-06	1.019E-06	5.421E-07	3.389E-07	2.338E-07	1.724E-07	1.334E-07	1.069E-07
WSW	2.486E-05	8.896E-06	4.889E-06	2.458E-06	9.632E-07	5.123E-07	3.202E-07	2.210E-07	1.630E-07	1.260E-07	1.010E-07
W	2.236E-05	7.777E-06	4.174E-06	2.079E-06	8.120E-07	4.309E-07	2.688E-07	1.852E-07	1.364E-07	1.054E-07	8.440E-08
WNW	2.029E-05	7.268E-06	3.998E-06	2.009E-06	7.870E-07	4.186E-07	2.616E-07	1.806E-07	1.332E-07	1.030E-07	8.256E-08
NW	3.696E-05	1.336E-05	7.318E-06	3.663E-06	1.427E-06	7.562E-07	4.713E-07	3.244E-07	2.388E-07	1.843E-07	1.475E-07
NNW	6.666E-05	2.307E-05	1.263E-05	6.371E-06	2.541E-06	1.369E-06	8.642E-07	6.013E-07	4.466E-07	3.475E-07	2.800E-07
N	8.251E-05	2.686E-05	1.472E-05	7.504E-06	3.050E-06	1.664E-06	1.060E-06	7.434E-07	5.557E-07	4.347E-07	3.519E-07
NNE	2.907E-05	9.183E-06	4.928E-06	2.497E-06	1.022E-06	5.607E-07	3.588E-07	2.523E-07	1.891E-07	1.483E-07	1.203E-07
NE	1.950E-05	6.069E-06	3.204E-06	1.616E-06	6.729E-07	3.733E-07	2.409E-07	1.706E-07	1.286E-07	1.013E-07	8.253E-08
ENE	1.481E-05	4.709E-06	2.408E-06	1.187E-06	4.931E-07	2.732E-07	1.763E-07	1.248E-07	9.408E-08	7.414E-08	6.041E-08
E	2.314E-05	7.210E-06	3.766E-06	1.887E-06	7.876E-07	4.375E-07	2.827E-07	2.003E-07	1.511E-07	1.191E-07	9.711E-08
ESE	5.017E-05	1.540E-05	7.971E-06	3.986E-06	1.676E-06	9.354E-07	6.065E-07	4.311E-07	3.259E-07	2.575E-07	2.102E-07
SE	7.453E-05	2.268E-05	1.173E-05	5.867E-06	2.471E-06	1.381E-06	8.964E-07	6.377E-07	4.824E-07	3.813E-07	3.115E-07
SSE	9.606E-05	3.022E-05	1.629E-05	8.293E-06	3.427E-06	1.890E-06	1.215E-06	8.573E-07	6.443E-07	5.064E-07	4.116E-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	1.930E-07	1.002E-07	6.534E-08	3.781E-08	2.575E-08	1.916E-08	1.506E-08	1.229E-08	1.032E-08	8.847E-09	7.711E-09
SSW	1.361E-07	6.864E-08	4.388E-08	2.470E-08	1.651E-08	1.210E-08	9.397E-09	7.595E-09	6.319E-09	5.376E-09	4.653E-09
SW	8.804E-08	4.440E-08	2.839E-08	1.598E-08	1.069E-08	7.835E-09	6.087E-09	4.921E-09	4.095E-09	3.484E-09	3.016E-09
WSW	8.319E-08	4.194E-08	2.681E-08	1.507E-08	1.006E-08	7.362E-09	5.712E-09	4.612E-09	3.834E-09	3.259E-09	2.819E-09
W	6.947E-08	3.495E-08	2.231E-08	1.254E-08	8.392E-09	6.157E-09	4.787E-09	3.873E-09	3.226E-09	2.747E-09	2.380E-09
WNW	6.802E-08	3.433E-08	2.196E-08	1.236E-08	8.263E-09	6.055E-09	4.702E-09	3.800E-09	3.161E-09	2.688E-09	2.326E-09
NW	1.213E-07	6.085E-08	3.875E-08	2.168E-08	1.443E-08	1.054E-08	8.166E-09	6.584E-09	5.467E-09	4.642E-09	4.011E-09
NNW	2.318E-07	1.192E-07	7.724E-08	4.430E-08	2.998E-08	2.219E-08	1.737E-08	1.414E-08	1.183E-08	1.012E-08	8.800E-09
N	2.926E-07	1.528E-07	1.001E-07	5.830E-08	3.987E-08	2.975E-08	2.345E-08	1.919E-08	1.613E-08	1.385E-08	1.209E-08
NNE	1.002E-07	5.272E-08	3.473E-08	2.039E-08	1.403E-08	1.051E-08	8.319E-09	6.831E-09	5.761E-09	4.960E-09	4.340E-09
NE	6.899E-08	3.678E-08	2.445E-08	1.452E-08	1.007E-08	7.592E-09	6.035E-09	4.975E-09	4.210E-09	3.636E-09	3.189E-09
ENE	5.050E-08	2.696E-08	1.795E-08	1.069E-08	7.430E-09	5.615E-09	4.472E-09	3.693E-09	3.130E-09	2.707E-09	2.378E-09
E	8.121E-08	4.338E-08	2.888E-08	1.719E-08	1.194E-08	9.013E-09	7.172E-09	5.917E-09	5.012E-09	4.331E-09	3.802E-09
ESE	1.761E-07	9.459E-08	6.322E-08	3.783E-08	2.636E-08	1.996E-08	1.592E-08	1.315E-08	1.116E-08	9.655E-09	8.486E-09
SE	2.610E-07	1.404E-07	9.393E-08	5.629E-08	3.928E-08	2.976E-08	2.375E-08	1.964E-08	1.667E-08	1.443E-08	1.269E-08
SSE	3.434E-07	1.817E-07	1.202E-07	7.086E-08	4.887E-08	3.670E-08	2.908E-08	2.390E-08	2.018E-08	1.739E-08	1.522E-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	9.684E-06	2.314E-06	7.314E-07	3.740E-07	2.343E-07	1.053E-07	3.857E-08	1.928E-08	1.233E-08	8.863E-09
SSW	7.683E-06	1.789E-06	5.423E-07	2.706E-07	1.665E-07	7.262E-08	2.532E-08	1.219E-08	7.624E-09	5.388E-09
SW	4.981E-06	1.159E-06	3.510E-07	1.751E-07	1.077E-07	4.698E-08	1.639E-08	7.896E-09	4.939E-09	3.492E-09
WSW	4.699E-06	1.095E-06	3.317E-07	1.655E-07	1.018E-07	4.438E-08	1.545E-08	7.420E-09	4.630E-09	3.266E-09
W	4.044E-06	9.242E-07	2.786E-07	1.386E-07	8.509E-08	3.700E-08	1.287E-08	6.205E-09	3.888E-09	2.753E-09
WNW	3.841E-06	8.948E-07	2.711E-07	1.352E-07	8.323E-08	3.632E-08	1.267E-08	6.103E-09	3.814E-09	2.694E-09
NW	7.036E-06	1.626E-06	4.885E-07	2.425E-07	1.487E-07	6.447E-08	2.225E-08	1.063E-08	6.611E-09	4.653E-09
NNW	1.217E-05	2.871E-06	8.936E-07	4.531E-07	2.822E-07	1.256E-07	4.526E-08	2.234E-08	1.419E-08	1.014E-08
N	1.421E-05	3.423E-06	1.095E-06	5.632E-07	3.545E-07	1.604E-07	5.940E-08	2.993E-08	1.924E-08	1.388E-08
NNE	4.793E-06	1.145E-06	3.701E-07	1.916E-07	1.211E-07	5.527E-08	2.075E-08	1.057E-08	6.849E-09	4.968E-09
NE	3.135E-06	7.492E-07	2.481E-07	1.302E-07	8.308E-08	3.846E-08	1.475E-08	7.630E-09	4.986E-09	3.641E-09
ENE	2.377E-06	5.496E-07	1.816E-07	9.527E-08	6.081E-08	2.819E-08	1.085E-08	5.642E-09	3.701E-09	2.711E-09
E	3.696E-06	8.764E-07	2.910E-07	1.530E-07	9.775E-08	4.534E-08	1.745E-08	9.057E-09	5.931E-09	4.337E-09
ESE	7.850E-06	1.860E-06	6.241E-07	3.299E-07	2.116E-07	9.876E-08	3.837E-08	2.005E-08	1.318E-08	9.668E-09
SE	1.156E-05	2.741E-06	9.222E-07	4.882E-07	3.134E-07	1.465E-07	5.709E-08	2.990E-08	1.969E-08	1.445E-08
SSE	1.583E-05	3.825E-06	1.252E-06	6.526E-07	4.144E-07	1.903E-07	7.205E-08	3.690E-08	2.396E-08	1.741E-08

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2016
 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	5.477E-05	1.825E-05	9.995E-06	5.067E-06	2.035E-06	1.100E-06	6.961E-07	4.847E-07	3.600E-07	2.801E-07	2.255E-07
SSW	4.118E-05	1.452E-05	7.950E-06	3.991E-06	1.560E-06	8.272E-07	5.155E-07	3.547E-07	2.607E-07	2.010E-07	1.606E-07
SW	2.685E-05	9.424E-06	5.150E-06	2.585E-06	1.010E-06	5.354E-07	3.336E-07	2.294E-07	1.687E-07	1.300E-07	1.039E-07
WSW	2.482E-05	8.870E-06	4.868E-06	2.443E-06	9.546E-07	5.062E-07	3.154E-07	2.170E-07	1.595E-07	1.230E-07	9.826E-08
W	2.233E-05	7.756E-06	4.158E-06	2.068E-06	8.053E-07	4.260E-07	2.650E-07	1.821E-07	1.337E-07	1.030E-07	8.220E-08
WNW	2.027E-05	7.252E-06	3.984E-06	2.000E-06	7.814E-07	4.146E-07	2.585E-07	1.779E-07	1.309E-07	1.010E-07	8.075E-08
NW	3.693E-05	1.334E-05	7.297E-06	3.650E-06	1.419E-06	7.505E-07	4.668E-07	3.207E-07	2.356E-07	1.815E-07	1.449E-07
NNW	6.658E-05	2.302E-05	1.259E-05	6.341E-06	2.523E-06	1.356E-06	8.538E-07	5.926E-07	4.390E-07	3.407E-07	2.738E-07
N	8.239E-05	2.679E-05	1.466E-05	7.462E-06	3.024E-06	1.645E-06	1.045E-06	7.306E-07	5.444E-07	4.247E-07	3.428E-07
NNE	2.901E-05	9.147E-06	4.899E-06	2.478E-06	1.010E-06	5.518E-07	3.516E-07	2.463E-07	1.838E-07	1.435E-07	1.159E-07
NE	1.945E-05	6.043E-06	3.183E-06	1.601E-06	6.640E-07	3.667E-07	2.356E-07	1.661E-07	1.246E-07	9.772E-08	7.924E-08
ENE	1.478E-05	4.690E-06	2.394E-06	1.178E-06	4.871E-07	2.688E-07	1.726E-07	1.217E-07	9.133E-08	7.166E-08	5.813E-08
E	2.309E-05	7.180E-06	3.742E-06	1.872E-06	7.776E-07	4.301E-07	2.767E-07	1.953E-07	1.466E-07	1.151E-07	9.344E-08
ESE	5.005E-05	1.533E-05	7.916E-06	3.949E-06	1.652E-06	9.180E-07	5.924E-07	4.191E-07	3.153E-07	2.479E-07	2.014E-07
SE	7.435E-05	2.258E-05	1.165E-05	5.813E-06	2.437E-06	1.356E-06	8.757E-07	6.199E-07	4.667E-07	3.672E-07	2.985E-07
SSE	9.583E-05	3.008E-05	1.618E-05	8.218E-06	3.380E-06	1.856E-06	1.187E-06	8.339E-07	6.237E-07	4.879E-07	3.947E-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	1.865E-07	9.507E-08	6.095E-08	3.409E-08	2.246E-08	1.617E-08	1.232E-08	9.752E-09	7.944E-09	6.613E-09	5.602E-09
SSW	1.319E-07	6.547E-08	4.120E-08	2.247E-08	1.456E-08	1.035E-08	7.802E-09	6.124E-09	4.950E-09	4.093E-09	3.445E-09
SW	8.527E-08	4.231E-08	2.662E-08	1.451E-08	9.399E-09	6.681E-09	5.035E-09	3.950E-09	3.193E-09	2.639E-09	2.221E-09
WSW	8.069E-08	4.006E-08	2.521E-08	1.374E-08	8.898E-09	6.323E-09	4.765E-09	3.739E-09	3.022E-09	2.498E-09	2.102E-09
W	6.746E-08	3.342E-08	2.100E-08	1.145E-08	7.432E-09	5.292E-09	3.996E-09	3.142E-09	2.544E-09	2.107E-09	1.777E-09
WNW	6.637E-08	3.308E-08	2.090E-08	1.148E-08	7.487E-09	5.358E-09	4.065E-09	3.210E-09	2.611E-09	2.172E-09	1.839E-09
NW	1.190E-07	5.909E-08	3.726E-08	2.044E-08	1.335E-08	9.566E-09	7.272E-09	5.756E-09	4.694E-09	3.914E-09	3.323E-09
NNW	2.261E-07	1.148E-07	7.344E-08	4.107E-08	2.712E-08	1.959E-08	1.498E-08	1.191E-08	9.746E-09	8.151E-09	6.937E-09
N	2.841E-07	1.462E-07	9.438E-08	5.338E-08	3.549E-08	2.576E-08	1.977E-08	1.576E-08	1.292E-08	1.083E-08	9.224E-09
NNE	9.616E-08	4.955E-08	3.197E-08	1.802E-08	1.192E-08	8.598E-09	6.554E-09	5.190E-09	4.226E-09	3.516E-09	2.976E-09
NE	6.593E-08	3.436E-08	2.234E-08	1.270E-08	8.440E-09	6.107E-09	4.665E-09	3.699E-09	3.015E-09	2.510E-09	2.125E-09
ENE	4.838E-08	2.526E-08	1.645E-08	9.382E-09	6.252E-09	4.535E-09	3.471E-09	2.756E-09	2.250E-09	1.875E-09	1.589E-09
E	7.781E-08	4.069E-08	2.653E-08	1.515E-08	1.011E-08	7.346E-09	5.632E-09	4.481E-09	3.665E-09	3.060E-09	2.599E-09
ESE	1.679E-07	8.808E-08	5.749E-08	3.285E-08	2.189E-08	1.587E-08	1.213E-08	9.623E-09	7.845E-09	6.531E-09	5.528E-09
SE	2.489E-07	1.308E-07	8.551E-08	4.896E-08	3.270E-08	2.374E-08	1.818E-08	1.445E-08	1.179E-08	9.832E-09	8.334E-09
SSE	3.278E-07	1.695E-07	1.095E-07	6.171E-08	4.073E-08	2.931E-08	2.228E-08	1.759E-08	1.427E-08	1.184E-08	9.983E-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	9.640E-06	2.293E-06	7.194E-07	3.652E-07	2.272E-07	1.002E-07	3.489E-08	1.631E-08	9.796E-09	6.633E-09
SSW	7.651E-06	1.775E-06	5.343E-07	2.648E-07	1.619E-07	6.944E-08	2.311E-08	1.045E-08	6.156E-09	4.107E-09
SW	4.960E-06	1.149E-06	3.458E-07	1.713E-07	1.047E-07	4.488E-08	1.493E-08	6.747E-09	3.971E-09	2.648E-09
WSW	4.680E-06	1.086E-06	3.269E-07	1.620E-07	9.908E-08	4.248E-08	1.414E-08	6.387E-09	3.759E-09	2.507E-09
W	4.028E-06	9.173E-07	2.748E-07	1.358E-07	8.290E-08	3.546E-08	1.179E-08	5.344E-09	3.158E-09	2.114E-09
WNW	3.828E-06	8.890E-07	2.679E-07	1.330E-07	8.143E-08	3.506E-08	1.180E-08	5.408E-09	3.226E-09	2.179E-09
NW	7.018E-06	1.618E-06	4.840E-07	2.393E-07	1.461E-07	6.270E-08	2.102E-08	9.656E-09	5.785E-09	3.926E-09
NNW	1.213E-05	2.853E-06	8.832E-07	4.454E-07	2.760E-07	1.211E-07	4.206E-08	1.975E-08	1.196E-08	8.174E-09
N	1.416E-05	3.397E-06	1.079E-06	5.520E-07	3.453E-07	1.538E-07	5.454E-08	2.596E-08	1.582E-08	1.085E-08
NNE	4.767E-06	1.133E-06	3.629E-07	1.863E-07	1.168E-07	5.209E-08	1.841E-08	8.665E-09	5.212E-09	3.526E-09
NE	3.116E-06	7.402E-07	2.427E-07	1.262E-07	7.979E-08	3.603E-08	1.295E-08	6.152E-09	3.714E-09	2.517E-09
ENE	2.363E-06	5.435E-07	1.779E-07	9.251E-08	5.853E-08	2.648E-08	9.562E-09	4.567E-09	2.767E-09	1.880E-09
E	3.675E-06	8.663E-07	2.850E-07	1.485E-07	9.408E-08	4.264E-08	1.544E-08	7.398E-09	4.499E-09	3.068E-09
ESE	7.800E-06	1.836E-06	6.099E-07	3.193E-07	2.028E-07	9.222E-08	3.345E-08	1.598E-08	9.662E-09	6.548E-09
SE	1.148E-05	2.707E-06	9.014E-07	4.726E-07	3.005E-07	1.369E-07	4.985E-08	2.391E-08	1.450E-08	9.859E-09
SSE	1.573E-05	3.778E-06	1.224E-06	6.320E-07	3.975E-07	1.780E-07	6.301E-08	2.954E-08	1.766E-08	1.187E-08

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2016
 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	5.190E-05	1.671E-05	8.938E-06	4.456E-06	1.741E-06	9.201E-07	5.708E-07	3.907E-07	2.858E-07	2.193E-07	1.743E-07
SSW	3.902E-05	1.329E-05	7.107E-06	3.509E-06	1.333E-06	6.910E-07	4.222E-07	2.855E-07	2.066E-07	1.571E-07	1.239E-07
SW	2.544E-05	8.624E-06	4.605E-06	2.273E-06	8.634E-07	4.473E-07	2.733E-07	1.847E-07	1.337E-07	1.016E-07	8.014E-08
WSW	2.351E-05	8.117E-06	4.352E-06	2.148E-06	8.159E-07	4.228E-07	2.583E-07	1.746E-07	1.264E-07	9.608E-08	7.576E-08
W	2.115E-05	7.096E-06	3.716E-06	1.817E-06	6.880E-07	3.556E-07	2.169E-07	1.464E-07	1.058E-07	8.038E-08	6.333E-08
WNW	1.920E-05	6.633E-06	3.559E-06	1.756E-06	6.670E-07	3.456E-07	2.112E-07	1.428E-07	1.034E-07	7.864E-08	6.203E-08
NW	3.497E-05	1.219E-05	6.516E-06	3.203E-06	1.210E-06	6.249E-07	3.807E-07	2.568E-07	1.856E-07	1.409E-07	1.110E-07
NNW	6.307E-05	2.105E-05	1.125E-05	5.569E-06	2.154E-06	1.130E-06	6.976E-07	4.756E-07	3.468E-07	2.653E-07	2.104E-07
N	7.805E-05	2.451E-05	1.310E-05	6.558E-06	2.584E-06	1.373E-06	8.555E-07	5.876E-07	4.311E-07	3.315E-07	2.641E-07
NNE	2.750E-05	8.377E-06	4.384E-06	2.181E-06	8.655E-07	4.622E-07	2.890E-07	1.991E-07	1.464E-07	1.128E-07	9.000E-08
NE	1.844E-05	5.536E-06	2.850E-06	1.411E-06	5.693E-07	3.075E-07	1.939E-07	1.345E-07	9.943E-08	7.698E-08	6.168E-08
ENE	1.401E-05	4.295E-06	2.142E-06	1.037E-06	4.173E-07	2.252E-07	1.420E-07	9.844E-08	7.279E-08	5.636E-08	4.517E-08
E	2.189E-05	6.577E-06	3.350E-06	1.648E-06	6.665E-07	3.605E-07	2.276E-07	1.580E-07	1.169E-07	9.057E-08	7.262E-08
ESE	4.745E-05	1.404E-05	7.089E-06	3.480E-06	1.417E-06	7.704E-07	4.880E-07	3.397E-07	2.519E-07	1.955E-07	1.570E-07
SE	7.049E-05	2.069E-05	1.043E-05	5.122E-06	2.090E-06	1.138E-06	7.213E-07	5.024E-07	3.729E-07	2.896E-07	2.326E-07
SSE	9.085E-05	2.756E-05	1.449E-05	7.240E-06	2.899E-06	1.557E-06	9.777E-07	6.756E-07	4.981E-07	3.846E-07	3.075E-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	1.425E-07	6.955E-08	4.302E-08	2.281E-08	1.444E-08	1.007E-08	7.471E-09	5.781E-09	4.614E-09	3.771E-09	3.141E-09
SSW	1.005E-07	4.774E-08	2.895E-08	1.494E-08	9.291E-09	6.392E-09	4.688E-09	3.594E-09	2.846E-09	2.309E-09	1.911E-09
SW	6.503E-08	3.087E-08	1.872E-08	9.662E-09	6.010E-09	4.135E-09	3.033E-09	2.325E-09	1.841E-09	1.494E-09	1.237E-09
WSW	6.147E-08	2.918E-08	1.769E-08	9.123E-09	5.667E-09	3.895E-09	2.854E-09	2.186E-09	1.730E-09	1.404E-09	1.161E-09
W	5.135E-08	2.432E-08	1.473E-08	7.595E-09	4.728E-09	3.257E-09	2.391E-09	1.835E-09	1.454E-09	1.182E-09	9.791E-10
WNW	5.035E-08	2.395E-08	1.454E-08	7.523E-09	4.688E-09	3.231E-09	2.374E-09	1.823E-09	1.446E-09	1.176E-09	9.750E-10
NW	8.993E-08	4.254E-08	2.574E-08	1.325E-08	8.238E-09	5.669E-09	4.161E-09	3.194E-09	2.532E-09	2.059E-09	1.707E-09
NNW	1.716E-07	8.311E-08	5.114E-08	2.694E-08	1.699E-08	1.183E-08	8.759E-09	6.772E-09	5.403E-09	4.415E-09	3.678E-09
N	2.162E-07	1.063E-07	6.612E-08	3.532E-08	2.249E-08	1.576E-08	1.174E-08	9.114E-09	7.299E-09	5.984E-09	4.998E-09
NNE	7.381E-08	3.650E-08	2.278E-08	1.222E-08	7.803E-09	5.475E-09	4.079E-09	3.168E-09	2.536E-09	2.078E-09	1.734E-09
NE	5.076E-08	2.542E-08	1.600E-08	8.682E-09	5.579E-09	3.935E-09	2.943E-09	2.292E-09	1.840E-09	1.511E-09	1.263E-09
ENE	3.719E-08	1.865E-08	1.176E-08	6.396E-09	4.122E-09	2.913E-09	2.183E-09	1.704E-09	1.369E-09	1.126E-09	9.423E-10
E	5.980E-08	3.002E-08	1.893E-08	1.030E-08	6.636E-09	4.689E-09	3.514E-09	2.742E-09	2.204E-09	1.813E-09	1.518E-09
ESE	1.295E-07	6.533E-08	4.132E-08	2.257E-08	1.457E-08	1.031E-08	7.727E-09	6.031E-09	4.848E-09	3.986E-09	3.336E-09
SE	1.919E-07	9.698E-08	6.141E-08	3.360E-08	2.172E-08	1.538E-08	1.155E-08	9.020E-09	7.256E-09	5.970E-09	5.000E-09
SSE	2.526E-07	1.256E-07	7.859E-08	4.231E-08	2.704E-08	1.898E-08	1.415E-08	1.098E-08	8.790E-09	7.199E-09	6.004E-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	8.673E-06	1.979E-06	5.919E-07	2.904E-07	1.758E-07	7.396E-08	2.358E-08	1.020E-08	5.819E-09	3.788E-09
SSW	6.882E-06	1.531E-06	4.392E-07	2.103E-07	1.251E-07	5.112E-08	1.554E-08	6.484E-09	3.622E-09	2.321E-09
SW	4.461E-06	9.917E-07	2.843E-07	1.361E-07	8.091E-08	3.306E-08	1.005E-08	4.194E-09	2.343E-09	1.502E-09
WSW	4.209E-06	9.372E-07	2.687E-07	1.286E-07	7.649E-08	3.125E-08	9.491E-09	3.951E-09	2.203E-09	1.411E-09
W	3.623E-06	7.912E-07	2.257E-07	1.077E-07	6.395E-08	2.607E-08	7.906E-09	3.303E-09	1.849E-09	1.187E-09
WNW	3.441E-06	7.662E-07	2.197E-07	1.052E-07	6.262E-08	2.564E-08	7.823E-09	3.277E-09	1.837E-09	1.182E-09
NW	6.305E-06	1.393E-06	3.963E-07	1.889E-07	1.120E-07	4.561E-08	1.380E-08	5.751E-09	3.218E-09	2.069E-09
NNW	1.090E-05	2.458E-06	7.242E-07	3.525E-07	2.123E-07	8.856E-08	2.790E-08	1.198E-08	6.818E-09	4.435E-09
N	1.273E-05	2.929E-06	8.864E-07	4.379E-07	2.663E-07	1.129E-07	3.646E-08	1.595E-08	9.172E-09	6.008E-09
NNE	4.292E-06	9.786E-07	2.992E-07	1.486E-07	9.075E-08	3.869E-08	1.260E-08	5.537E-09	3.187E-09	2.086E-09
NE	2.807E-06	6.399E-07	2.004E-07	1.009E-07	6.217E-08	2.687E-08	8.929E-09	3.976E-09	2.306E-09	1.517E-09
ENE	2.129E-06	4.696E-07	1.467E-07	7.386E-08	4.553E-08	1.971E-08	6.576E-09	2.943E-09	1.713E-09	1.130E-09
E	3.311E-06	7.486E-07	2.352E-07	1.186E-07	7.319E-08	3.171E-08	1.059E-08	4.738E-09	2.758E-09	1.819E-09
ESE	7.030E-06	1.588E-06	5.040E-07	2.555E-07	1.582E-07	6.891E-08	2.318E-08	1.041E-08	6.065E-09	4.001E-09
SE	1.035E-05	2.341E-06	7.448E-07	3.782E-07	2.344E-07	1.023E-07	3.450E-08	1.554E-08	9.070E-09	5.992E-09
SSE	1.417E-05	3.267E-06	1.011E-06	5.056E-07	3.100E-07	1.329E-07	4.359E-08	1.920E-08	1.105E-08	7.228E-09

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2016
 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	1.878E-07	6.350E-08	3.260E-08	1.550E-08	5.568E-09	2.761E-09	1.626E-09	1.065E-09	7.491E-10	5.551E-10	4.278E-10
SSW	1.575E-07	5.325E-08	2.734E-08	1.300E-08	4.669E-09	2.315E-09	1.363E-09	8.927E-10	6.282E-10	4.655E-10	3.587E-10
SW	9.727E-08	3.289E-08	1.689E-08	8.029E-09	2.884E-09	1.430E-09	8.422E-10	5.514E-10	3.880E-10	2.876E-10	2.216E-10
WSW	9.509E-08	3.216E-08	1.651E-08	7.850E-09	2.820E-09	1.398E-09	8.233E-10	5.391E-10	3.793E-10	2.811E-10	2.166E-10
W	9.908E-08	3.351E-08	1.720E-08	8.179E-09	2.938E-09	1.457E-09	8.579E-10	5.617E-10	3.952E-10	2.929E-10	2.257E-10
WNW	1.074E-07	3.633E-08	1.865E-08	8.867E-09	3.185E-09	1.580E-09	9.301E-10	6.090E-10	4.285E-10	3.176E-10	2.447E-10
NW	2.386E-07	8.068E-08	4.142E-08	1.969E-08	7.074E-09	3.508E-09	2.066E-09	1.353E-09	9.517E-10	7.053E-10	5.435E-10
NNW	3.644E-07	1.232E-07	6.327E-08	3.008E-08	1.080E-08	5.358E-09	3.155E-09	2.066E-09	1.454E-09	1.077E-09	8.301E-10
N	3.539E-07	1.197E-07	6.144E-08	2.921E-08	1.049E-08	5.204E-09	3.064E-09	2.006E-09	1.412E-09	1.046E-09	8.062E-10
NNE	9.996E-08	3.380E-08	1.736E-08	8.251E-09	2.964E-09	1.470E-09	8.655E-10	5.667E-10	3.988E-10	2.955E-10	2.277E-10
NE	3.880E-08	1.312E-08	6.736E-09	3.202E-09	1.150E-09	5.705E-10	3.359E-10	2.199E-10	1.548E-10	1.147E-10	8.838E-11
ENE	3.416E-08	1.155E-08	5.931E-09	2.820E-09	1.013E-09	5.023E-10	2.958E-10	1.937E-10	1.363E-10	1.010E-10	7.782E-11
E	4.093E-08	1.384E-08	7.107E-09	3.379E-09	1.214E-09	6.019E-10	3.544E-10	2.321E-10	1.633E-10	1.210E-10	9.326E-11
ESE	8.761E-08	2.963E-08	1.521E-08	7.232E-09	2.598E-09	1.288E-09	7.585E-10	4.967E-10	3.495E-10	2.590E-10	1.996E-10
SE	1.340E-07	4.532E-08	2.327E-08	1.106E-08	3.973E-09	1.970E-09	1.160E-09	7.597E-10	5.346E-10	3.962E-10	3.053E-10
SSE	1.796E-07	6.073E-08	3.118E-08	1.482E-08	5.325E-09	2.641E-09	1.555E-09	1.018E-09	7.164E-10	5.310E-10	4.092E-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	3.399E-10	1.510E-10	9.146E-11	4.623E-11	2.798E-11	1.876E-11	1.344E-11	1.009E-11	7.848E-12	6.269E-12	5.117E-12
SSW	2.850E-10	1.266E-10	7.669E-11	3.876E-11	2.346E-11	1.573E-11	1.127E-11	8.464E-12	6.581E-12	5.257E-12	4.291E-12
SW	1.760E-10	7.821E-11	4.737E-11	2.395E-11	1.449E-11	9.717E-12	6.963E-12	5.228E-12	4.065E-12	3.247E-12	2.650E-12
WSW	1.721E-10	7.646E-11	4.631E-11	2.341E-11	1.417E-11	9.500E-12	6.807E-12	5.111E-12	3.974E-12	3.175E-12	2.591E-12
W	1.793E-10	7.966E-11	4.826E-11	2.439E-11	1.476E-11	9.898E-12	7.093E-12	5.326E-12	4.141E-12	3.308E-12	2.700E-12
WNW	1.944E-10	8.637E-11	5.232E-11	2.644E-11	1.601E-11	1.073E-11	7.690E-12	5.774E-12	4.489E-12	3.586E-12	2.927E-12
NW	4.318E-10	1.918E-10	1.162E-10	5.873E-11	3.555E-11	2.383E-11	1.708E-11	1.282E-11	9.971E-12	7.965E-12	6.501E-12
NNW	6.595E-10	2.930E-10	1.775E-10	8.970E-11	5.429E-11	3.640E-11	2.608E-11	1.959E-11	1.523E-11	1.216E-11	9.929E-12
N	6.405E-10	2.845E-10	1.724E-10	8.712E-11	5.273E-11	3.535E-11	2.533E-11	1.902E-11	1.479E-11	1.181E-11	9.643E-12
NNE	1.809E-10	8.037E-11	4.869E-11	2.461E-11	1.489E-11	9.986E-12	7.156E-12	5.373E-12	4.178E-12	3.337E-12	2.724E-12
NE	7.022E-11	3.119E-11	1.889E-11	9.550E-12	5.780E-12	3.876E-12	2.777E-12	2.085E-12	1.621E-12	1.295E-12	1.057E-12
ENE	6.183E-11	2.747E-11	1.664E-11	8.409E-12	5.090E-12	3.413E-12	2.445E-12	1.836E-12	1.428E-12	1.140E-12	9.308E-13
E	7.409E-11	3.291E-11	1.994E-11	1.008E-11	6.099E-12	4.089E-12	2.930E-12	2.200E-12	1.711E-12	1.367E-12	1.115E-12
ESE	1.586E-10	7.044E-11	4.267E-11	2.157E-11	1.305E-11	8.752E-12	6.271E-12	4.709E-12	3.662E-12	2.925E-12	2.387E-12
SE	2.425E-10	1.077E-10	6.527E-11	3.299E-11	1.997E-11	1.339E-11	9.593E-12	7.203E-12	5.600E-12	4.474E-12	3.652E-12
SSE	3.251E-10	1.444E-10	8.747E-11	4.421E-11	2.676E-11	1.794E-11	1.286E-11	9.654E-12	7.506E-12	5.996E-12	4.894E-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	3.187E-08	6.528E-09	1.704E-09	7.653E-10	4.330E-10	1.665E-10	4.817E-11	1.909E-11	1.019E-11	6.310E-12
SSW	2.672E-08	5.474E-09	1.429E-09	6.418E-10	3.631E-10	1.396E-10	4.039E-11	1.601E-11	8.549E-12	5.291E-12
SW	1.651E-08	3.381E-09	8.827E-10	3.964E-10	2.243E-10	8.625E-11	2.495E-11	9.889E-12	5.281E-12	3.269E-12
WSW	1.614E-08	3.306E-09	8.630E-10	3.876E-10	2.193E-10	8.432E-11	2.439E-11	9.668E-12	5.163E-12	3.195E-12
W	1.681E-08	3.444E-09	8.991E-10	4.038E-10	2.285E-10	8.785E-11	2.542E-11	1.007E-11	5.379E-12	3.329E-12
WNW	1.823E-08	3.734E-09	9.748E-10	4.378E-10	2.477E-10	9.525E-11	2.755E-11	1.092E-11	5.832E-12	3.610E-12
NW	4.049E-08	8.294E-09	2.165E-09	9.724E-10	5.501E-10	2.115E-10	6.120E-11	2.426E-11	1.295E-11	8.017E-12
NNW	6.184E-08	1.267E-08	3.307E-09	1.485E-09	8.401E-10	3.231E-10	9.347E-11	3.704E-11	1.978E-11	1.224E-11
N	6.006E-08	1.230E-08	3.211E-09	1.442E-09	8.159E-10	3.138E-10	9.078E-11	3.598E-11	1.921E-11	1.189E-11
NNE	1.696E-08	3.475E-09	9.072E-10	4.074E-10	2.305E-10	8.864E-11	2.564E-11	1.016E-11	5.427E-12	3.359E-12
NE	6.584E-09	1.349E-09	3.521E-10	1.581E-10	8.945E-11	3.440E-11	9.951E-12	3.944E-12	2.106E-12	1.304E-12
ENE	5.797E-09	1.187E-09	3.100E-10	1.392E-10	7.876E-11	3.029E-11	8.762E-12	3.473E-12	1.855E-12	1.148E-12
E	6.947E-09	1.423E-09	3.715E-10	1.668E-10	9.438E-11	3.629E-11	1.050E-11	4.162E-12	2.222E-12	1.376E-12
ESE	1.487E-08	3.046E-09	7.951E-10	3.571E-10	2.020E-10	7.768E-11	2.247E-11	8.907E-12	4.756E-12	2.944E-12
SE	2.274E-08	4.658E-09	1.216E-09	5.462E-10	3.090E-10	1.188E-10	3.437E-11	1.362E-11	7.275E-12	4.503E-12
SSE	3.048E-08	6.243E-09	1.630E-09	7.320E-10	4.141E-10	1.592E-10	4.607E-11	1.826E-11	9.750E-12	6.035E-12

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST						
RELEASE TYPE OF DIRECTION DIST.						
ID	LOCATION FROM SITE (MI)	X/Q (SEC/M3) NO	X/Q (SEC/M3) 2.26 DAY DECAY	X/Q (SEC/M3) 8.0 DAY DECAY	D/Q (PER SQ.METER) DECAY	
		UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary S	.80	8.7E-06	8.6E-06	7.7E-06	2.8E-08
A	Site Boundary SSW	.82	6.4E-06	6.4E-06	5.6E-06	2.1E-08
A	Site Boundary SW	.97	2.8E-06	2.7E-06	2.4E-06	8.6E-09
A	Site Boundary WSW	.93	3.0E-06	2.9E-06	2.6E-06	9.6E-09
A	Site Boundary W	.91	2.6E-06	2.6E-06	2.3E-06	1.0E-08
A	Site Boundary WNW	.94	2.3E-06	2.3E-06	2.1E-06	1.0E-08
A	Site Boundary NNW	.81	6.1E-06	6.0E-06	5.4E-06	3.4E-08
A	Site Boundary NNW	.69	1.4E-05	1.4E-05	1.3E-05	7.3E-08
A	Site Boundary N	.67	1.7E-05	1.7E-05	1.5E-05	7.3E-08
A	Site Boundary NNE	.60	6.9E-06	6.9E-06	6.2E-06	2.5E-08
A	Site Boundary NE	.62	4.2E-06	4.2E-06	3.8E-06	9.2E-09
A	Site Boundary ENE	.59	3.6E-06	3.6E-06	3.3E-06	8.9E-09
A	Site Boundary E	.53	6.6E-06	6.6E-06	6.0E-06	1.3E-08
A	Site Boundary ESE	.54	1.4E-05	1.4E-05	1.2E-05	2.6E-08
A	Site Boundary SE	.65	1.5E-05	1.5E-05	1.3E-05	3.0E-08
A	Site Boundary SSE	.81	1.4E-05	1.3E-05	1.2E-05	2.5E-08
A	Nearest Res SSW	3.00	3.6E-07	3.5E-07	2.9E-07	8.9E-10
A	Nearest Res SW	1.70	7.7E-07	7.6E-07	6.5E-07	2.1E-09
A	Nearest Res WSW	1.90	5.7E-07	5.7E-07	4.7E-07	1.6E-09
A	Nearest Res W	1.00	2.1E-06	2.1E-06	1.8E-06	8.2E-09
A	Nearest Res WNW	1.70	6.0E-07	5.9E-07	5.0E-07	2.3E-09
A	Nearest Res NW	.90	4.7E-06	4.7E-06	4.2E-06	2.6E-08
A	Nearest Res NNW	1.90	1.5E-06	1.5E-06	1.3E-06	6.1E-09
A	Nearest Res N	2.90	7.9E-07	7.8E-07	6.3E-07	2.2E-09
A	Nearest Res NNE	1.70	7.8E-07	7.7E-07	6.6E-07	2.2E-09
A	Nearest Res ENE	1.70	3.8E-07	3.7E-07	3.2E-07	7.4E-10
A	Nearest Res E	2.20	3.6E-07	3.6E-07	3.0E-07	4.8E-10
A	Nearest Res ESE	2.80	4.9E-07	4.8E-07	3.9E-07	5.8E-10
A	Nearest Res SE	3.00	6.4E-07	6.2E-07	5.0E-07	7.6E-10
A	Nearest Res SSE	3.00	8.6E-07	8.3E-07	6.8E-07	1.0E-09
A	Nearest Cow NNW	3.50	4.5E-07	4.4E-07	3.5E-07	1.5E-09
A	Nearest Garde SSW	3.00	3.6E-07	3.5E-07	2.9E-07	8.9E-10
A	Nearest Garde SW	2.20	4.4E-07	4.4E-07	3.6E-07	1.1E-09
A	Nearest Garde NNW	3.00	6.0E-07	5.9E-07	4.8E-07	2.1E-09
A	Nearest Garde ENE	1.70	3.8E-07	3.7E-07	3.2E-07	7.4E-10
A	Nearest Garde ESE	2.30	7.1E-07	7.0E-07	5.8E-07	9.2E-10
A	Nearest Garde SSE	3.00	8.6E-07	8.3E-07	6.8E-07	1.0E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

October-December 2016

VENTS GROUND LEVEL RELEASES - OCT-DEC 2016
 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	4.981E-05	1.591E-05	8.508E-06	4.298E-06	1.762E-06	9.674E-07	6.195E-07	4.360E-07	3.269E-07	2.565E-07	2.081E-07
SSW	2.485E-05	8.551E-06	4.616E-06	2.312E-06	9.241E-07	4.986E-07	3.152E-07	2.196E-07	1.632E-07	1.271E-07	1.025E-07
SW	7.213E-06	2.401E-06	1.273E-06	6.350E-07	2.563E-07	1.392E-07	8.843E-08	6.185E-08	4.613E-08	3.603E-08	2.913E-08
WSW	5.652E-06	2.080E-06	1.131E-06	5.630E-07	2.175E-07	1.144E-07	7.092E-08	4.858E-08	3.560E-08	2.738E-08	2.183E-08
W	1.132E-05	3.921E-06	2.125E-06	1.066E-06	4.265E-07	2.304E-07	1.457E-07	1.016E-07	7.553E-08	5.885E-08	4.747E-08
WNW	2.016E-05	7.319E-06	4.003E-06	2.002E-06	7.789E-07	4.121E-07	2.565E-07	1.764E-07	1.297E-07	1.001E-07	8.001E-08
NW	3.078E-05	1.101E-05	6.000E-06	3.002E-06	1.179E-06	6.279E-07	3.929E-07	2.715E-07	2.004E-07	1.551E-07	1.244E-07
NNW	1.034E-04	3.206E-05	1.678E-05	8.427E-06	3.522E-06	1.959E-06	1.267E-06	8.985E-07	6.780E-07	5.349E-07	4.361E-07
N	1.803E-04	5.415E-05	2.787E-05	1.395E-05	5.916E-06	3.322E-06	2.163E-06	1.543E-06	1.170E-06	9.261E-07	7.577E-07
NNE	7.769E-05	2.366E-05	1.201E-05	5.945E-06	2.512E-06	1.408E-06	9.154E-07	6.521E-07	4.940E-07	3.909E-07	3.197E-07
NE	3.941E-05	1.199E-05	6.139E-06	3.057E-06	1.292E-06	7.242E-07	4.709E-07	3.355E-07	2.541E-07	2.010E-07	1.644E-07
ENE	2.371E-05	7.614E-06	4.075E-06	2.059E-06	8.423E-07	4.616E-07	2.951E-07	2.074E-07	1.554E-07	1.218E-07	9.874E-08
E	4.961E-05	1.505E-05	7.794E-06	3.908E-06	1.649E-06	9.227E-07	5.993E-07	4.265E-07	3.227E-07	2.552E-07	2.085E-07
ESE	6.426E-05	1.985E-05	1.034E-05	5.187E-06	2.167E-06	1.204E-06	7.785E-07	5.520E-07	4.164E-07	3.284E-07	2.677E-07
SE	7.003E-05	2.190E-05	1.125E-05	5.581E-06	2.327E-06	1.293E-06	8.351E-07	5.919E-07	4.465E-07	3.521E-07	2.870E-07
SSE	6.489E-05	2.060E-05	1.070E-05	5.321E-06	2.195E-06	1.210E-06	7.778E-07	5.490E-07	4.127E-07	3.244E-07	2.638E-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	1.734E-07	9.130E-08	6.018E-08	3.534E-08	2.432E-08	1.824E-08	1.443E-08	1.185E-08	9.995E-09	8.606E-09	7.531E-09
SSW	8.492E-08	4.377E-08	2.843E-08	1.636E-08	1.111E-08	8.243E-09	6.468E-09	5.273E-09	4.421E-09	3.787E-09	3.298E-09
SW	2.419E-08	1.258E-08	8.221E-09	4.774E-09	2.623E-09	2.433E-09	1.917E-09	1.569E-09	1.320E-09	1.134E-09	9.900E-10
WSW	1.790E-08	8.859E-09	5.585E-09	3.077E-09	2.024E-09	1.464E-09	1.125E-09	9.008E-10	7.434E-10	6.278E-10	5.399E-10
W	3.933E-08	2.029E-08	1.319E-08	7.594E-09	5.155E-09	3.825E-09	3.001E-09	2.446E-09	2.051E-09	1.756E-09	1.529E-09
WNW	6.577E-08	3.289E-08	2.089E-08	1.165E-08	7.730E-09	5.635E-09	4.356E-09	3.507E-09	2.908E-09	2.466E-09	2.128E-09
NW	1.026E-07	5.187E-08	3.323E-08	1.875E-08	1.255E-08	9.212E-09	7.163E-09	5.795E-09	4.825E-09	4.108E-09	3.558E-09
NNW	3.649E-07	1.952E-07	1.301E-07	7.752E-08	5.388E-08	4.071E-08	3.241E-08	2.675E-08	2.266E-08	1.959E-08	1.720E-08
N	6.357E-07	3.437E-07	2.306E-07	1.388E-07	9.709E-08	7.371E-08	5.891E-08	4.878E-08	4.145E-08	3.591E-08	3.160E-08
NNE	2.681E-07	1.448E-07	9.712E-08	5.842E-08	4.087E-08	3.103E-08	2.481E-08	2.055E-08	1.746E-08	1.513E-08	1.332E-08
NE	1.378E-07	7.437E-08	4.985E-08	2.995E-08	2.093E-08	1.588E-08	1.268E-08	1.050E-08	8.916E-09	7.723E-09	6.794E-09
ENE	8.220E-08	4.315E-08	2.838E-08	1.662E-08	1.141E-08	8.538E-09	6.746E-09	5.533E-09	4.663E-09	4.011E-09	3.507E-09
E	1.747E-07	9.405E-08	6.294E-08	3.772E-08	2.632E-08	1.994E-08	1.591E-08	1.316E-08	1.117E-08	9.665E-09	8.497E-09
ESE	2.239E-07	1.197E-07	7.969E-08	4.746E-08	3.297E-08	2.490E-08	1.982E-08	1.635E-08	1.385E-08	1.197E-08	1.051E-08
SE	2.400E-07	1.283E-07	8.546E-08	5.092E-08	3.540E-08	2.675E-08	2.130E-08	1.759E-08	1.491E-08	1.289E-08	1.132E-08
SSE	2.201E-07	1.167E-07	7.732E-08	4.574E-08	3.165E-08	2.384E-08	1.893E-08	1.560E-08	1.320E-08	1.139E-08	9.990E-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	8.282E-06	1.972E-06	6.389E-07	3.312E-07	2.096E-07	9.571E-08	3.597E-08	1.834E-08	1.188E-08	8.619E-09
SSW	4.466E-06	1.043E-06	3.259E-07	1.656E-07	1.033E-07	4.610E-08	1.671E-08	8.297E-09	5.290E-09	3.794E-09
SW	1.240E-06	2.884E-07	9.134E-08	4.678E-08	2.935E-08	1.322E-08	4.868E-09	2.448E-09	1.574E-09	1.136E-09
WSW	1.089E-06	2.485E-07	7.359E-08	3.618E-08	2.202E-08	9.413E-09	3.166E-09	1.478E-09	9.049E-10	6.295E-10
W	2.053E-06	4.814E-07	1.506E-07	7.661E-08	4.783E-08	2.137E-08	7.753E-09	3.850E-09	2.454E-09	1.759E-09
WNW	3.851E-06	8.877E-07	2.660E-07	1.318E-07	8.068E-08	3.486E-08	1.196E-08	5.682E-09	3.521E-09	2.472E-09
NW	5.781E-06	1.339E-06	4.070E-07	2.035E-07	1.254E-07	5.485E-08	1.921E-08	9.283E-09	5.816E-09	4.117E-09
NNW	1.647E-05	3.918E-06	1.304E-06	6.865E-07	4.390E-07	2.040E-07	7.869E-08	4.090E-08	2.681E-08	1.961E-08
N	2.752E-05	6.547E-06	2.224E-06	1.184E-06	7.624E-07	3.583E-07	1.407E-07	7.403E-08	4.888E-08	3.595E-08
NNE	1.190E-05	2.784E-06	9.413E-07	4.999E-07	3.217E-07	1.510E-07	5.922E-08	3.117E-08	2.059E-08	1.515E-08
NE	6.069E-06	1.432E-06	4.843E-07	2.571E-07	1.654E-07	7.757E-08	3.036E-08	1.595E-08	1.052E-08	7.733E-09
ENE	3.965E-06	9.435E-07	3.044E-07	1.574E-07	9.944E-08	4.527E-08	1.692E-08	8.586E-09	5.548E-09	4.018E-09
E	7.679E-06	1.828E-06	6.164E-07	3.266E-07	2.098E-07	9.815E-08	3.826E-08	2.003E-08	1.319E-08	9.677E-09
ESE	1.016E-05	2.410E-06	8.015E-07	4.216E-07	2.694E-07	1.251E-07	4.818E-08	2.502E-08	1.639E-08	1.199E-08
SE	1.110E-05	2.591E-06	8.599E-07	4.521E-07	2.889E-07	1.341E-07	5.170E-08	2.688E-08	1.763E-08	1.291E-08
SSE	1.051E-05	2.452E-06	8.017E-07	4.180E-07	2.656E-07	1.222E-07	4.650E-08	2.396E-08	1.564E-08	1.141E-08

B265

VENTS GROUND LEVEL RELEASES - OCT-DEC 2016
 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	4.972E-05	1.585E-05	8.461E-06	4.266E-06	1.743E-06	9.528E-07	6.077E-07	4.259E-07	3.181E-07	2.485E-07	2.009E-07
SSW	2.481E-05	8.520E-06	4.591E-06	2.296E-06	9.141E-07	4.914E-07	3.094E-07	2.147E-07	1.590E-07	1.234E-07	9.909E-08
SW	7.199E-06	2.392E-06	1.266E-06	6.305E-07	2.534E-07	1.371E-07	8.674E-08	6.041E-08	4.487E-08	3.490E-08	2.810E-08
WSW	5.645E-06	2.075E-06	1.126E-06	5.600E-07	2.158E-07	1.132E-07	6.999E-08	4.781E-08	3.495E-08	2.680E-08	2.131E-08
W	1.130E-05	3.906E-06	2.113E-06	1.058E-06	4.216E-07	2.268E-07	1.429E-07	9.917E-08	7.346E-08	5.700E-08	4.579E-08
WNW	2.013E-05	7.304E-06	3.991E-06	1.994E-06	7.741E-07	4.087E-07	2.538E-07	1.742E-07	1.278E-07	9.838E-08	7.849E-08
NW	3.074E-05	1.099E-05	5.980E-06	2.988E-06	1.170E-06	6.219E-07	3.883E-07	2.676E-07	1.970E-07	1.521E-07	1.217E-07
NNW	1.032E-04	3.191E-05	1.667E-05	8.349E-06	3.473E-06	1.922E-06	1.237E-06	8.727E-07	6.553E-07	5.143E-07	4.173E-07
N	1.798E-04	5.388E-05	2.767E-05	1.382E-05	5.832E-06	3.258E-06	2.111E-06	1.498E-06	1.130E-06	8.903E-07	7.247E-07
NNE	7.747E-05	2.353E-05	1.191E-05	5.883E-06	2.472E-06	1.378E-06	8.909E-07	6.311E-07	4.754E-07	3.741E-07	3.042E-07
NE	3.930E-05	1.192E-05	6.090E-06	3.025E-06	1.272E-06	7.086E-07	4.582E-07	3.246E-07	2.444E-07	1.923E-07	1.563E-07
ENE	2.366E-05	7.583E-06	4.051E-06	2.043E-06	8.320E-07	4.540E-07	2.890E-07	2.023E-07	1.508E-07	1.177E-07	9.502E-08
E	4.947E-05	1.497E-05	7.735E-06	3.869E-06	1.624E-06	9.039E-07	5.839E-07	4.133E-07	3.111E-07	2.447E-07	1.988E-07
ESE	6.410E-05	1.975E-05	1.027E-05	5.138E-06	2.136E-06	1.181E-06	7.595E-07	5.357E-07	4.021E-07	3.154E-07	2.558E-07
SE	6.986E-05	2.179E-05	1.117E-05	5.530E-06	2.295E-06	1.268E-06	8.151E-07	5.747E-07	4.313E-07	3.383E-07	2.743E-07
SSE	6.473E-05	2.051E-05	1.062E-05	5.273E-06	2.165E-06	1.188E-06	7.593E-07	5.332E-07	3.987E-07	3.119E-07	2.523E-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	1.667E-07	8.600E-08	5.556E-08	3.137E-08	2.077E-08	1.501E-08	1.146E-08	9.088E-09	7.414E-09	6.180E-09	5.241E-09
SSW	8.177E-08	4.134E-08	2.633E-08	1.459E-08	9.543E-09	6.829E-09	5.172E-09	4.074E-09	3.304E-09	2.738E-09	2.310E-09
SW	2.323E-08	1.182E-08	7.565E-09	4.212E-09	2.761E-09	1.978E-09	1.499E-09	1.181E-09	9.574E-10	7.934E-10	6.691E-10
WSW	1.743E-08	8.512E-09	5.295E-09	2.841E-09	1.824E-09	1.284E-09	9.616E-10	7.510E-10	6.047E-10	4.984E-10	4.184E-10
W	3.778E-08	1.909E-08	1.216E-08	6.720E-09	4.383E-09	3.128E-09	2.363E-09	1.857E-09	1.501E-09	1.241E-09	1.045E-09
WNW	6.438E-08	3.184E-08	2.001E-08	1.092E-08	7.099E-09	5.070E-09	3.842E-09	3.032E-09	2.466E-09	2.052E-09	1.739E-09
NW	1.001E-07	4.997E-08	3.160E-08	1.739E-08	1.135E-08	8.130E-09	6.172E-09	4.878E-09	3.971E-09	3.306E-09	2.802E-09
NNW	3.473E-07	1.812E-07	1.178E-07	6.690E-08	4.437E-08	3.203E-08	2.441E-08	1.931E-08	1.571E-08	1.305E-08	1.103E-08
N	6.050E-07	3.190E-07	2.089E-07	1.198E-07	7.999E-08	5.807E-08	4.445E-08	3.531E-08	2.882E-08	2.403E-08	2.037E-08
NNE	2.537E-07	1.332E-07	8.689E-08	4.949E-08	3.285E-08	2.370E-08	1.804E-08	1.425E-08	1.156E-08	9.588E-09	8.085E-09
NE	1.303E-07	6.838E-08	4.457E-08	2.535E-08	1.680E-08	1.211E-08	9.207E-09	7.264E-09	5.891E-09	4.880E-09	4.112E-09
ENE	7.875E-08	4.044E-08	2.603E-08	1.460E-08	9.611E-09	6.907E-09	5.247E-09	4.143E-09	3.365E-09	2.793E-09	2.359E-09
E	1.657E-07	8.689E-08	5.664E-08	3.225E-08	2.141E-08	1.546E-08	1.178E-08	9.314E-09	7.570E-09	6.285E-09	5.307E-09
ESE	2.129E-07	1.109E-07	7.197E-08	4.076E-08	2.697E-08	1.943E-08	1.478E-08	1.167E-08	9.473E-09	7.857E-09	6.630E-09
SE	2.282E-07	1.189E-07	7.715E-08	4.369E-08	2.890E-08	2.082E-08	1.583E-08	1.250E-08	1.014E-08	8.410E-09	7.094E-09
SSE	2.094E-07	1.082E-07	6.986E-08	3.928E-08	2.587E-08	1.857E-08	1.408E-08	1.109E-08	8.983E-09	7.434E-09	6.259E-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	8.239E-06	1.952E-06	6.270E-07	3.224E-07	2.023E-07	9.039E-08	3.203E-08	1.513E-08	9.127E-09	6.198E-09
SSW	4.444E-06	1.033E-06	3.201E-07	1.613E-07	9.987E-08	4.365E-08	1.496E-08	6.890E-09	4.094E-09	2.747E-09
SW	1.234E-06	2.855E-07	8.963E-08	4.551E-08	2.831E-08	1.247E-08	4.312E-09	1.995E-09	1.187E-09	7.959E-10
WSW	1.085E-06	2.467E-07	7.265E-08	3.552E-08	2.150E-08	9.064E-09	2.933E-09	1.298E-09	7.554E-10	5.003E-10
W	2.043E-06	4.764E-07	1.478E-07	7.453E-08	4.614E-08	2.016E-08	6.889E-09	3.157E-09	1.866E-09	1.245E-09
WNW	3.840E-06	8.828E-07	2.633E-07	1.299E-07	7.915E-08	3.381E-08	1.124E-08	5.120E-09	3.048E-09	2.059E-09
NW	5.763E-06	1.331E-06	4.023E-07	2.001E-07	1.227E-07	5.294E-08	1.786E-08	8.206E-09	4.902E-09	3.316E-09
NNW	1.636E-05	3.867E-06	1.274E-06	6.637E-07	4.201E-07	1.900E-07	6.820E-08	3.227E-08	1.939E-08	1.309E-08
N	2.734E-05	6.462E-06	2.172E-06	1.144E-06	7.294E-07	3.336E-07	1.219E-07	5.847E-08	3.545E-08	2.410E-08
NNE	1.182E-05	2.744E-06	9.168E-07	4.813E-07	3.062E-07	1.394E-07	5.040E-08	2.387E-08	1.431E-08	9.616E-09
NE	6.024E-06	1.411E-06	4.715E-07	2.475E-07	1.574E-07	7.157E-08	2.582E-08	1.220E-08	7.296E-09	4.895E-09
ENE	3.943E-06	9.330E-07	2.983E-07	1.529E-07	9.571E-08	4.255E-08	1.492E-08	6.964E-09	4.162E-09	2.801E-09
E	7.624E-06	1.803E-06	6.010E-07	3.150E-07	2.002E-07	9.097E-08	3.285E-08	1.557E-08	9.354E-09	6.304E-09
ESE	1.010E-05	2.379E-06	7.824E-07	4.072E-07	2.576E-07	1.162E-07	4.156E-08	1.958E-08	1.172E-08	7.881E-09
SE	1.102E-05	2.557E-06	8.397E-07	4.368E-07	2.762E-07	1.246E-07	4.456E-08	2.098E-08	1.255E-08	8.436E-09
SSE	1.044E-05	2.421E-06	7.831E-07	4.041E-07	2.541E-07	1.137E-07	4.012E-08	1.872E-08	1.114E-08	7.457E-09

B266

VENTS GROUND LEVEL RELEASES - OCT-DEC 2016
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	4.712E-05	1.452E-05	7.570E-06	3.754E-06	1.492E-06	7.976E-07	4.991E-07	3.440E-07	2.531E-07	1.951E-07	1.558E-07
SSW	2.351E-05	7.800E-06	4.107E-06	2.020E-06	7.824E-07	4.112E-07	2.540E-07	1.733E-07	1.264E-07	9.676E-08	7.676E-08
SW	6.823E-06	2.190E-06	1.132E-06	5.547E-07	2.170E-07	1.148E-07	7.124E-08	4.880E-08	3.571E-08	2.741E-08	2.180E-08
WSW	5.347E-06	1.898E-06	1.006E-06	4.921E-07	1.843E-07	9.448E-08	5.723E-08	3.841E-08	2.763E-08	2.089E-08	1.639E-08
W	1.071E-05	3.577E-06	1.891E-06	9.311E-07	3.611E-07	1.899E-07	1.174E-07	8.012E-08	5.847E-08	4.476E-08	3.552E-08
WNW	1.907E-05	6.680E-06	3.564E-06	1.751E-06	6.603E-07	3.405E-07	2.072E-07	1.396E-07	1.008E-07	7.645E-08	6.016E-08
NW	2.912E-05	1.005E-05	5.342E-06	2.624E-06	9.990E-07	5.185E-07	3.172E-07	2.147E-07	1.556E-07	1.184E-07	9.347E-08
NNW	9.781E-05	2.924E-05	1.493E-05	7.357E-06	2.980E-06	1.613E-06	1.019E-06	7.078E-07	5.239E-07	4.060E-07	3.256E-07
N	1.705E-04	4.938E-05	2.478E-05	1.217E-05	5.004E-06	2.736E-06	1.740E-06	1.215E-06	9.037E-07	7.030E-07	5.656E-07
NNE	7.347E-05	2.157E-05	1.068E-05	5.188E-06	2.124E-06	1.158E-06	7.358E-07	5.132E-07	3.813E-07	2.963E-07	2.383E-07
NE	3.727E-05	1.093E-05	5.458E-06	2.668E-06	1.093E-06	5.960E-07	3.785E-07	2.640E-07	1.961E-07	1.524E-07	1.225E-07
ENE	2.243E-05	6.945E-06	3.625E-06	1.798E-06	7.129E-07	3.804E-07	2.376E-07	1.636E-07	1.202E-07	9.258E-08	7.384E-08
E	4.691E-05	1.372E-05	6.930E-06	3.412E-06	1.394E-06	7.596E-07	4.819E-07	3.357E-07	2.492E-07	1.935E-07	1.555E-07
ESE	6.078E-05	1.810E-05	9.199E-06	4.528E-06	1.833E-06	9.918E-07	6.262E-07	4.347E-07	3.217E-07	2.492E-07	1.998E-07
SE	6.623E-05	1.997E-05	1.000E-05	4.873E-06	1.969E-06	1.065E-06	6.718E-07	4.662E-07	3.449E-07	2.672E-07	2.142E-07
SSE	6.137E-05	1.879E-05	9.513E-06	4.646E-06	1.857E-06	9.969E-07	6.258E-07	4.325E-07	3.189E-07	2.463E-07	1.969E-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	1.278E-07	6.326E-08	3.950E-08	2.121E-08	1.355E-08	9.507E-09	7.085E-09	5.503E-09	4.407E-09	3.611E-09	3.014E-09
SSW	6.262E-08	3.035E-08	1.868E-08	9.837E-09	6.200E-09	4.309E-09	3.186E-09	2.459E-09	1.958E-09	1.596E-09	1.327E-09
SW	1.782E-08	8.709E-09	5.391E-09	2.861E-09	1.812E-09	1.264E-09	9.372E-10	7.247E-10	5.780E-10	4.720E-10	3.927E-10
WSW	1.324E-08	6.175E-09	3.695E-09	1.870E-09	1.146E-09	7.596E-10	5.665E-10	4.309E-10	3.390E-10	2.736E-10	2.253E-10
W	2.898E-08	1.406E-08	8.653E-09	4.555E-09	2.869E-09	1.992E-09	1.471E-09	1.134E-09	9.022E-10	7.350E-10	6.102E-10
WNW	4.873E-08	2.297E-08	1.386E-08	7.108E-09	4.403E-09	3.022E-09	2.213E-09	1.695E-09	1.341E-09	1.088E-09	9.010E-10
NW	7.591E-08	3.617E-08	2.200E-08	1.140E-08	7.114E-09	4.908E-09	3.609E-09	2.774E-09	2.201E-09	1.791E-09	1.485E-09
NNW	2.682E-07	1.347E-07	8.490E-08	4.615E-08	2.968E-08	2.094E-08	1.566E-08	1.219E-08	9.782E-09	8.027E-09	6.706E-09
N	4.672E-07	2.371E-07	1.505E-07	8.261E-08	5.349E-08	3.792E-08	2.847E-08	2.225E-08	1.790E-08	1.472E-08	1.233E-08
NNE	1.967E-07	9.963E-08	6.317E-08	3.459E-08	2.235E-08	1.582E-08	1.186E-08	9.252E-09	7.432E-09	6.104E-09	5.103E-09
NE	1.011E-07	5.117E-08	3.242E-08	1.773E-08	1.145E-08	8.092E-09	6.062E-09	4.725E-09	3.793E-09	3.114E-09	2.602E-09
ENE	6.052E-08	2.986E-08	1.859E-08	9.945E-09	6.329E-09	4.430E-09	3.293E-09	2.552E-09	2.039E-09	1.668E-09	1.390E-09
E	1.283E-07	6.480E-08	4.101E-08	2.240E-08	1.445E-08	1.021E-08	7.649E-09	5.963E-09	4.787E-09	3.931E-09	3.286E-09
ESE	1.645E-07	8.251E-08	5.197E-08	2.821E-08	1.813E-08	1.277E-08	9.546E-09	7.429E-09	5.955E-09	4.883E-09	4.077E-09
SE	1.763E-07	8.846E-08	5.573E-08	3.026E-08	1.945E-08	1.371E-08	1.025E-08	7.978E-09	6.396E-09	5.245E-09	4.380E-09
SSE	1.618E-07	8.049E-08	5.043E-08	2.719E-08	1.740E-08	1.223E-08	9.116E-09	7.079E-09	5.665E-09	4.639E-09	3.868E-09

CHI/Q (SEC/METER CUBED) FOR EACH SEGMENT

DIRECTION FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	7.418E-06	1.686E-06	5.167E-07	2.570E-07	1.571E-07	6.704E-08	2.187E-08	9.615E-09	5.538E-09	3.626E-09
SSW	4.000E-06	8.924E-07	2.636E-07	1.285E-07	7.745E-08	3.234E-08	1.019E-08	4.364E-09	2.476E-09	1.604E-09
SW	1.111E-06	2.466E-07	7.387E-08	3.629E-08	2.199E-08	9.259E-09	2.957E-09	1.279E-09	7.295E-10	4.740E-10
WSW	9.761E-07	2.128E-07	5.964E-08	2.814E-08	1.656E-08	6.643E-09	1.954E-09	7.920E-10	4.346E-10	2.751E-10
W	1.839E-06	4.117E-07	1.218E-07	5.944E-08	3.584E-08	1.497E-08	4.716E-09	2.018E-09	1.142E-09	7.383E-10
WNW	3.450E-06	7.604E-07	2.157E-07	1.026E-07	6.075E-08	2.465E-08	7.407E-09	3.066E-09	1.708E-09	1.094E-09
NW	5.180E-06	1.147E-06	3.299E-07	1.583E-07	9.436E-08	3.871E-08	1.185E-08	4.977E-09	2.794E-09	1.799E-09
NNW	1.474E-05	3.345E-06	1.053E-06	5.315E-07	3.282E-07	1.422E-07	4.744E-08	2.116E-08	1.227E-08	8.058E-09
N	2.464E-05	5.589E-06	1.796E-06	9.163E-07	5.698E-07	2.497E-07	8.476E-08	3.829E-08	2.237E-08	1.478E-08
NNE	1.066E-05	2.376E-06	7.595E-07	3.866E-07	2.401E-07	1.050E-07	3.550E-08	1.598E-08	9.304E-09	6.127E-09
NE	5.434E-06	1.222E-06	3.907E-07	1.988E-07	1.234E-07	5.393E-08	1.820E-08	8.174E-09	4.752E-09	3.125E-09
ENE	3.551E-06	8.063E-07	2.461E-07	1.221E-07	7.446E-08	3.167E-08	1.026E-08	4.481E-09	2.568E-09	1.675E-09
E	6.875E-06	1.561E-06	4.975E-07	2.527E-07	1.567E-07	6.833E-08	2.300E-08	1.032E-08	5.997E-09	3.946E-09
ESE	9.101E-06	2.058E-06	6.471E-07	3.264E-07	2.013E-07	8.716E-08	2.901E-08	1.291E-08	7.472E-09	4.902E-09
SE	9.938E-06	2.212E-06	6.943E-07	3.500E-07	2.159E-07	9.344E-08	3.112E-08	1.386E-08	8.024E-09	5.266E-09
SSE	9.411E-06	2.094E-06	6.474E-07	3.237E-07	1.985E-07	8.519E-08	2.801E-08	1.236E-08	7.122E-09	4.657E-09

VENTS GROUND LEVEL RELEASES - OCT-DEC 2016
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		1.818E-07	6.146E-08	3.156E-08	1.500E-08	5.389E-09	2.673E-09	1.574E-09	1.030E-09	7.250E-10	5.373E-10	4.141E-10
SSW		7.345E-08	2.484E-08	1.275E-08	6.063E-09	2.178E-09	1.080E-09	6.359E-10	4.164E-10	2.930E-10	2.171E-10	1.673E-10
SW		2.444E-08	8.264E-09	4.243E-09	2.017E-09	7.246E-10	3.594E-10	2.116E-10	1.386E-10	9.749E-11	7.225E-11	5.568E-11
WSW		2.424E-08	8.196E-09	4.208E-09	2.001E-09	7.186E-10	3.564E-10	2.098E-10	1.374E-10	9.668E-11	7.165E-11	5.521E-11
W		3.414E-08	1.154E-08	5.927E-09	2.818E-09	1.012E-09	5.020E-10	2.956E-10	1.935E-10	1.362E-10	1.009E-10	7.777E-11
WNW		1.168E-07	3.949E-08	2.028E-08	9.640E-09	3.463E-09	1.717E-09	1.011E-09	6.621E-10	4.659E-10	3.453E-10	2.661E-10
NW		1.969E-07	6.660E-08	3.419E-08	1.626E-08	5.839E-09	2.896E-09	1.705E-09	1.117E-09	7.856E-10	5.822E-10	4.487E-10
NNW		2.487E-07	8.410E-08	4.318E-08	2.053E-08	7.374E-09	3.657E-09	2.153E-09	1.410E-09	9.921E-10	7.353E-10	5.666E-10
N		3.894E-07	1.317E-07	6.761E-08	3.214E-08	1.155E-08	5.726E-09	3.371E-09	2.208E-09	1.553E-09	1.151E-09	8.871E-10
NNE		1.919E-07	6.490E-08	3.332E-08	1.584E-08	5.690E-09	2.822E-09	1.662E-09	1.088E-09	7.655E-10	5.673E-10	4.372E-10
NE		7.616E-08	2.575E-08	1.322E-08	6.287E-09	2.258E-09	1.120E-09	6.594E-10	4.318E-10	3.038E-10	2.252E-10	1.735E-10
ENE		6.310E-08	2.134E-08	1.096E-08	5.208E-09	1.871E-09	9.278E-10	5.463E-10	3.577E-10	2.517E-10	1.865E-10	1.438E-10
E		9.559E-08	3.232E-08	1.660E-08	7.890E-09	2.834E-09	1.406E-09	8.276E-10	5.419E-10	3.813E-10	2.826E-10	2.178E-10
ESE		1.729E-07	5.847E-08	3.002E-08	1.427E-08	5.127E-09	2.543E-09	1.497E-09	9.803E-10	6.898E-10	5.112E-10	3.939E-10
SE		2.213E-07	7.482E-08	3.842E-08	1.826E-08	6.560E-09	3.253E-09	1.916E-09	1.254E-09	8.826E-10	6.541E-10	5.041E-10
SSE		2.053E-07	6.941E-08	3.564E-08	1.694E-08	6.086E-09	3.018E-09	1.777E-09	1.164E-09	8.188E-10	6.068E-10	4.676E-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		3.290E-10	1.461E-10	8.852E-11	4.474E-11	2.708E-11	1.816E-11	1.301E-11	9.769E-12	7.596E-12	6.068E-12	4.953E-12
SSW		1.329E-10	5.905E-11	3.577E-11	1.808E-11	1.094E-11	7.337E-12	5.257E-12	3.948E-12	3.070E-12	2.452E-12	2.001E-12
SW		4.423E-11	1.965E-11	1.190E-11	6.016E-12	3.641E-12	2.442E-12	1.749E-12	1.314E-12	1.021E-12	8.159E-13	6.660E-13
WSW		4.386E-11	1.949E-11	1.180E-11	5.966E-12	3.611E-12	2.421E-12	1.735E-12	1.303E-12	1.013E-12	8.091E-13	6.604E-13
W		6.179E-11	2.745E-11	1.663E-11	8.404E-12	5.086E-12	3.410E-12	2.444E-12	1.835E-12	1.427E-12	1.140E-12	9.302E-13
WNW		2.114E-10	9.390E-11	5.688E-11	2.875E-11	1.740E-11	1.167E-11	8.360E-12	6.277E-12	4.881E-12	3.899E-12	3.182E-12
NW		3.564E-10	1.583E-10	9.592E-11	4.848E-11	2.934E-11	1.967E-11	1.410E-11	1.059E-11	8.231E-12	6.575E-12	5.366E-12
NNW		4.501E-10	2.000E-10	1.211E-10	6.122E-11	3.706E-11	2.485E-11	1.780E-11	1.337E-11	1.039E-11	8.303E-12	6.777E-12
N		7.048E-10	3.131E-10	1.897E-10	9.586E-11	5.802E-11	3.890E-11	2.787E-11	2.093E-11	1.627E-11	1.300E-11	1.061E-11
NNE		3.473E-10	1.543E-10	9.347E-11	4.724E-11	2.859E-11	1.917E-11	1.374E-11	1.032E-11	8.020E-12	6.407E-12	5.229E-12
NE		1.378E-10	6.124E-11	3.709E-11	1.875E-11	1.135E-11	7.608E-12	5.452E-12	4.094E-12	3.183E-12	2.543E-12	2.075E-12
ENE		1.142E-10	5.073E-11	3.073E-11	1.553E-11	9.402E-12	6.304E-12	4.517E-12	3.392E-12	2.637E-12	2.107E-12	1.719E-12
E		1.730E-10	7.686E-11	4.656E-11	2.353E-11	1.424E-11	9.549E-12	6.842E-12	5.138E-12	3.995E-12	3.191E-12	2.605E-12
ESE		3.130E-10	1.390E-10	8.421E-11	4.257E-11	2.576E-11	1.727E-11	1.238E-11	9.294E-12	7.226E-12	5.772E-12	4.712E-12
SE		4.005E-10	1.779E-10	1.078E-10	5.447E-11	3.297E-11	2.210E-11	1.584E-11	1.189E-11	9.247E-12	7.387E-12	6.029E-12
SSE		3.715E-10	1.650E-10	9.997E-11	5.053E-11	3.058E-11	2.050E-11	1.469E-11	1.103E-11	8.578E-12	6.852E-12	5.593E-12

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***** 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		3.085E-08	6.318E-09	1.649E-09	7.408E-10	4.191E-10	1.612E-10	4.662E-11	1.848E-11	9.867E-12	6.108E-12	
SSW		1.246E-08	2.553E-09	6.665E-10	2.993E-10	1.693E-10	6.512E-11	1.884E-11	7.467E-12	3.987E-12	2.468E-12	
SW		4.148E-09	8.496E-10	2.218E-10	9.961E-11	5.635E-11	2.167E-11	6.269E-12	2.485E-12	1.327E-12	8.213E-13	
WSW		4.113E-09	8.425E-10	2.199E-10	9.878E-11	5.588E-11	2.149E-11	6.217E-12	2.464E-12	1.316E-12	8.144E-13	
W		5.793E-09	1.187E-09	3.098E-10	1.391E-10	7.871E-11	3.027E-11	8.757E-12	3.471E-12	1.853E-12	1.147E-12	
WNW		1.982E-08	4.060E-09	1.060E-09	4.760E-10	2.693E-10	1.036E-10	2.996E-11	1.187E-11	6.340E-12	3.924E-12	
NW		3.342E-08	6.846E-09	1.787E-09	8.027E-10	4.541E-10	1.746E-10	5.052E-11	2.002E-11	1.069E-11	6.618E-12	
NNW		4.221E-08	8.645E-09	2.257E-09	1.014E-09	5.734E-10	2.205E-10	6.380E-11	2.528E-11	1.350E-11	8.357E-12	
N		6.608E-08	1.354E-08	3.534E-09	1.587E-09	8.978E-10	3.453E-10	9.989E-11	3.959E-11	2.114E-11	1.309E-11	
NNE		3.257E-08	6.671E-09	1.742E-09	7.822E-10	4.425E-10	1.702E-10	4.923E-11	1.951E-11	1.042E-11	6.449E-12	
NE		1.293E-08	2.647E-09	6.911E-10	3.104E-10	1.756E-10	6.753E-11	1.954E-11	7.743E-12	4.135E-12	2.559E-12	
ENE		1.071E-08	2.193E-09	5.726E-10	2.572E-10	1.455E-10	5.595E-11	1.619E-11	6.415E-12	3.426E-12	2.120E-12	
E		1.622E-08	3.323E-09	8.674E-10	3.896E-10	2.204E-10	8.476E-11	2.452E-11	9.718E-12	5.190E-12	3.212E-12	
ESE		2.934E-08	6.011E-09	1.569E-09	7.047E-10	3.987E-10	1.533E-10	4.435E-11	1.758E-11	9.387E-12	5.810E-12	
SE		3.755E-08	7.691E-09	2.008E-09	9.018E-10	5.101E-10	1.962E-10	5.675E-11	2.249E-11	1.201E-11	7.435E-12	
SSE		3.483E-08	7.135E-09	1.863E-09	8.366E-10	4.733E-10	1.820E-10	5.265E-11	2.087E-11	1.114E-11	6.897E-12	

VENTS GROUND LEVEL RELEASES - OCT-DEC 2016
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	2.26 DAY	8.0 DAY		
		DECAY	DECAY	DECAY		
		UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary S	.80	7.3E-06	7.3E-06	6.5E-06	2.7E-08
A	Site Boundary SSW	.82	3.7E-06	3.7E-06	3.3E-06	1.0E-08
A	Site Boundary SW	.97	6.7E-07	6.7E-07	5.9E-07	2.2E-09
A	Site Boundary WSW	.93	6.8E-07	6.8E-07	6.0E-07	2.4E-09
A	Site Boundary W	.91	1.3E-06	1.3E-06	1.2E-06	3.6E-09
A	Site Boundary WNW	.94	2.3E-06	2.3E-06	2.1E-06	1.1E-08
A	Site Boundary NNW	.81	5.0E-06	5.0E-06	4.4E-06	2.8E-08
A	Site Boundary NNW	.69	1.9E-05	1.9E-05	1.7E-05	5.0E-08
A	Site Boundary N	.67	3.3E-05	3.3E-05	2.9E-05	8.1E-08
A	Site Boundary NNE	.60	1.7E-05	1.7E-05	1.6E-05	4.8E-08
A	Site Boundary NE	.62	8.2E-06	8.2E-06	7.4E-06	1.8E-08
A	Site Boundary ENE	.59	5.9E-06	5.9E-06	5.3E-06	1.6E-08
A	Site Boundary E	.53	1.4E-05	1.4E-05	1.3E-05	3.0E-08
A	Site Boundary ESE	.54	1.8E-05	1.7E-05	1.6E-05	5.2E-08
A	Site Boundary SE	.65	1.4E-05	1.4E-05	1.3E-05	4.9E-08
A	Site Boundary SSE	.81	8.8E-06	8.8E-06	7.8E-06	2.9E-08
A	Nearest Res SSW	3.00	2.2E-07	2.1E-07	1.7E-07	4.2E-10
A	Nearest Res SW	1.70	2.0E-07	1.9E-07	1.6E-07	5.3E-10
A	Nearest Res WSW	1.90	1.3E-07	1.3E-07	1.1E-07	4.0E-10
A	Nearest Res W	1.00	1.1E-06	1.1E-06	9.3E-07	2.8E-09
A	Nearest Res WNW	1.70	5.9E-07	5.8E-07	4.9E-07	2.5E-09
A	Nearest Res NW	.90	3.9E-06	3.9E-06	3.4E-06	2.1E-08
A	Nearest Res NNW	1.90	2.2E-06	2.1E-06	1.8E-06	4.1E-09
A	Nearest Res N	2.90	1.6E-06	1.6E-06	1.3E-06	2.4E-09
A	Nearest Res NNE	1.70	1.9E-06	1.9E-06	1.6E-06	4.2E-09
A	Nearest Res ENE	1.70	6.5E-07	6.4E-07	5.4E-07	1.4E-09
A	Nearest Res E	2.20	7.7E-07	7.5E-07	6.2E-07	1.1E-09
A	Nearest Res ESE	2.80	6.3E-07	6.1E-07	5.0E-07	1.1E-09
A	Nearest Res SE	3.00	5.9E-07	5.7E-07	4.7E-07	1.3E-09
A	Nearest Res SSE	3.00	5.5E-07	5.3E-07	4.3E-07	1.2E-09
A	Nearest Cow NNW	3.50	6.8E-07	6.6E-07	5.2E-07	9.9E-10
A	Nearest Garde SSW	3.00	2.2E-07	2.1E-07	1.7E-07	4.2E-10
A	Nearest Garde SW	2.20	1.1E-07	1.1E-07	9.3E-08	2.9E-10
A	Nearest Garde NNW	3.00	9.0E-07	8.7E-07	7.1E-07	1.4E-09
A	Nearest Garde ENE	1.70	6.5E-07	6.4E-07	5.4E-07	1.4E-09
A	Nearest Garde ESE	2.30	9.1E-07	8.9E-07	7.4E-07	1.8E-09
A	Nearest Garde SSE	3.00	5.5E-07	5.3E-07	4.3E-07	1.2E-09

B269

Atmospheric Diffusion Estimates

Ground Level Releases

July-December 2016

VENTS GROUND LEVEL RELEASES - JUL-DEC 2016
 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	5.242E-05	1.714E-05	9.290E-06	4.706E-06	1.912E-06	1.043E-06	6.648E-07	4.661E-07	3.484E-07	2.726E-07	2.207E-07
SSW	3.296E-05	1.153E-05	6.288E-06	3.158E-06	1.247E-06	6.665E-07	4.184E-07	2.897E-07	2.143E-07	1.662E-07	1.335E-07
SW	1.709E-05	5.944E-06	3.235E-06	1.624E-06	6.402E-07	3.419E-07	2.144E-07	1.483E-07	1.096E-07	8.497E-08	6.822E-08
WSW	1.535E-05	5.522E-06	3.029E-06	1.520E-06	5.943E-07	3.155E-07	1.969E-07	1.357E-07	9.999E-08	7.726E-08	6.186E-08
W	1.688E-05	5.856E-06	3.152E-06	1.573E-06	6.199E-07	3.310E-07	2.076E-07	1.436E-07	1.062E-07	8.229E-08	6.608E-08
WNW	2.022E-05	7.291E-06	3.999E-06	2.005E-06	7.827E-07	4.152E-07	2.590E-07	1.784E-07	1.314E-07	1.015E-07	8.126E-08
NW	3.374E-05	1.214E-05	6.636E-06	3.321E-06	1.298E-06	6.894E-07	4.304E-07	2.968E-07	2.187E-07	1.690E-07	1.354E-07
NNW	8.391E-05	2.723E-05	1.454E-05	7.317E-06	2.996E-06	1.644E-06	1.052E-06	7.404E-07	5.551E-07	4.355E-07	3.534E-07
N	1.291E-04	3.983E-05	2.097E-05	1.057E-05	4.414E-06	2.453E-06	1.586E-06	1.124E-06	8.481E-07	6.688E-07	5.452E-07
NNE	5.239E-05	1.614E-05	8.330E-06	4.154E-06	1.738E-06	9.673E-07	6.259E-07	4.442E-07	3.354E-07	2.647E-07	2.159E-07
NE	2.926E-05	8.975E-06	4.645E-06	2.323E-06	9.769E-07	5.455E-07	3.538E-07	2.515E-07	1.901E-07	1.502E-07	1.227E-07
ENE	1.966E-05	6.272E-06	3.291E-06	1.646E-06	6.783E-07	3.736E-07	2.399E-07	1.692E-07	1.271E-07	9.985E-08	8.114E-08
E	3.619E-05	1.107E-05	5.752E-06	2.884E-06	1.212E-06	6.766E-07	4.387E-07	3.118E-07	2.357E-07	1.862E-07	1.520E-07
ESE	5.830E-05	1.794E-05	9.304E-06	4.657E-06	1.953E-06	1.088E-06	7.045E-07	5.002E-07	3.778E-07	2.983E-07	2.434E-07
SE	7.412E-05	2.282E-05	1.174E-05	5.848E-06	2.454E-06	1.368E-06	8.865E-07	6.298E-07	4.759E-07	3.758E-07	3.067E-07
SSE	8.196E-05	2.584E-05	1.371E-05	6.914E-06	2.857E-06	1.577E-06	1.014E-06	7.156E-07	5.380E-07	4.230E-07	3.439E-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	1.835E-07	9.588E-08	6.286E-08	3.664E-08	2.508E-08	1.873E-08	1.477E-08	1.209E-08	1.017E-08	8.741E-09	7.634E-09
SSW	1.102E-07	5.603E-08	3.603E-08	2.045E-08	1.375E-08	1.013E-08	7.898E-09	6.406E-09	5.346E-09	4.560E-09	3.956E-09
SW	5.629E-08	2.857E-08	1.836E-08	1.040E-08	6.989E-09	5.144E-09	4.010E-09	3.251E-09	2.712E-09	2.312E-09	2.006E-09
WSW	5.091E-08	2.559E-08	1.632E-08	9.145E-09	6.089E-09	4.449E-09	3.446E-09	2.779E-09	2.308E-09	1.960E-09	1.693E-09
W	5.453E-08	2.770E-08	1.780E-08	1.011E-08	6.800E-09	5.012E-09	3.912E-09	3.175E-09	2.651E-09	2.263E-09	1.965E-09
WNW	6.688E-08	3.360E-08	2.142E-08	1.200E-08	7.995E-09	5.844E-09	4.528E-09	3.652E-09	3.034E-09	2.576E-09	2.227E-09
NW	1.115E-07	5.611E-08	3.582E-08	2.012E-08	1.342E-08	9.826E-09	7.624E-09	6.156E-09	5.118E-09	4.350E-09	3.763E-09
NNW	2.944E-07	1.550E-07	1.022E-07	6.001E-08	4.130E-08	3.096E-08	2.450E-08	2.012E-08	1.697E-08	1.461E-08	1.279E-08
N	4.560E-07	2.438E-07	1.623E-07	9.667E-08	6.715E-08	5.071E-08	4.036E-08	3.330E-08	2.820E-08	2.437E-08	2.139E-08
NNE	1.807E-07	9.685E-08	6.463E-08	3.861E-08	2.688E-08	2.034E-08	1.622E-08	1.340E-08	1.136E-08	9.830E-09	8.638E-09
NE	1.027E-07	5.521E-08	3.690E-08	2.208E-08	1.539E-08	1.165E-08	9.292E-09	7.680E-09	6.515E-09	5.638E-09	4.955E-09
ENE	6.768E-08	3.580E-08	2.368E-08	1.398E-08	9.650E-09	7.255E-09	5.754E-09	4.734E-09	4.001E-09	3.450E-09	3.023E-09
E	1.273E-07	6.836E-08	4.567E-08	2.731E-08	1.903E-08	1.440E-08	1.148E-08	9.486E-09	8.045E-09	6.960E-09	6.116E-09
ESE	2.037E-07	1.092E-07	7.287E-08	4.352E-08	3.029E-08	2.291E-08	1.825E-08	1.508E-08	1.278E-08	1.106E-08	9.713E-09
SE	2.568E-07	1.379E-07	9.209E-08	5.508E-08	3.838E-08	2.906E-08	2.317E-08	1.915E-08	1.625E-08	1.406E-08	1.236E-08
SSE	2.870E-07	1.521E-07	1.007E-07	5.948E-08	4.110E-08	3.091E-08	2.452E-08	2.018E-08	1.705E-08	1.471E-08	1.289E-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	8.997E-06	2.147E-06	6.862E-07	3.532E-07	2.223E-07	1.007E-07	3.733E-08	1.884E-08	1.213E-08	8.755E-09
SSW	6.062E-06	1.414E-06	4.331E-07	2.175E-07	1.345E-07	5.918E-08	2.094E-08	1.020E-08	6.428E-09	4.569E-09
SW	3.121E-06	7.263E-07	2.220E-07	1.113E-07	6.876E-08	3.019E-08	1.065E-08	5.182E-09	3.262E-09	2.317E-09
WSW	2.913E-06	6.762E-07	2.041E-07	1.015E-07	6.237E-08	2.710E-08	9.381E-09	4.485E-09	2.790E-09	1.964E-09
W	3.051E-06	7.034E-07	2.149E-07	1.078E-07	6.660E-08	2.926E-08	1.035E-08	5.049E-09	3.186E-09	2.268E-09
WNW	3.844E-06	8.910E-07	2.684E-07	1.335E-07	8.193E-08	3.558E-08	1.231E-08	5.891E-09	3.667E-09	2.582E-09
NW	6.386E-06	1.477E-06	4.460E-07	2.221E-07	1.365E-07	5.940E-08	2.063E-08	9.905E-09	6.180E-09	4.360E-09
NNW	1.415E-05	3.356E-06	1.085E-06	5.625E-07	3.558E-07	1.625E-07	6.106E-08	3.113E-08	2.017E-08	1.464E-08
N	2.054E-05	4.910E-06	1.632E-06	8.587E-07	5.488E-07	2.547E-07	9.814E-08	5.095E-08	3.337E-08	2.440E-08
NNE	8.209E-06	1.932E-06	6.443E-07	3.395E-07	2.173E-07	1.012E-07	3.918E-08	2.044E-08	1.343E-08	9.843E-09
NE	4.575E-06	1.084E-06	3.640E-07	1.925E-07	1.235E-07	5.763E-08	2.240E-08	1.170E-08	7.697E-09	5.645E-09
ENE	3.223E-06	7.580E-07	2.473E-07	1.287E-07	8.170E-08	3.750E-08	1.421E-08	7.293E-09	4.746E-09	3.455E-09
E	5.660E-06	1.346E-06	4.514E-07	2.386E-07	1.530E-07	7.137E-08	2.771E-08	1.447E-08	9.507E-09	6.969E-09
ESE	9.157E-06	2.169E-06	7.251E-07	3.825E-07	2.450E-07	1.141E-07	4.416E-08	2.301E-08	1.511E-08	1.107E-08
SE	1.158E-05	2.726E-06	9.123E-07	4.817E-07	3.087E-07	1.440E-07	5.588E-08	2.919E-08	1.920E-08	1.408E-08
SSE	1.339E-05	3.190E-06	1.045E-06	5.449E-07	3.463E-07	1.592E-07	6.047E-08	3.107E-08	2.023E-08	1.473E-08

VENTS GROUND LEVEL RELEASES - JUL-DEC 2016
 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	5.232E-05	1.708E-05	9.242E-06	4.673E-06	1.892E-06	1.028E-06	6.529E-07	4.560E-07	3.396E-07	2.647E-07	2.135E-07
SSW	3.290E-05	1.149E-05	6.258E-06	3.138E-06	1.235E-06	6.579E-07	4.115E-07	2.840E-07	2.094E-07	1.618E-07	1.295E-07
SW	1.706E-05	5.925E-06	3.220E-06	1.614E-06	6.340E-07	3.374E-07	2.109E-07	1.454E-07	1.071E-07	8.271E-08	6.617E-08
WSW	1.533E-05	5.506E-06	3.016E-06	1.511E-06	5.890E-07	3.118E-07	1.940E-07	1.333E-07	9.789E-08	7.540E-08	6.018E-08
W	1.685E-05	5.838E-06	3.137E-06	1.564E-06	6.141E-07	3.268E-07	2.042E-07	1.408E-07	1.038E-07	8.014E-08	6.412E-08
WNW	2.020E-05	7.275E-06	3.986E-06	1.996E-06	7.775E-07	4.115E-07	2.561E-07	1.760E-07	1.293E-07	9.967E-08	7.960E-08
NW	3.370E-05	1.212E-05	6.616E-06	3.308E-06	1.290E-06	6.838E-07	4.260E-07	2.930E-07	2.155E-07	1.662E-07	1.328E-07
NNW	8.374E-05	2.713E-05	1.447E-05	7.266E-06	2.964E-06	1.620E-06	1.033E-06	7.238E-07	5.405E-07	4.223E-07	3.414E-07
N	1.288E-04	3.967E-05	2.085E-05	1.049E-05	4.361E-06	2.414E-06	1.554E-06	1.097E-06	8.240E-07	6.470E-07	5.252E-07
NNE	5.226E-05	1.606E-05	8.272E-06	4.115E-06	1.713E-06	9.487E-07	6.108E-07	4.312E-07	3.239E-07	2.543E-07	2.064E-07
NE	2.919E-05	8.929E-06	4.611E-06	2.300E-06	9.623E-07	5.345E-07	3.448E-07	2.439E-07	1.834E-07	1.441E-07	1.171E-07
ENE	1.961E-05	6.245E-06	3.271E-06	1.633E-06	6.698E-07	3.673E-07	2.347E-07	1.648E-07	1.232E-07	9.638E-08	7.797E-08
E	3.610E-05	1.102E-05	5.711E-06	2.857E-06	1.195E-06	6.627E-07	4.282E-07	3.028E-07	2.278E-07	1.790E-07	1.454E-07
ESE	5.816E-05	1.785E-05	9.238E-06	4.613E-06	1.924E-06	1.067E-06	6.873E-07	4.855E-07	3.648E-07	2.865E-07	2.326E-07
SE	7.393E-05	2.271E-05	1.166E-05	5.793E-06	2.418E-06	1.342E-06	8.648E-07	6.112E-07	4.595E-07	3.610E-07	2.931E-07
SSE	8.176E-05	2.572E-05	1.362E-05	6.850E-06	2.817E-06	1.547E-06	9.895E-07	6.951E-07	5.199E-07	4.067E-07	3.291E-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	1.768E-07	9.066E-08	5.833E-08	3.277E-08	2.164E-08	1.561E-08	1.190E-08	9.428E-09	7.685E-09	6.401E-09	5.425E-09
SSW	1.066E-07	5.326E-08	3.367E-08	1.848E-08	1.202E-08	8.567E-09	6.471E-09	5.087E-09	4.118E-09	3.409E-09	2.872E-09
SW	5.440E-08	2.714E-08	1.713E-08	9.377E-09	6.089E-09	4.335E-09	3.270E-09	2.568E-09	2.077E-09	1.717E-09	1.446E-09
WSW	4.938E-08	2.444E-08	1.535E-08	8.340E-09	5.388E-09	3.822E-09	2.876E-09	2.254E-09	1.820E-09	1.503E-09	1.264E-09
W	5.273E-08	2.632E-08	1.662E-08	9.110E-09	5.924E-09	4.222E-09	3.188E-09	2.505E-09	2.027E-09	1.678E-09	1.413E-09
WNW	6.536E-08	3.246E-08	2.045E-08	1.120E-08	7.292E-09	5.213E-09	3.953E-09	3.121E-09	2.538E-09	2.112E-09	1.789E-09
NW	1.091E-07	5.432E-08	3.430E-08	1.885E-08	1.231E-08	8.821E-09	6.703E-09	5.304E-09	4.322E-09	3.602E-09	3.057E-09
NNW	2.832E-07	1.462E-07	9.449E-08	5.337E-08	3.536E-08	2.555E-08	1.951E-08	1.548E-08	1.263E-08	1.052E-08	8.924E-09
N	4.374E-07	2.289E-07	1.493E-07	8.530E-08	5.694E-08	4.138E-08	3.173E-08	2.525E-08	2.066E-08	1.727E-08	1.467E-08
NNE	1.719E-07	8.980E-08	5.843E-08	3.321E-08	2.204E-08	1.592E-08	1.213E-08	9.599E-09	7.805E-09	6.483E-09	5.477E-09
NE	9.755E-08	5.107E-08	3.326E-08	1.892E-08	1.256E-08	9.065E-09	6.905E-09	5.459E-09	4.436E-09	3.682E-09	3.108E-09
ENE	6.473E-08	3.347E-08	2.164E-08	1.221E-08	8.070E-09	5.815E-09	4.426E-09	3.499E-09	2.845E-09	2.363E-09	1.996E-09
E	1.212E-07	6.349E-08	4.140E-08	2.360E-08	1.570E-08	1.136E-08	8.676E-09	6.877E-09	5.602E-09	4.661E-09	3.944E-09
ESE	1.937E-07	1.012E-07	6.583E-08	3.740E-08	2.480E-08	1.790E-08	1.363E-08	1.078E-08	8.758E-09	7.270E-09	6.138E-09
SE	2.442E-07	1.277E-07	8.319E-08	4.733E-08	3.143E-08	2.270E-08	1.731E-08	1.369E-08	1.113E-08	9.248E-09	7.812E-09
SSE	2.732E-07	1.412E-07	9.119E-08	5.131E-08	3.381E-08	2.428E-08	1.842E-08	1.451E-08	1.176E-08	9.735E-09	8.198E-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	8.953E-06	2.126E-06	6.742E-07	3.443E-07	2.151E-07	9.544E-08	3.350E-08	1.573E-08	9.470E-09	6.420E-09
SSW	6.035E-06	1.401E-06	4.262E-07	2.126E-07	1.306E-07	5.640E-08	1.898E-08	8.649E-09	5.113E-09	3.420E-09
SW	3.107E-06	7.200E-07	2.184E-07	1.087E-07	6.671E-08	2.875E-08	9.639E-09	4.377E-09	2.581E-09	1.723E-09
WSW	2.901E-06	6.707E-07	2.011E-07	9.944E-08	6.069E-08	2.594E-08	8.585E-09	3.862E-09	2.267E-09	1.509E-09
W	3.038E-06	6.975E-07	2.116E-07	1.054E-07	6.465E-08	2.788E-08	9.363E-09	4.262E-09	2.518E-09	1.684E-09
WNW	3.833E-06	8.856E-07	2.655E-07	1.314E-07	8.027E-08	3.443E-08	1.152E-08	5.263E-09	3.137E-09	2.119E-09
NW	6.368E-06	1.469E-06	4.415E-07	2.189E-07	1.339E-07	5.760E-08	1.937E-08	8.904E-09	5.329E-09	3.613E-09
NNW	1.408E-05	3.322E-06	1.066E-06	5.479E-07	3.438E-07	1.537E-07	5.450E-08	2.575E-08	1.554E-08	1.055E-08
N	2.042E-05	4.857E-06	1.600E-06	8.345E-07	5.288E-07	2.398E-07	8.691E-08	4.167E-08	2.535E-08	1.731E-08
NNE	8.155E-06	1.907E-06	6.291E-07	3.281E-07	2.078E-07	9.410E-08	3.385E-08	1.604E-08	9.640E-09	6.502E-09
NE	4.543E-06	1.070E-06	3.550E-07	1.857E-07	1.179E-07	5.348E-08	1.928E-08	9.132E-09	5.482E-09	3.693E-09
ENE	3.204E-06	7.494E-07	2.421E-07	1.249E-07	7.852E-08	3.516E-08	1.247E-08	5.861E-09	3.515E-09	2.370E-09
E	5.622E-06	1.328E-06	4.408E-07	2.306E-07	1.464E-07	6.649E-08	2.404E-08	1.144E-08	6.905E-09	4.674E-09
ESE	9.095E-06	2.141E-06	7.077E-07	3.694E-07	2.341E-07	1.060E-07	3.812E-08	1.803E-08	1.082E-08	7.292E-09
SE	1.151E-05	2.690E-06	8.905E-07	4.653E-07	2.951E-07	1.338E-07	4.823E-08	2.287E-08	1.375E-08	9.275E-09
SSE	1.330E-05	3.149E-06	1.020E-06	5.268E-07	3.314E-07	1.483E-07	5.239E-08	2.448E-08	1.458E-08	9.765E-09

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2016
 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	4.958E-05	1.564E-05	8.267E-06	4.111E-06	1.619E-06	8.602E-07	5.357E-07	3.679E-07	2.699E-07	2.075E-07	1.653E-07
SSW	3.118E-05	1.052E-05	5.596E-06	2.759E-06	1.056E-06	5.499E-07	3.373E-07	2.288E-07	1.661E-07	1.266E-07	1.001E-07
SW	1.617E-05	5.423E-06	2.879E-06	1.419E-06	5.422E-07	2.820E-07	1.728E-07	1.172E-07	8.499E-08	6.473E-08	5.113E-08
WSW	1.452E-05	5.039E-06	2.696E-06	1.329E-06	5.034E-07	2.604E-07	1.588E-07	1.073E-07	7.755E-08	5.890E-08	4.640E-08
W	1.597E-05	5.343E-06	2.805E-06	1.375E-06	5.250E-07	2.731E-07	1.674E-07	1.135E-07	8.231E-08	6.270E-08	4.953E-08
WNW	1.913E-05	6.654E-06	3.561E-06	1.753E-06	6.635E-07	3.430E-07	2.091E-07	1.412E-07	1.021E-07	7.752E-08	6.108E-08
NW	3.192E-05	1.108E-05	5.908E-06	2.904E-06	1.101E-06	5.696E-07	3.476E-07	2.349E-07	1.699E-07	1.291E-07	1.018E-07
NNW	7.937E-05	2.484E-05	1.294E-05	6.392E-06	2.537E-06	1.356E-06	8.479E-07	5.843E-07	4.299E-07	3.314E-07	2.645E-07
N	1.221E-04	3.633E-05	1.866E-05	9.230E-06	3.736E-06	2.022E-06	1.277E-06	8.867E-07	6.563E-07	5.086E-07	4.078E-07
NNE	4.955E-05	1.471E-05	7.408E-06	3.627E-06	1.470E-06	7.966E-07	5.035E-07	3.499E-07	2.591E-07	2.009E-07	1.612E-07
NE	2.768E-05	8.184E-06	4.131E-06	2.028E-06	8.261E-07	4.491E-07	2.845E-07	1.980E-07	1.468E-07	1.140E-07	9.152E-08
ENE	1.859E-05	5.721E-06	2.928E-06	1.438E-06	5.740E-07	3.079E-07	1.931E-07	1.334E-07	9.829E-08	7.588E-08	6.065E-08
E	3.422E-05	1.010E-05	5.115E-06	2.517E-06	1.025E-06	5.572E-07	3.529E-07	2.456E-07	1.821E-07	1.413E-07	1.135E-07
ESE	5.514E-05	1.636E-05	8.275E-06	4.066E-06	1.651E-06	8.959E-07	5.667E-07	3.940E-07	2.919E-07	2.263E-07	1.816E-07
SE	7.010E-05	2.081E-05	1.044E-05	5.106E-06	2.075E-06	1.127E-06	7.131E-07	4.960E-07	3.676E-07	2.852E-07	2.289E-07
SSE	7.752E-05	2.357E-05	1.219E-05	6.036E-06	2.417E-06	1.299E-06	8.155E-07	5.637E-07	4.157E-07	3.211E-07	2.568E-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	1.353E-07	6.651E-08	4.132E-08	2.204E-08	1.401E-08	9.805E-09	7.288E-09	5.650E-09	4.516E-09	3.696E-09	3.081E-09
SSW	8.135E-08	3.893E-08	2.374E-08	1.235E-08	7.718E-09	5.331E-09	3.923E-09	3.015E-09	2.393E-09	1.946E-09	1.613E-09
SW	4.155E-08	1.985E-08	1.209E-08	6.275E-09	3.919E-09	2.705E-09	1.988E-09	1.527E-09	1.211E-09	9.844E-10	8.157E-10
WSW	3.762E-08	1.781E-08	1.077E-08	5.536E-09	3.431E-09	2.354E-09	1.722E-09	1.318E-09	1.042E-09	8.441E-10	6.977E-10
W	4.026E-08	1.924E-08	1.173E-08	6.095E-09	3.812E-09	2.634E-09	1.939E-09	1.490E-09	1.183E-09	9.622E-10	7.978E-10
WNW	4.952E-08	2.345E-08	1.420E-08	7.314E-09	4.545E-09	3.126E-09	2.293E-09	1.759E-09	1.393E-09	1.132E-09	9.379E-10
NW	8.258E-08	3.919E-08	2.377E-08	1.227E-08	7.642E-09	5.265E-09	3.868E-09	2.971E-09	2.357E-09	1.916E-09	1.589E-09
NNW	2.170E-07	1.074E-07	6.710E-08	3.604E-08	2.302E-08	1.616E-08	1.204E-08	9.356E-09	7.492E-09	6.140E-09	5.125E-09
N	3.359E-07	1.687E-07	1.064E-07	5.792E-08	3.732E-08	2.637E-08	1.976E-08	1.541E-08	1.239E-08	1.018E-08	8.522E-09
NNE	1.328E-07	6.680E-08	4.216E-08	2.296E-08	1.479E-08	1.045E-08	7.822E-09	6.096E-09	4.893E-09	4.018E-09	3.358E-09
NE	7.546E-08	3.805E-08	2.405E-08	1.312E-08	8.457E-09	5.975E-09	4.474E-09	3.487E-09	2.799E-09	2.298E-09	1.921E-09
ENE	4.981E-08	2.475E-08	1.550E-08	8.351E-09	5.342E-09	3.754E-09	2.800E-09	2.175E-09	1.742E-09	1.428E-09	1.191E-09
E	9.356E-08	4.717E-08	2.982E-08	1.627E-08	1.049E-08	7.415E-09	5.555E-09	4.332E-09	3.480E-09	2.859E-09	2.391E-09
ESE	1.497E-07	7.531E-08	4.753E-08	2.588E-08	1.666E-08	1.176E-08	8.801E-09	6.857E-09	5.502E-09	4.516E-09	3.774E-09
SE	1.887E-07	9.507E-08	6.006E-08	3.275E-08	2.111E-08	1.492E-08	1.117E-08	8.709E-09	6.993E-09	5.743E-09	4.801E-09
SSE	2.109E-07	1.049E-07	6.573E-08	3.541E-08	2.264E-08	1.590E-08	1.185E-08	9.199E-09	7.359E-09	6.025E-09	5.023E-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	8.057E-06	1.836E-06	5.551E-07	2.741E-07	1.667E-07	7.061E-08	2.276E-08	9.921E-09	5.686E-09	3.712E-09	
SSW	5.430E-06	1.209E-06	3.506E-07	1.690E-07	1.010E-07	4.160E-08	1.282E-08	5.404E-09	3.037E-09	1.955E-09	
SW	2.796E-06	6.215E-07	1.797E-07	8.646E-08	5.161E-08	2.122E-08	6.520E-09	2.742E-09	1.539E-09	9.891E-10	
WSW	2.609E-06	5.788E-07	1.653E-07	7.893E-08	4.685E-08	1.908E-08	5.764E-09	2.388E-09	1.328E-09	8.484E-10	
W	2.733E-06	6.019E-07	1.740E-07	8.374E-08	5.000E-08	2.057E-08	6.332E-09	2.670E-09	1.501E-09	9.668E-10	
WNW	3.445E-06	7.631E-07	2.176E-07	1.039E-07	6.167E-08	2.513E-08	7.613E-09	3.171E-09	1.772E-09	1.138E-09	
NW	5.723E-06	1.265E-06	3.617E-07	1.729E-07	1.028E-07	4.198E-08	1.277E-08	5.340E-09	2.993E-09	1.926E-09	
NNW	1.268E-05	2.869E-06	8.778E-07	4.365E-07	2.667E-07	1.139E-07	3.716E-08	1.634E-08	9.414E-09	6.165E-09	
N	1.840E-05	4.195E-06	1.320E-06	6.659E-07	4.110E-07	1.782E-07	5.954E-08	2.664E-08	1.550E-08	1.022E-08	
NNE	7.351E-06	1.650E-06	5.202E-07	2.629E-07	1.624E-07	7.051E-08	2.360E-08	1.056E-08	6.131E-09	4.033E-09	
NE	4.097E-06	9.256E-07	2.938E-07	1.489E-07	9.222E-08	4.014E-08	1.348E-08	6.036E-09	3.507E-09	2.307E-09	
ENE	2.886E-06	6.477E-07	1.998E-07	9.978E-08	6.115E-08	2.621E-08	8.602E-09	3.796E-09	2.189E-09	1.433E-09	
E	5.068E-06	1.149E-06	3.645E-07	1.847E-07	1.144E-07	4.977E-08	1.671E-08	7.491E-09	4.357E-09	2.870E-09	
ESE	8.200E-06	1.852E-06	5.854E-07	2.961E-07	1.830E-07	7.949E-08	2.659E-08	1.188E-08	6.896E-09	4.533E-09	
SE	1.037E-05	2.327E-06	7.365E-07	3.729E-07	2.307E-07	1.003E-07	3.365E-08	1.507E-08	8.759E-09	5.764E-09	
SSE	1.199E-05	2.724E-06	8.436E-07	4.220E-07	2.589E-07	1.111E-07	3.647E-08	1.608E-08	9.255E-09	6.049E-09	

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2016
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) AT FIXED POINTS BY DOWNWIND SECTORS *****

DIRECTION	DISTANCES IN MILES										
FROM SITE	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	1.848E-07	6.249E-08	3.209E-08	1.525E-08	5.479E-09	2.717E-09	1.600E-09	1.048E-09	7.372E-10	5.463E-10	4.210E-10
SSW	1.154E-07	3.904E-08	2.004E-08	9.529E-09	3.423E-09	1.697E-09	9.995E-10	6.545E-10	4.605E-10	3.413E-10	2.630E-10
SW	6.089E-08	2.059E-08	1.057E-08	5.026E-09	1.805E-09	8.953E-10	5.272E-10	3.452E-10	2.429E-10	1.800E-10	1.387E-10
WSW	5.971E-08	2.019E-08	1.037E-08	4.929E-09	1.770E-09	8.780E-10	5.170E-10	3.385E-10	2.382E-10	1.765E-10	1.360E-10
W	6.660E-08	2.252E-08	1.156E-08	5.498E-09	1.975E-09	9.794E-10	5.767E-10	3.776E-10	2.657E-10	1.969E-10	1.517E-10
WNW	1.121E-07	3.791E-08	1.946E-08	9.253E-09	3.324E-09	1.648E-09	9.706E-10	6.355E-10	4.472E-10	3.314E-10	2.554E-10
NW	2.177E-07	7.362E-08	3.780E-08	1.797E-08	6.455E-09	3.201E-09	1.885E-09	1.234E-09	8.685E-10	6.436E-10	4.960E-10
NNW	3.063E-07	1.036E-07	5.318E-08	2.528E-08	9.081E-09	4.504E-09	2.652E-09	1.736E-09	1.222E-09	9.055E-10	6.978E-10
N	3.712E-07	1.255E-07	6.445E-08	3.064E-08	1.101E-08	5.458E-09	3.214E-09	2.104E-09	1.481E-09	1.097E-09	8.456E-10
NNE	1.457E-07	4.928E-08	2.530E-08	1.203E-08	4.321E-09	2.143E-09	1.262E-09	8.262E-10	5.814E-10	4.308E-10	3.320E-10
NE	5.744E-08	1.942E-08	9.973E-09	4.741E-09	1.703E-09	8.446E-10	4.973E-10	3.256E-10	2.291E-10	1.698E-10	1.309E-10
ENE	4.869E-08	1.646E-08	8.454E-09	4.019E-09	1.444E-09	7.159E-10	4.215E-10	2.760E-10	1.942E-10	1.439E-10	1.109E-10
E	6.821E-08	2.307E-08	1.184E-08	5.631E-09	2.023E-09	1.003E-09	5.906E-10	3.867E-10	2.721E-10	2.017E-10	1.554E-10
ESE	1.305E-07	4.412E-08	2.265E-08	1.077E-08	3.868E-09	1.918E-09	1.130E-09	7.396E-10	5.204E-10	3.857E-10	2.972E-10
SE	1.780E-07	6.019E-08	3.091E-08	1.469E-08	5.278E-09	2.617E-09	1.541E-09	1.009E-09	7.101E-10	5.262E-10	4.055E-10
SSE	1.928E-07	6.519E-08	3.347E-08	1.591E-08	5.716E-09	2.834E-09	1.699E-09	1.093E-09	7.690E-10	5.699E-10	4.392E-10
DIRECTION	DISTANCES IN MILES										
FROM SITE	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	3.345E-10	1.486E-10	9.000E-11	4.549E-11	2.753E-11	1.846E-11	1.323E-11	9.933E-12	7.723E-12	6.169E-12	5.036E-12
SSW	2.089E-10	9.282E-11	5.622E-11	2.842E-11	1.720E-11	1.153E-11	8.264E-12	6.205E-12	4.825E-12	3.854E-12	3.146E-12
SW	1.102E-10	4.895E-11	2.965E-11	1.499E-11	9.072E-12	6.083E-12	4.358E-12	3.273E-12	2.545E-12	2.033E-12	1.659E-12
WSW	1.081E-10	4.801E-11	2.908E-11	1.470E-11	8.896E-12	5.965E-12	4.274E-12	3.209E-12	2.495E-12	1.993E-12	1.627E-12
W	1.205E-10	5.355E-11	3.244E-11	1.640E-11	9.924E-12	6.654E-12	4.768E-12	3.580E-12	2.784E-12	2.224E-12	1.815E-12
WNW	2.029E-10	9.013E-11	5.460E-11	2.760E-11	1.670E-11	1.120E-11	8.024E-12	6.025E-12	4.685E-12	3.742E-12	3.055E-12
NW	3.940E-10	1.750E-10	1.060E-10	5.360E-11	3.244E-11	2.175E-11	1.558E-11	1.170E-11	9.099E-12	7.268E-12	5.933E-12
NNW	5.543E-10	2.463E-10	1.492E-10	7.540E-11	4.564E-11	3.060E-11	2.192E-11	1.646E-11	1.280E-11	1.023E-11	8.346E-12
N	6.718E-10	2.984E-10	1.808E-10	9.138E-11	5.530E-11	3.708E-11	2.657E-11	1.995E-11	1.551E-11	1.239E-11	1.011E-11
NNE	2.638E-10	1.172E-10	7.098E-11	3.588E-11	2.171E-11	1.456E-11	1.043E-11	7.833E-12	6.091E-12	4.865E-12	3.971E-12
NE	1.040E-10	4.618E-11	2.798E-11	1.414E-11	8.558E-12	5.738E-12	4.112E-12	3.087E-12	2.401E-12	1.918E-12	1.565E-12
ENE	8.812E-11	3.915E-11	2.371E-11	1.199E-11	7.254E-12	4.864E-12	3.485E-12	2.617E-12	2.035E-12	1.625E-12	1.327E-12
E	1.235E-10	5.485E-11	3.322E-11	1.679E-11	1.016E-11	6.814E-12	4.883E-12	3.667E-12	2.851E-12	2.277E-12	1.859E-12
ESE	2.361E-10	1.049E-10	6.354E-11	3.212E-11	1.944E-11	1.303E-11	9.339E-12	7.013E-12	5.452E-12	4.355E-12	3.555E-12
SE	3.222E-10	1.431E-10	8.670E-11	4.382E-11	2.652E-11	1.778E-11	1.274E-11	9.568E-12	7.439E-12	5.943E-12	4.850E-12
SSE	3.489E-10	1.550E-10	9.388E-11	4.745E-11	2.872E-11	1.926E-11	1.380E-11	1.036E-11	8.056E-12	6.435E-12	5.253E-12

***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS *****

DIRECTION	SEGMENT BOUNDARIES IN MILES									
FROM SITE	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	3.136E-08	6.424E-09	1.677E-09	7.532E-10	4.261E-10	1.639E-10	4.740E-11	1.879E-11	1.003E-11	6.210E-12
SSW	1.959E-08	4.013E-09	1.048E-09	4.705E-10	2.662E-10	1.024E-10	2.961E-11	1.174E-11	6.267E-12	3.879E-12
SW	1.033E-08	2.117E-09	5.525E-10	2.482E-10	1.404E-10	5.399E-11	1.562E-11	6.190E-12	3.306E-12	2.046E-12
WSW	1.013E-08	2.076E-09	5.418E-10	2.434E-10	1.377E-10	5.294E-11	1.532E-11	6.070E-12	3.242E-12	2.006E-12
W	1.130E-08	2.315E-09	6.044E-10	2.715E-10	1.536E-10	5.906E-11	1.708E-11	6.771E-12	3.616E-12	2.238E-12
WNW	1.902E-08	3.897E-09	1.017E-09	4.569E-10	2.585E-10	9.940E-11	2.875E-11	1.140E-11	6.086E-12	3.767E-12
NW	3.695E-08	7.568E-09	1.976E-09	8.873E-10	5.020E-10	1.930E-10	5.585E-11	2.213E-11	1.182E-11	7.316E-12
NNW	5.198E-08	1.065E-08	2.779E-09	1.248E-09	7.062E-10	2.716E-10	7.856E-11	3.114E-11	1.663E-11	1.029E-11
N	6.299E-08	1.290E-08	3.368E-09	1.513E-09	8.558E-10	3.291E-10	9.521E-11	3.774E-11	2.015E-11	1.247E-11
NNE	2.473E-08	5.066E-09	1.323E-09	5.940E-10	3.360E-10	1.292E-10	3.738E-11	1.482E-11	7.912E-12	4.897E-12
NE	9.748E-09	1.997E-09	5.213E-10	2.341E-10	1.324E-10	5.093E-11	1.473E-11	5.840E-12	3.118E-12	1.930E-12
ENE	8.263E-09	1.692E-09	4.418E-10	1.984E-10	1.123E-10	4.317E-11	1.249E-11	4.950E-12	2.643E-12	1.636E-12
E	1.158E-08	2.371E-09	6.190E-10	2.780E-10	1.573E-10	6.048E-11	1.750E-11	6.935E-12	3.703E-12	2.292E-12
ESE	2.214E-08	4.535E-09	1.184E-09	5.317E-10	3.008E-10	1.157E-10	3.347E-11	1.326E-11	7.083E-12	4.384E-12
SE	3.021E-08	6.188E-09	1.615E-09	7.255E-10	4.104E-10	1.578E-10	4.566E-11	1.810E-11	9.664E-12	5.982E-12
SSE	3.271E-08	6.701E-09	1.749E-09	7.857E-10	4.445E-10	1.709E-10	4.945E-11	1.960E-11	1.047E-11	6.478E-12

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2016
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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	8.0E-06	8.0E-06	7.1E-06	2.7E-08
A	Site Boundary	SSW	.82	5.0E-06	5.0E-06	4.4E-06	1.6E-08
A	Site Boundary	SW	.97	1.7E-06	1.7E-06	1.5E-06	5.4E-09
A	Site Boundary	WSW	.93	1.8E-06	1.8E-06	1.6E-06	6.0E-09
A	Site Boundary	W	.91	2.0E-06	1.9E-06	1.7E-06	7.0E-09
A	Site Boundary	WNW	.94	2.3E-06	2.3E-06	2.1E-06	1.1E-08
A	Site Boundary	NNW	.81	5.5E-06	5.5E-06	4.9E-06	3.1E-08
A	Site Boundary	NNW	.69	1.7E-05	1.7E-05	1.5E-05	6.2E-08
A	Site Boundary	N	.67	2.5E-05	2.5E-05	2.2E-05	7.7E-08
A	Site Boundary	NNE	.60	1.2E-05	1.2E-05	1.1E-05	3.7E-08
A	Site Boundary	NE	.62	6.2E-06	6.2E-06	5.6E-06	1.4E-08
A	Site Boundary	ENE	.59	4.8E-06	4.8E-06	4.4E-06	1.3E-08
A	Site Boundary	E	.53	1.0E-05	1.0E-05	9.3E-06	2.1E-08
A	Site Boundary	ESE	.54	1.6E-05	1.6E-05	1.4E-05	3.9E-08
A	Site Boundary	SE	.65	1.5E-05	1.5E-05	1.3E-05	3.9E-08
A	Site Boundary	SSE	.81	1.1E-05	1.1E-05	1.0E-05	2.7E-08
A	Nearest Res	SSW	3.00	2.9E-07	2.8E-07	2.3E-07	6.5E-10
A	Nearest Res	SW	1.70	4.9E-07	4.8E-07	4.1E-07	1.3E-09
A	Nearest Res	WSW	1.90	3.5E-07	3.5E-07	2.9E-07	9.9E-10
A	Nearest Res	W	1.00	1.6E-06	1.6E-06	1.4E-06	5.5E-09
A	Nearest Res	WNW	1.70	5.9E-07	5.9E-07	5.0E-07	2.4E-09
A	Nearest Res	NW	.90	4.3E-06	4.3E-06	3.8E-06	2.4E-08
A	Nearest Res	NNW	1.90	1.8E-06	1.8E-06	1.5E-06	5.1E-09
A	Nearest Res	N	2.90	1.2E-06	1.2E-06	9.5E-07	2.3E-09
A	Nearest Res	NNE	1.70	1.3E-06	1.3E-06	1.1E-06	3.2E-09
A	Nearest Res	ENE	1.70	5.2E-07	5.1E-07	4.4E-07	1.1E-09
A	Nearest Res	E	2.20	5.6E-07	5.5E-07	4.6E-07	8.0E-10
A	Nearest Res	ESE	2.80	5.7E-07	5.5E-07	4.5E-07	8.7E-10
A	Nearest Res	SE	3.00	6.3E-07	6.1E-07	5.0E-07	1.0E-09
A	Nearest Res	SSE	3.00	7.2E-07	7.0E-07	5.6E-07	1.1E-09
A	Nearest Cow	NNW	3.50	5.6E-07	5.4E-07	4.3E-07	1.2E-09
A	Nearest Garde	SSW	3.00	2.9E-07	2.8E-07	2.3E-07	6.5E-10
A	Nearest Garde	SW	2.20	2.8E-07	2.8E-07	2.3E-07	7.1E-10
A	Nearest Garde	NNW	3.00	7.4E-07	7.2E-07	5.8E-07	1.7E-09
A	Nearest Garde	ENE	1.70	5.2E-07	5.1E-07	4.4E-07	1.1E-09
A	Nearest Garde	ESE	2.30	8.3E-07	8.1E-07	6.7E-07	1.4E-09
A	Nearest Garde	SSE	3.00	7.2E-07	7.0E-07	5.6E-07	1.1E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

January-December 2016

VENTS GROUND LEVEL RELEASES - JAN-DEC 2016
 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	4.030E-05	1.328E-05	7.191E-06	3.635E-06	1.470E-06	7.993E-07	5.082E-07	3.556E-07	2.654E-07	2.073E-07	1.677E-07
SSW	2.897E-05	1.006E-05	5.462E-06	2.741E-06	1.086E-06	5.821E-07	3.661E-07	2.539E-07	1.881E-07	1.460E-07	1.174E-07
SW	1.627E-05	5.625E-06	3.046E-06	1.528E-06	6.033E-07	3.225E-07	2.024E-07	1.401E-07	1.036E-07	8.033E-08	6.451E-08
WSW	1.259E-05	4.537E-06	2.494E-06	1.253E-06	4.908E-07	2.609E-07	1.630E-07	1.124E-07	8.287E-08	6.406E-08	5.132E-08
W	1.565E-05	5.514E-06	2.981E-06	1.489E-06	5.845E-07	3.113E-07	1.948E-07	1.345E-07	9.929E-08	7.684E-08	6.161E-08
WNW	1.862E-05	6.711E-06	3.679E-06	1.845E-06	7.204E-07	3.822E-07	2.384E-07	1.643E-07	1.210E-07	9.346E-08	7.481E-08
NW	2.927E-05	1.042E-05	5.683E-06	2.847E-06	1.115E-06	5.927E-07	3.703E-07	2.555E-07	1.884E-07	1.457E-07	1.167E-07
NNW	6.612E-05	2.165E-05	1.161E-05	5.843E-06	2.377E-06	1.298E-06	8.283E-07	5.813E-07	4.348E-07	3.404E-07	2.758E-07
N	1.028E-04	3.205E-05	1.689E-05	8.501E-06	3.535E-06	1.959E-06	1.263E-06	8.942E-07	6.736E-07	5.306E-07	4.321E-07
NNE	4.852E-05	1.516E-05	7.972E-06	4.005E-06	1.663E-06	9.208E-07	5.935E-07	4.198E-07	3.162E-07	2.490E-07	2.027E-07
NE	2.625E-05	8.144E-06	4.209E-06	2.098E-06	8.763E-07	4.872E-07	3.150E-07	2.234E-07	1.686E-07	1.330E-07	1.085E-07
ENE	2.502E-05	7.929E-06	4.163E-06	2.086E-06	8.610E-07	4.748E-07	3.051E-07	2.154E-07	1.619E-07	1.272E-07	1.034E-07
E	3.405E-05	1.046E-05	5.396E-06	2.693E-06	1.132E-06	6.319E-07	4.098E-07	2.913E-07	2.202E-07	1.740E-07	1.421E-07
ESE	4.375E-05	1.369E-05	7.175E-06	3.599E-06	1.495E-06	8.284E-07	5.341E-07	3.779E-07	2.846E-07	2.241E-07	1.825E-07
SE	6.612E-05	2.056E-05	1.058E-05	5.263E-06	2.197E-06	1.221E-06	7.893E-07	5.596E-07	4.222E-07	3.330E-07	2.715E-07
SSE	6.709E-05	2.133E-05	1.126E-05	5.651E-06	2.323E-06	1.278E-06	8.194E-07	5.774E-07	4.334E-07	3.403E-07	2.764E-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	1.392E-07	7.248E-08	4.740E-08	2.753E-08	1.880E-08	1.402E-08	1.104E-08	9.029E-09	7.590E-09	6.516E-09	5.686E-09
SSW	9.704E-08	4.955E-08	3.196E-08	1.822E-08	1.228E-08	9.068E-09	7.084E-09	5.755E-09	4.810E-09	4.108E-09	3.568E-09
SW	5.324E-08	2.705E-08	1.739E-08	9.866E-09	6.631E-09	4.882E-09	3.807E-09	3.087E-09	2.576E-09	2.198E-09	1.907E-09
WSW	4.226E-08	2.127E-08	1.358E-08	7.616E-09	5.072E-09	3.707E-09	2.872E-09	2.316E-09	1.924E-09	1.634E-09	1.412E-09
W	5.078E-08	2.567E-08	1.644E-08	9.279E-09	6.214E-09	4.563E-09	3.549E-09	2.873E-09	2.393E-09	2.039E-09	1.767E-09
WNW	6.157E-08	3.093E-08	1.972E-08	1.105E-08	7.354E-09	5.373E-09	4.162E-09	3.356E-09	2.787E-09	2.366E-09	2.045E-09
NW	9.612E-08	4.846E-08	3.097E-08	1.742E-08	1.163E-08	8.522E-09	6.616E-09	5.346E-09	4.447E-09	3.782E-09	3.273E-09
NNW	2.294E-07	1.202E-07	7.892E-08	4.612E-08	3.163E-08	2.366E-08	1.869E-08	1.532E-08	1.290E-08	1.110E-08	9.699E-09
N	3.611E-07	1.924E-07	1.279E-07	7.594E-08	5.266E-08	3.971E-08	3.157E-08	2.603E-08	2.203E-08	1.903E-08	1.669E-08
NNE	1.693E-07	9.016E-08	5.989E-08	3.554E-08	2.464E-08	1.857E-08	1.476E-08	1.217E-08	1.030E-08	8.894E-09	7.802E-09
NE	9.074E-08	4.856E-08	3.237E-08	1.931E-08	1.343E-08	1.016E-08	8.091E-09	6.682E-09	5.665E-09	4.899E-09	4.303E-09
ENE	8.631E-08	4.572E-08	3.027E-08	1.788E-08	1.236E-08	9.297E-09	7.377E-09	6.072E-09	5.132E-09	4.427E-09	3.881E-09
E	1.190E-07	6.393E-08	4.273E-08	2.558E-08	1.783E-08	1.350E-08	1.077E-08	8.900E-09	7.551E-09	6.534E-09	5.744E-09
ESE	1.525E-07	8.118E-08	5.392E-08	3.200E-08	2.218E-08	1.672E-08	1.329E-08	1.095E-08	9.269E-09	8.004E-09	7.022E-09
SE	2.271E-07	1.215E-07	8.098E-08	4.829E-08	3.359E-08	2.539E-08	2.023E-08	1.671E-08	1.416E-08	1.225E-08	1.076E-08
SSE	2.305E-07	1.218E-07	8.045E-08	4.742E-08	3.272E-08	2.459E-08	1.949E-08	1.603E-08	1.354E-08	1.167E-08	1.023E-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	6.963E-06	1.653E-06	5.248E-07	2.690E-07	1.689E-07	7.617E-08	2.807E-08	1.410E-08	9.055E-09	6.527E-09	
SSW	5.273E-06	1.230E-06	3.788E-07	1.909E-07	1.184E-07	5.229E-08	1.864E-08	9.132E-09	5.775E-09	4.116E-09	
SW	2.945E-06	6.840E-07	2.095E-07	1.052E-07	6.502E-08	2.858E-08	1.010E-08	4.918E-09	3.098E-09	2.202E-09	
WSW	2.397E-06	5.581E-07	1.689E-07	8.415E-08	5.174E-08	2.251E-08	7.810E-09	3.737E-09	2.326E-09	1.637E-09	
W	2.881E-06	6.641E-07	2.017E-07	1.008E-07	6.211E-08	2.715E-08	9.509E-09	4.598E-09	2.883E-09	2.043E-09	
WNW	3.538E-06	8.200E-07	2.471E-07	1.229E-07	7.543E-08	3.276E-08	1.133E-08	5.417E-09	3.370E-09	2.372E-09	
NW	5.475E-06	1.268E-06	3.837E-07	1.913E-07	1.177E-07	5.128E-08	1.786E-08	8.589E-09	5.366E-09	3.790E-09	
NNW	1.128E-05	2.668E-06	8.548E-07	4.407E-07	2.778E-07	1.261E-07	4.697E-08	2.380E-08	1.536E-08	1.111E-08	
N	1.653E-05	3.938E-06	1.301E-06	6.822E-07	4.350E-07	2.012E-07	7.713E-08	3.991E-08	2.609E-08	1.905E-08	
NNE	7.807E-06	1.854E-06	6.113E-07	3.202E-07	2.040E-07	9.430E-08	3.610E-08	1.867E-08	1.220E-08	8.906E-09	
NE	4.145E-06	9.748E-07	3.243E-07	1.707E-07	1.092E-07	5.074E-08	1.960E-08	1.020E-08	6.697E-09	4.905E-09	
ENE	4.077E-06	9.615E-07	3.145E-07	1.640E-07	1.041E-07	4.787E-08	1.818E-08	9.345E-09	6.087E-09	4.434E-09	
E	5.320E-06	1.257E-06	4.216E-07	2.229E-07	1.430E-07	6.674E-08	2.594E-08	1.356E-08	8.919E-09	6.543E-09	
ESE	7.034E-06	1.666E-06	5.501E-07	2.882E-07	1.837E-07	8.491E-08	3.251E-08	1.680E-08	1.098E-08	8.015E-09	
SE	1.044E-05	2.445E-06	8.125E-07	4.275E-07	2.733E-07	1.270E-07	4.902E-08	2.551E-08	1.674E-08	1.226E-08	
SSE	1.100E-05	2.598E-06	8.448E-07	4.391E-07	2.783E-07	1.276E-07	4.823E-08	2.472E-08	1.607E-08	1.169E-08	

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2016
 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	4.024E-05	1.324E-05	7.159E-06	3.614E-06	1.456E-06	7.893E-07	5.002E-07	3.488E-07	2.595E-07	2.020E-07	1.628E-07
SSW	2.893E-05	1.003E-05	5.438E-06	2.725E-06	1.076E-06	5.750E-07	3.605E-07	2.492E-07	1.840E-07	1.424E-07	1.142E-07
SW	1.625E-05	5.608E-06	3.033E-06	1.519E-06	5.977E-07	3.185E-07	1.992E-07	1.375E-07	1.013E-07	7.829E-08	6.266E-08
WSW	1.258E-05	4.525E-06	2.485E-06	1.247E-06	4.871E-07	2.582E-07	1.609E-07	1.107E-07	8.136E-08	6.273E-08	5.011E-08
W	1.563E-05	5.500E-06	2.969E-06	1.481E-06	5.797E-07	3.078E-07	1.920E-07	1.322E-07	9.731E-08	7.509E-08	6.003E-08
WNW	1.860E-05	6.697E-06	3.668E-06	1.837E-06	7.160E-07	3.791E-07	2.360E-07	1.622E-07	1.192E-07	9.189E-08	7.340E-08
NW	2.924E-05	1.040E-05	5.667E-06	2.837E-06	1.108E-06	5.881E-07	3.667E-07	2.524E-07	1.857E-07	1.433E-07	1.146E-07
NNW	6.600E-05	2.158E-05	1.155E-05	5.807E-06	2.354E-06	1.281E-06	8.146E-07	5.696E-07	4.246E-07	3.313E-07	2.674E-07
N	1.026E-04	3.193E-05	1.680E-05	8.439E-06	3.495E-06	1.929E-06	1.239E-06	8.737E-07	6.555E-07	5.143E-07	4.172E-07
NNE	4.842E-05	1.510E-05	7.923E-06	3.973E-06	1.642E-06	9.052E-07	5.809E-07	4.091E-07	3.067E-07	2.404E-07	1.949E-07
NE	2.619E-05	8.109E-06	4.182E-06	2.080E-06	8.650E-07	4.787E-07	3.081E-07	2.175E-07	1.634E-07	1.283E-07	1.041E-07
ENE	2.497E-05	7.898E-06	4.140E-06	2.070E-06	8.511E-07	4.675E-07	2.992E-07	2.103E-07	1.574E-07	1.232E-07	9.975E-08
E	3.397E-05	1.041E-05	5.361E-06	2.632E-06	1.117E-06	6.210E-07	4.008E-07	2.836E-07	2.135E-07	1.679E-07	1.364E-07
ESE	4.366E-05	1.364E-05	7.132E-06	3.570E-06	1.477E-06	8.148E-07	5.230E-07	3.684E-07	2.763E-07	2.166E-07	1.756E-07
SE	6.598E-05	2.047E-05	1.052E-05	5.220E-06	2.169E-06	1.200E-06	7.722E-07	5.450E-07	4.093E-07	3.213E-07	2.608E-07
SSE	6.695E-05	2.124E-05	1.119E-05	5.606E-06	2.295E-06	1.256E-06	8.022E-07	5.628E-07	4.206E-07	3.288E-07	2.658E-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	1.348E-07	6.900E-08	4.438E-08	2.494E-08	1.650E-08	1.192E-08	9.108E-09	7.232E-09	5.908E-09	4.931E-09	4.187E-09
SSW	9.402E-08	4.723E-08	2.997E-08	1.654E-08	1.080E-08	7.731E-09	5.858E-09	4.618E-09	3.748E-09	3.110E-09	2.626E-09
SW	5.154E-08	2.575E-08	1.628E-08	8.928E-09	5.806E-09	4.138E-09	3.125E-09	2.457E-09	1.988E-09	1.646E-09	1.387E-09
WSW	4.115E-08	2.044E-08	1.287E-08	7.032E-09	4.562E-09	3.250E-09	2.455E-09	1.931E-09	1.564E-09	1.297E-09	1.094E-09
W	4.933E-08	2.456E-08	1.549E-08	8.481E-09	5.512E-09	3.930E-09	2.970E-09	2.336E-09	1.893E-09	1.568E-09	1.323E-09
WNW	6.028E-08	2.996E-08	1.889E-08	1.036E-08	6.754E-09	4.834E-09	3.669E-09	2.900E-09	2.361E-09	1.966E-09	1.667E-09
NW	9.418E-08	4.697E-08	2.970E-08	1.636E-08	1.070E-08	7.678E-09	5.842E-09	4.628E-09	3.775E-09	3.150E-09	2.675E-09
NNW	2.217E-07	1.140E-07	7.358E-08	4.152E-08	2.752E-08	1.991E-08	1.522E-08	1.209E-08	9.877E-09	8.245E-09	7.001E-09
N	3.472E-07	1.813E-07	1.181E-07	6.746E-08	4.504E-08	3.274E-08	2.512E-08	2.001E-08	1.638E-08	1.369E-08	1.164E-08
NNE	1.621E-07	8.437E-08	5.481E-08	3.114E-08	2.069E-08	1.497E-08	1.144E-08	9.071E-09	7.395E-09	6.158E-09	5.214E-09
NE	8.671E-08	4.534E-08	2.954E-08	1.684E-08	1.122E-08	8.128E-09	6.215E-09	4.932E-09	4.023E-09	3.351E-09	2.838E-09
ENE	8.289E-08	4.300E-08	2.789E-08	1.582E-08	1.051E-08	7.605E-09	5.813E-09	4.614E-09	3.765E-09	3.139E-09	2.661E-09
E	1.138E-07	5.975E-08	3.905E-08	2.236E-08	1.493E-08	1.085E-08	8.313E-09	6.610E-09	5.401E-09	4.506E-09	3.823E-09
ESE	1.461E-07	7.608E-08	4.945E-08	2.811E-08	1.869E-08	1.353E-08	1.034E-08	8.206E-09	6.693E-09	5.577E-09	4.725E-09
SE	2.171E-07	1.135E-07	7.394E-08	4.215E-08	2.806E-08	2.033E-08	1.555E-08	1.234E-08	1.006E-08	8.382E-09	7.100E-09
SSE	2.207E-07	1.140E-07	7.366E-08	4.155E-08	2.748E-08	1.981E-08	1.508E-08	1.193E-08	9.697E-09	8.056E-09	6.807E-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	6.934E-06	1.639E-06	5.167E-07	2.631E-07	1.641E-07	7.268E-08	2.551E-08	1.202E-08	7.264E-09	4.945E-09
SSW	5.251E-06	1.220E-06	3.732E-07	1.868E-07	1.151E-07	4.996E-08	1.698E-08	7.801E-09	4.641E-09	3.120E-09
SW	2.932E-06	6.783E-07	2.063E-07	1.029E-07	6.317E-08	2.727E-08	9.173E-09	4.178E-09	2.469E-09	1.651E-09
WSW	2.388E-06	5.542E-07	1.668E-07	8.264E-08	5.053E-08	2.168E-08	7.232E-09	3.282E-09	1.941E-09	1.301E-09
W	2.870E-06	6.592E-07	1.990E-07	9.883E-08	6.053E-08	2.603E-08	8.720E-09	3.968E-09	2.348E-09	1.573E-09
WNW	3.528E-06	8.154E-07	2.446E-07	1.211E-07	7.402E-08	3.178E-08	1.065E-08	4.880E-09	2.914E-09	1.972E-09
NW	5.460E-06	1.261E-06	3.800E-07	1.886E-07	1.155E-07	4.979E-08	1.681E-08	7.749E-09	4.650E-09	3.160E-09
NNW	1.123E-05	2.645E-06	8.411E-07	4.305E-07	2.694E-07	1.200E-07	4.242E-08	2.006E-08	1.214E-08	8.268E-09
N	1.645E-05	3.898E-06	1.277E-06	6.641E-07	4.200E-07	1.901E-07	6.876E-08	3.297E-08	2.009E-08	1.373E-08
NNE	7.762E-06	1.833E-06	5.986E-07	3.107E-07	1.962E-07	8.850E-08	3.176E-08	1.508E-08	9.109E-09	6.175E-09
NE	4.120E-06	9.633E-07	3.174E-07	1.655E-07	1.048E-07	4.751E-08	1.716E-08	8.186E-09	4.952E-09	3.360E-09
ENE	4.055E-06	9.515E-07	3.085E-07	1.595E-07	1.005E-07	4.515E-08	1.614E-08	7.662E-09	4.633E-09	3.148E-09
E	5.288E-06	1.242E-06	4.127E-07	2.161E-07	1.374E-07	6.255E-08	2.277E-08	1.092E-08	6.636E-09	4.518E-09
ESE	6.995E-06	1.648E-06	5.390E-07	2.799E-07	1.768E-07	7.980E-08	2.867E-08	1.363E-08	8.240E-09	5.592E-09
SE	1.037E-05	2.416E-06	7.954E-07	4.146E-07	2.626E-07	1.190E-07	4.295E-08	2.048E-08	1.239E-08	8.405E-09
SSE	1.094E-05	2.569E-06	8.276E-07	4.262E-07	2.678E-07	1.198E-07	4.243E-08	1.996E-08	1.198E-08	8.080E-09

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2016
 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	3.812E-05	1.211E-05	6.400E-06	3.177E-06	1.245E-06	6.595E-07	4.098E-07	2.809E-07	2.057E-07	1.580E-07	1.257E-07
SSW	2.741E-05	9.175E-06	4.861E-06	2.395E-06	9.197E-07	4.803E-07	2.952E-07	2.006E-07	1.459E-07	1.113E-07	8.807E-08
SW	1.539E-05	5.133E-06	2.711E-06	1.335E-06	5.110E-07	2.661E-07	1.632E-07	1.107E-07	8.034E-08	6.121E-08	4.837E-08
WSW	1.191E-05	4.140E-06	2.220E-06	1.096E-06	4.159E-07	2.154E-07	1.315E-07	8.890E-08	6.433E-08	4.888E-08	3.854E-08
W	1.480E-05	5.032E-06	2.654E-06	1.301E-06	4.952E-07	2.570E-07	1.571E-07	1.063E-07	7.703E-08	5.860E-08	4.624E-08
WNW	1.762E-05	6.125E-06	3.276E-06	1.613E-06	6.107E-07	3.158E-07	1.926E-07	1.300E-07	9.401E-08	7.140E-08	5.626E-08
NW	2.770E-05	9.507E-06	5.061E-06	2.490E-06	9.453E-07	4.897E-07	2.991E-07	2.022E-07	1.464E-07	1.113E-07	8.778E-08
NNW	6.254E-05	1.975E-05	1.033E-05	5.106E-06	2.013E-06	1.071E-06	6.678E-07	4.590E-07	3.370E-07	2.593E-07	2.067E-07
N	9.727E-05	2.924E-05	1.503E-05	7.426E-06	2.992E-06	1.615E-06	1.018E-06	7.056E-07	5.216E-07	4.037E-07	3.235E-07
NNE	4.589E-05	1.383E-05	7.092E-06	3.498E-06	1.407E-06	7.588E-07	4.778E-07	3.310E-07	2.446E-07	1.892E-07	1.515E-07
NE	2.483E-05	7.428E-06	3.744E-06	1.832E-06	7.415E-07	4.014E-07	2.536E-07	1.761E-07	1.304E-07	1.011E-07	8.105E-08
ENE	2.366E-05	7.233E-06	3.704E-06	1.822E-06	7.288E-07	3.914E-07	2.458E-07	1.699E-07	1.253E-07	9.678E-08	7.740E-08
E	3.220E-05	9.540E-06	4.800E-06	2.352E-06	9.578E-07	5.207E-07	3.299E-07	2.296E-07	1.703E-07	1.322E-07	1.062E-07
ESE	4.138E-05	1.249E-05	6.383E-06	3.143E-06	1.266E-06	6.827E-07	4.300E-07	2.980E-07	2.202E-07	1.704E-07	1.365E-07
SE	6.254E-05	1.875E-05	9.415E-06	4.596E-06	1.859E-06	1.006E-06	6.354E-07	4.412E-07	3.265E-07	2.530E-07	2.029E-07
SSE	6.346E-05	1.946E-05	1.002E-05	4.936E-06	1.966E-06	1.053E-06	6.598E-07	4.553E-07	3.353E-07	2.587E-07	2.067E-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	1.028E-07	5.038E-08	3.124E-08	1.663E-08	1.056E-08	7.386E-09	5.490E-09	4.256E-09	3.403E-09	2.786E-09	2.323E-09
SSW	7.169E-08	3.445E-08	2.108E-08	1.101E-08	6.908E-09	4.784E-09	3.528E-09	2.717E-09	2.160E-09	1.760E-09	1.461E-09
SW	3.932E-08	1.880E-08	1.146E-08	5.958E-09	3.723E-09	2.571E-09	1.892E-09	1.454E-09	1.154E-09	9.382E-10	7.778E-10
WSW	3.126E-08	1.482E-08	8.983E-09	4.627E-09	2.878E-09	1.973E-09	1.446E-09	1.108E-09	8.767E-10	7.114E-10	5.887E-10
W	3.754E-08	1.787E-08	1.086E-08	5.620E-09	3.503E-09	2.415E-09	1.774E-09	1.362E-09	1.080E-09	8.778E-10	7.274E-10
WNW	4.562E-08	2.161E-08	1.309E-08	6.743E-09	4.189E-09	2.882E-09	2.114E-09	1.622E-09	1.286E-09	1.045E-09	8.657E-10
NW	7.123E-08	3.386E-08	2.056E-08	1.063E-08	6.628E-09	4.571E-09	3.361E-09	2.583E-09	2.051E-09	1.669E-09	1.385E-09
NNW	1.693E-07	8.344E-08	5.195E-08	2.780E-08	1.772E-08	1.242E-08	9.252E-09	7.184E-09	5.751E-09	4.713E-09	3.934E-09
N	2.662E-07	1.333E-07	8.395E-08	4.560E-08	2.934E-08	2.072E-08	1.552E-08	1.210E-08	9.727E-09	7.996E-09	6.693E-09
NNE	1.247E-07	6.235E-08	3.921E-08	2.126E-08	1.366E-08	9.628E-09	7.200E-09	5.608E-09	4.500E-09	3.694E-09	3.088E-09
NE	6.677E-08	3.356E-08	2.118E-08	1.153E-08	7.433E-09	5.253E-09	3.935E-09	3.070E-09	2.466E-09	2.027E-09	1.696E-09
ENE	6.360E-08	3.167E-08	1.986E-08	1.072E-08	6.875E-09	4.840E-09	3.616E-09	2.814E-09	2.257E-09	1.853E-09	1.548E-09
E	8.756E-08	4.420E-08	2.797E-08	1.529E-08	9.874E-09	6.990E-09	5.245E-09	4.096E-09	3.295E-09	2.710E-09	2.270E-09
ESE	1.123E-07	5.617E-08	3.533E-08	1.915E-08	1.230E-08	8.676E-09	6.489E-09	5.054E-09	4.056E-09	3.331E-09	2.785E-09
SE	1.671E-07	8.398E-08	5.298E-08	2.885E-08	1.859E-08	1.313E-08	9.839E-09	7.675E-09	6.166E-09	5.067E-09	4.240E-09
SSE	1.697E-07	8.421E-08	5.268E-08	2.836E-08	1.814E-08	1.274E-08	9.504E-09	7.385E-09	5.914E-09	4.847E-09	4.045E-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	6.237E-06	1.414E-06	4.248E-07	2.090E-07	1.268E-07	5.353E-08	1.718E-08	7.474E-09	4.283E-09	2.797E-09
SSW	4.724E-06	1.052E-06	3.068E-07	1.483E-07	8.889E-08	3.678E-08	1.143E-08	4.848E-09	2.737E-09	1.768E-09
SW	2.638E-06	5.853E-07	1.696E-07	8.172E-08	4.882E-08	2.010E-08	6.188E-09	2.607E-09	1.465E-09	9.426E-10
WSW	2.147E-06	4.779E-07	1.369E-07	6.547E-08	3.891E-08	1.588E-08	4.815E-09	2.002E-09	1.116E-09	7.149E-10
W	2.581E-06	5.685E-07	1.634E-07	7.838E-08	4.668E-08	1.913E-08	5.843E-09	2.449E-09	1.372E-09	8.821E-10
WNW	3.170E-06	7.024E-07	2.004E-07	9.569E-08	5.680E-08	2.316E-08	7.018E-09	2.924E-09	1.634E-09	1.050E-09
NW	4.906E-06	1.086E-06	3.112E-07	1.490E-07	8.862E-08	3.625E-08	1.106E-08	4.636E-09	2.603E-09	1.677E-09
NNW	1.010E-05	2.282E-06	6.918E-07	3.423E-07	2.084E-07	8.853E-08	2.869E-08	1.257E-08	7.229E-09	4.732E-09
N	1.481E-05	3.365E-06	1.052E-06	5.292E-07	3.260E-07	1.409E-07	4.690E-08	2.094E-08	1.217E-08	8.026E-09
NNE	6.992E-06	1.584E-06	4.940E-07	2.482E-07	1.527E-07	6.591E-08	2.187E-08	9.731E-09	5.641E-09	3.708E-09
NE	3.713E-06	8.327E-07	2.620E-07	1.323E-07	8.169E-08	3.544E-08	1.185E-08	5.307E-09	3.087E-09	2.035E-09
ENE	3.652E-06	8.218E-07	2.543E-07	1.272E-07	7.803E-08	3.351E-08	1.104E-08	4.893E-09	2.831E-09	1.860E-09
E	4.765E-06	1.073E-06	3.406E-07	1.727E-07	1.070E-07	4.662E-08	1.570E-08	7.061E-09	4.119E-09	2.720E-09
ESE	6.300E-06	1.424E-06	4.446E-07	2.235E-07	1.376E-07	5.937E-08	1.970E-08	8.769E-09	5.084E-09	3.343E-09
SE	9.347E-06	2.088E-06	6.565E-07	3.313E-07	2.045E-07	8.888E-08	2.965E-08	1.327E-08	7.718E-09	5.086E-09
SSE	9.856E-06	2.220E-06	6.828E-07	3.404E-07	2.084E-07	8.919E-08	2.922E-08	1.289E-08	7.430E-09	4.866E-09

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2016
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	1.697E-07	5.739E-08	2.947E-08	1.401E-08	5.032E-09	2.496E-09	1.469E-09	9.622E-10	6.770E-10	5.017E-10	3.867E-10
SSW	1.109E-07	3.749E-08	1.925E-08	9.151E-09	3.287E-09	1.630E-09	9.599E-10	6.285E-10	4.423E-10	3.278E-10	2.526E-10
SW	6.062E-08	2.050E-08	1.053E-08	5.004E-09	1.798E-09	8.914E-10	5.249E-10	3.437E-10	2.418E-10	1.792E-10	1.381E-10
WSW	5.541E-08	1.874E-08	9.621E-09	4.574E-09	1.643E-09	8.148E-10	4.798E-10	3.142E-10	2.211E-10	1.638E-10	1.262E-10
W	6.844E-08	2.314E-08	1.188E-08	5.649E-09	2.029E-09	1.006E-09	5.926E-10	3.880E-10	2.730E-10	2.023E-10	1.559E-10
WNW	1.079E-07	3.650E-08	1.874E-08	8.910E-09	3.201E-09	1.587E-09	9.346E-10	6.120E-10	4.306E-10	3.191E-10	2.459E-10
NW	1.986E-07	6.717E-08	3.449E-08	1.640E-08	5.890E-09	2.921E-09	1.720E-09	1.126E-09	7.924E-10	5.872E-10	4.525E-10
NNW	2.842E-07	9.611E-08	4.935E-08	2.346E-08	8.427E-09	4.179E-09	2.461E-09	1.611E-09	1.134E-09	8.402E-10	6.475E-10
N	3.263E-07	1.103E-07	5.665E-08	2.693E-08	9.675E-09	4.798E-09	2.825E-09	1.850E-09	1.302E-09	9.646E-10	7.434E-10
NNE	1.499E-07	5.070E-08	2.603E-08	1.238E-08	4.445E-09	2.205E-09	1.298E-09	8.500E-10	5.981E-10	4.432E-10	3.416E-10
NE	6.939E-08	2.347E-08	1.205E-08	5.728E-09	2.058E-09	1.020E-09	6.008E-10	3.934E-10	2.768E-10	2.051E-10	1.581E-10
ENE	7.390E-08	2.499E-08	1.283E-08	6.100E-09	2.191E-09	1.087E-09	6.398E-10	4.190E-10	2.948E-10	2.185E-10	1.684E-10
E	7.529E-08	2.546E-08	1.307E-08	6.215E-09	2.232E-09	1.107E-09	6.519E-10	4.268E-10	3.003E-10	2.226E-10	1.715E-10
ESE	1.311E-07	4.434E-08	2.277E-08	1.082E-08	3.888E-09	1.928E-09	1.135E-09	7.434E-10	5.231E-10	3.877E-10	2.987E-10
SE	2.114E-07	7.150E-08	3.671E-08	1.745E-08	6.269E-09	3.109E-09	1.831E-09	1.199E-09	8.435E-10	6.251E-10	4.817E-10
SSE	2.228E-07	7.534E-08	3.868E-08	1.839E-08	6.606E-09	3.276E-09	1.929E-09	1.263E-09	8.888E-10	6.587E-10	5.076E-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	3.072E-10	1.365E-10	8.266E-11	4.178E-11	2.529E-11	1.695E-11	1.215E-11	9.123E-12	7.093E-12	5.666E-12	4.625E-12
SSW	2.007E-10	8.914E-11	5.400E-11	2.729E-11	1.652E-11	1.108E-11	7.936E-12	5.959E-12	4.633E-12	3.701E-12	3.021E-12
SW	1.097E-10	4.874E-11	2.953E-11	1.492E-11	9.033E-12	6.056E-12	4.340E-12	3.259E-12	2.534E-12	2.024E-12	1.652E-12
WSW	1.003E-10	4.455E-11	2.699E-11	1.364E-11	8.257E-12	5.536E-12	3.967E-12	2.979E-12	2.316E-12	1.850E-12	1.510E-12
W	1.239E-10	5.503E-11	3.333E-11	1.685E-11	1.020E-11	6.837E-12	4.899E-12	3.679E-12	2.860E-12	2.285E-12	1.865E-12
WNW	1.954E-10	8.679E-11	5.257E-11	2.657E-11	1.608E-11	1.078E-11	7.727E-12	5.802E-12	4.511E-12	3.604E-12	2.941E-12
NW	3.595E-10	1.597E-10	9.674E-11	4.890E-11	2.960E-11	1.984E-11	1.422E-11	1.068E-11	8.301E-12	6.631E-12	5.413E-12
NNW	5.144E-10	2.285E-10	1.384E-10	6.997E-11	4.235E-11	2.839E-11	2.034E-11	1.528E-11	1.188E-11	9.488E-12	7.744E-12
N	5.906E-10	2.623E-10	1.589E-10	8.032E-11	4.862E-11	3.260E-11	2.336E-11	1.754E-11	1.364E-11	1.089E-11	8.891E-12
NNE	2.713E-10	1.205E-10	7.302E-11	3.691E-11	2.234E-11	1.498E-11	1.073E-11	8.059E-12	6.266E-12	5.005E-12	4.085E-12
NE	1.256E-10	5.579E-11	3.380E-11	1.708E-11	1.034E-11	6.932E-12	4.967E-12	3.730E-12	2.900E-12	2.317E-12	1.891E-12
ENE	1.338E-10	5.942E-11	3.599E-11	1.819E-11	1.101E-11	7.382E-12	5.290E-12	3.972E-12	3.088E-12	2.467E-12	2.014E-12
E	1.363E-10	6.053E-11	3.667E-11	1.853E-11	1.122E-11	7.521E-12	5.389E-12	4.047E-12	3.147E-12	2.513E-12	2.052E-12
ESE	2.373E-10	1.054E-10	6.386E-11	3.228E-11	1.954E-11	1.310E-11	9.386E-12	7.048E-12	5.480E-12	4.378E-12	3.573E-12
SE	3.827E-10	1.700E-10	1.030E-10	5.205E-11	3.151E-11	2.112E-11	1.514E-11	1.137E-11	8.837E-12	7.059E-12	5.762E-12
SSE	4.032E-10	1.791E-10	1.085E-10	5.485E-11	3.320E-11	2.226E-11	1.595E-11	1.198E-11	9.311E-12	7.438E-12	6.071E-12

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***** 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	2.880E-08	5.900E-09	1.540E-09	6.917E-10	3.913E-10	1.505E-10	4.353E-11	1.725E-11	9.214E-12	5.703E-12	
SSW	1.881E-08	3.854E-09	1.006E-09	4.519E-10	2.556E-10	9.830E-11	2.844E-11	1.127E-11	6.019E-12	3.725E-12	
SW	1.029E-08	2.107E-09	5.502E-10	2.471E-10	1.398E-10	5.375E-11	1.555E-11	6.163E-12	3.291E-12	2.037E-12	
WSW	9.404E-09	1.926E-09	5.029E-10	2.259E-10	1.278E-10	4.913E-11	1.421E-11	5.634E-12	3.008E-12	1.862E-12	
W	1.161E-08	2.379E-09	6.211E-10	2.789E-10	1.578E-10	6.068E-11	1.756E-11	6.958E-12	3.716E-12	2.300E-12	
WNW	1.832E-08	3.752E-09	9.796E-10	4.400E-10	2.489E-10	9.571E-11	2.769E-11	1.097E-11	5.860E-12	3.627E-12	
NW	3.371E-08	6.905E-09	1.803E-09	8.096E-10	4.580E-10	1.761E-10	5.095E-11	2.019E-11	1.078E-11	6.675E-12	
NNW	4.823E-08	9.880E-09	2.579E-09	1.158E-09	6.553E-10	2.520E-10	7.290E-11	2.889E-11	1.543E-11	9.550E-12	
N	5.537E-08	1.134E-08	2.961E-09	1.330E-09	7.523E-10	2.893E-10	8.370E-11	3.317E-11	1.771E-11	1.096E-11	
NNE	2.544E-08	5.212E-09	1.361E-09	6.111E-10	3.457E-10	1.329E-10	3.846E-11	1.524E-11	8.139E-12	5.038E-12	
NE	1.178E-08	2.412E-09	6.297E-10	2.828E-10	1.600E-10	6.153E-11	1.780E-11	7.055E-12	3.767E-12	2.332E-12	
ENE	1.254E-08	2.569E-09	6.706E-10	3.012E-10	1.704E-10	6.552E-11	1.896E-11	7.513E-12	4.012E-12	2.483E-12	
E	1.278E-08	2.617E-09	6.832E-10	3.069E-10	1.736E-10	6.676E-11	1.931E-11	7.654E-12	4.087E-12	2.530E-12	
ESE	2.225E-08	4.558E-09	1.190E-09	5.344E-10	3.023E-10	1.163E-10	3.364E-11	1.333E-11	7.119E-12	4.406E-12	
SE	3.588E-08	7.350E-09	1.919E-09	8.618E-10	4.875E-10	1.875E-10	5.424E-11	2.150E-11	1.148E-11	7.105E-12	
SSE	3.781E-08	7.745E-09	2.022E-09	9.081E-10	5.137E-10	1.975E-10	5.715E-11	2.265E-11	1.210E-11	7.487E-12	

VENTS GROUND LEVEL RELEASES - JAN-DEC 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE OF DIRECTION DIST.							
ID	LOCATION	FROM SITE (MI)	X/Q (SEC/M3) NO DECAY	X/Q (SEC/M3) 2.26 DAY DECAY	X/Q (SEC/M3) 8.0 DAY DECAY	D/Q (PER SQ.METER)	
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	6.2E-06	6.2E-06	5.5E-06	2.5E-08
A	Site Boundary	SSW	.82	4.4E-06	4.3E-06	3.9E-06	1.5E-08
A	Site Boundary	SW	.97	1.6E-06	1.6E-06	1.4E-06	5.3E-09
A	Site Boundary	WSW	.93	1.5E-06	1.5E-06	1.3E-06	5.6E-09
A	Site Boundary	W	.91	1.9E-06	1.8E-06	1.6E-06	7.2E-09
A	Site Boundary	WNW	.94	2.2E-06	2.1E-06	1.9E-06	1.1E-08
A	Site Boundary	NW	.81	4.7E-06	4.7E-06	4.2E-06	2.8E-08
A	Site Boundary	NNW	.69	1.3E-05	1.3E-05	1.2E-05	5.7E-08
A	Site Boundary	N	.67	2.0E-05	2.0E-05	1.8E-05	6.8E-08
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	1.0E-05	3.8E-08
A	Site Boundary	NE	.62	5.6E-06	5.6E-06	5.1E-06	1.6E-08
A	Site Boundary	ENE	.59	6.1E-06	6.1E-06	5.5E-06	1.9E-08
A	Site Boundary	E	.53	9.6E-06	9.6E-06	8.8E-06	2.4E-08
A	Site Boundary	ESE	.54	1.2E-05	1.2E-05	1.1E-05	3.9E-08
A	Site Boundary	SE	.65	1.3E-05	1.3E-05	1.2E-05	4.7E-08
A	Site Boundary	SSE	.81	9.3E-06	9.3E-06	8.3E-06	3.2E-08
A	Nearest Res	SSW	3.00	2.5E-07	2.5E-07	2.0E-07	6.3E-10
A	Nearest Res	SW	1.70	4.6E-07	4.5E-07	3.8E-07	1.3E-09
A	Nearest Res	WSW	1.90	2.9E-07	2.9E-07	2.4E-07	9.2E-10
A	Nearest Res	W	1.00	1.5E-06	1.5E-06	1.3E-06	5.7E-09
A	Nearest Res	WNW	1.70	5.4E-07	5.4E-07	4.6E-07	2.4E-09
A	Nearest Res	NW	.90	3.7E-06	3.7E-06	3.2E-06	2.2E-08
A	Nearest Res	NNW	1.90	1.4E-06	1.4E-06	1.2E-06	4.7E-09
A	Nearest Res	N	2.90	9.5E-07	9.3E-07	7.5E-07	2.0E-09
A	Nearest Res	NNE	1.70	1.3E-06	1.3E-06	1.1E-06	3.3E-09
A	Nearest Res	ENE	1.70	6.6E-07	6.5E-07	5.5E-07	1.6E-09
A	Nearest Res	E	2.20	5.2E-07	5.1E-07	4.3E-07	8.8E-10
A	Nearest Res	ESE	2.80	4.3E-07	4.2E-07	3.4E-07	8.7E-10
A	Nearest Res	SE	3.00	5.6E-07	5.4E-07	4.4E-07	1.2E-09
A	Nearest Res	SSE	3.00	5.8E-07	5.6E-07	4.6E-07	1.3E-09
A	Nearest Cow	NNW	3.50	4.3E-07	4.2E-07	3.4E-07	1.1E-09
A	Nearest Garde	SSW	3.00	2.5E-07	2.5E-07	2.0E-07	6.3E-10
A	Nearest Garde	SW	2.20	2.6E-07	2.6E-07	2.2E-07	7.1E-10
A	Nearest Garde	NNW	3.00	5.8E-07	5.7E-07	4.6E-07	1.6E-09
A	Nearest Garde	ENE	1.70	6.6E-07	6.5E-07	5.5E-07	1.6E-09
A	Nearest Garde	ESE	2.30	6.3E-07	6.2E-07	5.1E-07	1.4E-09
A	Nearest Garde	SSE	3.00	5.8E-07	5.6E-07	4.6E-07	1.3E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-March 2016

ERP ELEVATED STACK RELEASES - JAN-MAR 2016
 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	2.338E-10	1.397E-08	3.342E-08	4.188E-08	4.337E-08	3.719E-08	3.069E-08	2.536E-08	2.122E-08	2.387E-08	2.500E-08
SSW	6.347E-11	5.245E-09	2.802E-08	4.822E-08	5.826E-08	5.147E-08	4.281E-08	4.512E-08	4.520E-08	3.917E-08	3.447E-08
SW	2.267E-16	2.762E-10	1.092E-08	2.939E-08	5.270E-08	3.671E-08	2.698E-08	2.078E-08	1.660E-08	1.365E-08	1.150E-08
WSW	2.624E-16	3.201E-10	1.825E-08	5.802E-08	1.113E-07	7.146E-08	4.987E-08	3.703E-08	2.879E-08	2.317E-08	1.917E-08
W	1.582E-13	1.956E-08	1.057E-07	1.447E-07	1.454E-07	9.295E-08	6.487E-08	4.822E-08	3.753E-08	3.025E-08	2.504E-08
WNW	9.769E-15	4.594E-09	8.211E-08	1.764E-07	2.454E-07	1.503E-07	1.017E-07	7.669E-08	6.016E-08	4.742E-08	3.856E-08
NW	6.627E-11	7.240E-09	9.427E-08	2.534E-07	4.239E-07	2.493E-07	1.652E-07	1.209E-07	9.310E-08	7.331E-08	5.959E-08
NNW	7.777E-11	7.072E-09	4.957E-08	1.070E-07	1.720E-07	1.672E-07	1.492E-07	1.284E-07	1.113E-07	8.736E-08	7.086E-08
N	1.177E-09	1.915E-08	5.026E-08	6.870E-08	7.471E-08	6.629E-08	5.574E-08	4.590E-08	3.832E-08	3.250E-08	2.798E-08
NNE	1.864E-10	1.033E-08	2.739E-08	3.650E-08	3.918E-08	3.402E-08	2.830E-08	2.355E-08	1.983E-08	1.693E-08	1.465E-08
NE	8.143E-16	6.982E-10	1.142E-08	2.275E-08	3.053E-08	2.878E-08	2.509E-08	2.154E-08	1.856E-08	1.614E-08	1.418E-08
ENE	4.610E-16	6.253E-10	1.135E-08	2.310E-08	3.045E-08	2.787E-08	2.368E-08	1.991E-08	1.687E-08	1.446E-08	1.256E-08
E	4.103E-16	4.568E-10	8.290E-09	1.739E-08	2.428E-08	2.310E-08	2.018E-08	1.735E-08	1.496E-08	1.303E-08	1.147E-08
ESE	8.104E-16	6.595E-10	1.036E-08	2.012E-08	2.610E-08	2.409E-08	2.072E-08	1.765E-08	1.513E-08	1.312E-08	1.152E-08
SE	2.923E-11	4.026E-09	3.833E-08	6.874E-08	8.175E-08	7.121E-08	5.868E-08	4.829E-08	4.024E-08	3.405E-08	2.924E-08
SSE	3.342E-10	2.357E-08	9.129E-08	1.365E-07	1.481E-07	1.250E-07	1.012E-07	8.234E-08	6.803E-08	5.717E-08	4.883E-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	2.187E-08	1.331E-08	8.514E-09	4.779E-09	3.256E-09	2.412E-09	1.864E-09	1.500E-09	1.250E-09	1.063E-09	9.173E-10
SSW	3.159E-08	2.236E-08	1.437E-08	8.119E-09	5.601E-09	4.138E-09	3.203E-09	2.582E-09	2.145E-09	1.821E-09	1.574E-09
SW	1.068E-08	8.420E-09	5.573E-09	3.273E-09	2.362E-09	1.821E-09	1.468E-09	1.195E-09	1.000E-09	8.554E-10	7.441E-10
WSW	1.683E-08	1.051E-08	7.255E-09	4.345E-09	2.908E-09	2.134E-09	1.659E-09	1.342E-09	1.118E-09	9.516E-10	8.244E-10
W	2.118E-08	1.162E-08	8.203E-09	5.138E-09	3.642E-09	2.683E-09	2.087E-09	1.689E-09	1.407E-09	1.198E-09	1.038E-09
WNW	3.236E-08	1.726E-08	1.131E-08	6.504E-09	4.345E-09	3.180E-09	2.467E-09	1.988E-09	1.649E-09	1.397E-09	1.206E-09
NW	5.011E-08	2.707E-08	1.805E-08	1.063E-08	7.106E-09	5.212E-09	4.095E-09	3.319E-09	2.762E-09	2.350E-09	2.034E-09
NNW	5.994E-08	3.295E-08	2.126E-08	1.210E-08	8.138E-09	5.995E-09	4.707E-09	3.838E-09	3.238E-09	2.770E-09	2.401E-09
N	2.445E-08	1.477E-08	1.151E-08	8.430E-09	6.681E-09	5.366E-09	4.195E-09	3.400E-09	2.830E-09	2.409E-09	2.086E-09
NNE	1.542E-08	1.582E-08	1.010E-08	5.676E-09	3.790E-09	2.776E-09	2.156E-09	1.742E-09	1.450E-09	1.233E-09	1.068E-09
NE	1.562E-08	2.451E-08	1.600E-08	9.269E-09	6.318E-09	4.704E-09	3.747E-09	3.088E-09	2.614E-09	2.241E-09	1.954E-09
ENE	1.301E-08	1.901E-08	1.269E-08	7.553E-09	5.232E-09	3.939E-09	3.326E-09	2.847E-09	2.396E-09	2.059E-09	1.799E-09
E	1.243E-08	1.870E-08	1.240E-08	7.312E-09	5.032E-09	3.770E-09	2.979E-09	2.443E-09	2.131E-09	1.878E-09	1.638E-09
ESE	1.215E-08	1.717E-08	1.161E-08	7.014E-09	4.901E-09	3.712E-09	2.959E-09	2.443E-09	2.070E-09	1.789E-09	1.570E-09
SE	2.544E-08	1.511E-08	1.133E-08	8.023E-09	5.938E-09	4.771E-09	4.031E-09	3.516E-09	2.960E-09	2.544E-09	2.222E-09
SSE	4.920E-08	5.419E-08	3.485E-08	1.979E-08	1.331E-08	9.803E-09	7.648E-09	6.207E-09	5.184E-09	4.426E-09	3.843E-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	3.286E-08	4.029E-08	3.029E-08	2.341E-08	2.351E-08	1.308E-08	4.932E-09	2.418E-09	1.509E-09	1.064E-09
SSW	3.194E-08	5.301E-08	4.604E-08	4.288E-08	3.480E-08	2.086E-08	8.389E-09	4.154E-09	2.593E-09	1.826E-09
SW	1.676E-08	4.041E-08	2.709E-08	1.667E-08	1.183E-08	7.657E-09	3.379E-09	1.824E-09	1.199E-09	8.570E-10
WSW	3.194E-08	8.176E-08	5.049E-08	2.900E-08	1.949E-08	1.047E-08	4.353E-09	2.150E-09	1.347E-09	9.537E-10
W	1.039E-07	1.219E-07	6.570E-08	3.781E-08	2.516E-08	1.223E-08	5.154E-09	2.700E-09	1.695E-09	1.201E-09
WNW	1.068E-07	1.878E-07	1.047E-07	6.003E-08	3.889E-08	1.797E-08	6.612E-09	3.205E-09	1.996E-09	1.401E-09
NW	1.456E-07	3.084E-07	1.699E-07	9.351E-08	6.014E-08	2.818E-08	1.071E-08	5.270E-09	3.328E-09	2.355E-09
NNW	6.564E-08	1.554E-07	1.457E-07	1.071E-07	7.170E-08	3.375E-08	1.237E-08	6.052E-09	3.856E-09	2.772E-09
N	5.154E-08	6.963E-08	5.461E-08	3.827E-08	2.801E-08	1.547E-08	8.338E-09	5.248E-09	3.410E-09	2.414E-09
NNE	2.765E-08	3.629E-08	2.793E-08	1.979E-08	1.561E-08	1.319E-08	5.821E-09	2.798E-09	1.749E-09	1.236E-09
NE	1.407E-08	2.802E-08	2.465E-08	1.849E-08	1.529E-08	1.875E-08	9.454E-09	4.752E-09	3.096E-09	2.245E-09
ENE	1.419E-08	2.767E-08	2.329E-08	1.682E-08	1.329E-08	1.487E-08	7.664E-09	4.039E-09	2.812E-09	2.062E-09
E	1.059E-08	2.223E-08	1.983E-08	1.491E-08	1.229E-08	1.451E-08	7.430E-09	3.790E-09	2.477E-09	1.864E-09
ESE	1.254E-08	2.388E-08	2.039E-08	1.509E-08	1.223E-08	1.358E-08	7.097E-09	3.728E-09	2.448E-09	1.791E-09
SE	4.422E-08	7.418E-08	5.787E-08	4.018E-08	2.926E-08	1.573E-08	7.832E-09	4.786E-09	3.451E-09	2.548E-09
SSE	9.634E-08	1.353E-07	1.000E-07	6.798E-08	5.144E-08	4.449E-08	2.025E-08	9.875E-09	6.229E-09	4.435E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2016
 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	2.338E-10	1.397E-08	3.340E-08	4.183E-08	4.328E-08	3.708E-08	3.057E-08	2.524E-08	2.110E-08	2.372E-08	2.482E-08
SSW	6.346E-11	5.242E-09	2.799E-08	4.814E-08	5.811E-08	5.128E-08	4.261E-08	4.486E-08	4.489E-08	3.885E-08	3.415E-08
SW	2.266E-16	2.760E-10	1.090E-08	2.934E-08	5.252E-08	3.653E-08	2.681E-08	2.062E-08	1.645E-08	1.351E-08	1.136E-08
WSW	2.624E-16	3.198E-10	1.822E-08	5.789E-08	1.109E-07	7.111E-08	4.956E-08	3.675E-08	2.853E-08	2.294E-08	1.895E-08
W	1.582E-13	1.955E-08	1.056E-07	1.444E-07	1.450E-07	9.256E-08	6.452E-08	4.790E-08	3.724E-08	2.997E-08	2.479E-08
WNW	9.766E-15	4.590E-09	8.199E-08	1.760E-07	2.446E-07	1.496E-07	1.011E-07	7.614E-08	5.966E-08	4.697E-08	3.814E-08
NW	6.624E-11	7.233E-09	9.415E-08	2.530E-07	4.229E-07	2.485E-07	1.646E-07	1.203E-07	9.257E-08	7.283E-08	5.915E-08
NNW	7.775E-11	7.066E-09	4.951E-08	1.068E-07	1.716E-07	1.667E-07	1.486E-07	1.278E-07	1.107E-07	8.681E-08	7.036E-08
N	1.177E-09	1.915E-08	5.022E-08	6.862E-08	7.457E-08	6.611E-08	5.555E-08	4.571E-08	3.814E-08	3.233E-08	2.781E-08
NNE	1.864E-10	1.033E-08	2.738E-08	3.647E-08	3.912E-08	3.394E-08	2.822E-08	2.347E-08	1.975E-08	1.685E-08	1.458E-08
NE	8.141E-16	6.978E-10	1.140E-08	2.271E-08	3.046E-08	2.869E-08	2.498E-08	2.143E-08	1.844E-08	1.602E-08	1.406E-08
ENE	4.609E-16	6.248E-10	1.134E-08	2.306E-08	3.038E-08	2.778E-08	2.358E-08	1.981E-08	1.677E-08	1.437E-08	1.247E-08
E	4.101E-16	4.565E-10	8.279E-09	1.736E-08	2.420E-08	2.301E-08	2.008E-08	1.724E-08	1.486E-08	1.292E-08	1.137E-08
ESE	8.103E-16	6.591E-10	1.035E-08	2.009E-08	2.605E-08	2.403E-08	2.066E-08	1.759E-08	1.507E-08	1.306E-08	1.146E-08
SE	2.922E-11	4.025E-09	3.830E-08	6.866E-08	8.162E-08	7.106E-08	5.852E-08	4.814E-08	4.009E-08	3.390E-08	2.909E-08
SSE	3.341E-10	2.356E-08	9.123E-08	1.364E-07	1.479E-07	1.248E-07	1.010E-07	8.209E-08	6.779E-08	5.694E-08	4.861E-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	2.170E-08	1.315E-08	8.379E-09	4.666E-09	3.153E-09	2.317E-09	1.776E-09	1.418E-09	1.172E-09	9.892E-10	8.470E-10
SSW	3.126E-08	2.199E-08	1.405E-08	7.844E-09	5.348E-09	3.904E-09	2.987E-09	2.381E-09	1.954E-09	1.640E-09	1.401E-09
SW	1.054E-08	8.253E-09	5.426E-09	3.144E-09	2.240E-09	1.704E-09	1.357E-09	1.090E-09	9.004E-10	7.603E-10	6.529E-10
WSW	1.661E-08	1.030E-08	7.062E-09	4.172E-09	2.754E-09	1.994E-09	1.530E-09	1.221E-09	1.003E-09	8.430E-10	7.207E-10
W	2.094E-08	1.141E-08	8.003E-09	4.943E-09	3.455E-09	2.510E-09	1.927E-09	1.539E-09	1.265E-09	1.063E-09	9.089E-10
WNW	3.198E-08	1.695E-08	1.104E-08	6.275E-09	4.144E-09	2.997E-09	2.298E-09	1.832E-09	1.501E-09	1.258E-09	1.073E-09
NW	4.970E-08	2.674E-08	1.776E-08	1.037E-08	6.881E-09	5.007E-09	3.903E-09	3.139E-09	2.592E-09	2.188E-09	1.880E-09
NNW	5.946E-08	3.256E-08	2.092E-08	1.181E-08	7.883E-09	5.761E-09	4.488E-09	3.631E-09	3.038E-09	2.578E-09	2.218E-09
N	2.429E-08	1.462E-08	1.136E-08	8.255E-09	6.475E-09	5.141E-09	3.983E-09	3.199E-09	2.639E-09	2.27E-09	1.911E-09
NNE	1.533E-08	1.568E-08	9.983E-09	5.577E-09	3.702E-09	2.696E-09	2.082E-09	1.673E-09	1.384E-09	1.170E-09	1.007E-09
NE	1.548E-08	2.413E-08	1.567E-08	8.983E-09	6.059E-09	4.464E-09	3.519E-09	2.868E-09	2.402E-09	2.038E-09	1.759E-09
ENE	1.291E-08	1.870E-08	1.241E-08	7.293E-09	4.989E-09	3.709E-09	3.086E-09	2.602E-09	2.162E-09	1.833E-09	1.581E-09
E	1.231E-08	1.838E-08	1.212E-08	7.061E-09	4.802E-09	3.554E-09	2.775E-09	2.249E-09	1.935E-09	1.683E-09	1.450E-09
ESE	1.208E-08	1.696E-08	1.141E-08	6.823E-09	4.719E-09	3.536E-09	2.789E-09	2.278E-09	1.909E-09	1.632E-09	1.417E-09
SE	2.530E-08	1.498E-08	1.119E-08	7.853E-09	5.758E-09	4.579E-09	3.827E-09	3.301E-09	2.752E-09	2.342E-09	2.026E-09
SSE	4.894E-08	5.340E-08	3.417E-08	1.919E-08	1.276E-08	9.292E-09	7.168E-09	5.750E-09	4.747E-09	4.006E-09	3.438E-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	3.283E-08	4.020E-08	3.017E-08	2.328E-08	2.334E-08	1.293E-08	4.819E-09	2.324E-09	1.427E-09	9.907E-10
SSW	3.189E-08	5.286E-08	4.582E-08	4.258E-08	3.447E-08	2.052E-08	8.113E-09	3.922E-09	2.391E-09	1.645E-09
SW	1.673E-08	4.026E-08	2.693E-08	1.652E-08	1.169E-08	7.505E-09	3.249E-09	1.708E-09	1.094E-09	7.620E-10
WSW	3.187E-08	8.145E-08	5.019E-08	2.875E-08	1.927E-08	1.026E-08	4.184E-09	2.011E-09	1.226E-09	8.452E-10
W	1.037E-07	1.216E-07	6.535E-08	3.752E-08	2.490E-08	1.202E-08	4.961E-09	2.529E-09	1.545E-09	1.066E-09
WNW	1.066E-07	1.871E-07	1.041E-07	5.954E-08	3.848E-08	1.766E-08	6.387E-09	3.023E-09	1.839E-09	1.262E-09
NW	1.454E-07	3.076E-07	1.692E-07	9.297E-08	5.970E-08	2.785E-08	1.046E-08	5.065E-09	3.149E-09	2.194E-09
NNW	6.555E-08	1.550E-07	1.451E-07	1.065E-07	7.120E-08	3.337E-08	1.209E-08	5.818E-09	3.650E-09	2.581E-09
N	5.149E-08	6.949E-08	5.443E-08	3.809E-08	2.784E-08	1.532E-08	8.154E-09	5.034E-09	3.210E-09	2.232E-09
NNE	2.763E-08	3.623E-08	2.785E-08	1.971E-08	1.553E-08	1.307E-08	5.723E-09	2.719E-09	1.679E-09	1.173E-09
NE	1.405E-08	2.795E-08	2.455E-08	1.837E-08	1.517E-08	1.845E-08	9.170E-09	4.511E-09	2.877E-09	2.043E-09
ENE	1.417E-08	2.760E-08	2.319E-08	1.672E-08	1.319E-08	1.462E-08	7.406E-09	3.801E-09	2.573E-09	1.837E-09
E	1.058E-08	2.215E-08	1.973E-08	1.480E-08	1.218E-08	1.425E-08	7.181E-09	3.575E-09	2.280E-09	1.671E-09
ESE	1.253E-08	2.383E-08	2.033E-08	1.503E-08	1.217E-08	1.341E-08	6.908E-09	3.553E-09	2.283E-09	1.634E-09
SE	4.418E-08	7.405E-08	5.771E-08	4.003E-08	2.911E-08	1.559E-08	7.664E-09	4.593E-09	3.242E-09	2.347E-09
SSE	9.626E-08	1.351E-07	9.977E-08	6.774E-08	5.120E-08	4.386E-08	1.966E-08	9.366E-09	5.773E-09	4.015E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2016
 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	2.338E-10	1.385E-08	3.298E-08	4.142E-08	4.270E-08	3.636E-08	2.979E-08	2.445E-08	2.033E-08	2.283E-08	2.389E-08
SSW	6.347E-11	5.209E-09	2.787E-08	4.806E-08	5.761E-08	5.043E-08	4.158E-08	4.354E-08	4.342E-08	3.742E-08	3.279E-08
SW	2.267E-16	2.761E-10	1.091E-08	2.937E-08	5.213E-08	3.603E-08	2.633E-08	2.018E-08	1.606E-08	1.316E-08	1.105E-08
WSW	2.624E-16	3.200E-10	1.824E-08	5.794E-08	1.101E-07	7.011E-08	4.862E-08	3.591E-08	2.779E-08	2.227E-08	1.836E-08
W	1.582E-13	1.956E-08	1.051E-07	1.431E-07	1.429E-07	9.078E-08	6.306E-08	4.669E-08	3.622E-08	2.911E-08	2.404E-08
WNW	9.768E-15	4.593E-09	8.202E-08	1.752E-07	2.419E-07	1.470E-07	9.886E-08	7.417E-08	5.794E-08	4.543E-08	3.673E-08
NW	6.626E-11	7.185E-09	9.394E-08	2.521E-07	4.181E-07	2.436E-07	1.603E-07	1.166E-07	8.940E-08	7.001E-08	5.656E-08
NNW	7.777E-11	7.018E-09	4.931E-08	1.067E-07	1.704E-07	1.645E-07	1.462E-07	1.255E-07	1.085E-07	8.474E-08	6.835E-08
N	1.177E-09	1.899E-08	4.971E-08	6.814E-08	7.371E-08	6.492E-08	5.419E-08	4.432E-08	3.677E-08	3.101E-08	2.655E-08
NNE	1.864E-10	1.025E-08	2.708E-08	3.618E-08	3.865E-08	3.333E-08	2.754E-08	2.278E-08	1.907E-08	1.620E-08	1.396E-08
NE	8.142E-16	6.981E-10	1.141E-08	2.274E-08	3.026E-08	2.831E-08	2.451E-08	2.093E-08	1.794E-08	1.553E-08	1.359E-08
ENE	4.610E-16	6.251E-10	1.135E-08	2.309E-08	3.017E-08	2.737E-08	2.307E-08	1.926E-08	1.621E-08	1.382E-08	1.194E-08
E	4.102E-16	4.567E-10	8.287E-09	1.738E-08	2.405E-08	2.271E-08	1.970E-08	1.682E-08	1.443E-08	1.250E-08	1.096E-08
ESE	8.104E-16	6.594E-10	1.036E-08	2.011E-08	2.587E-08	2.370E-08	2.025E-08	1.715E-08	1.463E-08	1.263E-08	1.104E-08
SE	2.923E-11	4.011E-09	3.827E-08	6.866E-08	8.095E-08	6.989E-08	5.710E-08	4.662E-08	3.858E-08	3.243E-08	2.768E-08
SSE	3.342E-10	2.339E-08	9.062E-08	1.358E-07	1.463E-07	1.224E-07	9.828E-08	7.930E-08	6.503E-08	5.427E-08	4.606E-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	2.082E-08	1.238E-08	7.666E-09	4.043E-09	2.578E-09	1.807E-09	1.340E-09	1.039E-09	8.376E-10	6.919E-10	5.810E-10
SSW	2.997E-08	2.085E-08	1.296E-08	6.869E-09	4.434E-09	3.139E-09	2.342E-09	1.825E-09	1.469E-09	1.212E-09	1.019E-09
SW	1.026E-08	8.005E-09	5.120E-09	2.800E-09	1.863E-09	1.340E-09	1.037E-09	8.141E-10	6.595E-10	5.471E-10	4.624E-10
WSW	1.608E-08	9.812E-09	6.558E-09	3.715E-09	2.373E-09	1.673E-09	1.255E-09	9.829E-10	7.942E-10	6.575E-10	5.547E-10
W	2.028E-08	1.101E-08	7.662E-09	4.506E-09	2.994E-09	2.118E-09	1.590E-09	1.245E-09	1.007E-09	8.338E-10	7.037E-10
WNW	3.065E-08	1.580E-08	1.001E-08	5.372E-09	3.327E-09	2.299E-09	1.709E-09	1.330E-09	1.067E-09	8.770E-10	7.350E-10
NW	4.729E-08	2.474E-08	1.597E-08	8.834E-09	5.605E-09	3.931E-09	2.976E-09	2.334E-09	1.885E-09	1.559E-09	1.315E-09
NNW	5.749E-08	3.062E-08	1.907E-08	1.012E-08	6.284E-09	4.328E-09	3.208E-09	2.498E-09	2.035E-09	1.686E-09	1.420E-09
N	2.309E-08	1.370E-08	1.060E-08	7.713E-09	5.984E-09	4.604E-09	3.490E-09	2.750E-09	2.230E-09	1.853E-09	1.569E-09
NNE	1.469E-08	1.498E-08	9.243E-09	4.909E-09	3.123E-09	2.196E-09	1.645E-09	1.287E-09	1.040E-09	8.610E-10	7.266E-10
NE	1.499E-08	2.357E-08	1.486E-08	8.086E-09	5.190E-09	3.673E-09	2.804E-09	2.234E-09	1.834E-09	1.529E-09	1.298E-09
ENE	1.235E-08	1.820E-08	1.176E-08	6.526E-09	4.175E-09	2.938E-09	2.334E-09	1.902E-09	1.540E-09	1.277E-09	1.079E-09
E	1.189E-08	1.798E-08	1.153E-08	6.334E-09	4.018E-09	2.810E-09	2.090E-09	1.623E-09	1.345E-09	1.133E-09	9.526E-10
ESE	1.166E-08	1.659E-08	1.085E-08	6.112E-09	3.939E-09	2.785E-09	2.089E-09	1.634E-09	1.317E-09	1.086E-09	9.126E-10
SE	2.395E-08	1.392E-08	1.032E-08	7.230E-09	5.308E-09	4.247E-09	3.581E-09	3.110E-09	2.559E-09	2.154E-09	1.845E-09
SSE	4.627E-08	5.091E-08	3.160E-08	1.682E-08	1.060E-08	7.396E-09	5.497E-09	4.269E-09	3.424E-09	2.815E-09	2.359E-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	3.248E-08	3.960E-08	2.941E-08	2.246E-08	2.244E-08	1.216E-08	4.197E-09	1.826E-09	1.048E-09	6.940E-10	
SSW	3.181E-08	5.230E-08	4.472E-08	4.117E-08	3.312E-08	1.937E-08	7.141E-09	3.166E-09	1.837E-09	1.217E-09	
SW	1.675E-08	3.992E-08	2.645E-08	1.613E-08	1.138E-08	7.224E-09	2.899E-09	1.358E-09	8.188E-10	5.491E-10	
WSW	3.190E-08	8.074E-08	4.927E-08	2.801E-08	1.868E-08	9.759E-09	3.751E-09	1.693E-09	9.889E-10	6.599E-10	
W	1.030E-07	1.198E-07	6.391E-08	3.650E-08	2.415E-08	1.158E-08	4.535E-09	2.140E-09	1.253E-09	8.369E-10	
WNW	1.062E-07	1.849E-07	1.018E-07	5.781E-08	3.706E-08	1.653E-08	5.494E-09	2.337E-09	1.338E-09	8.807E-10	
NW	1.449E-07	3.036E-07	1.650E-07	8.979E-08	5.711E-08	2.585E-08	8.984E-09	3.995E-09	2.346E-09	1.565E-09	
NNW	6.541E-08	1.536E-07	1.428E-07	1.043E-07	6.919E-08	3.146E-08	1.040E-08	4.402E-09	2.524E-09	1.691E-09	
N	5.108E-08	6.856E-08	5.310E-08	3.674E-08	2.659E-08	1.441E-08	7.586E-09	4.526E-09	2.763E-09	1.859E-09	
NNE	2.738E-08	3.573E-08	2.718E-08	1.904E-08	1.489E-08	1.237E-08	5.078E-09	2.223E-09	1.295E-09	8.643E-10	
NE	1.406E-08	2.772E-08	2.409E-08	1.787E-08	1.468E-08	1.779E-08	8.304E-09	3.730E-09	2.245E-09	1.534E-09	
ENE	1.418E-08	2.735E-08	2.270E-08	1.617E-08	1.265E-08	1.404E-08	6.643E-09	3.026E-09	1.887E-09	1.281E-09	
E	1.059E-08	2.197E-08	1.935E-08	1.438E-08	1.176E-08	1.376E-08	6.459E-09	2.844E-09	1.650E-09	1.129E-09	
ESE	1.254E-08	2.362E-08	1.993E-08	1.459E-08	1.174E-08	1.294E-08	6.200E-09	2.814E-09	1.643E-09	1.090E-09	
SE	4.416E-08	7.330E-08	5.632E-08	3.853E-08	2.770E-08	1.455E-08	7.062E-09	4.264E-09	3.035E-09	2.160E-09	
SSE	9.577E-08	1.334E-07	9.713E-08	6.501E-08	4.857E-08	4.129E-08	1.734E-08	7.492E-09	4.298E-09	2.827E-09	

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ERP ELEVATED STACK RELEASES - JAN-MAR 2016
 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	2.153E-09	2.059E-09	2.205E-09	1.785E-09	9.787E-10	6.288E-10	4.352E-10	3.165E-10	2.385E-10	2.011E-10	1.761E-10
SSW	6.223E-10	1.019E-09	1.626E-09	1.559E-09	9.397E-10	6.232E-10	4.380E-10	3.209E-10	3.048E-10	2.305E-10	1.804E-10
SW	2.251E-11	1.351E-10	2.876E-10	2.979E-10	3.701E-10	2.013E-10	1.245E-10	8.444E-11	6.096E-11	4.607E-11	3.604E-11
WSW	3.046E-11	1.827E-10	3.891E-10	7.178E-10	4.994E-10	2.717E-10	1.680E-10	1.139E-10	8.226E-11	6.216E-11	4.863E-11
W	3.708E-11	1.984E-09	1.926E-09	1.276E-09	6.698E-10	3.525E-10	2.138E-10	1.428E-10	1.020E-10	7.639E-11	5.946E-11
WNW	5.562E-11	3.337E-10	2.118E-09	1.840E-09	1.137E-09	5.826E-10	3.506E-10	2.369E-10	1.819E-10	1.421E-10	1.175E-10
NW	6.289E-10	1.059E-09	1.710E-09	4.102E-09	2.701E-09	1.344E-09	7.945E-10	5.275E-10	3.821E-10	2.963E-10	2.430E-10
NNW	8.858E-10	1.243E-09	1.829E-09	1.708E-09	1.957E-09	1.064E-09	6.605E-10	5.495E-10	4.019E-10	3.155E-10	2.625E-10
N	3.250E-09	3.216E-09	3.579E-09	2.957E-09	1.643E-09	1.061E-09	7.358E-10	5.356E-10	4.038E-10	3.129E-10	2.477E-10
NNE	2.144E-09	2.003E-09	2.087E-09	1.662E-09	9.021E-10	5.774E-10	3.989E-10	2.898E-10	2.183E-10	1.690E-10	1.338E-10
NE	6.357E-11	3.814E-10	8.120E-10	8.411E-10	5.254E-10	3.523E-10	2.488E-10	1.828E-10	1.384E-10	1.075E-10	8.510E-11
ENE	5.165E-11	3.099E-10	6.598E-10	6.834E-10	4.269E-10	2.862E-10	2.022E-10	1.485E-10	1.125E-10	8.731E-11	6.914E-11
E	4.105E-11	2.463E-10	5.244E-10	5.432E-10	3.393E-10	2.275E-10	1.607E-10	1.181E-10	8.941E-11	6.940E-11	5.496E-11
ESE	5.960E-11	3.575E-10	7.613E-10	7.886E-10	4.925E-10	3.303E-10	2.333E-10	1.714E-10	1.298E-10	1.007E-10	7.978E-11
SE	4.740E-10	1.487E-09	2.894E-09	2.935E-09	1.816E-09	1.214E-09	8.566E-10	6.289E-10	4.761E-10	3.695E-10	2.926E-10
SSE	3.489E-09	4.646E-09	6.624E-09	6.112E-09	3.613E-09	2.382E-09	1.669E-09	1.221E-09	9.230E-10	7.158E-10	5.669E-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	1.416E-10	8.950E-11	5.932E-11	3.350E-11	2.111E-11	1.596E-11	1.143E-11	8.574E-12	6.752E-12	5.394E-12	4.404E-12
SSW	1.456E-10	8.877E-11	5.805E-11	3.229E-11	2.261E-11	1.593E-11	1.142E-11	8.576E-12	6.717E-12	5.365E-12	4.379E-12
SW	2.897E-11	2.433E-11	1.726E-11	1.031E-11	6.540E-12	4.611E-12	3.144E-12	2.361E-12	1.835E-12	1.466E-12	1.197E-12
WSW	4.024E-11	3.514E-11	2.530E-11	1.543E-11	9.335E-12	6.260E-12	4.565E-12	3.428E-12	2.665E-12	2.129E-12	1.738E-12
W	4.782E-11	2.165E-11	3.355E-11	2.157E-11	1.280E-11	8.634E-12	6.187E-12	4.646E-12	3.612E-12	2.885E-12	2.355E-12
WNW	1.036E-10	6.439E-11	4.655E-11	2.824E-11	1.762E-11	1.144E-11	8.227E-12	6.179E-12	4.877E-12	3.896E-12	3.180E-12
NW	2.096E-10	1.261E-10	8.987E-11	5.438E-11	3.307E-11	2.217E-11	1.642E-11	1.233E-11	9.613E-12	7.679E-12	6.268E-12
NNW	2.294E-10	1.440E-10	1.047E-10	6.378E-11	4.070E-11	2.699E-11	1.884E-11	1.375E-11	1.080E-11	8.625E-12	7.040E-12
N	1.998E-10	9.485E-11	5.799E-11	3.068E-11	4.791E-11	3.333E-11	2.388E-11	1.793E-11	1.395E-11	1.114E-11	9.093E-12
NNE	1.079E-10	1.414E-10	8.613E-11	4.385E-11	2.660E-11	1.783E-11	1.276E-11	9.577E-12	7.442E-12	5.942E-12	4.849E-12
NE	6.853E-11	1.290E-10	7.979E-11	4.137E-11	2.523E-11	1.689E-11	1.214E-11	9.025E-12	7.018E-12	5.626E-12	4.592E-12
ENE	5.568E-11	6.879E-11	5.056E-11	3.104E-11	1.981E-11	1.311E-11	9.197E-12	6.202E-12	4.826E-12	3.860E-12	3.154E-12
E	4.426E-11	6.985E-11	5.320E-11	3.354E-11	2.154E-11	1.423E-11	9.951E-12	7.258E-12	5.507E-12	3.986E-12	3.250E-12
ESE	6.425E-11	9.570E-11	7.235E-11	4.536E-11	2.910E-11	1.923E-11	1.345E-11	9.819E-12	7.454E-12	5.834E-12	4.678E-12
SE	2.357E-10	1.116E-10	6.804E-11	3.576E-11	2.174E-11	1.488E-11	1.104E-11	1.855E-11	1.427E-11	1.132E-11	9.197E-12
SSE	4.568E-10	4.220E-10	2.596E-10	1.337E-10	8.134E-11	5.446E-11	3.893E-11	2.915E-11	2.261E-11	1.803E-11	1.469E-11

***** 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	1.986E-09	1.002E-09	4.393E-10	2.465E-10	1.707E-10	8.768E-11	3.373E-11	1.552E-11	8.695E-12	5.430E-12
SSW	1.461E-09	9.367E-10	4.406E-10	2.811E-10	1.824E-10	8.775E-11	3.371E-11	1.591E-11	8.680E-12	5.400E-12
SW	2.583E-10	2.790E-10	1.290E-10	6.200E-11	3.639E-11	2.222E-11	1.018E-11	4.539E-12	2.384E-12	1.476E-12
WSW	4.893E-10	4.467E-10	1.740E-10	8.366E-11	4.953E-11	3.190E-11	1.491E-11	6.402E-12	3.462E-12	2.143E-12
W	1.650E-09	6.634E-10	2.224E-10	1.039E-10	6.016E-11	3.275E-11	2.033E-11	8.766E-12	4.692E-12	2.904E-12
WNW	1.598E-09	1.047E-09	3.670E-10	1.825E-10	1.197E-10	6.518E-11	2.759E-11	1.181E-11	6.268E-12	3.921E-12
NW	2.629E-09	2.409E-09	8.343E-10	3.909E-10	2.464E-10	1.285E-10	5.279E-11	2.278E-11	1.247E-11	7.730E-12
NNW	1.645E-09	1.505E-09	7.237E-10	4.112E-10	2.660E-10	1.455E-10	6.261E-11	2.739E-11	1.408E-11	8.682E-12
N	3.222E-09	1.676E-09	7.424E-10	4.068E-10	2.493E-10	1.018E-10	4.441E-11	3.344E-11	1.811E-11	1.121E-11
NNE	1.880E-09	9.267E-10	4.029E-10	2.200E-10	1.347E-10	1.094E-10	4.558E-11	1.814E-11	9.674E-12	5.982E-12
NE	7.293E-10	5.186E-10	2.500E-10	1.393E-10	8.559E-11	9.368E-11	4.273E-11	1.721E-11	9.152E-12	5.655E-12
ENE	5.925E-10	4.214E-10	2.031E-10	1.132E-10	6.954E-11	5.778E-11	3.039E-11	1.333E-11	6.534E-12	3.885E-12
E	4.710E-10	3.349E-10	1.615E-10	8.997E-11	5.527E-11	5.677E-11	3.258E-11	1.447E-11	7.360E-12	4.164E-12
ESE	6.837E-10	4.862E-10	2.344E-10	1.306E-10	8.024E-11	7.833E-11	4.413E-11	1.955E-11	9.957E-12	5.886E-12
SE	2.599E-09	1.797E-09	8.609E-10	4.792E-10	2.943E-10	1.198E-10	3.670E-11	1.517E-11	1.478E-11	1.141E-11
SSE	5.957E-09	3.621E-09	1.680E-09	9.292E-10	5.702E-10	3.576E-10	1.384E-10	5.542E-11	2.945E-11	1.815E-11

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ERP ELEVATED STACK RELEASES - JAN-MAR 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	3.6E-08	3.6E-08	3.5E-08	2.1E-09
A	Site Boundary	SSW	.82	3.5E-08	3.5E-08	3.5E-08	1.7E-09
A	Site Boundary	SW	.97	2.8E-08	2.8E-08	2.8E-08	3.1E-10
A	Site Boundary	WSW	.93	4.6E-08	4.6E-08	4.6E-08	7.1E-10
A	Site Boundary	W	.91	1.4E-07	1.4E-07	1.3E-07	1.4E-09
A	Site Boundary	WNW	.94	1.6E-07	1.6E-07	1.5E-07	2.0E-09
A	Site Boundary	NW	.81	1.3E-07	1.3E-07	1.3E-07	1.8E-09
A	Site Boundary	NNW	.69	3.3E-08	3.3E-08	3.3E-08	1.7E-09
A	Site Boundary	N	.67	3.9E-08	3.9E-08	3.9E-08	3.4E-09
A	Site Boundary	NNE	.60	1.6E-08	1.6E-08	1.6E-08	2.0E-09
A	Site Boundary	NE	.62	4.3E-09	4.3E-09	4.3E-09	5.9E-10
A	Site Boundary	ENE	.59	2.7E-09	2.7E-09	2.7E-09	4.3E-10
A	Site Boundary	E	.53	7.4E-10	7.4E-10	7.4E-10	2.7E-10
A	Site Boundary	ESE	.54	1.3E-09	1.3E-09	1.3E-09	4.2E-10
A	Site Boundary	SE	.65	2.0E-08	2.0E-08	2.0E-08	2.3E-09
A	Site Boundary	SSE	.81	1.1E-07	1.1E-07	1.1E-07	6.7E-09
A	Nearest Res	SSW	3.00	4.5E-08	4.5E-08	4.4E-08	3.2E-10
A	Nearest Res	SW	1.70	4.5E-08	4.5E-08	4.5E-08	2.8E-10
A	Nearest Res	WSW	1.90	7.7E-08	7.7E-08	7.6E-08	3.0E-10
A	Nearest Res	W	1.00	1.4E-07	1.4E-07	1.4E-07	1.3E-09
A	Nearest Res	WNW	1.70	2.0E-07	2.0E-07	2.0E-07	8.5E-10
A	Nearest Res	NW	.90	1.9E-07	1.9E-07	1.9E-07	4.1E-09
A	Nearest Res	NNW	1.90	1.7E-07	1.7E-07	1.7E-07	1.2E-09
A	Nearest Res	N	2.90	4.8E-08	4.7E-08	4.6E-08	5.7E-10
A	Nearest Res	NNE	1.70	3.7E-08	3.7E-08	3.7E-08	7.4E-10
A	Nearest Res	ENE	1.70	3.0E-08	3.0E-08	3.0E-08	3.6E-10
A	Nearest Res	E	2.20	2.2E-08	2.2E-08	2.2E-08	2.0E-10
A	Nearest Res	ESE	2.80	1.9E-08	1.9E-08	1.8E-08	1.9E-10
A	Nearest Res	SE	3.00	4.8E-08	4.8E-08	4.7E-08	6.3E-10
A	Nearest Res	SSE	3.00	8.2E-08	8.2E-08	7.9E-08	1.2E-09
A	Nearest Cow	NNW	3.50	1.1E-07	1.1E-07	1.1E-07	4.0E-10
A	Nearest Garde	SSW	3.00	4.5E-08	4.5E-08	4.4E-08	3.2E-10
A	Nearest Garde	SW	2.20	3.2E-08	3.2E-08	3.2E-08	1.6E-10
A	Nearest Garde	NNW	3.00	1.3E-07	1.3E-07	1.3E-07	5.5E-10
A	Nearest Garde	ENE	1.70	3.0E-08	3.0E-08	3.0E-08	3.6E-10
A	Nearest Garde	ESE	2.30	2.2E-08	2.2E-08	2.2E-08	2.7E-10
A	Nearest Garde	SSE	3.00	8.2E-08	8.2E-08	7.9E-08	1.2E-09
A	MAXIMUM CHI/Q	S	1.50	4.3E-08	4.3E-08	4.3E-08	9.8E-10
A	MAXIMUM CHI/Q	SSW	1.50	5.8E-08	5.8E-08	5.8E-08	9.4E-10
A	MAXIMUM CHI/Q	SW	1.50	5.3E-08	5.3E-08	5.2E-08	3.7E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.1E-07	1.1E-07	1.1E-07	5.0E-10
A	MAXIMUM CHI/Q	W	1.50	1.5E-07	1.4E-07	1.4E-07	6.7E-10
A	MAXIMUM CHI/Q	WNW	1.50	2.5E-07	2.4E-07	2.4E-07	1.1E-09
A	MAXIMUM CHI/Q	NW	1.50	4.2E-07	4.2E-07	4.2E-07	2.7E-09
A	MAXIMUM CHI/Q	NNW	1.50	1.7E-07	1.7E-07	1.7E-07	2.0E-09
A	MAXIMUM CHI/Q	N	1.50	7.5E-08	7.5E-08	7.4E-08	1.6E-09
A	MAXIMUM CHI/Q	NNE	1.50	3.9E-08	3.9E-08	3.9E-08	9.0E-10
A	MAXIMUM CHI/Q	NE	1.50	3.1E-08	3.0E-08	3.0E-08	5.3E-10
A	MAXIMUM CHI/Q	ENE	1.50	3.0E-08	3.0E-08	3.0E-08	4.3E-10
A	MAXIMUM CHI/Q	E	1.50	2.4E-08	2.4E-08	2.4E-08	3.4E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.6E-08	2.6E-08	2.6E-08	4.9E-10
A	MAXIMUM CHI/Q	SE	1.50	8.2E-08	8.2E-08	8.1E-08	1.8E-09
A	MAXIMUM CHI/Q	SSE	1.50	1.5E-07	1.5E-07	1.5E-07	3.6E-09

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Atmospheric Diffusion Estimates

Elevated Releases

April-June 2016

ERP ELEVATED STACK RELEASES - APR-JUN 2016
 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	3.370E-09	3.793E-08	6.775E-08	7.261E-08	6.753E-08	5.602E-08	4.558E-08	3.741E-08	3.119E-08	3.525E-08	3.780E-08
SSW	1.532E-09	1.913E-08	4.116E-08	5.038E-08	5.218E-08	4.498E-08	3.729E-08	3.972E-08	3.963E-08	3.403E-08	2.961E-08
SW	6.418E-16	7.967E-10	3.145E-08	8.126E-08	1.221E-07	8.030E-08	5.678E-08	4.251E-08	3.324E-08	2.687E-08	2.231E-08
WSW	6.066E-16	6.084E-10	3.206E-08	9.484E-08	1.549E-07	9.675E-08	6.631E-08	4.861E-08	3.744E-08	2.993E-08	2.463E-08
W	3.170E-13	2.966E-08	1.452E-07	1.833E-07	1.626E-07	1.005E-07	6.873E-08	5.044E-08	3.894E-08	3.120E-08	2.574E-08
WNW	5.883E-09	2.499E-08	1.335E-07	2.526E-07	3.507E-07	2.193E-07	1.512E-07	1.174E-07	9.486E-08	7.569E-08	6.220E-08
NW	2.536E-08	9.438E-08	1.853E-07	3.359E-07	4.824E-07	2.809E-07	1.849E-07	1.344E-07	1.029E-07	8.073E-08	6.542E-08
NNW	1.159E-08	6.101E-08	1.137E-07	1.538E-07	1.962E-07	1.822E-07	1.619E-07	1.400E-07	1.221E-07	9.590E-08	7.782E-08
N	5.156E-09	5.563E-08	9.768E-08	1.041E-07	9.809E-08	8.454E-08	7.067E-08	5.817E-08	4.862E-08	4.129E-08	3.559E-08
NNE	2.923E-11	2.992E-09	2.361E-08	4.301E-08	5.463E-08	5.014E-08	4.294E-08	3.640E-08	3.105E-08	2.677E-08	2.337E-08
NE	7.324E-16	6.129E-10	1.023E-08	2.065E-08	2.801E-08	2.647E-08	2.309E-08	1.983E-08	1.710E-08	1.487E-08	1.308E-08
ENE	1.173E-10	8.210E-09	2.127E-08	2.774E-08	2.948E-08	2.547E-08	2.111E-08	1.751E-08	1.470E-08	1.253E-08	1.083E-08
E	8.442E-16	8.967E-10	1.508E-08	2.957E-08	3.756E-08	3.381E-08	2.849E-08	2.385E-08	2.016E-08	1.726E-08	1.498E-08
ESE	3.425E-11	3.006E-09	1.441E-08	2.384E-08	2.844E-08	2.524E-08	2.114E-08	1.764E-08	1.488E-08	1.272E-08	1.103E-08
SE	1.844E-10	1.150E-08	3.167E-08	4.276E-08	4.882E-08	4.141E-08	3.498E-08	2.946E-08	2.504E-08	2.154E-08	1.875E-08
SSE	1.182E-08	4.473E-08	7.504E-08	8.045E-08	7.378E-08	6.015E-08	4.831E-08	3.929E-08	3.256E-08	2.748E-08	2.358E-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	3.347E-08	2.210E-08	1.433E-08	8.205E-09	5.773E-09	4.379E-09	3.412E-09	2.766E-09	2.329E-09	1.998E-09	1.733E-09
SSW	2.668E-08	1.757E-08	1.122E-08	6.293E-09	4.304E-09	3.167E-09	2.448E-09	1.971E-09	1.635E-09	1.387E-09	1.197E-09
SW	2.013E-08	1.462E-08	9.574E-09	5.546E-09	3.964E-09	3.041E-09	2.452E-09	1.988E-09	1.660E-09	1.416E-09	1.229E-09
WSW	2.152E-08	1.393E-08	1.003E-08	6.354E-09	4.277E-09	3.154E-09	2.464E-09	1.999E-09	1.669E-09	1.425E-09	1.237E-09
W	2.172E-08	1.187E-08	8.617E-09	5.832E-09	4.475E-09	3.333E-09	2.606E-09	2.119E-09	1.773E-09	1.516E-09	1.319E-09
WNW	5.298E-08	3.001E-08	2.053E-08	1.256E-08	8.636E-09	6.462E-09	5.118E-09	4.188E-09	3.507E-09	2.995E-09	2.602E-09
NW	5.484E-08	2.928E-08	1.936E-08	1.127E-08	7.510E-09	5.495E-09	4.301E-09	3.481E-09	2.893E-09	2.458E-09	2.126E-09
NNW	6.593E-08	3.651E-08	2.360E-08	1.348E-08	9.103E-09	6.725E-09	5.296E-09	4.330E-09	3.665E-09	3.143E-09	2.729E-09
N	3.115E-08	1.890E-08	1.477E-08	1.083E-08	8.632E-09	6.969E-09	5.457E-09	4.429E-09	3.691E-09	3.145E-09	2.726E-09
NNE	2.522E-08	2.795E-08	1.792E-08	1.013E-08	6.780E-09	4.977E-09	3.871E-09	3.133E-09	2.610E-09	2.222E-09	1.926E-09
NE	1.445E-08	2.081E-08	1.353E-08	7.792E-09	5.287E-09	3.921E-09	3.111E-09	2.556E-09	2.162E-09	1.850E-09	1.609E-09
ENE	1.109E-08	1.148E-08	7.400E-09	4.203E-09	2.822E-09	2.075E-09	1.648E-09	1.349E-09	1.123E-09	9.550E-10	8.267E-10
E	1.552E-08	1.745E-08	1.132E-08	6.473E-09	4.363E-09	3.218E-09	2.511E-09	2.038E-09	1.732E-09	1.495E-09	1.296E-09
ESE	1.119E-08	1.207E-08	7.910E-09	4.581E-09	3.112E-09	2.307E-09	1.808E-09	1.471E-09	1.232E-09	1.053E-09	9.156E-10
SE	1.651E-08	1.019E-08	7.848E-09	5.505E-09	3.969E-09	3.079E-09	2.505E-09	2.104E-09	1.759E-09	1.502E-09	1.304E-09
SSE	2.441E-08	2.551E-08	1.628E-08	9.145E-09	6.110E-09	4.479E-09	3.480E-09	2.814E-09	2.342E-09	1.993E-09	1.726E-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	6.328E-08	6.354E-08	4.510E-08	3.451E-08	3.544E-08	2.117E-08	8.485E-09	4.364E-09	2.784E-09	1.998E-09
SSW	4.036E-08	4.858E-08	4.031E-08	3.752E-08	2.983E-08	1.677E-08	6.504E-09	3.182E-09	1.979E-09	1.390E-09
SW	4.678E-08	9.443E-08	5.734E-08	3.346E-08	2.285E-08	1.360E-08	5.738E-09	3.051E-09	1.996E-09	1.419E-09
WSW	5.297E-08	1.157E-07	6.735E-08	3.777E-08	2.505E-08	1.388E-08	6.247E-09	3.177E-09	2.006E-09	1.428E-09
W	1.364E-07	1.396E-07	6.988E-08	3.928E-08	2.587E-08	1.261E-08	5.848E-09	3.347E-09	2.127E-09	1.519E-09
WNW	1.623E-07	2.705E-07	1.559E-07	9.401E-08	6.278E-08	3.090E-08	1.258E-08	6.504E-09	4.194E-09	3.001E-09
NW	2.321E-07	3.603E-07	1.903E-07	1.034E-07	6.604E-08	3.055E-08	1.139E-08	5.555E-09	3.491E-09	2.464E-09
NNW	1.198E-07	1.806E-07	1.586E-07	1.172E-07	7.878E-08	3.731E-08	1.378E-08	6.788E-09	4.353E-09	3.144E-09
N	9.120E-08	9.341E-08	6.937E-08	4.856E-08	3.564E-08	1.979E-08	1.073E-08	6.808E-09	4.442E-09	3.152E-09
NNE	2.765E-08	5.006E-08	4.224E-08	3.095E-08	2.506E-08	2.289E-08	1.037E-08	5.015E-09	3.144E-09	2.227E-09
NE	1.272E-08	2.569E-08	2.269E-08	1.703E-08	1.412E-08	1.161E-08	7.954E-09	3.961E-09	2.564E-09	1.853E-09
ENE	2.124E-08	2.731E-08	2.083E-08	1.467E-08	1.143E-08	9.580E-09	4.300E-09	2.104E-09	1.348E-09	9.572E-10
E	1.837E-08	3.412E-08	2.805E-08	2.011E-08	1.586E-08	1.429E-08	6.611E-09	3.241E-09	2.057E-09	1.491E-09
ESE	1.607E-08	2.600E-08	2.083E-08	1.484E-08	1.159E-08	1.002E-08	4.668E-09	2.322E-09	1.476E-09	1.055E-09
SE	3.212E-08	4.352E-08	3.449E-08	2.497E-08	1.875E-08	1.055E-08	5.343E-09	3.087E-09	2.087E-09	1.505E-09
SSE	7.071E-08	6.920E-08	4.786E-08	3.255E-08	2.504E-08	2.116E-08	9.382E-09	4.514E-09	2.824E-09	1.998E-09

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ERP ELEVATED STACK RELEASES - APR-JUN 2016
 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	3.369E-09	3.791E-08	6.768E-08	7.251E-08	6.738E-08	5.585E-08	4.541E-08	3.724E-08	3.102E-08	3.504E-08	3.754E-08
SSW	1.532E-09	1.911E-08	4.110E-08	5.028E-08	5.204E-08	4.482E-08	3.712E-08	3.951E-08	3.938E-08	3.378E-08	2.937E-08
SW	6.417E-16	7.961E-10	3.142E-08	8.112E-08	1.217E-07	8.001E-08	5.652E-08	4.227E-08	3.302E-08	2.667E-08	2.211E-08
WSW	6.064E-16	6.079E-10	3.201E-08	9.460E-08	1.543E-07	9.621E-08	6.584E-08	4.820E-08	3.707E-08	2.958E-08	2.430E-08
W	3.170E-13	2.964E-08	1.450E-07	1.829E-07	1.621E-07	1.001E-07	6.838E-08	5.013E-08	3.865E-08	3.094E-08	2.550E-08
WNW	5.881E-09	2.497E-08	1.333E-07	2.522E-07	3.496E-07	2.184E-07	1.503E-07	1.166E-07	9.406E-08	7.496E-08	6.152E-08
NW	2.536E-08	9.432E-08	1.852E-07	3.354E-07	4.811E-07	2.798E-07	1.840E-07	1.336E-07	1.022E-07	8.010E-08	6.485E-08
NNW	1.159E-08	6.099E-08	1.136E-07	1.537E-07	1.958E-07	1.817E-07	1.613E-07	1.394E-07	1.214E-07	9.528E-08	7.725E-08
N	5.155E-09	5.561E-08	9.760E-08	1.040E-07	9.788E-08	8.428E-08	7.039E-08	5.790E-08	4.836E-08	4.104E-08	3.535E-08
NNE	2.922E-11	2.991E-09	2.359E-08	4.296E-08	5.453E-08	5.001E-08	4.280E-08	3.625E-08	3.091E-08	2.663E-08	2.323E-08
NE	7.322E-16	6.125E-10	1.022E-08	2.062E-08	2.793E-08	2.636E-08	2.296E-08	1.970E-08	1.696E-08	1.474E-08	1.295E-08
ENE	1.173E-10	8.205E-09	2.125E-08	2.770E-08	2.941E-08	2.539E-08	2.102E-08	1.742E-08	1.462E-08	1.244E-08	1.075E-08
E	8.440E-16	8.961E-10	1.506E-08	2.953E-08	3.747E-08	3.370E-08	2.837E-08	2.373E-08	2.004E-08	1.714E-08	1.487E-08
ESE	3.423E-11	3.004E-09	1.440E-08	2.381E-08	2.838E-08	2.516E-08	2.105E-08	1.755E-08	1.479E-08	1.263E-08	1.095E-08
SE	1.844E-10	1.150E-08	3.165E-08	4.272E-08	4.673E-08	4.129E-08	3.485E-08	2.932E-08	2.489E-08	2.139E-08	1.860E-08
SSE	1.182E-08	4.471E-08	7.499E-08	8.037E-08	7.365E-08	6.001E-08	4.816E-08	3.915E-08	3.242E-08	2.734E-08	2.345E-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	3.321E-08	2.180E-08	1.407E-08	7.974E-09	5.547E-09	4.159E-09	3.207E-09	2.572E-09	2.141E-09	1.816E-09	1.558E-09
SSW	2.643E-08	1.731E-08	1.100E-08	6.105E-09	4.130E-09	3.007E-09	2.300E-09	1.833E-09	1.504E-09	1.263E-09	1.079E-09
SW	1.994E-08	1.436E-08	9.342E-09	5.340E-09	3.760E-09	2.840E-09	2.254E-09	1.802E-09	1.482E-09	1.246E-09	1.066E-09
WSW	2.121E-08	1.359E-08	9.684E-09	6.010E-09	3.969E-09	2.871E-09	2.200E-09	1.751E-09	1.434E-09	1.201E-09	1.023E-09
W	2.149E-08	1.168E-08	8.425E-09	5.624E-09	4.251E-09	3.124E-09	2.411E-09	1.935E-09	1.598E-09	1.349E-09	1.158E-09
WNW	5.233E-08	2.944E-08	2.000E-08	1.206E-08	8.184E-09	6.040E-09	4.717E-09	3.806E-09	3.144E-09	2.649E-09	2.271E-09
NW	5.431E-08	2.885E-08	1.897E-08	1.093E-08	7.217E-09	5.229E-09	4.053E-09	3.248E-09	2.673E-09	2.250E-09	1.927E-09
NNW	6.539E-08	3.604E-08	2.319E-08	1.312E-08	8.776E-09	6.423E-09	5.010E-09	4.056E-09	3.398E-09	2.886E-09	2.482E-09
N	3.091E-08	1.869E-08	1.456E-08	1.058E-08	8.353E-09	6.670E-09	5.176E-09	4.163E-09	3.439E-09	2.904E-09	2.496E-09
NNE	2.506E-08	2.766E-08	1.768E-08	9.920E-09	6.596E-09	4.808E-09	3.714E-09	2.985E-09	2.469E-09	2.088E-09	1.797E-09
NE	1.429E-08	2.042E-08	1.319E-08	7.497E-09	5.020E-09	3.676E-09	2.877E-09	2.332E-09	1.946E-09	1.644E-09	1.412E-09
ENE	1.100E-08	1.134E-08	7.281E-09	4.102E-09	2.733E-09	1.994E-09	1.570E-09	1.276E-09	1.053E-09	8.890E-10	7.636E-10
E	1.539E-08	1.721E-08	1.111E-08	6.294E-09	4.204E-09	3.072E-09	2.375E-09	1.910E-09	1.609E-09	1.376E-09	1.183E-09
ESE	1.110E-08	1.193E-08	7.790E-09	4.478E-09	3.019E-09	2.222E-09	1.728E-09	1.396E-09	1.160E-09	9.847E-10	8.500E-10
SE	1.636E-08	1.005E-08	7.697E-09	5.343E-09	3.814E-09	2.930E-09	2.360E-09	1.964E-09	1.625E-09	1.375E-09	1.182E-09
SSE	2.426E-08	2.525E-08	1.605E-08	8.954E-09	5.941E-09	4.324E-09	3.335E-09	2.678E-09	2.213E-09	1.870E-09	1.608E-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	6.321E-08	6.340E-08	4.493E-08	3.433E-08	3.519E-08	2.090E-08	8.249E-09	4.148E-09	2.589E-09	1.817E-09
SSW	4.030E-08	4.844E-08	4.013E-08	3.729E-08	2.959E-08	1.653E-08	6.314E-09	3.024E-09	1.841E-09	1.266E-09
SW	4.670E-08	9.417E-08	5.709E-08	3.324E-08	2.266E-08	1.337E-08	5.527E-09	2.851E-09	1.809E-09	1.249E-09
WSW	5.285E-08	1.152E-07	6.688E-08	3.740E-08	2.472E-08	1.355E-08	5.919E-09	2.895E-09	1.758E-09	1.204E-09
W	1.362E-07	1.392E-07	6.954E-08	3.900E-08	2.563E-08	1.241E-08	5.636E-09	3.139E-09	1.943E-09	1.352E-09
WNW	1.621E-07	2.696E-07	1.550E-07	9.323E-08	6.210E-08	3.033E-08	1.210E-08	6.082E-09	3.814E-09	2.656E-09
NW	2.317E-07	3.593E-07	1.894E-07	1.027E-07	6.547E-08	3.012E-08	1.107E-08	5.289E-09	3.259E-09	2.256E-09
NNW	1.197E-07	1.802E-07	1.580E-07	1.166E-07	7.820E-08	3.685E-08	1.343E-08	6.485E-09	4.078E-09	2.888E-09
N	9.110E-08	9.319E-08	6.910E-08	4.830E-08	3.539E-08	1.957E-08	1.048E-08	6.521E-09	4.177E-09	2.912E-09
NNE	2.762E-08	4.995E-08	4.211E-08	3.081E-08	2.492E-08	2.265E-08	1.017E-08	4.847E-09	2.997E-09	2.093E-09
NE	1.271E-08	2.561E-08	2.256E-08	1.690E-08	1.398E-08	1.584E-08	7.661E-09	3.715E-09	2.341E-09	1.647E-09
ENE	2.122E-08	2.724E-08	2.074E-08	1.459E-08	1.135E-08	9.460E-09	4.200E-09	2.021E-09	1.275E-09	8.912E-10
E	1.834E-08	3.403E-08	2.794E-08	1.999E-08	1.574E-08	1.409E-08	6.434E-09	3.095E-09	1.928E-09	1.373E-09
ESE	1.605E-08	2.593E-08	2.075E-08	1.476E-08	1.150E-08	9.905E-09	4.565E-09	2.237E-09	1.401E-09	9.868E-10
SE	3.209E-08	4.342E-08	3.435E-08	2.482E-08	1.860E-08	1.041E-08	5.187E-09	2.938E-09	1.948E-09	1.378E-09
SSE	7.065E-08	6.908E-08	4.772E-08	3.241E-08	2.490E-08	2.094E-08	9.192E-09	4.359E-09	2.689E-09	1.875E-09

B290

ERP ELEVATED STACK RELEASES - APR-JUN 2016
 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	3.369E-09	3.759E-08	6.660E-08	7.145E-08	6.624E-08	5.462E-08	4.415E-08	3.600E-08	2.984E-08	3.372E-08	3.617E-08
SSW	1.532E-09	1.896E-08	4.054E-08	4.973E-08	5.132E-08	4.394E-08	3.618E-08	3.839E-08	3.819E-08	3.263E-08	2.828E-08
SW	6.418E-16	7.965E-10	3.144E-08	8.122E-08	1.205E-07	7.837E-08	5.492E-08	4.080E-08	3.170E-08	2.548E-08	2.104E-08
WSW	6.065E-16	6.082E-10	3.205E-08	9.466E-08	1.527E-07	9.429E-08	6.401E-08	4.655E-08	3.560E-08	2.828E-08	2.314E-08
W	3.170E-13	2.966E-08	1.444E-07	1.811E-07	1.590E-07	9.743E-08	6.616E-08	4.827E-08	3.707E-08	2.957E-08	2.430E-08
WNW	5.882E-09	2.483E-08	1.330E-07	2.505E-07	3.455E-07	2.145E-07	1.471E-07	1.138E-07	9.168E-08	7.282E-08	5.953E-08
NW	2.536E-08	9.353E-08	1.832E-07	3.329E-07	4.745E-07	2.734E-07	1.785E-07	1.289E-07	9.812E-08	7.653E-08	6.163E-08
NNW	1.159E-08	6.047E-08	1.120E-07	1.522E-07	1.935E-07	1.787E-07	1.582E-07	1.365E-07	1.188E-07	9.290E-08	7.498E-08
N	5.156E-09	5.514E-08	9.601E-08	1.024E-07	9.624E-08	8.249E-08	6.855E-08	5.610E-08	4.664E-08	3.942E-08	3.382E-08
NNE	2.923E-11	2.977E-09	2.355E-08	4.294E-08	5.412E-08	4.929E-08	4.192E-08	3.532E-08	2.997E-08	2.572E-08	2.236E-08
NE	7.324E-16	6.128E-10	1.022E-08	2.064E-08	2.775E-08	2.601E-08	2.253E-08	1.923E-08	1.649E-08	1.427E-08	1.250E-08
ENE	1.173E-10	8.140E-09	2.100E-08	2.745E-08	2.904E-08	2.491E-08	2.049E-08	1.688E-08	1.409E-08	1.193E-08	1.026E-08
E	8.441E-16	8.965E-10	1.508E-08	2.956E-08	3.720E-08	3.319E-08	2.774E-08	2.305E-08	1.935E-08	1.647E-08	1.422E-08
ESE	3.424E-11	2.984E-09	1.433E-08	2.375E-08	2.812E-08	2.475E-08	2.056E-08	1.703E-08	1.427E-08	1.212E-08	1.045E-08
SE	1.844E-10	1.141E-08	3.131E-08	4.239E-08	4.619E-08	4.058E-08	3.406E-08	2.852E-08	2.411E-08	2.064E-08	1.789E-08
SSE	1.182E-08	4.434E-08	7.383E-08	7.926E-08	7.242E-08	5.865E-08	4.677E-08	3.778E-08	3.111E-08	2.610E-08	2.227E-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	3.194E-08	2.069E-08	1.299E-08	6.970E-09	4.564E-09	3.260E-09	2.424E-09	1.884E-09	1.528E-09	1.271E-09	1.071E-09
SSW	2.540E-08	1.639E-08	1.013E-08	5.326E-09	3.413E-09	2.408E-09	1.793E-09	1.396E-09	1.123E-09	9.252E-10	7.775E-10
SW	1.895E-08	1.359E-08	8.613E-09	4.675E-09	3.109E-09	2.242E-09	1.734E-09	1.357E-09	1.095E-09	9.059E-10	7.637E-10
WSW	2.015E-08	1.278E-08	8.938E-09	5.380E-09	3.455E-09	2.447E-09	1.842E-09	1.444E-09	1.168E-09	9.681E-10	8.174E-10
W	2.043E-08	1.101E-08	7.877E-09	5.050E-09	3.655E-09	2.617E-09	1.975E-09	1.555E-09	1.263E-09	1.050E-09	8.896E-10
WNW	5.044E-08	2.768E-08	1.830E-08	1.042E-08	6.601E-09	4.635E-09	3.508E-09	2.767E-09	2.240E-09	1.854E-09	1.563E-09
NW	5.134E-08	2.653E-08	1.697E-08	9.281E-09	5.836E-09	4.063E-09	3.058E-09	2.392E-09	1.926E-09	1.589E-09	1.337E-09
NNW	6.317E-08	3.389E-08	2.116E-08	1.126E-08	7.013E-09	4.840E-09	3.594E-09	2.802E-09	2.285E-09	1.898E-09	1.599E-09
N	2.947E-08	1.760E-08	1.366E-08	9.960E-09	7.765E-09	5.999E-09	4.555E-09	3.594E-09	2.918E-09	2.427E-09	2.057E-09
NNE	2.414E-08	2.661E-08	1.649E-08	8.790E-09	5.587E-09	3.924E-09	2.936E-09	2.294E-09	1.850E-09	1.529E-09	1.288E-09
NE	1.382E-08	1.993E-08	1.251E-08	6.749E-09	4.285E-09	3.005E-09	2.276E-09	1.804E-09	1.478E-09	1.227E-09	1.038E-09
ENE	1.050E-08	1.084E-08	6.770E-09	3.605E-09	2.254E-09	1.561E-09	1.175E-09	9.224E-10	7.438E-10	6.145E-10	5.176E-10
E	1.472E-08	1.655E-08	1.039E-08	5.562E-09	3.485E-09	2.415E-09	1.784E-09	1.378E-09	1.119E-09	9.286E-10	7.797E-10
ESE	1.059E-08	1.145E-08	7.269E-09	3.949E-09	2.497E-09	1.742E-09	1.294E-09	1.003E-09	8.033E-10	6.591E-10	5.514E-10
SE	1.569E-08	9.541E-09	7.292E-09	5.069E-09	3.620E-09	2.789E-09	2.256E-09	1.881E-09	1.537E-09	1.285E-09	1.094E-09
SSE	2.305E-08	2.404E-08	1.481E-08	7.840E-09	4.961E-09	3.473E-09	2.591E-09	2.020E-09	1.626E-09	1.342E-09	1.129E-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	6.231E-08	6.224E-08	4.368E-08	3.308E-08	3.388E-08	1.977E-08	7.238E-09	3.274E-09	1.903E-09	1.273E-09
SSW	3.983E-08	4.769E-08	3.914E-08	3.613E-08	2.850E-08	1.561E-08	5.543E-09	2.430E-09	1.405E-09	9.290E-10
SW	4.676E-08	9.303E-08	5.553E-08	3.193E-08	2.158E-08	1.257E-08	4.854E-09	2.270E-09	1.365E-09	9.094E-10
WSW	5.289E-08	1.138E-07	6.510E-08	3.594E-08	2.356E-08	1.271E-08	5.315E-09	2.474E-09	1.453E-09	9.716E-10
W	1.352E-07	1.365E-07	6.734E-08	3.741E-08	2.443E-08	1.171E-08	5.058E-09	2.637E-09	1.563E-09	1.054E-09
WNW	1.612E-07	2.662E-07	1.518E-07	9.082E-08	6.010E-08	2.857E-08	1.047E-08	4.709E-09	2.778E-09	1.860E-09
NW	2.298E-07	3.536E-07	1.839E-07	9.868E-08	6.223E-08	2.779E-08	9.459E-09	4.134E-09	2.405E-09	1.596E-09
NNW	1.184E-07	1.778E-07	1.550E-07	1.140E-07	7.592E-08	3.474E-08	1.157E-08	4.921E-09	2.831E-09	1.902E-09
N	8.978E-08	9.151E-08	6.729E-08	4.659E-08	3.387E-08	1.849E-08	9.808E-09	5.893E-09	3.611E-09	2.436E-09
NNE	2.760E-08	4.949E-08	4.125E-08	2.988E-08	2.401E-08	2.156E-08	9.078E-09	3.972E-09	2.308E-09	1.535E-09
NE	1.272E-08	2.540E-08	2.214E-08	1.643E-08	1.351E-08	1.528E-08	6.935E-09	3.055E-09	1.814E-09	1.231E-09
ENE	2.101E-08	2.685E-08	2.022E-08	1.406E-08	1.085E-08	8.958E-09	3.708E-09	1.591E-09	9.264E-10	6.169E-10
E	1.836E-08	3.372E-08	2.732E-08	1.931E-08	1.507E-08	1.340E-08	5.711E-09	2.448E-09	1.396E-09	9.298E-10
ESE	1.599E-08	2.565E-08	2.026E-08	1.424E-08	1.100E-08	9.400E-09	4.041E-09	1.764E-09	1.010E-09	6.619E-10
SE	3.181E-08	4.285E-08	3.358E-08	2.405E-08	1.789E-08	9.909E-09	4.919E-09	2.798E-09	1.857E-09	1.289E-09
SSE	6.969E-08	6.782E-08	4.634E-08	3.110E-08	2.369E-08	1.972E-08	8.111E-09	3.517E-09	2.033E-09	1.347E-09

B291

ERP ELEVATED STACK RELEASES - APR-JUN 2016
 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	4.224E-09	3.625E-09	3.362E-09	2.483E-09	1.279E-09	8.026E-10	5.491E-10	3.968E-10	2.981E-10	2.376E-10	2.180E-10
SSW	1.614E-09	1.540E-09	1.646E-09	1.330E-09	7.286E-10	4.679E-10	3.238E-10	2.354E-10	2.212E-10	1.671E-10	1.308E-10
SW	6.489E-11	3.893E-10	8.290E-10	8.587E-10	1.056E-09	5.757E-10	3.568E-10	2.422E-10	1.750E-10	1.323E-10	1.035E-10
WSW	5.827E-11	3.496E-10	7.444E-10	1.601E-09	9.550E-10	5.195E-10	3.213E-10	2.179E-10	1.573E-10	1.189E-10	9.300E-11
W	6.224E-11	3.243E-09	3.161E-09	2.142E-09	1.103E-09	5.839E-10	3.555E-10	2.382E-10	1.705E-10	1.281E-10	9.991E-11
WNW	8.606E-10	1.092E-09	4.085E-09	3.215E-09	1.953E-09	9.933E-10	5.945E-10	4.000E-10	3.043E-10	2.371E-10	1.955E-10
NW	6.313E-09	5.303E-09	4.755E-09	6.495E-09	3.942E-09	1.964E-09	1.159E-09	7.639E-10	5.459E-10	4.154E-10	3.325E-10
NNW	7.600E-09	6.238E-09	5.385E-09	3.766E-09	3.132E-09	1.684E-09	1.040E-09	8.261E-10	5.967E-10	4.603E-10	3.745E-10
N	8.135E-09	6.733E-09	5.894E-09	4.169E-09	2.077E-09	1.286E-09	8.739E-10	6.294E-10	4.720E-10	3.648E-10	2.889E-10
NNE	3.866E-10	9.625E-10	1.777E-09	1.778E-09	1.094E-09	7.300E-10	5.145E-10	3.775E-10	2.858E-10	2.218E-10	1.756E-10
NE	5.827E-11	3.496E-10	7.444E-10	7.710E-10	4.816E-10	3.229E-10	2.281E-10	1.676E-10	1.269E-10	9.850E-11	7.800E-11
ENE	1.341E-09	1.261E-09	1.323E-09	1.058E-09	5.761E-10	3.692E-10	2.552E-10	1.854E-10	1.397E-10	1.082E-10	8.565E-11
E	7.549E-11	4.529E-10	9.643E-10	9.988E-10	6.239E-10	4.183E-10	2.955E-10	2.171E-10	1.644E-10	1.276E-10	1.011E-10
ESE	3.191E-10	5.573E-10	9.143E-10	8.846E-10	5.355E-10	3.557E-10	2.501E-10	1.833E-10	1.387E-10	1.076E-10	8.521E-11
SE	1.905E-09	1.931E-09	2.205E-09	1.846E-09	1.034E-09	6.695E-10	4.651E-10	3.388E-10	2.555E-10	1.980E-10	1.568E-10
SSE	5.802E-09	4.951E-09	4.551E-09	3.339E-09	1.712E-09	1.072E-09	7.329E-10	5.294E-10	3.977E-10	3.076E-10	2.435E-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	1.754E-10	1.202E-10	8.167E-11	4.723E-11	3.001E-11	2.145E-11	1.536E-11	1.152E-11	9.076E-12	7.250E-12	5.918E-12
SSW	1.052E-10	7.637E-11	5.256E-11	3.068E-11	1.873E-11	1.380E-11	9.887E-12	7.424E-12	5.773E-12	4.611E-12	3.764E-12
SW	8.353E-11	5.766E-11	3.905E-11	2.241E-11	1.409E-11	1.002E-11	7.512E-12	5.641E-12	4.386E-12	3.503E-12	2.860E-12
WSW	7.608E-11	4.711E-11	3.113E-11	2.004E-11	1.212E-11	8.132E-12	6.065E-12	4.554E-12	3.541E-12	2.828E-12	2.309E-12
W	8.048E-11	3.664E-11	4.174E-11	2.504E-11	1.622E-11	1.104E-11	7.907E-12	5.937E-12	4.617E-12	3.688E-12	3.010E-12
WNW	1.708E-10	1.048E-10	7.535E-11	4.554E-11	2.988E-11	1.895E-11	1.341E-11	1.007E-11	7.903E-12	6.313E-12	5.153E-12
NW	2.789E-10	1.523E-10	1.034E-10	6.614E-11	4.030E-11	2.701E-11	1.945E-11	1.461E-11	1.148E-11	9.170E-12	7.485E-12
NNW	3.195E-10	1.854E-10	1.300E-10	7.727E-11	4.945E-11	3.323E-11	2.439E-11	1.805E-11	1.391E-11	1.111E-11	9.068E-12
N	2.332E-10	1.111E-10	6.820E-11	3.644E-11	6.541E-11	4.245E-11	3.042E-11	2.284E-11	1.776E-11	1.419E-11	1.158E-11
NNE	1.415E-10	2.100E-10	1.282E-10	6.542E-11	3.972E-11	2.661E-11	1.905E-11	1.429E-11	1.110E-11	8.862E-12	7.231E-12
NE	6.282E-11	9.306E-11	5.822E-11	3.058E-11	1.873E-11	1.252E-11	8.972E-12	6.643E-12	5.166E-12	4.167E-12	3.401E-12
ENE	6.907E-11	6.185E-11	4.283E-11	2.513E-11	1.596E-11	1.067E-11	7.583E-12	5.801E-12	4.519E-12	3.618E-12	2.959E-12
E	8.138E-11	7.961E-11	5.592E-11	3.311E-11	2.096E-11	1.391E-11	9.797E-12	7.213E-12	5.522E-12	4.682E-12	3.820E-12
ESE	6.864E-11	6.453E-11	4.496E-11	2.646E-11	1.675E-11	1.113E-11	7.858E-12	5.799E-12	4.449E-12	3.517E-12	2.847E-12
SE	1.264E-10	6.000E-11	3.668E-11	1.942E-11	1.194E-11	8.271E-12	6.221E-12	1.120E-11	8.644E-12	6.879E-12	5.610E-12
SSE	1.965E-10	2.020E-10	1.240E-10	6.371E-11	3.876E-11	2.595E-11	1.856E-11	1.391E-11	1.079E-11	8.610E-12	7.019E-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	3.030E-09	1.335E-09	5.558E-10	3.033E-10	2.080E-10	1.153E-10	4.723E-11	2.129E-11	1.168E-11	7.298E-12
SSW	1.482E-09	7.463E-10	3.269E-10	2.047E-10	1.321E-10	7.219E-11	3.023E-11	1.355E-11	7.499E-12	4.642E-12
SW	7.445E-10	7.986E-10	3.693E-10	1.779E-10	1.046E-10	5.514E-11	2.241E-11	1.010E-11	5.697E-12	3.526E-12
WSW	1.038E-09	9.051E-10	3.328E-10	1.600E-10	9.440E-11	4.645E-11	1.899E-11	8.370E-12	4.600E-12	2.847E-12
W	2.727E-09	1.103E-09	3.695E-10	1.737E-10	1.011E-10	4.865E-11	2.483E-11	1.117E-11	5.997E-12	3.712E-12
WNW	3.033E-09	1.807E-09	6.230E-10	3.061E-10	1.987E-10	1.064E-10	4.520E-11	1.965E-11	1.020E-11	6.354E-12
NW	5.650E-09	3.630E-09	1.216E-09	5.585E-10	3.372E-10	1.587E-10	6.293E-11	2.753E-11	1.480E-11	9.230E-12
NNW	4.855E-09	2.629E-09	1.126E-09	6.103E-10	3.796E-10	1.906E-10	7.662E-11	3.402E-11	1.828E-11	1.118E-11
N	5.314E-09	2.190E-09	8.861E-10	4.761E-10	2.908E-10	1.192E-10	5.638E-11	4.376E-11	2.307E-11	1.428E-11
NNE	1.597E-09	1.084E-09	5.172E-10	2.876E-10	1.766E-10	1.584E-10	6.795E-11	2.708E-11	1.443E-11	8.921E-12
NE	6.685E-10	4.754E-10	2.292E-10	1.277E-10	7.845E-11	7.086E-11	3.145E-11	1.276E-11	6.746E-12	4.179E-12
ENE	1.192E-09	5.913E-10	2.577E-10	1.407E-10	8.618E-11	5.500E-11	2.499E-11	1.085E-11	5.822E-12	3.641E-12
E	8.660E-10	6.159E-10	2.969E-10	1.654E-10	1.016E-10	6.947E-11	3.278E-11	1.414E-11	7.307E-12	4.612E-12
ESE	8.218E-10	5.332E-10	2.515E-10	1.396E-10	8.570E-11	5.675E-11	2.625E-11	1.132E-11	5.873E-12	3.545E-12
SE	1.985E-09	1.053E-09	4.691E-10	2.574E-10	1.577E-10	6.439E-11	1.993E-11	8.429E-12	8.805E-12	6.932E-12
SSE	4.101E-09	1.789E-09	7.421E-10	4.010E-10	2.451E-10	1.661E-10	6.602E-11	2.641E-11	1.405E-11	8.668E-12

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ERP ELEVATED STACK RELEASES - APR-JUN 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE OF INTEREST	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	7.0E-08	6.9E-08	6.8E-08	3.2E-09
A	Site Boundary	SSW	.82	4.5E-08	4.5E-08	4.4E-08	1.6E-09
A	Site Boundary	SW	.97	7.7E-08	7.7E-08	7.7E-08	8.8E-10
A	Site Boundary	WSW	.93	7.6E-08	7.6E-08	7.6E-08	1.5E-09
A	Site Boundary	W	.91	1.8E-07	1.8E-07	1.8E-07	2.4E-09
A	Site Boundary	WNN	.94	2.3E-07	2.3E-07	2.3E-07	3.6E-09
A	Site Boundary	NW	.81	2.2E-07	2.2E-07	2.2E-07	4.4E-09
A	Site Boundary	NNW	.69	9.7E-08	9.7E-08	9.5E-08	5.5E-09
A	Site Boundary	N	.67	8.6E-08	8.6E-08	8.4E-08	6.1E-09
A	Site Boundary	NNE	.60	8.4E-09	8.4E-09	8.4E-09	1.3E-09
A	Site Boundary	NE	.62	3.9E-09	3.8E-09	3.9E-09	5.4E-10
A	Site Boundary	ENE	.59	1.2E-08	1.2E-08	1.2E-08	1.3E-09
A	Site Boundary	E	.53	1.4E-09	1.4E-09	1.4E-09	5.0E-10
A	Site Boundary	ESE	.54	4.0E-09	4.0E-09	4.0E-09	6.1E-10
A	Site Boundary	SE	.65	2.3E-08	2.3E-08	2.2E-08	2.1E-09
A	Site Boundary	SSE	.81	7.7E-08	7.7E-08	7.6E-08	4.2E-09
A	Nearest Res	SSW	3.00	4.0E-08	4.0E-08	3.8E-08	2.4E-10
A	Nearest Res	SW	1.70	1.0E-07	1.0E-07	1.0E-07	8.1E-10
A	Nearest Res	WSW	1.90	1.1E-07	1.0E-07	1.0E-07	5.8E-10
A	Nearest Res	W	1.00	1.8E-07	1.8E-07	1.8E-07	2.1E-09
A	Nearest Res	WNN	1.70	2.9E-07	2.9E-07	2.8E-07	1.5E-09
A	Nearest Res	NW	.90	2.7E-07	2.7E-07	2.7E-07	7.4E-09
A	Nearest Res	NNW	1.90	1.9E-07	1.9E-07	1.8E-07	1.9E-09
A	Nearest Res	N	2.90	6.0E-08	6.0E-08	5.8E-08	6.7E-10
A	Nearest Res	NNE	1.70	5.4E-08	5.4E-08	5.3E-08	9.2E-10
A	Nearest Res	ENE	1.70	2.8E-08	2.8E-08	2.8E-08	4.7E-10
A	Nearest Res	E	2.20	3.2E-08	3.2E-08	3.1E-08	3.6E-10
A	Nearest Res	ESE	2.80	1.9E-08	1.9E-08	1.8E-08	2.1E-10
A	Nearest Res	SE	3.00	2.9E-08	2.9E-08	2.9E-08	3.4E-10
A	Nearest Res	SSE	3.00	3.9E-08	3.9E-08	3.8E-08	5.3E-10
A	Nearest Cow	NNW	3.50	1.2E-07	1.2E-07	1.2E-07	6.0E-10
A	Nearest Garde	SSW	3.00	4.0E-08	4.0E-08	3.8E-08	2.4E-10
A	Nearest Garde	SW	2.20	6.9E-08	6.9E-08	6.7E-08	4.7E-10
A	Nearest Garde	NNW	3.00	1.4E-07	1.4E-07	1.4E-07	8.3E-10
A	Nearest Garde	ENE	1.70	2.8E-08	2.8E-08	2.8E-08	4.7E-10
A	Nearest Garde	ESE	2.30	2.3E-08	2.3E-08	2.2E-08	2.9E-10
A	Nearest Garde	SSE	3.00	3.9E-08	3.9E-08	3.8E-08	5.3E-10
A	MAXIMUM CHI/Q	S	1.00	7.3E-08	7.3E-08	7.1E-08	2.5E-09
A	MAXIMUM CHI/Q	SSW	1.50	5.2E-08	5.2E-08	5.1E-08	7.3E-10
A	MAXIMUM CHI/Q	SW	1.50	1.2E-07	1.2E-07	1.2E-07	1.1E-09
A	MAXIMUM CHI/Q	WSW	1.50	1.5E-07	1.5E-07	1.5E-07	9.5E-10
A	MAXIMUM CHI/Q	W	1.00	1.8E-07	1.8E-07	1.8E-07	2.1E-09
A	MAXIMUM CHI/Q	WNN	1.50	3.5E-07	3.5E-07	3.5E-07	2.0E-09
A	MAXIMUM CHI/Q	NW	1.50	4.8E-07	4.8E-07	4.7E-07	3.9E-09
A	MAXIMUM CHI/Q	NNW	1.50	2.0E-07	2.0E-07	1.9E-07	3.1E-09
A	MAXIMUM CHI/Q	N	1.00	1.0E-07	1.0E-07	1.0E-07	4.2E-09
A	MAXIMUM CHI/Q	NNE	1.50	5.5E-08	5.5E-08	5.4E-08	1.1E-09
A	MAXIMUM CHI/Q	NE	1.50	2.8E-08	2.8E-08	2.8E-08	4.8E-10
A	MAXIMUM CHI/Q	ENE	1.50	2.9E-08	2.9E-08	2.9E-08	5.8E-10
A	MAXIMUM CHI/Q	E	1.50	3.8E-08	3.7E-08	3.7E-08	6.2E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.8E-08	2.8E-08	2.8E-08	5.4E-10
A	MAXIMUM CHI/Q	SE	1.50	4.7E-08	4.7E-08	4.6E-08	1.0E-09
A	MAXIMUM CHI/Q	SSE	1.00	8.0E-08	8.0E-08	7.9E-08	3.3E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-June 2016

ERP ELEVATED STACK RELEASES - JAN-JUN 2016
 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	1.802E-09	2.595E-08	5.059E-08	5.725E-08	5.545E-08	4.660E-08	3.813E-08	3.138E-08	2.620E-08	2.956E-08	3.140E-08
SSW	7.978E-10	1.219E-08	3.459E-08	4.930E-08	5.522E-08	4.822E-08	4.005E-08	4.242E-08	4.242E-08	3.660E-08	3.204E-08
SW	4.343E-16	5.364E-10	2.119E-08	5.532E-08	8.738E-08	5.851E-08	4.188E-08	3.164E-08	2.492E-08	2.026E-08	1.690E-08
WSW	4.345E-16	4.642E-10	2.516E-08	7.643E-08	1.331E-07	8.410E-08	5.809E-08	4.282E-08	3.311E-08	2.655E-08	2.190E-08
W	2.376E-13	2.461E-08	1.254E-07	1.640E-07	1.540E-07	9.672E-08	6.680E-08	4.933E-08	3.823E-08	3.072E-08	2.539E-08
WNW	2.941E-09	1.479E-08	1.078E-07	2.145E-07	2.981E-07	1.848E-07	1.265E-07	9.707E-08	7.751E-08	6.156E-08	5.038E-08
NW	1.271E-08	5.081E-08	1.398E-07	2.947E-07	4.532E-07	2.651E-07	1.751E-07	1.276E-07	9.799E-08	7.702E-08	6.251E-08
NNW	5.836E-09	3.404E-08	8.161E-08	1.304E-07	1.841E-07	1.747E-07	1.555E-07	1.342E-07	1.167E-07	9.163E-08	7.434E-08
N	3.166E-09	3.739E-08	7.397E-08	8.641E-08	8.640E-08	7.541E-08	6.320E-08	5.203E-08	4.347E-08	3.690E-08	3.178E-08
NNE	1.078E-10	6.664E-09	2.550E-08	3.976E-08	4.691E-08	4.208E-08	3.562E-08	2.998E-08	2.544E-08	2.185E-08	1.901E-08
NE	7.733E-16	6.556E-10	1.082E-08	2.170E-08	2.927E-08	2.763E-08	2.409E-08	2.069E-08	1.783E-08	1.550E-08	1.363E-08
ENE	5.867E-11	4.418E-09	1.631E-08	2.542E-08	2.997E-08	2.667E-08	2.239E-08	1.871E-08	1.578E-08	1.349E-08	1.170E-08
E	6.272E-16	6.767E-10	1.169E-08	2.348E-08	3.092E-08	2.846E-08	2.434E-08	2.060E-08	1.756E-08	1.515E-08	1.323E-08
ESE	1.712E-11	1.832E-09	1.239E-08	2.198E-08	2.727E-08	2.467E-08	2.093E-08	1.764E-08	1.500E-08	1.292E-08	1.127E-08
SE	1.068E-10	7.763E-09	3.500E-08	5.575E-08	6.429E-08	5.631E-08	4.683E-08	3.888E-08	3.264E-08	2.779E-08	2.399E-08
SSE	6.076E-09	3.415E-08	8.317E-08	1.085E-07	1.110E-07	9.258E-08	7.476E-08	6.082E-08	5.029E-08	4.232E-08	3.621E-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	2.767E-08	1.770E-08	1.142E-08	6.492E-09	4.514E-09	3.395E-09	2.638E-09	2.133E-09	1.789E-09	1.531E-09	1.325E-09
SSW	2.914E-08	1.997E-08	1.280E-08	7.206E-09	4.952E-09	3.652E-09	2.826E-09	2.277E-09	1.890E-09	1.604E-09	1.386E-09
SW	1.541E-08	1.152E-08	7.574E-09	4.409E-09	3.163E-09	2.431E-09	1.960E-09	1.592E-09	1.330E-09	1.136E-09	9.865E-10
WSW	1.918E-08	1.222E-08	8.642E-09	5.349E-09	3.592E-09	2.644E-09	2.061E-09	1.671E-09	1.393E-09	1.188E-09	1.031E-09
W	2.145E-08	1.175E-08	8.410E-09	5.485E-09	4.058E-09	3.008E-09	2.346E-09	1.904E-09	1.590E-09	1.357E-09	1.178E-09
WNW	4.267E-08	2.363E-08	1.592E-08	9.530E-09	6.490E-09	4.821E-09	3.792E-09	3.088E-09	2.578E-09	2.196E-09	1.904E-09
NW	5.248E-08	2.818E-08	1.870E-08	1.095E-08	7.308E-09	5.353E-09	4.198E-09	3.400E-09	2.827E-09	2.404E-09	2.080E-09
NNW	6.294E-08	3.473E-08	2.243E-08	1.279E-08	8.620E-09	6.360E-09	5.002E-09	4.084E-09	3.451E-09	2.956E-09	2.565E-09
N	2.780E-08	1.683E-08	1.314E-08	9.628E-09	7.656E-09	6.167E-09	4.826E-09	3.915E-09	3.261E-09	2.777E-09	2.406E-09
NNE	2.032E-08	2.188E-08	1.401E-08	7.901E-09	5.285E-09	3.877E-09	3.013E-09	2.437E-09	2.030E-09	1.728E-09	1.497E-09
NE	1.504E-08	2.266E-08	1.477E-08	8.531E-09	5.803E-09	4.313E-09	3.429E-09	2.822E-09	2.388E-09	2.046E-09	1.782E-09
ENE	1.205E-08	1.524E-08	1.005E-08	5.878E-09	4.027E-09	3.007E-09	2.487E-09	2.098E-09	1.759E-09	1.507E-09	1.313E-09
E	1.398E-08	1.807E-08	1.186E-08	6.892E-09	4.698E-09	3.494E-09	2.745E-09	2.241E-09	1.931E-09	1.686E-09	1.467E-09
ESE	1.167E-08	1.462E-08	9.761E-09	5.797E-09	4.007E-09	3.010E-09	2.383E-09	1.957E-09	1.651E-09	1.421E-09	1.243E-09
SE	2.097E-08	1.265E-08	9.590E-09	6.764E-09	4.954E-09	3.925E-09	3.268E-09	2.810E-09	2.359E-09	2.023E-09	1.763E-09
SSE	3.681E-08	3.985E-08	2.557E-08	1.447E-08	9.708E-09	7.141E-09	5.564E-09	4.511E-09	3.763E-09	3.210E-09	2.785E-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	4.807E-08	5.192E-08	3.769E-08	2.896E-08	2.947E-08	1.713E-08	6.708E-09	3.391E-09	2.146E-09	1.531E-09
SSW	3.615E-08	5.080E-08	4.318E-08	4.020E-08	3.231E-08	1.882E-08	7.447E-09	3.668E-09	2.286E-09	1.608E-09
SW	3.177E-08	6.742E-08	4.222E-08	2.506E-08	1.734E-08	1.063E-08	4.559E-09	2.438E-09	1.597E-09	1.138E-09
WSW	4.246E-08	9.874E-08	5.892E-08	3.339E-08	2.227E-08	1.218E-08	5.300E-09	2.664E-09	1.677E-09	1.191E-09
W	1.202E-07	1.308E-07	6.779E-08	3.854E-08	2.551E-08	1.242E-08	5.501E-09	3.023E-09	1.911E-09	1.360E-09
WNW	1.346E-07	2.292E-07	1.303E-07	7.702E-08	5.084E-08	2.443E-08	9.598E-09	4.855E-09	3.095E-09	2.201E-09
NW	1.889E-07	3.344E-07	1.801E-07	9.847E-08	6.309E-08	2.937E-08	1.105E-08	5.412E-09	3.410E-09	2.409E-09
NNW	9.273E-08	1.680E-07	1.521E-07	1.122E-07	7.524E-08	3.553E-08	1.308E-08	6.420E-09	4.105E-09	2.958E-09
N	7.137E-08	8.152E-08	6.199E-08	4.341E-08	3.182E-08	1.763E-08	9.533E-09	6.028E-09	3.926E-09	2.783E-09
NNE	2.765E-08	4.317E-08	3.509E-08	2.537E-08	2.034E-08	1.804E-08	8.096E-09	3.907E-09	2.447E-09	1.732E-09
NE	1.340E-08	2.686E-08	2.367E-08	1.776E-08	1.471E-08	1.746E-08	8.704E-09	4.357E-09	2.830E-09	2.049E-09
ENE	1.772E-08	2.749E-08	2.206E-08	1.575E-08	1.236E-08	1.222E-08	5.982E-09	3.071E-09	2.080E-09	1.510E-09
E	1.448E-08	2.817E-08	2.394E-08	1.751E-08	1.407E-08	1.440E-08	7.021E-09	3.515E-09	2.267E-09	1.678E-09
ESE	1.431E-08	2.494E-08	2.061E-08	1.497E-08	1.191E-08	1.180E-08	5.882E-09	3.025E-09	1.962E-09	1.423E-09
SE	3.817E-08	5.885E-08	4.618E-08	3.258E-08	2.400E-08	1.314E-08	6.587E-09	3.937E-09	2.769E-09	2.026E-09
SSE	8.353E-08	1.022E-07	7.394E-08	5.026E-08	3.824E-08	3.283E-08	1.482E-08	7.195E-09	4.527E-09	3.216E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2016
 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	1.801E-09	2.594E-08	5.054E-08	5.717E-08	5.533E-08	4.647E-08	3.799E-08	3.124E-08	2.606E-08	2.938E-08	3.118E-08
SSW	7.976E-10	1.218E-08	3.454E-08	4.921E-08	5.508E-08	4.805E-08	3.987E-08	4.218E-08	4.213E-08	3.632E-08	3.176E-08
SW	4.342E-16	5.361E-10	2.116E-08	5.523E-08	8.713E-08	5.827E-08	4.167E-08	3.144E-08	2.473E-08	2.009E-08	1.674E-08
WSW	4.344E-16	4.639E-10	2.512E-08	7.624E-08	1.326E-07	8.366E-08	5.770E-08	4.248E-08	3.280E-08	2.626E-08	2.163E-08
W	2.376E-13	2.459E-08	1.253E-07	1.637E-07	1.535E-07	9.632E-08	6.645E-08	4.902E-08	3.795E-08	3.046E-08	2.514E-08
WNW	2.940E-09	1.478E-08	1.076E-07	2.141E-07	2.971E-07	1.840E-07	1.257E-07	9.638E-08	7.686E-08	6.096E-08	4.983E-08
NW	1.271E-08	5.078E-08	1.397E-07	2.942E-07	4.520E-07	2.642E-07	1.743E-07	1.269E-07	9.737E-08	7.647E-08	6.200E-08
NNW	5.835E-09	3.403E-08	8.154E-08	1.302E-07	1.837E-07	1.742E-07	1.550E-07	1.336E-07	1.160E-07	9.104E-08	7.380E-08
N	3.166E-09	3.738E-08	7.391E-08	8.630E-08	8.622E-08	7.520E-08	6.297E-08	5.180E-08	4.325E-08	3.668E-08	3.158E-08
NNE	1.078E-10	6.661E-09	2.548E-08	3.971E-08	4.682E-08	4.198E-08	3.551E-08	2.986E-08	2.533E-08	2.174E-08	1.891E-08
NE	7.732E-16	6.552E-10	1.081E-08	2.167E-08	2.919E-08	2.752E-08	2.397E-08	2.056E-08	1.770E-08	1.538E-08	1.351E-08
ENE	5.865E-11	4.415E-09	1.630E-08	2.538E-08	2.989E-08	2.658E-08	2.230E-08	1.862E-08	1.569E-08	1.341E-08	1.161E-08
E	6.271E-16	6.763E-10	1.167E-08	2.344E-08	3.084E-08	2.836E-08	2.423E-08	2.049E-08	1.745E-08	1.503E-08	1.312E-08
ESE	1.712E-11	1.831E-09	1.238E-08	2.195E-08	2.721E-08	2.460E-08	2.086E-08	1.757E-08	1.493E-08	1.285E-08	1.120E-08
SE	1.068E-10	7.760E-09	3.498E-08	5.569E-08	6.417E-08	5.618E-08	4.668E-08	3.873E-08	3.249E-08	2.765E-08	2.385E-08
SSE	6.075E-09	3.413E-08	8.311E-08	1.084E-07	1.108E-07	9.239E-08	7.457E-08	6.062E-08	5.010E-08	4.214E-08	3.603E-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	2.746E-08	1.748E-08	1.122E-08	6.320E-09	4.350E-09	3.238E-09	2.491E-09	1.995E-09	1.657E-09	1.403E-09	1.203E-09
SSW	2.885E-08	1.965E-08	1.252E-08	6.974E-09	4.739E-09	3.456E-09	2.644E-09	2.107E-09	1.729E-09	1.452E-09	1.240E-09
SW	1.524E-08	1.131E-08	7.384E-09	4.242E-09	3.000E-09	2.272E-09	1.805E-09	1.446E-09	1.191E-09	1.003E-09	8.596E-10
WSW	1.891E-08	1.195E-08	8.373E-09	5.091E-09	3.362E-09	2.433E-09	1.865E-09	1.486E-09	1.219E-09	1.022E-09	8.718E-10
W	2.122E-08	1.155E-08	8.214E-09	5.283E-09	3.853E-09	2.817E-09	2.169E-09	1.737E-09	1.431E-09	1.206E-09	1.033E-09
WNW	4.216E-08	2.319E-08	1.552E-08	9.170E-09	6.164E-09	4.518E-09	3.508E-09	2.819E-09	2.323E-09	1.954E-09	1.672E-09
NW	5.201E-08	2.780E-08	1.837E-08	1.065E-08	7.049E-09	5.118E-09	3.978E-09	3.193E-09	2.632E-09	2.219E-09	1.904E-09
NNW	6.243E-08	3.430E-08	2.205E-08	1.247E-08	8.330E-09	6.092E-09	4.749E-09	3.843E-09	3.218E-09	2.732E-09	2.350E-09
N	2.760E-08	1.665E-08	1.296E-08	9.419E-09	7.414E-09	5.906E-09	4.580E-09	3.681E-09	3.039E-09	2.566E-09	2.204E-09
NNE	2.020E-08	2.167E-08	1.383E-08	7.749E-09	5.149E-09	3.752E-09	2.898E-09	2.329E-09	1.927E-09	1.629E-09	1.402E-09
NE	1.488E-08	2.228E-08	1.443E-08	8.240E-09	5.540E-09	4.070E-09	3.198E-09	2.600E-09	2.174E-09	1.841E-09	1.585E-09
ENE	1.196E-08	1.502E-08	9.845E-09	5.697E-09	3.851E-09	2.851E-09	2.328E-09	1.939E-09	1.607E-09	1.361E-09	1.172E-09
E	1.385E-08	1.779E-08	1.161E-08	6.678E-09	4.503E-09	3.313E-09	2.575E-09	2.079E-09	1.772E-09	1.530E-09	1.316E-09
ESE	1.159E-08	1.444E-08	9.601E-09	5.651E-09	3.869E-09	2.879E-09	2.258E-09	1.837E-09	1.535E-09	1.308E-09	1.133E-09
SE	2.083E-08	1.251E-08	9.446E-09	6.598E-09	4.786E-09	3.754E-09	3.093E-09	2.632E-09	2.189E-09	1.858E-09	1.604E-09
SSE	3.660E-08	3.933E-08	2.511E-08	1.407E-08	9.349E-09	6.808E-09	5.251E-09	4.214E-09	3.480E-09	2.938E-09	2.523E-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	4.802E-08	5.180E-08	3.755E-08	2.881E-08	2.927E-08	1.691E-08	6.534E-09	3.236E-09	2.008E-09	1.404E-09
SSW	3.609E-08	5.065E-08	4.298E-08	3.993E-08	3.203E-08	1.853E-08	7.214E-09	3.473E-09	2.116E-09	1.456E-09
SW	3.172E-08	6.721E-08	4.201E-08	2.488E-08	1.718E-08	1.044E-08	4.388E-09	2.279E-09	1.451E-09	1.006E-09
WSW	4.236E-08	9.833E-08	5.853E-08	3.307E-08	2.199E-08	1.191E-08	5.052E-09	2.453E-09	1.492E-09	1.025E-09
W	1.200E-07	1.304E-07	6.744E-08	3.826E-08	2.526E-08	1.221E-08	5.299E-09	2.834E-09	1.744E-09	1.209E-09
WNW	1.343E-07	2.284E-07	1.295E-07	7.638E-08	5.029E-08	2.400E-08	9.245E-09	4.553E-09	2.827E-09	1.959E-09
NW	1.886E-07	3.334E-07	1.793E-07	9.786E-08	6.259E-08	2.899E-08	1.077E-08	5.177E-09	3.204E-09	2.225E-09
NNW	9.262E-08	1.676E-07	1.516E-07	1.115E-07	7.470E-08	3.511E-08	1.276E-08	6.152E-09	3.864E-09	2.734E-09
N	7.130E-08	8.134E-08	6.177E-08	4.319E-08	3.162E-08	1.744E-08	9.315E-09	5.778E-09	3.693E-09	2.572E-09
NNE	2.762E-08	4.309E-08	3.498E-08	2.526E-08	2.022E-08	1.786E-08	7.945E-09	3.783E-09	2.338E-09	1.633E-09
NE	1.338E-08	2.678E-08	2.356E-08	1.764E-08	1.457E-08	1.715E-08	8.416E-09	4.113E-09	2.609E-09	1.845E-09
ENE	1.769E-08	2.742E-08	2.197E-08	1.566E-08	1.227E-08	1.204E-08	5.803E-09	2.911E-09	1.924E-09	1.364E-09
E	1.446E-08	2.809E-08	2.383E-08	1.740E-08	1.396E-08	1.417E-08	6.808E-09	3.335E-09	2.104E-09	1.522E-09
ESE	1.429E-08	2.488E-08	2.054E-08	1.489E-08	1.183E-08	1.166E-08	5.737E-09	2.895E-09	1.842E-09	1.311E-09
SE	3.813E-08	5.873E-08	4.603E-08	3.243E-08	2.386E-08	1.300E-08	6.426E-09	3.765E-09	2.595E-09	1.862E-09
SSE	8.346E-08	1.021E-07	7.374E-08	5.008E-08	3.805E-08	3.240E-08	1.443E-08	6.863E-09	4.231E-09	2.945E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2016
 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	1.802E-09	2.572E-08	4.979E-08	5.644E-08	5.447E-08	4.549E-08	3.697E-08	3.023E-08	2.509E-08	2.828E-08	3.003E-08
SSW	7.977E-10	1.208E-08	3.421E-08	4.889E-08	5.447E-08	4.719E-08	3.888E-08	4.097E-08	4.080E-08	3.502E-08	3.053E-08
SW	4.342E-16	5.363E-10	2.118E-08	5.530E-08	8.630E-08	5.720E-08	4.062E-08	3.049E-08	2.388E-08	1.932E-08	1.605E-08
WSW	4.345E-16	4.641E-10	2.514E-08	7.630E-08	1.314E-07	8.220E-08	5.632E-08	4.123E-08	3.169E-08	2.528E-08	2.075E-08
W	2.376E-13	2.461E-08	1.247E-07	1.621E-07	1.510E-07	9.410E-08	6.461E-08	4.748E-08	3.665E-08	2.934E-08	2.417E-08
WNW	2.941E-09	1.471E-08	1.075E-07	2.129E-07	2.937E-07	1.808E-07	1.230E-07	9.400E-08	7.481E-08	5.912E-08	4.813E-08
NW	1.271E-08	5.036E-08	1.386E-07	2.925E-07	4.463E-07	2.585E-07	1.694E-07	1.227E-07	9.376E-08	7.327E-08	5.910E-08
NNW	5.835E-09	3.374E-08	8.065E-08	1.295E-07	1.819E-07	1.716E-07	1.522E-07	1.310E-07	1.137E-07	8.882E-08	7.167E-08
N	3.166E-09	3.707E-08	7.286E-08	8.529E-08	8.497E-08	7.371E-08	6.137E-08	5.021E-08	4.171E-08	3.522E-08	3.019E-08
NNE	1.078E-10	6.613E-09	2.531E-08	3.956E-08	4.638E-08	4.131E-08	3.473E-08	2.905E-08	2.452E-08	2.096E-08	1.816E-08
NE	7.733E-16	6.554E-10	1.082E-08	2.169E-08	2.901E-08	2.716E-08	2.352E-08	2.008E-08	1.721E-08	1.490E-08	1.304E-08
ENE	5.866E-11	4.383E-09	1.617E-08	2.527E-08	2.960E-08	2.614E-08	2.178E-08	1.807E-08	1.515E-08	1.288E-08	1.110E-08
E	6.272E-16	6.766E-10	1.168E-08	2.347E-08	3.063E-08	2.795E-08	2.372E-08	1.994E-08	1.689E-08	1.449E-08	1.259E-08
ESE	1.712E-11	1.822E-09	1.234E-08	2.193E-08	2.700E-08	2.422E-08	2.040E-08	1.709E-08	1.445E-08	1.238E-08	1.075E-08
SE	1.068E-10	7.708E-09	3.479E-08	5.553E-08	6.375E-08	5.523E-08	4.558E-08	3.757E-08	3.135E-08	2.654E-08	2.278E-08
SSE	6.076E-09	3.386E-08	8.223E-08	1.075E-07	1.094E-07	9.054E-08	7.252E-08	5.854E-08	4.807E-08	4.018E-08	3.417E-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	2.638E-08	1.653E-08	1.033E-08	5.507E-09	3.571E-09	2.534E-09	1.882E-09	1.461E-09	1.183E-09	9.814E-10	8.259E-10
SSW	2.768E-08	1.862E-08	1.154E-08	6.098E-09	3.924E-09	2.773E-09	2.067E-09	1.611E-09	1.296E-09	1.069E-09	8.983E-10
SW	1.460E-08	1.080E-08	6.866E-09	3.737E-09	2.486E-09	1.791E-09	1.385E-09	1.085E-09	8.774E-10	7.265E-10	6.130E-10
WSW	1.812E-08	1.130E-08	7.748E-09	4.547E-09	2.914E-09	2.060E-09	1.549E-09	1.214E-09	9.813E-10	8.128E-10	6.860E-10
W	2.036E-08	1.101E-08	7.770E-09	4.778E-09	3.324E-09	2.368E-09	1.782E-09	1.400E-09	1.135E-09	9.419E-10	7.966E-10
WNW	4.054E-08	2.174E-08	1.415E-08	7.897E-09	4.964E-09	3.467E-09	2.609E-09	2.049E-09	1.654E-09	1.365E-09	1.149E-09
NW	4.931E-08	2.563E-08	1.647E-08	9.057E-09	5.721E-09	3.997E-09	3.017E-09	2.363E-09	1.905E-09	1.574E-09	1.326E-09
NNW	6.033E-08	3.225E-08	2.012E-08	1.069E-08	6.649E-09	4.584E-09	3.401E-09	2.650E-09	2.160E-09	1.792E-09	1.509E-09
N	2.628E-08	1.565E-08	1.213E-08	8.837E-09	6.875E-09	5.302E-09	4.022E-09	3.172E-09	2.574E-09	2.140E-09	1.813E-09
NNE	1.941E-08	2.080E-08	1.287E-08	6.849E-09	4.355E-09	3.060E-09	2.290E-09	1.791E-09	1.445E-09	1.195E-09	1.007E-09
NE	1.440E-08	2.175E-08	1.368E-08	7.418E-09	4.738E-09	3.339E-09	2.540E-09	2.019E-09	1.656E-09	1.378E-09	1.168E-09
ENE	1.143E-08	1.452E-08	9.263E-09	5.066E-09	3.215E-09	2.249E-09	1.754E-09	1.412E-09	1.142E-09	9.457E-10	7.981E-10
E	1.330E-08	1.727E-08	1.096E-08	5.948E-09	3.751E-09	2.612E-09	1.937E-09	1.501E-09	1.232E-09	1.031E-09	8.661E-10
ESE	1.113E-08	1.402E-08	9.060E-09	5.031E-09	3.218E-09	2.263E-09	1.692E-09	1.318E-09	1.060E-09	8.726E-10	7.320E-10
SE	1.982E-08	1.173E-08	8.804E-09	6.149E-09	4.464E-09	3.518E-09	2.919E-09	2.495E-09	2.048E-09	1.720E-09	1.470E-09
SSE	3.466E-08	3.747E-08	2.321E-08	1.233E-08	7.783E-09	5.434E-09	4.044E-09	3.144E-09	2.525E-09	2.078E-09	1.744E-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	4.740E-08	5.092E-08	3.654E-08	2.777E-08	2.816E-08	1.596E-08	5.717E-09	2.550E-09	1.475E-09	9.835E-10
SSW	3.582E-08	4.999E-08	4.193E-08	3.865E-08	3.081E-08	1.749E-08	6.342E-09	2.798E-09	1.621E-09	1.073E-09
SW	3.175E-08	6.648E-08	4.099E-08	2.403E-08	1.648E-08	9.896E-09	3.877E-09	1.814E-09	1.092E-09	7.292E-10
WSW	4.240E-08	9.729E-08	5.718E-08	3.197E-08	2.112E-08	1.124E-08	4.533E-09	2.083E-09	1.221E-09	8.158E-10
W	1.191E-07	1.282E-07	6.562E-08	3.696E-08	2.429E-08	1.165E-08	4.797E-09	2.389E-09	1.408E-09	9.452E-10
WNW	1.337E-07	2.255E-07	1.268E-07	7.432E-08	4.858E-08	2.255E-08	7.984E-09	3.523E-09	2.058E-09	1.371E-09
NW	1.874E-07	3.286E-07	1.745E-07	9.423E-08	5.967E-08	2.682E-08	9.221E-09	4.065E-09	2.376E-09	1.580E-09
NNW	9.192E-08	1.657E-07	1.489E-07	1.092E-07	7.255E-08	3.310E-08	1.099E-08	4.661E-09	2.678E-09	1.796E-09
N	7.043E-08	8.004E-08	6.020E-08	4.166E-08	3.023E-08	1.645E-08	8.697E-09	5.209E-09	3.187E-09	2.148E-09
NNE	2.749E-08	4.261E-08	3.421E-08	2.446E-08	1.945E-08	1.696E-08	7.078E-09	3.098E-09	1.802E-09	1.200E-09
NE	1.339E-08	2.656E-08	2.311E-08	1.715E-08	1.410E-08	1.653E-08	7.619E-09	3.392E-09	2.029E-09	1.383E-09
ENE	1.760E-08	2.710E-08	2.146E-08	1.512E-08	1.175E-08	1.150E-08	5.176E-09	2.309E-09	1.407E-09	9.492E-10
E	1.448E-08	2.785E-08	2.333E-08	1.685E-08	1.342E-08	1.358E-08	6.085E-09	2.646E-09	1.523E-09	1.029E-09
ESE	1.427E-08	2.644E-08	2.010E-08	1.441E-08	1.137E-08	1.117E-08	5.120E-09	2.289E-09	1.327E-09	8.760E-10
SE	3.799E-08	5.808E-08	4.495E-08	3.129E-08	2.280E-08	1.223E-08	5.990E-09	3.531E-09	2.446E-09	1.724E-09
SSE	8.273E-08	1.006E-07	7.173E-08	4.806E-08	3.613E-08	3.051E-08	1.273E-08	5.504E-09	3.165E-09	2.087E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2016
 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	3.188E-09	2.842E-09	2.784E-09	2.134E-09	1.129E-09	7.157E-10	4.921E-10	3.566E-10	2.683E-10	2.193E-10	1.971E-10	
SSW	1.118E-09	1.280E-09	1.636E-09	1.444E-09	8.341E-10	5.456E-10	3.809E-10	2.782E-10	2.630E-10	1.988E-10	1.556E-10	
SW	4.370E-11	2.622E-10	5.583E-10	5.783E-10	7.129E-10	3.885E-10	2.406E-10	1.633E-10	1.180E-10	8.919E-11	6.978E-11	
WSW	4.437E-11	2.662E-10	5.667E-10	1.160E-09	7.272E-10	3.956E-10	2.447E-10	1.659E-10	1.198E-10	9.052E-11	7.082E-11	
W	4.966E-11	2.613E-09	2.544E-09	1.709E-09	8.865E-10	4.682E-10	2.846E-10	1.905E-10	1.362E-10	1.022E-10	7.969E-11	
WNW	4.581E-10	7.128E-10	3.101E-09	2.527E-09	1.545E-09	7.879E-10	4.725E-10	3.184E-10	2.431E-10	1.896E-10	1.565E-10	
NW	3.471E-09	3.181E-09	3.233E-09	5.299E-09	3.322E-09	1.654E-09	9.766E-10	6.457E-10	4.640E-10	3.558E-10	2.878E-10	
NNW	4.243E-09	3.740E-09	3.607E-09	2.737E-09	2.545E-09	1.374E-09	8.500E-10	6.878E-10	4.993E-10	3.879E-10	3.185E-10	
N	5.693E-09	4.974E-09	4.736E-09	3.563E-09	1.860E-09	1.173E-09	8.049E-10	5.825E-10	4.379E-10	3.389E-10	2.683E-10	
NNE	1.265E-09	1.483E-09	1.932E-09	1.720E-09	9.979E-10	6.537E-10	4.567E-10	3.337E-10	2.520E-10	1.954E-10	1.547E-10	
NE	6.092E-11	3.655E-10	7.782E-10	8.061E-10	5.035E-10	3.376E-10	2.385E-10	1.752E-10	1.327E-10	1.030E-10	8.155E-11	
ENE	6.964E-10	7.854E-10	9.916E-10	8.709E-10	5.015E-10	3.277E-10	2.287E-10	1.670E-10	1.261E-10	9.774E-11	7.739E-11	
E	5.827E-11	3.496E-10	7.444E-10	7.710E-10	4.816E-10	3.229E-10	2.281E-10	1.676E-10	1.269E-10	9.850E-11	7.800E-11	
ESE	1.893E-10	4.574E-10	8.378E-10	8.366E-10	5.140E-10	3.430E-10	2.417E-10	1.773E-10	1.342E-10	1.042E-10	8.249E-11	
SE	1.190E-09	1.709E-09	2.549E-09	2.391E-09	1.425E-09	9.419E-10	6.608E-10	4.838E-10	3.658E-10	2.838E-10	2.247E-10	
SSE	4.645E-09	4.798E-09	5.587E-09	4.726E-09	2.663E-09	1.727E-09	1.201E-09	8.753E-10	6.603E-10	5.117E-10	4.052E-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	1.585E-10	1.049E-10	7.049E-11	4.037E-11	2.556E-11	1.870E-11	1.339E-11	1.005E-11	7.914E-12	6.322E-12	5.161E-12	
SSW	1.254E-10	8.257E-11	5.531E-11	3.148E-11	2.067E-11	1.487E-11	1.065E-11	8.000E-12	6.245E-12	4.988E-12	4.072E-12	
SW	5.625E-11	4.099E-11	2.816E-11	1.636E-11	1.031E-11	7.315E-12	5.328E-12	4.001E-12	3.111E-12	2.485E-12	2.028E-12	
WSW	5.816E-11	4.113E-11	2.821E-11	1.773E-11	1.073E-11	7.196E-12	5.315E-12	3.991E-12	3.103E-12	2.479E-12	2.023E-12	
W	6.415E-11	2.914E-11	3.765E-11	2.330E-11	1.451E-11	9.835E-12	7.047E-12	5.292E-12	4.114E-12	3.287E-12	2.683E-12	
WNW	1.372E-10	8.459E-11	6.095E-11	3.689E-11	2.375E-11	1.520E-11	1.082E-11	8.125E-12	6.390E-12	5.104E-12	4.166E-12	
NW	2.442E-10	1.392E-10	9.663E-11	6.026E-11	3.668E-11	2.459E-11	1.794E-11	1.347E-11	1.055E-11	8.424E-12	6.876E-12	
NNW	2.745E-10	1.647E-10	1.173E-10	7.052E-11	4.507E-11	3.011E-11	2.161E-11	1.590E-11	1.235E-11	9.867E-12	8.054E-12	
N	2.165E-10	1.030E-10	6.310E-11	3.356E-11	5.666E-11	3.789E-11	2.715E-11	2.039E-11	1.585E-11	1.267E-11	1.034E-11	
NNE	1.247E-10	1.757E-10	1.072E-10	5.646E-11	3.316E-11	2.222E-11	1.591E-11	1.193E-11	9.271E-12	7.402E-12	6.040E-12	
NE	6.568E-11	1.110E-10	6.901E-11	3.597E-11	2.198E-11	1.470E-11	1.056E-11	7.834E-12	6.092E-12	4.896E-12	3.996E-12	
ENE	6.238E-11	6.532E-11	4.669E-11	2.808E-11	1.789E-11	1.189E-11	8.390E-12	6.002E-12	4.673E-12	3.739E-12	3.057E-12	
E	6.282E-11	7.473E-11	5.456E-11	3.333E-11	2.125E-11	1.407E-11	9.874E-12	7.236E-12	5.515E-12	4.334E-12	3.535E-12	
ESE	6.645E-11	8.012E-11	5.866E-11	3.591E-11	2.292E-11	1.518E-11	1.066E-11	7.809E-12	5.951E-12	4.675E-12	3.763E-12	
SE	1.810E-10	8.581E-11	5.236E-11	2.759E-11	1.684E-11	1.158E-11	8.630E-12	1.488E-11	1.146E-11	9.099E-12	7.403E-12	
SSE	3.266E-10	3.120E-10	1.918E-10	9.868E-11	6.005E-11	4.021E-11	2.875E-11	2.153E-11	1.670E-11	1.332E-11	1.085E-11	

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***** 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	2.508E-09	1.169E-09	4.976E-10	2.749E-10	1.894E-10	1.015E-10	4.048E-11	1.841E-11	1.019E-11	6.364E-12		
SSW	1.472E-09	8.415E-10	3.837E-10	2.429E-10	1.572E-10	7.997E-11	3.197E-11	1.473E-11	8.089E-12	5.021E-12		
SW	5.014E-10	5.388E-10	2.491E-10	1.200E-10	7.052E-11	3.868E-11	1.629E-11	7.319E-12	4.041E-12	2.501E-12		
WSW	7.634E-10	6.759E-10	2.534E-10	1.218E-10	7.197E-11	3.917E-11	1.695E-11	7.386E-12	4.031E-12	2.495E-12		
W	2.188E-09	8.834E-10	2.959E-10	1.388E-10	8.061E-11	4.070E-11	2.258E-11	9.966E-12	5.345E-12	3.308E-12		
WNW	2.315E-09	1.427E-09	4.950E-10	2.443E-10	1.592E-10	8.578E-11	3.640E-11	1.573E-11	8.234E-12	5.138E-12		
NW	4.139E-09	3.020E-09	1.025E-09	4.747E-10	2.918E-10	1.436E-10	5.786E-11	2.515E-11	1.363E-11	8.480E-12		
NNW	3.250E-09	2.067E-09	9.248E-10	5.107E-10	3.228E-10	1.681E-10	6.961E-11	3.070E-11	1.618E-11	9.932E-12		
N	4.268E-09	1.933E-09	8.142E-10	4.415E-10	2.700E-10	1.105E-10	5.039E-11	3.860E-11	2.059E-11	1.275E-11		
NNE	1.738E-09	1.005E-09	4.600E-10	2.538E-10	1.557E-10	1.339E-10	5.676E-11	2.261E-11	1.205E-11	7.451E-12		
NE	6.989E-10	4.970E-10	2.396E-10	1.335E-10	8.202E-11	8.227E-11	3.709E-11	1.498E-11	7.949E-12	4.917E-12		
ENE	8.922E-10	5.064E-10	2.304E-10	1.270E-10	7.786E-11	5.639E-11	2.769E-11	1.209E-11	6.178E-12	3.763E-12		
E	6.685E-10	4.754E-10	2.292E-10	1.277E-10	7.845E-11	6.312E-11	3.268E-11	1.431E-11	7.334E-12	4.388E-12		
ESE	7.527E-10	5.097E-10	2.430E-10	1.351E-10	8.297E-11	6.754E-11	3.519E-11	1.543E-11	7.915E-12	4.715E-12		
SE	2.292E-09	1.425E-09	6.650E-10	3.683E-10	2.260E-10	9.210E-11	2.831E-11	1.180E-11	1.179E-11	9.170E-12		
SSE	5.029E-09	2.705E-09	1.211E-09	6.651E-10	4.077E-10	2.618E-10	1.022E-10	4.091E-11	2.175E-11	1.341E-11		

ERP ELEVATED STACK RELEASES - JAN-JUN 2016
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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	5.3E-08	5.3E-08	5.2E-08	2.7E-09
A	Site Boundary	SSW	.82	4.0E-08	4.0E-08	4.0E-08	1.6E-09
A	Site Boundary	SW	.97	5.2E-08	5.2E-08	5.2E-08	5.9E-10
A	Site Boundary	WSW	.93	6.1E-08	6.1E-08	6.1E-08	1.1E-09
A	Site Boundary	W	.91	1.6E-07	1.6E-07	1.5E-07	1.9E-09
A	Site Boundary	WNW	.94	1.9E-07	1.9E-07	1.9E-07	2.8E-09
A	Site Boundary	NW	.81	1.8E-07	1.8E-07	1.8E-07	3.1E-09
A	Site Boundary	NNW	.69	6.5E-08	6.5E-08	6.4E-08	3.6E-09
A	Site Boundary	N	.67	6.2E-08	6.2E-08	6.2E-08	4.7E-09
A	Site Boundary	NNE	.60	1.2E-08	1.2E-08	1.2E-08	1.6E-09
A	Site Boundary	NE	.62	4.1E-09	4.1E-09	4.1E-09	5.7E-10
A	Site Boundary	ENE	.59	7.5E-09	7.5E-09	7.4E-09	8.5E-10
A	Site Boundary	E	.53	1.1E-09	1.1E-09	1.1E-09	3.9E-10
A	Site Boundary	ESE	.54	2.6E-09	2.6E-09	2.6E-09	5.1E-10
A	Site Boundary	SE	.65	2.1E-08	2.1E-08	2.1E-08	2.2E-09
A	Site Boundary	SSE	.81	9.2E-08	9.1E-08	9.1E-08	5.5E-09
A	Nearest Res	SSW	3.00	4.2E-08	4.2E-08	4.1E-08	2.8E-10
A	Nearest Res	SW	1.70	7.4E-08	7.4E-08	7.3E-08	5.5E-10
A	Nearest Res	WSW	1.90	9.1E-08	9.1E-08	9.0E-08	4.4E-10
A	Nearest Res	W	1.00	1.6E-07	1.6E-07	1.6E-07	1.7E-09
A	Nearest Res	WNW	1.70	2.4E-07	2.4E-07	2.4E-07	1.2E-09
A	Nearest Res	NW	.90	2.3E-07	2.3E-07	2.3E-07	5.7E-09
A	Nearest Res	NNW	1.90	1.8E-07	1.8E-07	1.8E-07	1.5E-09
A	Nearest Res	N	2.90	5.4E-08	5.4E-08	5.2E-08	6.2E-10
A	Nearest Res	NNE	1.70	4.6E-08	4.5E-08	4.5E-08	8.3E-10
A	Nearest Res	ENE	1.70	2.9E-08	2.9E-08	2.9E-08	4.2E-10
A	Nearest Res	E	2.20	2.7E-08	2.7E-08	2.6E-08	2.8E-10
A	Nearest Res	ESE	2.80	1.9E-08	1.9E-08	1.8E-08	2.0E-10
A	Nearest Res	SE	3.00	3.9E-08	3.9E-08	3.8E-08	4.8E-10
A	Nearest Res	SSE	3.00	6.1E-08	6.1E-08	5.9E-08	8.8E-10
A	Nearest Cow	NNW	3.50	1.2E-07	1.2E-07	1.1E-07	5.0E-10
A	Nearest Garde	SSW	3.00	4.2E-08	4.2E-08	4.1E-08	2.8E-10
A	Nearest Garde	SW	2.20	5.1E-08	5.1E-08	4.9E-08	3.2E-10
A	Nearest Garde	NNW	3.00	1.3E-07	1.3E-07	1.3E-07	6.9E-10
A	Nearest Garde	ENE	1.70	2.9E-08	2.9E-08	2.9E-08	4.2E-10
A	Nearest Garde	ESE	2.30	2.2E-08	2.2E-08	2.2E-08	2.8E-10
A	Nearest Garde	SSE	3.00	6.1E-08	6.1E-08	5.9E-08	8.8E-10
A	MAXIMUM CHI/Q	S	1.00	5.7E-08	5.7E-08	5.6E-08	2.1E-09
A	MAXIMUM CHI/Q	SSW	1.50	5.5E-08	5.5E-08	5.4E-08	8.3E-10
A	MAXIMUM CHI/Q	SW	1.50	8.7E-08	8.7E-08	8.6E-08	7.1E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.3E-07	1.3E-07	1.3E-07	7.3E-10
A	MAXIMUM CHI/Q	W	1.00	1.6E-07	1.6E-07	1.6E-07	1.7E-09
A	MAXIMUM CHI/Q	WNW	1.50	3.0E-07	3.0E-07	2.9E-07	1.5E-09
A	MAXIMUM CHI/Q	NW	1.50	4.5E-07	4.5E-07	4.5E-07	3.3E-09
A	MAXIMUM CHI/Q	NNW	1.50	1.8E-07	1.8E-07	1.8E-07	2.5E-09
A	MAXIMUM CHI/Q	N	1.00	8.6E-08	8.6E-08	8.5E-08	3.6E-09
A	MAXIMUM CHI/Q	NNE	1.50	4.7E-08	4.7E-08	4.6E-08	1.0E-09
A	MAXIMUM CHI/Q	NE	1.50	2.9E-08	2.9E-08	2.9E-08	5.0E-10
A	MAXIMUM CHI/Q	ENE	1.50	3.0E-08	3.0E-08	3.0E-08	5.0E-10
A	MAXIMUM CHI/Q	E	1.50	3.1E-08	3.1E-08	3.1E-08	4.8E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.7E-08	2.7E-08	2.7E-08	5.1E-10
A	MAXIMUM CHI/Q	SE	1.50	6.4E-08	6.4E-08	6.4E-08	1.4E-09
A	MAXIMUM CHI/Q	SSE	1.50	1.1E-07	1.1E-07	1.1E-07	2.7E-09

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Atmospheric Diffusion Estimates

Elevated Releases

July-September 2016

ERP ELEVATED STACK RELEASES - JUL-SEP 2016
 NO DECCAY, 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	3.476E-10	2.263E-08	4.736E-08	5.629E-08	5.915E-08	5.190E-08	4.348E-08	3.630E-08	3.060E-08	3.501E-08	3.777E-08
SSW	2.034E-09	1.973E-08	4.910E-08	7.011E-08	8.139E-08	7.291E-08	6.159E-08	6.693E-08	6.816E-08	5.928E-08	5.233E-08
SW	6.771E-11	5.485E-09	4.664E-08	1.216E-07	2.352E-07	1.649E-07	1.213E-07	9.330E-08	7.446E-08	6.119E-08	5.149E-08
WSW	6.552E-11	6.749E-09	6.273E-08	1.591E-07	2.818E-07	1.817E-07	1.274E-07	9.495E-08	7.404E-08	5.976E-08	4.954E-08
W	1.904E-09	1.111E-07	3.186E-07	3.988E-07	3.792E-07	2.376E-07	1.631E-07	1.196E-07	9.205E-08	7.348E-08	6.034E-08
WNW	7.173E-10	4.285E-08	1.578E-07	2.640E-07	3.462E-07	2.129E-07	1.448E-07	1.102E-07	8.725E-08	6.901E-08	5.628E-08
NW	2.587E-10	2.040E-08	1.647E-07	4.114E-07	6.466E-07	3.761E-07	2.471E-07	1.789E-07	1.364E-07	1.069E-07	8.649E-08
NNW	2.228E-09	1.414E-08	6.585E-08	1.445E-07	2.529E-07	2.543E-07	2.279E-07	1.930E-07	1.625E-07	1.271E-07	1.027E-07
N	1.872E-08	5.087E-08	7.336E-08	8.190E-08	8.745E-08	8.210E-08	7.263E-08	6.201E-08	5.326E-08	4.620E-08	4.051E-08
NNE	1.742E-08	6.880E-08	7.780E-08	6.963E-08	6.020E-08	5.052E-08	4.203E-08	3.525E-08	2.995E-08	2.581E-08	2.254E-08
NE	5.779E-11	3.667E-09	1.302E-08	2.056E-08	2.433E-08	2.147E-08	1.783E-08	1.475E-08	1.233E-08	1.045E-08	8.987E-09
ENE	2.890E-11	1.781E-09	6.007E-09	1.004E-08	1.311E-08	1.219E-08	1.044E-08	8.809E-09	7.468E-09	6.399E-09	5.551E-09
E	4.609E-17	1.341E-10	3.153E-09	7.342E-09	1.107E-08	1.080E-08	9.512E-09	8.186E-09	7.047E-09	6.115E-09	5.360E-09
ESE	2.541E-16	3.499E-10	6.950E-09	1.515E-08	2.142E-08	2.019E-08	1.740E-08	1.475E-08	1.256E-08	1.080E-08	9.395E-09
SE	6.080E-16	5.654E-10	9.604E-09	1.951E-08	2.656E-08	2.513E-08	2.191E-08	1.879E-08	1.616E-08	1.402E-08	1.229E-08
SSE	1.357E-09	4.467E-09	1.524E-08	2.825E-08	3.874E-08	3.702E-08	3.243E-08	2.788E-08	2.400E-08	2.082E-08	1.826E-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	3.355E-08	2.271E-08	1.480E-08	8.523E-09	6.064E-09	4.642E-09	3.622E-09	2.940E-09	2.485E-09	2.139E-09	1.856E-09
SSW	4.827E-08	3.973E-08	2.608E-08	1.519E-08	1.121E-08	8.610E-09	6.738E-09	5.483E-09	4.607E-09	3.941E-09	3.429E-09
SW	4.784E-08	3.962E-08	2.644E-08	1.570E-08	1.160E-08	9.101E-09	7.468E-09	6.102E-09	5.121E-09	4.390E-09	3.827E-09
WSW	4.374E-08	2.785E-08	1.937E-08	1.167E-08	7.831E-09	5.758E-09	4.485E-09	3.634E-09	3.031E-09	2.583E-09	2.241E-09
W	5.068E-08	2.708E-08	1.853E-08	1.116E-08	7.723E-09	5.651E-09	4.376E-09	3.528E-09	2.929E-09	2.487E-09	2.150E-09
WNW	4.745E-08	2.577E-08	1.712E-08	1.004E-08	6.785E-09	5.008E-09	3.916E-09	3.175E-09	2.644E-09	2.249E-09	1.947E-09
NW	7.228E-08	3.806E-08	2.489E-08	1.428E-08	9.467E-09	6.897E-09	5.365E-09	4.324E-09	3.584E-09	3.038E-09	2.621E-09
NNW	8.619E-08	4.592E-08	2.942E-08	1.658E-08	1.107E-08	8.109E-09	6.316E-09	5.115E-09	4.276E-09	3.640E-09	3.147E-09
N	3.597E-08	2.289E-08	1.868E-08	1.417E-08	1.135E-08	9.169E-09	7.196E-09	5.852E-09	4.883E-09	4.165E-09	3.614E-09
NNE	2.460E-08	2.633E-08	1.685E-08	9.501E-09	6.362E-09	4.670E-09	3.632E-09	2.940E-09	2.449E-09	2.085E-09	1.807E-09
NE	9.209E-09	1.157E-08	7.513E-09	4.319E-09	2.928E-09	2.171E-09	1.730E-09	1.427E-09	1.218E-09	1.044E-09	9.083E-10
ENE	5.657E-09	8.401E-09	5.639E-09	3.377E-09	2.348E-09	1.773E-09	1.513E-09	1.307E-09	1.101E-09	9.468E-10	8.277E-10
E	5.646E-09	7.321E-09	4.806E-09	2.794E-09	1.904E-09	1.416E-09	1.113E-09	9.081E-10	7.841E-10	6.852E-10	5.960E-10
ESE	9.538E-09	1.288E-08	8.724E-09	5.278E-09	3.692E-09	2.799E-09	2.232E-09	1.844E-09	1.564E-09	1.352E-09	1.187E-09
SE	1.088E-08	6.829E-09	5.347E-09	3.825E-09	2.763E-09	2.137E-09	1.728E-09	1.440E-09	1.201E-09	1.024E-09	8.879E-10
SSE	1.972E-08	2.258E-08	1.450E-08	8.201E-09	5.494E-09	4.035E-09	3.140E-09	2.542E-09	2.118E-09	1.805E-09	1.564E-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	4.583E-08	5.529E-08	4.286E-08	3.391E-08	3.539E-08	2.160E-08	8.824E-09	4.613E-09	2.961E-09	2.137E-09
SSW	5.191E-08	7.511E-08	6.674E-08	6.442E-08	5.289E-08	3.556E-08	1.584E-08	8.556E-09	5.508E-09	3.949E-09
SW	7.080E-08	1.787E-07	1.217E-07	7.479E-08	5.301E-08	3.559E-08	1.627E-08	9.115E-09	6.118E-09	4.398E-09
WSW	9.311E-08	2.100E-07	1.289E-07	7.457E-08	5.042E-08	2.761E-08	1.168E-08	5.802E-09	3.647E-09	2.589E-09
W	3.081E-07	3.206E-07	1.656E-07	9.285E-08	6.066E-08	2.852E-08	1.127E-08	5.693E-09	3.542E-09	2.493E-09
WNW	1.795E-07	2.687E-07	1.491E-07	8.685E-08	5.678E-08	2.674E-08	1.017E-08	5.045E-09	3.184E-09	2.254E-09
NW	2.423E-07	4.741E-07	2.542E-07	1.373E-07	8.727E-08	3.981E-08	1.450E-08	6.970E-09	4.340E-09	3.045E-09
NNW	8.930E-08	2.295E-07	2.210E-07	1.577E-07	1.038E-07	4.754E-08	1.699E-08	8.183E-09	5.139E-09	3.646E-09
N	7.216E-08	8.384E-08	7.091E-08	5.307E-08	4.052E-08	2.393E-08	1.392E-08	8.961E-09	5.867E-09	4.174E-09
NNE	7.217E-08	5.799E-08	4.158E-08	2.989E-08	2.427E-08	2.173E-08	9.738E-09	4.706E-09	2.951E-09	2.090E-09
NE	1.429E-08	2.222E-08	1.757E-08	1.230E-08	9.502E-09	9.242E-09	4.410E-09	2.197E-09	1.434E-09	1.045E-09
ENE	6.861E-09	1.202E-08	1.025E-08	7.444E-09	5.841E-09	6.564E-09	3.422E-09	1.823E-09	1.287E-09	9.484E-10
E	4.344E-09	1.012E-08	9.326E-09	7.017E-09	5.690E-09	5.831E-09	2.845E-09	1.425E-09	9.193E-10	6.815E-10
ESE	9.126E-09	1.948E-08	1.709E-08	1.251E-08	9.863E-09	1.032E-08	5.339E-09	2.810E-09	1.848E-09	1.354E-09
SE	1.200E-08	2.436E-08	2.152E-08	1.610E-08	1.228E-08	7.070E-09	3.691E-09	2.140E-09	1.431E-09	1.026E-09
SSE	1.863E-08	3.565E-08	3.183E-08	2.390E-08	1.956E-08	1.835E-08	8.397E-09	4.066E-09	2.552E-09	1.809E-09

B301

ERP ELEVATED STACK RELEASES - JUL-SEP 2016
 2.260 DAY 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	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500	6.000	6.500	7.000	7.500	8.000	8.500	9.000	9.500	10.000																																																																																																																																																				
S	3.475E-10	2.262E-08	4.730E-08	5.619E-08	5.895E-08	5.166E-08	4.322E-08	3.604E-08	3.034E-08	3.468E-08	3.738E-08	2.034E-09	1.971E-08	4.904E-08	6.998E-08	8.114E-08	7.260E-08	6.127E-08	6.650E-08	6.766E-08	5.878E-08	5.183E-08	6.769E-11	5.481E-09	4.658E-08	1.213E-07	2.344E-07	1.642E-07	1.206E-07	9.266E-08	7.386E-08	6.062E-08	5.095E-08	6.549E-11	6.743E-09	6.264E-08	1.587E-07	2.807E-07	1.807E-07	1.265E-07	9.419E-08	7.335E-08	5.912E-08	4.895E-08	1.903E-09	1.110E-07	3.180E-07	3.978E-07	3.778E-07	2.364E-07	1.620E-07	1.187E-07	9.122E-08	7.271E-08	5.963E-08	7.170E-10	4.281E-08	1.576E-07	2.634E-07	3.450E-07	2.120E-07	1.440E-07	1.095E-07	8.658E-08	6.841E-08	5.573E-08	2.587E-10	2.039E-08	1.645E-07	4.107E-07	6.448E-07	3.746E-07	2.459E-07	1.778E-07	1.355E-07	1.060E-07	8.572E-08	2.227E-09	1.414E-08	6.578E-08	1.443E-07	2.523E-07	2.535E-07	2.270E-07	1.921E-07	1.616E-07	1.262E-07	1.019E-07	1.872E-08	5.085E-08	7.332E-08	8.181E-08	8.728E-08	8.187E-08	7.237E-08	6.175E-08	5.300E-08	4.594E-08	4.025E-08	1.741E-08	6.877E-08	7.775E-08	6.956E-08	6.010E-08	5.041E-08	4.191E-08	3.512E-08	2.983E-08	2.568E-08	2.241E-08	5.778E-11	3.665E-09	1.301E-08	2.052E-08	2.426E-08	2.138E-08	1.774E-08	1.466E-08	1.224E-08	1.036E-08	8.906E-09	2.889E-11	1.781E-09	5.999E-09	1.002E-08	1.305E-08	1.211E-08	1.036E-08	8.721E-09	7.381E-09	6.313E-09	5.467E-09	4.607E-17	1.339E-10	3.147E-09	7.320E-09	1.102E-08	1.074E-08	9.440E-09	8.112E-09	6.974E-09	6.042E-09	5.289E-09	2.540E-16	3.496E-10	6.938E-09	1.511E-08	2.133E-08	2.008E-08	1.728E-08	1.462E-08	1.243E-08	1.067E-08	9.273E-09	6.078E-16	5.651E-10	9.593E-09	1.947E-08	2.648E-08	2.502E-08	2.179E-08	1.866E-08	1.603E-08	1.389E-08	1.216E-08	1.357E-09	4.465E-09	1.522E-08	2.820E-08	3.860E-08	3.684E-08	3.223E-08	2.766E-08	2.378E-08	2.061E-08	1.804E-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	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000																																																																																																																																																										
S	3.316E-08	2.224E-08	1.438E-08	8.153E-09	5.693E-09	4.275E-09	3.282E-09	2.622E-09	2.178E-09	1.843E-09	1.575E-09	4.774E-08	3.872E-08	2.516E-08	1.435E-08	1.032E-08	7.719E-09	5.914E-09	4.714E-09	3.875E-09	3.250E-09	2.773E-09	4.729E-08	3.878E-08	2.567E-08	1.501E-08	1.089E-08	8.380E-09	6.737E-09	5.413E-09	4.472E-09	3.775E-09	3.242E-09	4.316E-08	2.731E-08	1.887E-08	1.123E-08	7.436E-09	5.399E-09	4.152E-09	3.322E-09	2.736E-09	2.304E-09	1.973E-09	5.002E-08	2.655E-08	1.805E-08	1.073E-08	7.329E-09	5.294E-09	4.048E-09	3.222E-09	2.642E-09	2.216E-09	1.892E-09	4.694E-08	2.536E-08	1.675E-08	9.727E-09	6.504E-09	4.752E-09	3.678E-09	2.952E-09	2.433E-09	2.049E-09	1.756E-09	7.157E-08	3.750E-08	2.440E-08	1.385E-08	9.094E-09	6.559E-09	5.052E-09	4.031E-09	3.308E-09	2.777E-09	2.372E-09	8.547E-08	4.535E-08	2.893E-08	1.617E-08	1.071E-08	7.780E-09	6.011E-09	4.829E-09	4.004E-09	3.381E-09	2.900E-09	3.572E-08	2.265E-08	1.842E-08	1.383E-08	1.093E-08	8.686E-09	6.738E-09	5.419E-09	4.475E-09	3.778E-09	3.245E-09	2.444E-08	2.608E-08	1.663E-08	9.322E-09	6.203E-09	4.525E-09	3.498E-09	2.813E-09	2.329E-09	1.971E-09	1.697E-09	9.117E-09	1.122E-08	7.199E-09	4.042E-09	2.678E-09	1.940E-09	1.508E-09	1.214E-09	1.008E-09	8.448E-10	7.194E-10	5.561E-09	8.094E-09	5.357E-09	3.119E-09	2.109E-09	1.549E-09	1.279E-09	1.070E-09	8.776E-10	7.354E-10	6.267E-10	5.567E-09	7.200E-09	4.702E-09	2.706E-09	1.826E-09	1.345E-09	1.047E-09	8.466E-10	7.247E-10	6.279E-10	5.413E-10	9.405E-09	1.261E-08	8.470E-09	5.042E-09	3.471E-09	2.590E-09	2.034E-09	1.656E-09	1.383E-09	1.179E-09	1.021E-09	1.075E-08	6.707E-09	5.220E-09	3.691E-09	2.636E-09	2.016E-09	1.612E-09	1.329E-09	1.097E-09	9.250E-10	7.935E-10	1.947E-08	2.219E-08	1.417E-08	7.927E-09	5.253E-09	3.817E-09	2.939E-09	2.355E-09	1.942E-09	1.637E-09	1.405E-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	4.577E-08	5.510E-08	4.260E-08	3.362E-08	3.502E-08	2.118E-08	8.443E-09	4.256E-09	2.641E-09	1.843E-09
SSW	5.183E-08	7.487E-08	6.638E-08	6.395E-08	5.237E-08	3.470E-08	1.496E-08	7.690E-09	4.737E-09	3.258E-09
SW	7.066E-08	1.780E-07	1.210E-07	7.419E-08	5.246E-08	3.485E-08	1.555E-08	8.391E-09	5.433E-09	3.784E-09
WSW	9.293E-08	2.092E-07	1.281E-07	7.389E-08	4.982E-08	2.708E-08	1.124E-08	5.443E-09	3.336E-09	2.309E-09
W	3.075E-07	3.194E-07	1.645E-07	9.201E-08	5.995E-08	2.799E-08	1.084E-08	5.338E-09	3.237E-09	2.222E-09
WNW	1.791E-07	2.677E-07	1.483E-07	8.619E-08	5.623E-08	2.633E-08	9.856E-09	4.789E-09	2.961E-09	2.054E-09
NW	2.419E-07	4.727E-07	2.530E-07	1.364E-07	8.650E-08	3.925E-08	1.408E-08	6.632E-09	4.047E-09	2.784E-09
NNW	8.918E-08	2.288E-07	2.201E-07	1.568E-07	1.030E-07	4.697E-08	1.658E-08	7.854E-09	4.852E-09	3.387E-09
N	7.210E-08	8.366E-08	7.066E-08	5.281E-08	4.026E-08	2.367E-08	1.356E-08	8.504E-09	5.436E-09	3.787E-09
NNE	7.212E-08	5.790E-08	4.146E-08	2.976E-08	2.413E-08	2.152E-08	9.561E-09	4.561E-09	2.824E-09	1.976E-09
NE	1.427E-08	2.215E-08	1.748E-08	1.222E-08	9.416E-09	8.965E-09	4.137E-09	1.964E-09	1.220E-09	8.468E-10
ENE	6.847E-09	1.196E-08	1.017E-08	7.357E-09	5.753E-09	6.315E-09	3.167E-09	1.591E-09	1.057E-09	7.373E-10
E	4.332E-09	1.007E-08	9.254E-09	6.944E-09	5.615E-09	5.727E-09	2.759E-09	1.354E-09	8.574E-10	6.245E-10
ESE	9.105E-09	1.939E-08	1.696E-08	1.239E-08	9.736E-08	1.006E-08	5.105E-09	2.603E-09	1.660E-09	1.181E-09
SE	1.198E-08	2.427E-08	2.140E-08	1.597E-08	1.215E-08	6.945E-09	3.562E-09	2.020E-09	1.322E-09	9.272E-10
SSE	1.860E-08	3.551E-08	3.163E-08	2.368E-08	1.933E-08	1.802E-08	8.125E-09	3.849E-09	2.364E-09	1.642E-09

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ERP ELEVATED STACK RELEASES - JUL-SEP 2016
 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	3.476E-10	2.243E-08	4.659E-08	5.549E-08	5.812E-08	5.066E-08	4.215E-08	3.495E-08	2.927E-08	3.344E-08	3.607E-08	
SSW	2.034E-09	1.956E-08	4.854E-08	6.953E-08	8.030E-08	7.138E-08	5.985E-08	6.473E-08	6.571E-08	5.688E-08	5.003E-08	
SW	6.771E-11	5.442E-09	4.643E-08	1.213E-07	2.329E-07	1.622E-07	1.186E-07	9.088E-08	7.226E-08	5.918E-08	4.966E-08	
WSW	6.551E-11	6.695E-09	6.242E-08	1.586E-07	2.783E-07	1.780E-07	1.240E-07	9.195E-08	7.139E-08	5.740E-08	4.742E-08	
W	1.904E-09	1.095E-07	3.149E-07	3.933E-07	3.719E-07	2.315E-07	1.580E-07	1.153E-07	8.839E-08	7.029E-08	5.753E-08	
WNW	7.172E-10	4.250E-08	1.565E-07	2.613E-07	3.408E-07	2.081E-07	1.407E-07	1.066E-07	8.413E-08	6.620E-08	5.369E-08	
NW	2.587E-10	2.024E-08	1.638E-07	4.089E-07	6.369E-07	3.667E-07	2.390E-07	1.719E-07	1.304E-07	1.015E-07	8.160E-08	
NNW	2.228E-09	1.403E-08	6.547E-08	1.441E-07	2.507E-07	2.507E-07	2.239E-07	1.890E-07	1.587E-07	1.235E-07	9.924E-08	
N	1.872E-08	5.042E-08	7.221E-08	8.083E-08	8.616E-08	8.056E-08	7.097E-08	6.035E-08	5.165E-08	4.466E-08	3.904E-08	
NNE	1.742E-08	6.818E-08	7.632E-08	6.833E-08	5.901E-08	4.933E-08	4.086E-08	3.413E-08	2.889E-08	2.481E-08	2.160E-08	
NE	5.779E-11	3.638E-09	1.291E-08	2.044E-08	2.403E-08	2.101E-08	1.730E-08	1.419E-08	1.177E-08	9.909E-09	8.466E-09	
ENE	2.889E-11	1.767E-09	5.951E-09	9.978E-09	1.294E-08	1.193E-08	1.012E-08	8.467E-09	7.121E-09	6.056E-09	5.217E-09	
E	4.608E-17	1.340E-10	3.151E-09	7.336E-09	1.097E-08	1.060E-08	9.260E-09	7.911E-09	6.766E-09	5.835E-09	5.087E-09	
ESE	2.541E-16	3.499E-10	6.946E-09	1.514E-08	2.120E-08	1.980E-08	1.691E-08	1.421E-08	1.201E-08	1.025E-08	8.866E-09	
SE	6.079E-16	5.653E-10	9.601E-09	1.950E-08	2.631E-08	2.469E-08	2.137E-08	1.822E-08	1.558E-08	1.345E-08	1.173E-08	
SSE	1.357E-09	4.432E-09	1.517E-08	2.819E-08	3.836E-08	3.636E-08	3.162E-08	2.700E-08	2.311E-08	1.994E-08	1.740E-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	3.194E-08	2.119E-08	1.336E-08	7.203E-09	4.763E-09	3.428E-09	2.549E-09	1.981E-09	1.609E-09	1.339E-09	1.126E-09	
SSW	4.604E-08	3.737E-08	2.370E-08	1.287E-08	8.793E-09	6.428E-09	4.829E-09	3.786E-09	3.070E-09	2.541E-09	2.144E-09	
SW	4.611E-08	3.773E-08	2.432E-08	1.343E-08	9.126E-09	6.671E-09	5.237E-09	4.122E-09	3.343E-09	2.776E-09	2.348E-09	
WSW	4.179E-08	2.605E-08	1.755E-08	9.984E-09	6.393E-09	4.516E-09	3.394E-09	2.662E-09	2.154E-09	1.786E-09	1.509E-09	
W	4.817E-08	2.540E-08	1.710E-08	9.686E-09	6.294E-09	4.424E-09	3.305E-09	2.579E-09	2.078E-09	1.715E-09	1.444E-09	
WNW	4.501E-08	2.367E-08	1.520E-08	8.321E-09	5.200E-09	3.622E-09	2.720E-09	2.129E-09	1.716E-09	1.416E-09	1.191E-09	
NW	6.776E-08	3.451E-08	2.183E-08	1.175E-08	7.355E-09	5.099E-09	3.813E-09	2.971E-09	2.386E-09	1.964E-09	1.648E-09	
NNW	8.281E-08	4.269E-08	2.641E-08	1.387E-08	8.551E-09	5.855E-09	4.307E-09	3.340E-09	2.698E-09	2.226E-09	1.870E-09	
N	3.458E-08	2.179E-08	1.773E-08	1.340E-08	1.044E-08	8.019E-09	6.092E-09	4.812E-09	3.909E-09	3.252E-09	2.757E-09	
NNE	2.362E-08	2.515E-08	1.554E-08	8.279E-09	5.280E-09	3.720E-09	2.791E-09	2.186E-09	1.768E-09	1.465E-09	1.237E-09	
NE	8.652E-09	1.087E-08	6.812E-09	3.667E-09	2.329E-09	1.632E-09	1.236E-09	9.772E-10	8.021E-10	6.644E-10	5.597E-10	
ENE	5.300E-09	7.944E-09	5.151E-09	2.871E-09	1.841E-09	1.295E-09	1.035E-09	8.441E-10	6.771E-10	5.563E-10	4.658E-10	
E	5.354E-09	6.973E-09	4.429E-09	2.407E-09	1.520E-09	1.060E-09	7.866E-10	6.098E-10	5.020E-10	4.208E-10	3.545E-10	
ESE	8.978E-09	1.225E-08	8.041E-09	4.560E-09	2.964E-09	2.110E-09	1.592E-09	1.251E-09	1.011E-09	8.370E-10	7.052E-10	
SE	1.034E-08	6.392E-09	4.967E-09	3.523E-09	2.521E-09	1.936E-09	1.555E-09	1.286E-09	1.049E-09	8.758E-10	7.444E-10	
SSE	1.879E-08	2.143E-08	1.329E-08	7.074E-09	4.471E-09	3.126E-09	2.329E-09	1.813E-09	1.458E-09	1.202E-09	1.010E-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	4.518E-08	5.422E-08	4.154E-08	3.248E-08	3.376E-08	2.010E-08	7.487E-09	3.432E-09	2.002E-09	1.340E-09	
SSW	5.143E-08	7.394E-08	6.488E-08	6.207E-08	5.058E-08	3.322E-08	1.346E-08	6.419E-09	3.811E-09	2.551E-09	
SW	7.059E-08	1.767E-07	1.192E-07	7.260E-08	5.117E-08	3.363E-08	1.394E-08	6.752E-09	4.144E-09	2.785E-09	
WSW	9.276E-08	2.071E-07	1.256E-07	7.194E-08	4.829E-08	2.577E-08	1.007E-08	4.568E-09	2.678E-09	1.792E-09	
W	3.041E-07	3.142E-07	1.605E-07	8.919E-08	5.784E-08	2.677E-08	9.826E-09	4.475E-09	2.595E-09	1.722E-09	
WNW	1.777E-07	2.641E-07	1.450E-07	8.372E-08	5.418E-08	2.465E-08	8.463E-09	3.682E-09	2.140E-09	1.421E-09	
NW	2.408E-07	4.661E-07	2.462E-07	1.312E-07	8.237E-08	3.627E-08	1.204E-08	5.186E-09	2.989E-09	1.972E-09	
NNW	8.898E-08	2.270E-07	2.171E-07	1.540E-07	1.003E-07	4.437E-08	1.429E-08	5.955E-09	3.372E-09	2.234E-09	
N	7.120E-08	8.249E-08	6.928E-08	5.147E-08	3.905E-08	2.282E-08	1.305E-08	7.894E-09	4.834E-09	3.264E-09	
NNE	7.096E-08	5.678E-08	4.043E-08	2.883E-08	2.330E-08	2.054E-08	8.561E-09	3.764E-09	2.200E-09	1.470E-09	
NE	1.420E-08	2.189E-08	1.705E-08	1.175E-08	8.962E-09	8.575E-09	3.772E-09	1.659E-09	9.843E-10	6.664E-10	
ENE	6.811E-09	1.183E-08	9.941E-09	7.100E-09	5.496E-09	6.115E-09	2.920E-09	1.336E-09	8.350E-10	5.586E-10	
E	4.340E-09	9.997E-09	9.078E-09	6.738E-09	5.408E-09	5.483E-09	2.462E-09	1.073E-09	6.192E-10	4.203E-10	
ESE	9.120E-09	1.923E-08	1.660E-08	1.197E-08	9.319E-09	6.624E-09	4.624E-09	2.131E-09	1.257E-09	8.399E-10	
SE	1.199E-08	2.408E-08	2.100E-08	1.552E-08	1.173E-08	6.636E-09	3.398E-09	1.940E-09	1.272E-09	8.784E-10	
SSE	1.857E-08	3.521E-08	3.104E-08	2.301E-08	1.867E-08	1.723E-08	7.299E-09	3.166E-09	1.825E-09	1.207E-09	

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ERP ELEVATED STACK RELEASES - JUL-SEP 2016
 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	2.873E-09	2.479E-09	2.317E-09	1.720E-09	8.895E-10	5.592E-10	3.828E-10	2.768E-10	2.080E-10	1.667E-10	1.522E-10
SSW	1.640E-09	1.790E-09	2.196E-09	1.904E-09	1.088E-09	7.094E-10	4.944E-10	3.608E-10	3.385E-10	2.560E-10	2.004E-10
SW	5.812E-10	8.035E-10	1.172E-09	1.091E-09	1.197E-09	6.563E-10	4.088E-10	2.785E-10	2.017E-10	1.527E-10	1.196E-10
WSW	5.865E-10	8.349E-10	1.239E-09	2.153E-09	1.333E-09	7.235E-10	4.472E-10	3.031E-10	2.188E-10	1.654E-10	1.294E-10
W	1.860E-09	5.865E-09	4.926E-09	3.264E-09	1.505E-09	8.110E-10	4.996E-10	3.380E-10	2.438E-10	1.842E-10	1.443E-10
WNW	2.101E-09	1.871E-09	3.331E-09	2.779E-09	1.551E-09	8.005E-10	4.854E-10	3.311E-10	2.586E-10	2.038E-10	1.700E-10
NW	2.206E-09	2.499E-09	3.167E-09	6.433E-09	4.174E-09	2.078E-09	1.224E-09	8.069E-10	5.774E-10	4.404E-10	3.542E-10
NNW	1.931E-09	2.192E-09	2.782E-09	2.449E-09	2.618E-09	1.427E-09	8.987E-10	7.506E-10	5.566E-10	4.439E-10	3.754E-10
N	7.276E-09	6.080E-09	5.407E-09	3.871E-09	1.947E-09	1.211E-09	8.244E-10	5.943E-10	4.459E-10	3.448E-10	2.730E-10
NNE	7.976E-09	6.256E-09	4.974E-09	3.238E-09	1.501E-09	9.016E-10	6.026E-10	4.302E-10	3.212E-10	2.478E-10	1.962E-10
NE	5.459E-10	5.914E-10	7.207E-10	6.230E-10	3.555E-10	2.316E-10	1.614E-10	1.178E-10	8.888E-11	6.889E-11	5.455E-11
ENE	2.723E-10	2.918E-10	3.520E-10	3.029E-10	1.724E-10	1.122E-10	7.813E-11	5.699E-11	4.302E-11	3.334E-11	2.640E-11
E	1.309E-11	7.855E-11	1.673E-10	1.733E-10	1.082E-10	7.256E-11	5.125E-11	3.765E-11	2.852E-11	2.213E-11	1.753E-11
ESE	3.273E-11	1.964E-10	4.182E-10	4.331E-10	2.705E-10	1.814E-10	1.281E-10	9.413E-11	7.129E-11	5.533E-11	4.382E-11
SE	5.106E-11	3.064E-10	6.523E-10	6.757E-10	4.220E-10	2.830E-10	1.999E-10	1.468E-10	1.112E-10	8.632E-11	6.836E-11
SSE	3.181E-10	5.667E-10	9.374E-10	9.092E-10	5.511E-10	3.661E-10	2.575E-10	1.888E-10	1.428E-10	1.108E-10	8.775E-11
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	1.225E-10	9.748E-11	6.862E-11	4.087E-11	2.613E-11	1.637E-11	1.171E-11	8.786E-12	7.276E-12	5.815E-12	4.749E-12
SSW	1.624E-10	1.219E-10	8.451E-11	4.958E-11	3.016E-11	2.181E-11	1.563E-11	1.174E-11	9.226E-12	7.370E-12	6.015E-12
SW	9.773E-11	1.176E-10	8.874E-11	5.561E-11	3.573E-11	2.147E-11	1.509E-11	1.133E-11	8.812E-12	7.039E-12	5.746E-12
WSW	1.056E-10	8.397E-11	5.915E-11	3.693E-11	2.235E-11	1.498E-11	1.085E-11	8.151E-12	6.338E-12	5.062E-12	4.132E-12
W	1.162E-10	5.258E-11	7.418E-11	4.699E-11	2.821E-11	1.928E-11	1.382E-11	1.038E-11	8.067E-12	6.444E-12	5.260E-12
WNW	1.494E-10	9.410E-11	6.848E-11	4.187E-11	2.657E-11	1.659E-11	1.199E-11	9.007E-12	7.099E-12	5.670E-12	4.628E-12
NW	2.991E-10	1.676E-10	1.152E-10	7.252E-11	4.426E-11	2.963E-11	2.157E-11	1.620E-11	1.269E-11	1.014E-11	8.273E-12
NNW	3.332E-10	2.186E-10	1.619E-10	1.001E-10	6.414E-11	4.253E-11	2.919E-11	2.072E-11	1.619E-11	1.294E-11	1.056E-11
N	2.204E-10	1.050E-10	6.440E-11	3.439E-11	9.725E-11	5.662E-11	4.052E-11	3.043E-11	2.366E-11	1.890E-11	1.543E-11
NNE	1.586E-10	2.284E-10	1.391E-10	7.072E-11	4.288E-11	2.874E-11	2.058E-11	1.544E-11	1.200E-11	9.581E-12	7.817E-12
NE	4.397E-11	4.876E-11	2.972E-11	1.518E-11	9.226E-12	6.183E-12	4.831E-12	3.597E-12	2.795E-12	2.252E-12	1.838E-12
ENE	2.128E-11	2.052E-11	1.440E-11	8.540E-12	5.430E-12	3.618E-12	2.564E-12	1.815E-12	1.410E-12	1.126E-12	9.199E-13
E	1.412E-11	2.223E-11	1.692E-11	1.066E-11	6.849E-12	4.526E-12	3.165E-12	2.308E-12	1.753E-12	1.177E-12	9.608E-13
ESE	3.529E-11	4.604E-11	3.411E-11	2.107E-11	1.347E-11	8.916E-12	6.249E-12	4.572E-12	3.479E-12	2.729E-12	2.193E-12
SE	5.505E-11	2.607E-11	1.588E-11	8.341E-12	5.084E-12	3.502E-12	2.633E-12	5.640E-12	4.332E-12	3.432E-12	2.789E-12
SSE	7.069E-11	1.048E-10	6.522E-11	3.406E-11	2.082E-11	1.393E-11	9.943E-12	7.435E-12	5.763E-12	4.592E-12	3.742E-12

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***** RELATIVE DEPOSITION PER UNIT AREA (M**-2) BY DOWNWIND SECTORS *****											
SEGMENT BOUNDARIES IN MILES											
DIRECTION	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
FROM SITE											
S	2.088E-09	9.273E-10	3.874E-10	2.119E-10	1.455E-10	9.021E-11	4.049E-11	1.711E-11	9.047E-12	5.853E-12	
SSW	1.976E-09	1.101E-09	4.983E-10	3.134E-10	2.028E-10	1.143E-10	4.871E-11	2.157E-11	1.189E-11	7.418E-12	
SW	1.054E-09	9.329E-10	4.227E-10	2.050E-10	1.213E-10	1.003E-10	5.414E-11	2.272E-11	1.145E-11	7.085E-12	
WSW	1.555E-09	1.244E-09	4.633E-10	2.225E-10	1.312E-10	7.774E-11	3.539E-11	1.530E-11	8.233E-12	5.096E-12	
W	4.396E-09	1.588E-09	5.180E-10	2.480E-10	1.457E-10	7.631E-11	4.469E-11	1.948E-11	1.048E-11	6.486E-12	
WNW	2.761E-09	1.490E-09	5.077E-10	2.584E-10	1.724E-10	9.501E-11	4.098E-11	1.741E-11	9.133E-12	5.708E-12	
NW	4.470E-09	3.744E-09	1.285E-09	5.908E-10	3.593E-10	1.735E-10	6.946E-11	3.031E-11	1.640E-11	1.020E-11	
NNW	2.503E-09	2.051E-09	9.804E-10	5.691E-10	3.801E-10	2.189E-10	9.787E-11	4.296E-11	2.142E-11	1.302E-11	
N	4.874E-09	2.048E-09	8.354E-10	4.498E-10	2.748E-10	1.126E-10	6.900E-11	6.102E-11	3.073E-11	1.902E-11	
NNE	4.487E-09	1.621E-09	6.134E-10	3.244E-10	1.976E-10	1.732E-10	7.353E-11	2.925E-11	1.560E-11	9.644E-12	
NE	6.486E-10	3.599E-10	1.627E-10	8.952E-11	5.488E-11	3.924E-11	1.577E-11	6.454E-12	3.644E-12	2.260E-12	
ENE	3.168E-10	1.746E-10	7.876E-11	4.332E-11	2.656E-11	1.797E-11	8.461E-12	3.680E-12	1.875E-12	1.134E-12	
E	1.502E-10	1.068E-10	5.149E-11	2.869E-11	1.763E-11	1.807E-11	1.036E-11	4.601E-12	2.341E-12	1.268E-12	
ESE	3.755E-10	2.671E-10	1.287E-10	7.173E-11	4.407E-11	3.835E-11	2.059E-11	9.065E-12	4.635E-12	2.753E-12	
SE	5.858E-10	4.166E-10	2.008E-10	1.119E-10	6.875E-11	2.798E-11	8.570E-12	3.576E-12	4.283E-12	3.461E-12	
SSE	8.425E-10	5.485E-10	2.590E-10	1.438E-10	8.826E-11	7.964E-11	3.510E-11	1.417E-11	7.515E-12	4.624E-12	

ERP ELEVATED STACK RELEASES - JUL-SEP 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	5.0E-08	5.0E-08	4.9E-08	2.2E-09
A	Site Boundary	SSW	.82	5.6E-08	5.6E-08	5.6E-08	2.2E-09
A	Site Boundary	SW	.97	1.1E-07	1.1E-07	1.1E-07	1.1E-09
A	Site Boundary	WSW	.93	1.3E-07	1.3E-07	1.3E-07	1.5E-09
A	Site Boundary	W	.91	3.8E-07	3.8E-07	3.8E-07	3.6E-09
A	Site Boundary	WNW	.94	2.4E-07	2.4E-07	2.4E-07	3.1E-09
A	Site Boundary	NW	.81	2.2E-07	2.2E-07	2.2E-07	3.1E-09
A	Site Boundary	NNW	.69	4.5E-08	4.5E-08	4.5E-08	2.6E-09
A	Site Boundary	N	.67	6.5E-08	6.5E-08	6.4E-08	5.5E-09
A	Site Boundary	NNE	.60	7.3E-08	7.3E-08	7.2E-08	5.6E-09
A	Site Boundary	NE	.62	7.4E-09	7.4E-09	7.3E-09	6.5E-10
A	Site Boundary	ENE	.59	2.8E-09	2.8E-09	2.8E-09	3.1E-10
A	Site Boundary	E	.53	2.3E-10	2.3E-10	2.3E-10	8.7E-11
A	Site Boundary	ESE	.54	7.2E-10	7.2E-10	7.2E-10	2.3E-10
A	Site Boundary	SE	.65	4.6E-09	4.6E-09	4.6E-09	5.1E-10
A	Site Boundary	SSE	.81	1.9E-08	1.9E-08	1.9E-08	9.7E-10
A	Nearest Res	SSW	3.00	6.7E-08	6.7E-08	6.5E-08	3.6E-10
A	Nearest Res	SW	1.70	2.0E-07	2.0E-07	2.0E-07	9.2E-10
A	Nearest Res	WSW	1.90	2.0E-07	2.0E-07	1.9E-07	8.1E-10
A	Nearest Res	W	1.00	4.0E-07	4.0E-07	3.9E-07	3.3E-09
A	Nearest Res	WNW	1.70	2.8E-07	2.8E-07	2.8E-07	1.2E-09
A	Nearest Res	NW	.90	3.1E-07	3.1E-07	3.1E-07	6.7E-09
A	Nearest Res	NNW	1.90	2.6E-07	2.6E-07	2.5E-07	1.6E-09
A	Nearest Res	N	2.90	6.4E-08	6.4E-08	6.2E-08	6.3E-10
A	Nearest Res	NNE	1.70	5.6E-08	5.6E-08	5.5E-08	1.2E-09
A	Nearest Res	ENE	1.70	1.3E-08	1.3E-08	1.3E-08	1.4E-10
A	Nearest Res	E	2.20	1.0E-08	1.0E-08	1.0E-08	6.3E-11
A	Nearest Res	ESE	2.80	1.6E-08	1.6E-08	1.5E-08	1.1E-10
A	Nearest Res	SE	3.00	1.9E-08	1.9E-08	1.8E-08	1.5E-10
A	Nearest Res	SSE	3.00	2.8E-08	2.8E-08	2.7E-08	1.9E-10
A	Nearest Cow	NNW	3.50	1.6E-07	1.6E-07	1.6E-07	5.6E-10
A	Nearest Garde	SSW	3.00	6.7E-08	6.7E-08	6.5E-08	3.6E-10
A	Nearest Garde	SW	2.20	1.4E-07	1.4E-07	1.4E-07	5.4E-10
A	Nearest Garde	NNW	3.00	1.9E-07	1.9E-07	1.9E-07	7.5E-10
A	Nearest Garde	ENE	1.70	1.3E-08	1.3E-08	1.3E-08	1.4E-10
A	Nearest Garde	ESE	2.30	1.9E-08	1.8E-08	1.8E-08	1.5E-10
A	Nearest Garde	SSE	3.00	2.8E-08	2.8E-08	2.7E-08	1.9E-10
A	MAXIMUM CHI/Q	S	1.50	5.9E-08	5.9E-08	5.8E-08	8.9E-10
A	MAXIMUM CHI/Q	SSW	1.50	8.1E-08	8.1E-08	8.0E-08	1.1E-09
A	MAXIMUM CHI/Q	SW	1.50	2.4E-07	2.3E-07	2.3E-07	1.2E-09
A	MAXIMUM CHI/Q	WSW	1.50	2.8E-07	2.8E-07	2.8E-07	1.3E-09
A	MAXIMUM CHI/Q	W	1.00	4.0E-07	4.0E-07	3.9E-07	3.3E-09
A	MAXIMUM CHI/Q	WNW	1.50	3.5E-07	3.5E-07	3.4E-07	1.6E-09
A	MAXIMUM CHI/Q	NW	1.50	6.5E-07	6.4E-07	6.4E-07	4.2E-09
A	MAXIMUM CHI/Q	NNW	2.00	2.5E-07	2.5E-07	2.5E-07	1.4E-09
A	MAXIMUM CHI/Q	N	1.50	8.7E-08	8.7E-08	8.6E-08	1.9E-09
A	MAXIMUM CHI/Q	NNE	.75	7.8E-08	7.8E-08	7.6E-08	5.0E-09
A	MAXIMUM CHI/Q	NE	1.50	2.4E-08	2.4E-08	2.4E-08	3.6E-10
A	MAXIMUM CHI/Q	ENE	1.50	1.3E-08	1.3E-08	1.3E-08	1.7E-10
A	MAXIMUM CHI/Q	E	1.50	1.1E-08	1.1E-08	1.1E-08	1.1E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.1E-08	2.1E-08	2.1E-08	2.7E-10
A	MAXIMUM CHI/Q	SE	1.50	2.7E-08	2.6E-08	2.6E-08	4.2E-10
A	MAXIMUM CHI/Q	SSE	1.50	3.9E-08	3.9E-08	3.8E-08	5.5E-10

B305

Atmospheric Diffusion Estimates

Elevated Releases

October-December 2016

ERP ELEVATED STACK RELEASES - OCT-DEC 2016
 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	2.362E-10	1.469E-08	3.812E-08	5.103E-08	5.638E-08	4.998E-08	4.216E-08	3.542E-08	3.003E-08	3.547E-08	3.958E-08
SSW	3.387E-11	2.757E-09	1.209E-08	2.106E-08	2.804E-08	2.690E-08	2.385E-08	2.869E-08	3.301E-08	3.049E-08	2.843E-08
SW	2.016E-16	2.616E-10	1.178E-08	3.728E-08	8.120E-08	5.881E-08	4.424E-08	3.462E-08	2.800E-08	2.326E-08	1.975E-08
WSW	6.775E-11	4.879E-09	2.174E-08	4.628E-08	8.869E-08	5.915E-08	4.283E-08	3.287E-08	2.632E-08	2.175E-08	1.842E-08
W	9.344E-14	1.400E-08	7.424E-08	9.825E-08	1.021E-07	6.730E-08	4.818E-08	3.659E-08	2.902E-08	2.377E-08	1.997E-08
WNW	3.674E-10	2.520E-08	1.358E-07	2.285E-07	2.715E-07	1.664E-07	1.139E-07	8.879E-08	7.265E-08	5.829E-08	4.816E-08
NW	1.911E-10	1.529E-08	1.200E-07	2.952E-07	4.937E-07	2.938E-07	1.966E-07	1.453E-07	1.129E-07	8.941E-08	7.301E-08
NNW	1.161E-10	8.130E-09	4.328E-08	8.815E-08	1.414E-07	1.421E-07	1.336E-07	1.210E-07	1.100E-07	8.699E-08	7.101E-08
N	2.673E-10	1.712E-08	4.096E-08	5.201E-08	5.825E-08	5.541E-08	4.949E-08	4.259E-08	3.686E-08	3.221E-08	2.843E-08
NNE	1.000E-10	6.462E-09	2.636E-08	4.200E-08	5.047E-08	4.601E-08	3.969E-08	3.409E-08	2.956E-08	2.594E-08	2.305E-08
NE	1.514E-10	8.487E-09	2.098E-08	2.766E-08	3.079E-08	2.772E-08	2.374E-08	2.024E-08	1.739E-08	1.512E-08	1.330E-08
ENE	2.583E-16	3.330E-10	6.545E-09	1.445E-08	2.117E-08	2.048E-08	1.796E-08	1.541E-08	1.323E-08	1.145E-08	1.000E-08
E	3.585E-16	3.982E-10	7.130E-09	1.488E-08	2.086E-08	2.003E-08	1.763E-08	1.523E-08	1.317E-08	1.148E-08	1.010E-08
ESE	1.369E-15	1.050E-09	1.681E-08	3.299E-08	4.265E-08	3.896E-08	3.318E-08	2.803E-08	2.387E-08	2.058E-08	1.797E-08
SE	2.377E-15	1.749E-09	2.717E-08	5.243E-08	6.680E-08	6.058E-08	5.128E-08	4.303E-08	3.639E-08	3.115E-08	2.699E-08
SSE	1.883E-10	1.384E-08	5.096E-08	7.842E-08	9.138E-08	8.114E-08	6.809E-08	5.687E-08	4.794E-08	4.094E-08	3.544E-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	3.550E-08	2.470E-08	1.615E-08	9.343E-09	6.648E-09	5.081E-09	3.968E-09	3.223E-09	2.722E-09	2.341E-09	2.033E-09
SSW	2.793E-08	2.604E-08	1.720E-08	1.009E-08	7.355E-09	5.582E-09	4.378E-09	3.569E-09	2.994E-09	2.564E-09	2.233E-09
SW	1.871E-08	1.608E-08	1.074E-08	6.383E-09	4.682E-09	3.646E-09	2.957E-09	2.413E-09	2.025E-09	1.736E-09	1.513E-09
WSW	1.711E-08	1.384E-08	1.078E-08	7.237E-09	4.972E-09	3.724E-09	2.944E-09	2.415E-09	2.037E-09	1.753E-09	1.534E-09
W	1.711E-08	9.865E-09	7.599E-09	5.474E-09	4.318E-09	3.238E-09	2.549E-09	2.084E-09	1.752E-09	1.504E-09	1.313E-09
WNW	4.142E-08	2.459E-08	1.746E-08	1.130E-08	7.961E-09	6.066E-09	4.888E-09	4.045E-09	3.411E-09	2.926E-09	2.552E-09
NW	6.176E-08	3.417E-08	2.321E-08	1.402E-08	9.439E-09	6.960E-09	5.527E-09	4.510E-09	3.764E-09	3.211E-09	2.787E-09
NNW	6.071E-08	3.648E-08	2.260E-08	1.305E-08	8.866E-09	6.581E-09	5.212E-09	4.280E-09	3.642E-09	3.133E-09	2.725E-09
N	2.540E-08	1.661E-08	1.428E-08	1.236E-08	1.128E-08	9.796E-09	7.777E-09	6.371E-09	5.348E-09	4.586E-09	3.999E-09
NNE	2.739E-08	5.324E-08	3.480E-08	2.021E-08	1.380E-08	1.029E-08	8.102E-09	6.627E-09	5.572E-09	4.784E-09	4.175E-09
NE	1.495E-08	3.164E-08	2.087E-08	1.227E-08	8.452E-09	6.343E-09	5.106E-09	4.241E-09	3.619E-09	3.114E-09	2.724E-09
ENE	1.040E-08	1.315E-08	8.678E-09	5.083E-09	3.483E-09	2.601E-09	2.157E-09	1.823E-09	1.528E-09	1.309E-09	1.140E-09
E	1.078E-08	1.472E-08	9.753E-09	5.740E-09	3.945E-09	2.952E-09	2.331E-09	1.911E-09	1.670E-09	1.474E-09	1.285E-09
ESE	1.860E-08	2.425E-08	1.626E-08	9.697E-09	6.716E-09	5.052E-09	4.004E-09	3.291E-09	2.777E-09	2.392E-09	2.093E-09
SE	2.367E-08	1.440E-08	1.097E-08	7.670E-09	5.541E-09	4.318E-09	3.532E-09	2.986E-09	2.497E-09	2.134E-09	1.854E-09
SSE	3.689E-08	3.552E-08	2.258E-08	1.260E-08	8.360E-09	6.093E-09	4.711E-09	3.793E-09	3.146E-09	2.668E-09	2.304E-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	3.865E-08	5.235E-08	4.155E-08	3.364E-08	3.685E-08	2.330E-08	9.658E-09	5.054E-09	3.245E-09	2.340E-09
SSW	1.401E-08	2.599E-08	2.660E-08	3.082E-08	2.886E-08	2.253E-08	1.046E-08	5.573E-09	3.581E-09	2.569E-09
SW	2.055E-08	6.149E-08	4.428E-08	2.809E-08	2.041E-08	1.429E-08	6.596E-09	3.646E-09	2.421E-09	1.739E-09
WSW	2.890E-08	6.614E-08	4.320E-08	2.645E-08	1.892E-08	1.321E-08	7.018E-09	3.745E-09	2.422E-09	1.756E-09
W	7.152E-08	8.579E-08	4.864E-08	2.918E-08	2.004E-08	1.047E-08	5.433E-09	3.250E-09	2.090E-09	1.507E-09
WNW	1.524E-07	2.152E-07	1.179E-07	7.179E-08	4.867E-08	2.516E-08	1.119E-08	6.100E-09	4.044E-09	2.931E-09
NW	1.746E-07	3.607E-07	2.020E-07	1.132E-07	7.370E-08	3.543E-08	1.403E-08	7.048E-09	4.516E-09	3.218E-09
NNW	5.541E-08	1.299E-07	1.308E-07	1.044E-07	7.193E-08	3.510E-08	1.331E-08	6.643E-09	4.303E-09	3.132E-09
N	4.058E-08	5.560E-08	4.831E-08	3.672E-08	2.843E-08	1.753E-08	1.231E-08	9.383E-09	6.383E-09	4.594E-09
NNE	2.889E-08	4.661E-08	3.913E-08	2.947E-08	2.551E-08	3.930E-08	2.060E-08	1.035E-08	6.646E-09	4.792E-09
NE	2.118E-08	2.873E-08	2.340E-08	1.734E-08	1.445E-08	2.314E-08	1.248E-08	6.410E-09	4.251E-09	3.119E-09
ENE	8.680E-09	1.937E-08	1.761E-08	1.317E-08	1.058E-08	1.055E-08	5.171E-09	2.658E-09	1.806E-09	1.311E-09
E	9.080E-09	1.916E-08	1.731E-08	1.311E-08	1.076E-08	1.164E-08	5.834E-09	2.968E-09	1.939E-09	1.462E-09
ESE	2.050E-08	3.886E-08	3.266E-08	2.380E-08	1.898E-08	1.944E-08	9.830E-09	5.077E-09	3.299E-09	2.395E-09
SE	3.274E-08	6.084E-08	5.046E-08	3.629E-08	2.699E-08	1.493E-08	7.457E-09	4.330E-09	2.956E-09	2.138E-09
SSE	5.492E-08	8.395E-08	6.708E-08	4.783E-08	3.761E-08	3.007E-08	1.293E-08	6.145E-09	3.809E-09	2.675E-09

B307

ERP ELEVATED STACK RELEASES -- OCT-DEC 2016
 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	2.362E-10	1.469E-08	3.809E-08	5.096E-08	5.624E-08	4.980E-08	4.196E-08	3.521E-08	2.982E-08	3.518E-08	3.920E-08
SSW	3.386E-11	2.755E-09	1.208E-08	2.102E-08	2.794E-08	2.675E-08	2.367E-08	2.841E-08	3.260E-08	3.006E-08	2.797E-08
SW	2.016E-16	2.614E-10	1.176E-08	3.718E-08	8.086E-08	5.847E-08	4.391E-08	3.431E-08	2.771E-08	2.298E-08	1.948E-08
WSW	6.772E-11	4.876E-09	2.171E-08	4.621E-08	8.847E-08	5.896E-08	4.265E-08	3.270E-08	2.616E-08	2.160E-08	1.827E-08
W	9.341E-14	1.399E-08	7.412E-08	9.804E-08	1.018E-07	6.701E-08	4.792E-08	3.636E-08	2.880E-08	2.357E-08	1.977E-08
WNW	3.673E-10	2.518E-08	1.356E-07	2.281E-07	2.707E-07	1.658E-07	1.133E-07	8.824E-08	7.210E-08	5.778E-08	4.768E-08
NW	1.911E-10	1.528E-08	1.199E-07	2.947E-07	4.921E-07	2.925E-07	1.955E-07	1.443E-07	1.120E-07	8.855E-08	7.222E-08
NNW	1.160E-10	8.125E-09	4.324E-08	8.802E-08	1.411E-07	1.416E-07	1.330E-07	1.205E-07	1.093E-07	8.639E-08	7.046E-08
N	2.672E-10	1.712E-08	4.093E-08	5.196E-08	5.814E-08	5.528E-08	4.935E-08	4.244E-08	3.671E-08	3.205E-08	2.828E-08
NNE	9.999E-11	6.460E-09	2.634E-08	4.195E-08	5.037E-08	4.589E-08	3.954E-08	3.394E-08	2.940E-08	2.578E-08	2.289E-08
NE	1.513E-10	8.484E-09	2.097E-08	2.763E-08	3.072E-08	2.763E-08	2.364E-08	2.013E-08	1.728E-08	1.500E-08	1.319E-08
ENE	2.582E-16	3.327E-10	6.535E-09	1.442E-08	2.108E-08	2.037E-08	1.784E-08	1.529E-08	1.310E-08	1.132E-08	9.884E-09
E	3.584E-16	3.979E-10	7.120E-09	1.485E-08	2.079E-08	1.993E-08	1.751E-08	1.510E-08	1.303E-08	1.134E-08	9.966E-09
ESE	1.369E-15	1.049E-09	1.680E-08	3.294E-08	4.253E-08	3.880E-08	3.301E-08	2.785E-08	2.368E-08	2.038E-08	1.778E-08
SE	2.376E-15	1.748E-09	2.714E-08	5.236E-08	6.665E-08	6.039E-08	5.107E-08	4.282E-08	3.617E-08	3.093E-08	2.678E-08
SSE	1.883E-10	1.383E-08	5.091E-08	7.831E-08	9.115E-08	8.083E-08	6.775E-08	5.651E-08	4.758E-08	4.058E-08	3.507E-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	3.513E-08	2.427E-08	1.577E-08	9.015E-09	6.332E-09	4.777E-09	3.686E-09	2.957E-09	2.466E-09	2.094E-09	1.797E-09
SSW	2.742E-08	2.535E-08	1.661E-08	9.578E-09	6.869E-09	5.131E-09	3.961E-09	3.179E-09	2.626E-09	2.215E-09	1.901E-09
SW	1.843E-08	1.574E-08	1.044E-08	6.122E-09	4.434E-09	3.410E-09	2.732E-09	2.202E-09	1.825E-09	1.546E-09	1.331E-09
WSW	1.696E-08	1.364E-08	1.057E-08	7.025E-09	4.778E-09	3.543E-09	2.773E-09	2.252E-09	1.880E-09	1.602E-09	1.388E-09
W	1.693E-08	9.708E-09	7.439E-09	5.302E-09	4.137E-09	3.069E-09	2.390E-09	1.934E-09	1.609E-09	1.366E-09	1.180E-09
WNW	4.095E-08	2.415E-08	1.703E-08	1.086E-08	7.540E-09	5.664E-09	4.497E-09	3.668E-09	3.049E-09	2.579E-09	2.218E-09
NW	6.101E-08	3.353E-08	2.262E-08	1.348E-08	8.960E-09	6.522E-09	5.110E-09	4.115E-09	3.392E-09	2.857E-09	2.449E-09
NNW	6.018E-08	3.421E-08	2.220E-08	1.270E-08	8.549E-09	6.288E-09	4.934E-09	4.014E-09	3.383E-09	2.883E-09	2.485E-09
N	2.525E-08	1.646E-08	1.411E-08	1.211E-08	1.093E-08	9.397E-09	7.395E-09	6.006E-09	5.000E-09	4.251E-09	3.675E-09
NNE	2.718E-08	5.268E-08	3.432E-08	1.979E-08	1.342E-08	9.940E-09	7.777E-09	6.320E-09	5.279E-09	4.503E-09	3.905E-09
NE	1.480E-08	3.106E-08	2.036E-08	1.182E-08	8.045E-09	5.964E-09	4.742E-09	3.890E-09	3.278E-09	2.787E-09	2.409E-09
ENE	1.027E-08	1.289E-08	8.453E-09	4.886E-09	3.303E-09	2.434E-09	1.989E-09	1.657E-09	1.371E-09	1.158E-09	9.955E-10
E	1.061E-08	1.433E-08	9.405E-09	5.436E-09	3.671E-09	2.699E-09	2.095E-09	1.688E-09	1.450E-09	1.259E-09	1.080E-09
ESE	1.837E-08	2.373E-08	1.578E-08	9.271E-09	6.324E-09	4.686E-09	3.660E-09	2.964E-09	2.465E-09	2.092E-09	1.804E-09
SE	2.346E-08	1.421E-08	1.076E-08	7.444E-09	5.317E-09	4.094E-09	3.308E-09	2.760E-09	2.282E-09	1.928E-09	1.656E-09
SSE	3.645E-08	3.480E-08	2.197E-08	1.209E-08	7.920E-09	5.697E-09	4.349E-09	3.458E-09	2.832E-09	2.373E-09	2.024E-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	3.861E-08	5.220E-08	4.135E-08	3.340E-08	3.650E-08	2.291E-08	9.325E-09	4.755E-09	2.978E-09	2.094E-09
SSW	1.398E-08	2.587E-08	2.639E-08	3.043E-08	2.838E-08	2.192E-08	9.936E-09	5.126E-09	3.192E-09	2.220E-09
SW	2.050E-08	6.120E-08	4.395E-08	2.779E-08	2.013E-08	1.398E-08	6.332E-09	3.412E-09	2.210E-09	1.549E-09
WSW	2.886E-08	6.596E-08	4.302E-08	2.629E-08	1.877E-08	1.302E-08	6.815E-09	3.564E-09	2.259E-09	1.605E-09
W	7.139E-08	8.550E-08	4.838E-08	2.896E-08	1.984E-08	1.030E-08	5.259E-09	3.082E-09	1.940E-09	1.369E-09
WNW	1.522E-07	2.146E-07	1.173E-07	7.125E-08	4.818E-08	2.472E-08	1.075E-08	5.697E-09	3.669E-09	2.585E-09
NW	1.743E-07	3.595E-07	2.009E-07	1.123E-07	7.291E-08	3.479E-08	1.350E-08	6.607E-09	4.124E-09	2.864E-09
NNW	5.534E-08	1.295E-07	1.303E-07	1.038E-07	7.137E-08	3.464E-08	1.296E-08	6.349E-09	4.037E-09	2.884E-09
N	4.054E-08	5.550E-08	4.817E-08	3.657E-08	2.828E-08	1.737E-08	1.203E-08	9.005E-09	6.020E-09	4.259E-09
NNE	2.886E-08	4.651E-08	3.899E-08	2.932E-08	2.534E-08	3.885E-08	2.019E-08	1.000E-08	6.340E-09	4.511E-09
NE	2.115E-08	2.866E-08	2.330E-08	1.723E-08	1.432E-08	2.269E-08	1.204E-08	6.030E-09	3.900E-09	2.792E-09
ENE	8.661E-09	1.928E-08	1.749E-08	1.305E-08	1.045E-08	1.034E-08	4.975E-09	2.488E-09	1.643E-09	1.161E-09
E	9.064E-09	1.909E-08	1.719E-08	1.298E-08	1.061E-08	1.131E-08	5.534E-09	2.717E-09	1.714E-09	1.249E-09
ESE	2.047E-08	3.874E-08	3.249E-08	2.362E-08	1.877E-08	1.901E-08	9.409E-09	4.712E-09	2.972E-09	2.096E-09
SE	3.271E-08	6.069E-08	5.025E-08	3.607E-08	2.678E-08	1.473E-08	7.236E-09	4.106E-09	2.735E-09	1.932E-09
SSE	5.485E-08	8.371E-08	6.674E-08	4.746E-08	3.721E-08	2.946E-08	1.243E-08	5.750E-09	3.474E-09	2.380E-09

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ERP ELEVATED STACK RELEASES - OCT-DEC 2016
 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	2.362E-10	1.457E-08	3.766E-08	5.055E-08	5.558E-08	4.893E-08	4.099E-08	3.422E-08	2.885E-08	3.407E-08	3.806E-08
SSW	3.387E-11	2.736E-09	1.201E-08	2.097E-08	2.773E-08	2.640E-08	2.325E-08	2.790E-08	3.208E-08	2.957E-08	2.754E-08
SW	2.016E-16	2.616E-10	1.177E-08	3.725E-08	8.050E-08	5.795E-08	4.339E-08	3.382E-08	2.727E-08	2.259E-08	1.913E-08
WSW	6.774E-11	4.837E-09	2.152E-08	4.601E-08	8.776E-08	5.824E-08	4.202E-08	3.216E-08	2.569E-08	2.119E-08	1.792E-08
W	9.343E-14	1.399E-08	7.380E-08	9.702E-08	1.002E-07	6.563E-08	4.679E-08	3.541E-08	2.801E-08	2.289E-08	1.919E-08
WNW	3.674E-10	2.503E-08	1.350E-07	2.261E-07	2.665E-07	1.618E-07	1.100E-07	8.540E-08	6.969E-08	5.565E-08	4.574E-08
NW	1.911E-10	1.516E-08	1.193E-07	2.932E-07	4.867E-07	2.871E-07	1.908E-07	1.403E-07	1.086E-07	8.554E-08	6.945E-08
NNW	1.160E-10	8.065E-09	4.299E-08	8.782E-08	1.400E-07	1.399E-07	1.311E-07	1.186E-07	1.077E-07	8.480E-08	6.887E-08
N	2.672E-10	1.698E-08	4.041E-08	5.144E-08	5.745E-08	5.443E-08	4.843E-08	4.153E-08	3.583E-08	3.122E-08	2.749E-08
NNE	1.000E-10	6.414E-09	2.618E-08	4.181E-08	4.992E-08	4.519E-08	3.873E-08	3.309E-08	2.856E-08	2.497E-08	2.212E-08
NE	1.514E-10	8.415E-09	2.072E-08	2.739E-08	3.036E-08	2.717E-08	2.313E-08	1.962E-08	1.678E-08	1.452E-08	1.273E-08
ENE	2.583E-16	3.329E-10	6.542E-09	1.444E-08	2.096E-08	2.011E-08	1.750E-08	1.491E-08	1.271E-08	1.093E-08	9.507E-09
E	3.585E-16	3.982E-10	7.127E-09	1.488E-08	2.067E-08	1.969E-08	1.720E-08	1.476E-08	1.270E-08	1.101E-08	9.650E-09
ESE	1.369E-15	1.050E-09	1.681E-08	3.297E-08	4.224E-08	3.824E-08	3.231E-08	2.709E-08	2.292E-08	1.964E-08	1.706E-08
SE	2.376E-15	1.748E-09	2.716E-08	5.241E-08	6.618E-08	5.950E-08	4.996E-08	4.163E-08	3.498E-08	2.976E-08	2.565E-08
SSE	1.883E-10	1.373E-08	5.055E-08	7.797E-08	9.026E-08	7.949E-08	6.617E-08	5.486E-08	4.594E-08	3.899E-08	3.356E-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	3.406E-08	2.328E-08	1.472E-08	7.962E-09	5.252E-09	3.768E-09	2.798E-09	2.170E-09	1.763E-09	1.468E-09	1.238E-09
SSW	2.704E-08	2.490E-08	1.588E-08	8.646E-09	5.812E-09	4.215E-09	3.182E-09	2.504E-09	2.033E-09	1.689E-09	1.430E-09
SW	1.812E-08	1.539E-08	9.928E-09	5.484E-09	3.699E-09	2.687E-09	2.092E-09	1.648E-09	1.339E-09	1.113E-09	9.427E-10
WSW	1.665E-08	1.322E-08	9.963E-09	6.301E-09	4.134E-09	2.976E-09	2.272E-09	1.806E-09	1.479E-09	1.239E-09	1.057E-09
W	1.641E-08	9.395E-09	7.172E-09	4.858E-09	3.593E-09	2.591E-09	1.970E-09	1.561E-09	1.275E-09	1.066E-09	9.069E-10
WNW	3.914E-08	2.257E-08	1.552E-08	9.368E-09	6.077E-09	4.333E-09	3.339E-09	2.663E-09	2.169E-09	1.802E-09	1.526E-09
NW	5.842E-08	3.132E-08	2.058E-08	1.162E-08	7.312E-09	5.088E-09	3.867E-09	3.044E-09	2.458E-09	2.033E-09	1.714E-09
NNW	5.857E-08	3.242E-08	2.040E-08	1.094E-08	6.838E-09	4.728E-09	3.524E-09	2.755E-09	2.260E-09	1.883E-09	1.590E-09
N	2.452E-08	1.591E-08	1.368E-08	1.187E-08	1.057E-08	8.728E-09	6.719E-09	5.354E-09	4.381E-09	3.668E-09	3.128E-09
NNE	2.639E-08	5.156E-08	3.256E-08	1.784E-08	1.158E-08	8.271E-09	6.275E-09	4.963E-09	4.047E-09	3.377E-09	2.870E-09
NE	1.434E-08	3.059E-08	1.947E-08	1.074E-08	6.956E-09	4.954E-09	3.815E-09	3.061E-09	2.531E-09	2.117E-09	1.802E-09
ENE	9.871E-09	1.251E-08	7.986E-09	4.370E-09	2.773E-09	1.939E-09	1.515E-09	1.221E-09	9.867E-10	8.164E-10	6.883E-10
E	1.030E-08	1.409E-08	9.017E-09	4.939E-09	3.127E-09	2.183E-09	1.621E-09	1.256E-09	1.042E-09	8.786E-10	7.356E-10
ESE	1.764E-08	2.318E-08	1.504E-08	8.384E-09	5.376E-09	3.786E-09	2.831E-09	2.207E-09	1.773E-09	1.459E-09	1.223E-09
SE	2.238E-08	1.336E-08	1.007E-08	6.965E-09	4.979E-09	3.850E-09	3.130E-09	2.624E-09	2.146E-09	1.797E-09	1.532E-09
SSE	3.487E-08	3.326E-08	2.041E-08	1.069E-08	6.672E-09	4.618E-09	3.411E-09	2.635E-09	2.105E-09	1.724E-09	1.440E-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	3.825E-08	5.151E-08	4.040E-08	3.237E-08	3.539E-08	2.187E-08	8.260E-09	3.776E-09	2.194E-09	1.470E-09
SSW	1.393E-08	2.564E-08	2.595E-08	2.993E-08	2.796E-08	2.137E-08	8.993E-09	4.228E-09	2.518E-09	1.695E-09
SW	2.054E-08	6.087E-08	4.345E-08	2.736E-08	1.978E-08	1.357E-08	5.678E-09	2.719E-09	1.657E-09	1.117E-09
WSW	2.870E-08	6.536E-08	4.240E-08	2.583E-08	1.842E-08	1.253E-08	6.152E-09	3.003E-09	1.815E-09	1.243E-09
W	7.083E-08	8.412E-08	4.726E-08	2.817E-08	1.926E-08	9.967E-09	4.810E-09	2.610E-09	1.569E-09	1.069E-09
WNW	1.511E-07	2.110E-07	1.140E-07	6.883E-08	4.623E-08	3.12E-08	9.272E-09	4.400E-09	2.668E-09	1.809E-09
NW	1.735E-07	3.550E-07	1.963E-07	1.089E-07	7.013E-08	3.257E-08	1.170E-08	5.193E-09	3.056E-09	2.041E-09
NNW	5.515E-08	1.284E-07	1.285E-07	1.021E-07	6.978E-08	3.289E-08	1.122E-08	4.809E-09	2.786E-09	1.886E-09
N	4.010E-08	5.477E-08	4.727E-08	3.570E-08	2.749E-08	1.683E-08	1.169E-08	8.415E-09	5.373E-09	3.679E-09
NNE	2.874E-08	4.601E-08	3.820E-08	2.849E-08	2.454E-08	3.752E-08	1.833E-08	8.355E-09	4.989E-09	3.388E-09
NE	2.095E-08	2.828E-08	2.280E-08	1.673E-08	1.386E-08	2.204E-08	1.100E-08	5.032E-09	3.075E-09	2.123E-09
ENE	8.674E-09	1.914E-08	1.716E-08	1.266E-08	1.006E-08	9.912E-09	4.464E-09	1.992E-09	1.216E-09	8.194E-10
E	9.076E-09	1.894E-08	1.689E-08	1.265E-08	1.029E-08	1.099E-08	5.040E-09	2.210E-09	1.279E-09	8.741E-10
ESE	2.049E-08	3.840E-08	3.180E-08	2.286E-08	1.804E-08	1.833E-08	8.526E-09	3.828E-09	2.220E-09	1.465E-09
SE	3.273E-08	6.015E-08	4.917E-08	3.489E-08	2.566E-08	1.391E-08	6.773E-09	3.863E-09	2.586E-09	1.802E-09
SSE	5.455E-08	8.274E-08	6.520E-08	4.584E-08	3.565E-08	2.791E-08	1.106E-08	4.683E-09	2.655E-09	1.731E-09

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ERP ELEVATED STACK RELEASES - OCT-DEC 2016
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	2.141E-09	2.2107E-09	2.332E-09	1.921E-09	1.066E-09	6.873E-10	4.767E-10	3.469E-10	2.616E-10	2.167E-10	1.935E-10	
SSW	2.947E-10	4.255E-10	6.366E-10	5.977E-10	3.565E-10	2.356E-10	1.653E-10	1.211E-10	1.131E-10	8.564E-11	6.707E-11	
SW	2.358E-11	1.415E-10	3.012E-10	3.120E-10	3.554E-10	1.975E-10	1.241E-10	8.498E-11	6.176E-11	4.684E-11	3.671E-11	
WSW	5.291E-10	4.895E-10	5.035E-10	6.827E-10	3.881E-10	2.096E-10	1.293E-10	8.759E-11	6.321E-11	4.777E-11	3.738E-11	
W	2.489E-11	1.311E-09	1.275E-09	8.565E-10	4.107E-10	2.220E-10	1.368E-10	9.244E-11	6.657E-11	5.020E-11	3.920E-11	
WNW	1.104E-09	1.254E-09	4.678E-09	3.194E-09	2.021E-09	1.014E-09	6.002E-10	4.000E-10	2.940E-10	2.265E-10	1.843E-10	
NW	1.666E-09	1.940E-09	2.515E-09	5.200E-09	3.380E-09	1.683E-09	9.925E-10	6.561E-10	4.715E-10	3.617E-10	2.929E-10	
NNW	1.113E-09	1.309E-09	1.710E-09	1.524E-09	1.666E-09	9.062E-10	5.656E-10	4.746E-10	3.520E-10	2.808E-10	2.376E-10	
N	2.402E-09	2.328E-09	2.534E-09	2.068E-09	1.141E-09	7.342E-10	5.087E-10	3.700E-10	2.789E-10	2.161E-10	1.711E-10	
NNE	1.129E-09	1.403E-09	1.911E-09	1.732E-09	1.015E-09	6.667E-10	4.665E-10	3.411E-10	2.577E-10	1.998E-10	1.583E-10	
NE	1.581E-09	1.429E-09	1.427E-09	1.107E-09	5.907E-10	3.757E-10	2.588E-10	1.877E-10	1.412E-10	1.093E-10	8.658E-11	
ENE	3.144E-11	1.886E-10	4.016E-10	4.160E-10	2.598E-10	1.742E-10	1.231E-10	9.040E-11	6.847E-11	5.314E-11	4.209E-11	
E	3.537E-11	2.122E-10	4.518E-10	4.680E-10	2.923E-10	1.960E-10	1.384E-10	1.017E-10	7.703E-11	5.979E-11	4.735E-11	
ESE	1.009E-10	6.051E-10	1.289E-09	1.335E-09	8.336E-10	5.590E-10	3.948E-10	2.900E-10	2.197E-10	1.705E-10	1.350E-10	
SE	1.677E-10	1.006E-09	2.142E-09	2.219E-09	1.386E-09	9.292E-10	6.563E-10	4.821E-10	3.652E-10	2.834E-10	2.245E-10	
SSE	1.717E-09	2.247E-09	3.167E-09	2.910E-09	1.717E-09	1.131E-09	7.921E-10	5.794E-10	4.379E-10	3.396E-10	2.689E-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	1.556E-10	1.171E-10	8.124E-11	4.773E-11	3.031E-11	2.124E-11	1.516E-11	1.133E-11	8.798E-12	7.013E-12	5.726E-12	
SSW	5.486E-11	6.070E-11	4.528E-11	2.813E-11	1.590E-11	1.080E-11	7.743E-12	5.816E-12	4.595E-12	3.670E-12	2.996E-12	
SW	3.045E-11	4.408E-11	3.402E-11	2.165E-11	1.395E-11	8.287E-12	5.648E-12	4.241E-12	3.297E-12	2.634E-12	2.150E-12	
WSW	3.157E-11	4.049E-11	3.105E-11	1.816E-11	1.099E-11	7.371E-12	5.282E-12	3.966E-12	3.084E-12	2.463E-12	2.011E-12	
W	3.149E-11	1.406E-11	2.670E-11	1.665E-11	9.580E-12	6.476E-12	4.640E-12	3.484E-12	2.709E-12	2.164E-12	1.766E-12	
WNW	1.574E-10	9.183E-11	6.444E-11	3.821E-11	2.449E-11	1.704E-11	1.175E-11	8.826E-12	6.934E-12	5.539E-12	4.521E-12	
NW	2.491E-10	1.432E-10	9.975E-11	6.321E-11	3.868E-11	2.588E-11	1.841E-11	1.382E-11	1.082E-11	8.642E-12	7.054E-12	
NNW	2.111E-10	1.389E-10	1.030E-10	6.377E-11	4.086E-11	2.708E-11	1.830E-11	1.349E-11	1.032E-11	8.248E-12	6.733E-12	
N	1.379E-10	6.551E-11	4.006E-11	2.123E-11	7.979E-11	4.451E-11	3.190E-11	2.395E-11	1.862E-11	1.488E-11	1.214E-11	
NNE	1.275E-10	2.934E-10	1.796E-10	9.195E-11	5.587E-11	3.742E-11	2.677E-11	2.007E-11	1.558E-11	1.243E-11	1.014E-11	
NE	6.984E-11	1.393E-10	8.604E-11	4.453E-11	2.715E-11	1.817E-11	1.306E-11	9.685E-12	7.530E-12	6.034E-12	4.925E-12	
ENE	3.389E-11	4.355E-11	3.219E-11	1.985E-11	1.269E-11	8.398E-12	5.894E-12	3.919E-12	3.051E-12	2.440E-12	1.994E-12	
E	3.813E-11	4.918E-11	3.639E-11	2.246E-11	1.436E-11	9.499E-12	6.658E-12	4.871E-12	3.708E-12	2.870E-12	2.338E-12	
ESE	1.087E-10	1.114E-10	7.899E-11	4.714E-11	2.990E-11	1.983E-11	1.396E-11	1.026E-11	7.850E-12	6.187E-12	4.995E-12	
SE	1.808E-10	8.559E-11	5.216E-11	2.739E-11	1.666E-11	1.142E-11	8.505E-12	1.569E-11	1.206E-11	9.551E-12	7.756E-12	
SSE	2.167E-10	2.165E-10	1.338E-10	6.934E-11	4.229E-11	2.830E-11	2.022E-11	1.513E-11	1.174E-11	9.356E-12	7.624E-12	

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***** 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	2.100E-09	1.088E-09	4.809E-10	2.689E-10	1.863E-10	1.097E-10	4.744E-11	2.123E-11	1.146E-11	7.065E-12		
SSW	5.724E-10	3.564E-10	1.664E-10	1.049E-10	6.805E-11	5.255E-11	2.651E-11	1.094E-11	5.902E-12	3.694E-12		
SW	2.705E-10	2.756E-10	1.280E-10	6.271E-11	3.739E-11	3.658E-11	2.098E-11	8.742E-12	4.283E-12	2.651E-12		
WSW	5.800E-10	3.742E-10	1.340E-10	6.429E-11	3.830E-11	3.431E-11	1.784E-11	7.501E-12	4.006E-12	2.479E-12		
W	1.097E-09	4.259E-10	1.417E-10	6.772E-11	3.960E-11	2.355E-11	1.574E-11	6.569E-12	3.519E-12	2.178E-12		
WNW	3.258E-09	1.834E-09	6.305E-10	2.985E-10	1.868E-10	9.424E-11	3.794E-11	1.691E-11	8.941E-12	5.575E-12		
NW	3.580E-09	3.030E-09	1.042E-09	4.824E-10	2.970E-10	1.474E-10	6.043E-11	2.631E-11	1.399E-11	8.699E-12		
NNW	1.538E-09	1.297E-09	6.200E-10	3.599E-10	2.406E-10	1.390E-10	6.231E-11	2.724E-11	1.366E-11	8.303E-12		
N	2.281E-09	1.166E-09	5.134E-10	2.810E-10	1.721E-10	7.030E-11	5.144E-11	4.887E-11	2.419E-11	1.498E-11		
NNE	1.719E-09	1.019E-09	4.697E-10	2.595E-10	1.592E-10	2.060E-10	9.540E-11	3.808E-11	2.027E-11	1.251E-11		
NE	1.285E-09	6.100E-10	2.615E-10	1.424E-10	8.712E-11	1.002E-10	4.603E-11	1.852E-11	9.829E-12	6.067E-12		
ENE	3.607E-10	2.565E-10	1.236E-10	6.890E-11	4.233E-11	3.635E-11	1.941E-11	8.541E-12	4.152E-12	2.456E-12		
E	4.058E-10	2.886E-10	1.391E-10	7.751E-11	4.762E-11	4.104E-11	2.195E-11	9.658E-12	4.939E-12	2.921E-12		
ESE	1.157E-09	8.229E-10	3.967E-10	2.210E-10	1.358E-10	9.640E-11	4.656E-11	2.017E-11	1.040E-11	6.238E-12		
SE	1.924E-09	1.368E-09	6.594E-10	3.674E-10	2.257E-10	9.188E-11	2.813E-11	1.165E-11	1.225E-11	9.629E-12		
SSE	2.848E-09	1.721E-09	7.973E-10	4.409E-10	2.705E-10	1.798E-10	7.165E-11	2.880E-11	1.529E-11	9.419E-12		

ERP ELEVATED STACK RELEASES - OCT-DEC 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST							
RELEASE TYPE	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	4.1E-08	4.1E-08	4.1E-08	2.3E-09
A	Site Boundary	SSW	.82	1.5E-08	1.5E-08	1.5E-08	6.5E-10
A	Site Boundary	SW	.97	3.5E-08	3.4E-08	3.4E-08	3.2E-10
A	Site Boundary	WSW	.93	3.9E-08	3.9E-08	3.8E-08	6.5E-10
A	Site Boundary	W	.91	9.3E-08	9.3E-08	9.2E-08	9.6E-10
A	Site Boundary	WNW	.94	2.1E-07	2.1E-07	2.1E-07	3.6E-09
A	Site Boundary	NW	.81	1.6E-07	1.6E-07	1.6E-07	2.5E-09
A	Site Boundary	NNW	.69	3.0E-08	3.0E-08	3.0E-08	1.6E-09
A	Site Boundary	N	.67	3.3E-08	3.3E-08	3.3E-08	2.4E-09
A	Site Boundary	NNE	.60	1.2E-08	1.2E-08	1.2E-08	1.6E-09
A	Site Boundary	NE	.62	1.4E-08	1.4E-08	1.4E-08	1.4E-09
A	Site Boundary	ENE	.59	1.5E-09	1.5E-09	1.5E-09	2.6E-10
A	Site Boundary	E	.53	6.5E-10	6.5E-10	6.5E-10	2.4E-10
A	Site Boundary	ESE	.54	2.1E-09	2.1E-09	2.1E-09	7.0E-10
A	Site Boundary	SE	.65	1.3E-08	1.3E-08	1.3E-08	1.7E-09
A	Site Boundary	SSE	.81	5.9E-08	5.9E-08	5.9E-08	3.2E-09
A	Nearest Res	SSW	3.00	2.9E-08	2.8E-08	2.8E-08	1.2E-10
A	Nearest Res	SW	1.70	7.1E-08	7.1E-08	7.0E-08	2.8E-10
A	Nearest Res	WSW	1.90	6.4E-08	6.3E-08	6.3E-08	2.3E-10
A	Nearest Res	W	1.00	9.8E-08	9.8E-08	9.7E-08	8.6E-10
A	Nearest Res	WNW	1.70	2.2E-07	2.2E-07	2.1E-07	1.5E-09
A	Nearest Res	NW	.90	2.2E-07	2.2E-07	2.2E-07	5.6E-09
A	Nearest Res	NNW	1.90	1.4E-07	1.4E-07	1.4E-07	1.0E-09
A	Nearest Res	N	2.90	4.4E-08	4.4E-08	4.3E-08	3.9E-10
A	Nearest Res	NNE	1.70	4.9E-08	4.9E-08	4.9E-08	8.5E-10
A	Nearest Res	ENE	1.70	2.1E-08	2.1E-08	2.1E-08	2.2E-10
A	Nearest Res	E	2.20	1.9E-08	1.9E-08	1.9E-08	1.7E-10
A	Nearest Res	ESE	2.80	3.0E-08	3.0E-08	2.9E-08	3.3E-10
A	Nearest Res	SE	3.00	4.3E-08	4.3E-08	4.2E-08	4.8E-10
A	Nearest Res	SSE	3.00	5.7E-08	5.7E-08	5.5E-08	5.8E-10
A	Nearest Cow	NNW	3.50	1.1E-07	1.1E-07	1.1E-07	3.5E-10
A	Nearest Garde	SSW	3.00	2.9E-08	2.8E-08	2.8E-08	1.2E-10
A	Nearest Garde	SW	2.20	5.2E-08	5.2E-08	5.1E-08	1.6E-10
A	Nearest Garde	NNW	3.00	1.2E-07	1.2E-07	1.2E-07	4.7E-10
A	Nearest Garde	ENE	1.70	2.1E-08	2.1E-08	2.1E-08	2.2E-10
A	Nearest Garde	ESE	2.30	3.5E-08	3.5E-08	3.5E-08	4.5E-10
A	Nearest Garde	SSE	3.00	5.7E-08	5.7E-08	5.5E-08	5.8E-10
A	MAXIMUM CHI/Q	S	1.50	5.6E-08	5.6E-08	5.6E-08	1.1E-09
A	MAXIMUM CHI/Q	SSW	3.50	3.3E-08	3.3E-08	3.2E-08	1.1E-10
A	MAXIMUM CHI/Q	SW	1.50	8.1E-08	8.1E-08	8.1E-08	3.6E-10
A	MAXIMUM CHI/Q	WSW	1.50	8.9E-08	8.8E-08	8.8E-08	3.9E-10
A	MAXIMUM CHI/Q	W	1.50	1.0E-07	1.0E-07	1.0E-07	4.1E-10
A	MAXIMUM CHI/Q	WNW	1.50	2.7E-07	2.7E-07	2.7E-07	2.0E-09
A	MAXIMUM CHI/Q	NW	1.50	4.9E-07	4.9E-07	4.9E-07	3.4E-09
A	MAXIMUM CHI/Q	NNW	2.00	1.4E-07	1.4E-07	1.4E-07	9.1E-10
A	MAXIMUM CHI/Q	N	1.50	5.8E-08	5.8E-08	5.7E-08	1.1E-09
A	MAXIMUM CHI/Q	NNE	7.50	5.3E-08	5.3E-08	5.2E-08	2.9E-10
A	MAXIMUM CHI/Q	NE	7.50	3.2E-08	3.1E-08	3.1E-08	1.4E-10
A	MAXIMUM CHI/Q	ENE	1.50	2.1E-08	2.1E-08	2.1E-08	2.6E-10
A	MAXIMUM CHI/Q	E	1.50	2.1E-08	2.1E-08	2.1E-08	2.9E-10
A	MAXIMUM CHI/Q	ESE	1.50	4.3E-08	4.3E-08	4.2E-08	8.3E-10
A	MAXIMUM CHI/Q	SE	1.50	6.7E-08	6.7E-08	6.6E-08	1.4E-09
A	MAXIMUM CHI/Q	SSE	1.50	9.1E-08	9.1E-08	9.0E-08	1.7E-09

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Atmospheric Diffusion Estimates

Elevated Releases

July-December 2016

ERP ELEVATED STACK RELEASES - JUL-DEC 2016
 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	2.920E-10	1.867E-08	4.275E-08	5.367E-08	5.777E-08	5.093E-08	4.280E-08	3.584E-08	3.029E-08	3.519E-08	3.858E-08
SSW	1.035E-09	1.125E-08	3.061E-08	4.560E-08	5.470E-08	4.985E-08	4.265E-08	4.766E-08	5.036E-08	4.465E-08	4.014E-08
SW	3.387E-11	2.875E-09	2.922E-08	7.947E-08	1.584E-07	1.121E-07	8.291E-08	6.408E-08	5.132E-08	4.229E-08	3.567E-08
WSW	6.665E-11	5.816E-09	4.225E-08	1.029E-07	1.870E-07	1.217E-07	8.613E-08	6.471E-08	5.083E-08	4.129E-08	3.444E-08
W	9.526E-10	6.257E-08	1.966E-07	2.491E-07	2.419E-07	1.533E-07	1.063E-07	7.863E-08	6.096E-08	4.897E-08	4.045E-08
WNW	5.425E-10	3.403E-08	1.468E-07	2.464E-07	3.093E-07	1.900E-07	1.296E-07	9.969E-08	8.012E-08	6.379E-08	5.234E-08
NW	2.250E-10	1.785E-08	1.424E-07	3.533E-07	5.697E-07	3.346E-07	2.216E-07	1.619E-07	1.245E-07	9.802E-08	7.964E-08
NNW	1.172E-09	1.114E-08	5.458E-08	1.163E-07	1.972E-07	1.983E-07	1.808E-07	1.571E-07	1.363E-07	1.071E-07	8.687E-08
N	9.497E-09	3.401E-08	5.718E-08	6.698E-08	7.288E-08	6.879E-08	6.111E-08	5.235E-08	4.511E-08	3.925E-08	3.451E-08
NNE	8.763E-09	3.765E-08	5.210E-08	5.583E-08	5.535E-08	4.828E-08	4.087E-08	3.467E-08	2.976E-08	2.588E-08	2.280E-08
NE	1.046E-10	6.078E-09	1.701E-08	2.412E-08	2.756E-08	2.458E-08	2.076E-08	1.746E-08	1.483E-08	1.275E-08	1.111E-08
ENE	1.445E-11	1.058E-09	6.278E-09	1.225E-08	1.714E-08	1.634E-08	1.421E-08	1.211E-08	1.035E-08	8.924E-09	7.779E-09
E	2.023E-16	2.662E-10	5.142E-09	1.111E-08	1.595E-08	1.537E-08	1.351E-08	1.164E-08	1.004E-08	8.733E-09	7.671E-09
ESE	8.115E-16	7.000E-10	1.188E-08	2.407E-08	3.201E-08	2.953E-08	2.524E-08	2.133E-08	1.815E-08	1.562E-08	1.362E-08
SE	1.492E-15	1.157E-09	1.839E-08	3.597E-08	4.670E-08	4.288E-08	3.662E-08	3.094E-08	2.631E-08	2.262E-08	1.967E-08
SSE	7.730E-10	9.153E-09	3.310E-08	5.334E-08	6.506E-08	5.906E-08	5.023E-08	4.234E-08	3.594E-08	3.085E-08	2.682E-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	3.442E-08	2.344E-08	1.527E-08	8.793E-09	6.227E-09	4.745E-09	3.701E-09	3.003E-09	2.532E-09	2.176E-09	1.888E-09
SSW	3.781E-08	3.186E-08	2.089E-08	1.214E-08	8.815E-09	6.685E-09	5.229E-09	4.253E-09	3.561E-09	3.045E-09	2.648E-09
SW	3.329E-08	2.747E-08	1.829E-08	1.082E-08	7.928E-09	6.173E-09	5.016E-09	4.091E-09	3.431E-09	2.940E-09	2.561E-09
WSW	3.084E-08	2.111E-08	1.526E-08	9.564E-09	6.476E-09	4.796E-09	3.757E-09	3.059E-09	2.562E-09	2.193E-09	1.908E-09
W	3.415E-08	1.861E-08	1.316E-08	8.381E-09	6.065E-09	4.478E-09	3.488E-09	2.827E-09	2.358E-09	2.011E-09	1.744E-09
WNW	4.454E-08	2.524E-08	1.733E-08	1.070E-08	7.389E-09	5.549E-09	4.411E-09	3.618E-09	3.033E-09	2.593E-09	2.254E-09
NW	6.693E-08	3.607E-08	2.402E-08	1.413E-08	9.440E-09	6.918E-09	5.438E-09	4.411E-09	3.669E-09	3.120E-09	2.700E-09
NNW	7.347E-08	4.031E-08	2.602E-08	1.482E-08	9.972E-09	7.347E-09	5.766E-09	4.699E-09	3.960E-09	3.387E-09	2.936E-09
N	3.073E-08	1.978E-08	1.651E-08	1.325E-08	1.125E-08	9.381E-09	7.399E-09	6.035E-09	5.051E-09	4.319E-09	3.756E-09
NNE	2.600E-08	3.978E-08	2.583E-08	1.486E-08	1.008E-08	7.479E-09	5.867E-09	4.784E-09	4.011E-09	3.435E-09	2.991E-09
NE	1.204E-08	2.113E-08	1.386E-08	8.085E-09	5.539E-09	4.140E-09	3.319E-09	2.748E-09	2.340E-09	2.010E-09	1.755E-09
ENE	8.031E-09	1.052E-08	6.967E-09	4.097E-09	2.815E-09	2.107E-09	1.756E-09	1.490E-09	1.250E-09	1.071E-09	9.339E-10
E	8.137E-09	1.091E-08	7.206E-09	4.224E-09	2.896E-09	2.163E-09	1.705E-09	1.396E-09	1.216E-09	1.070E-09	9.322E-10
ESE	1.399E-08	1.830E-08	1.229E-08	7.350E-09	5.100E-09	3.842E-09	3.049E-09	2.509E-09	2.119E-09	1.826E-09	1.599E-09
SE	1.730E-08	1.064E-08	8.178E-09	5.763E-09	4.164E-09	3.237E-09	2.637E-09	2.219E-09	1.854E-09	1.583E-09	1.375E-09
SSE	2.826E-08	2.899E-08	1.850E-08	1.038E-08	6.912E-09	5.053E-09	3.917E-09	3.160E-09	2.626E-09	2.231E-09	1.930E-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	4.225E-08	5.382E-08	4.218E-08	3.374E-08	3.603E-08	2.225E-08	9.092E-09	4.723E-09	3.023E-09	2.175E-09	
SSW	3.297E-08	5.052E-08	4.657E-08	4.741E-08	4.062E-08	2.831E-08	1.261E-08	6.671E-09	4.268E-09	3.051E-09	
SW	4.570E-08	1.203E-07	8.315E-08	5.153E-08	3.675E-08	2.468E-08	1.120E-08	6.178E-09	4.104E-09	2.945E-09	
WSW	6.110E-08	1.393E-07	8.706E-08	5.116E-08	3.513E-08	2.067E-08	9.457E-09	4.828E-09	3.069E-09	2.197E-09	
W	1.901E-07	2.041E-07	1.078E-07	6.144E-08	4.064E-08	1.964E-08	8.415E-09	4.505E-09	2.837E-09	2.015E-09	
WNW	1.660E-07	2.423E-07	1.337E-07	7.949E-08	5.284E-08	2.601E-08	1.070E-08	5.584E-09	3.622E-09	2.598E-09	
NW	2.085E-07	4.171E-07	2.279E-07	1.251E-07	8.038E-08	3.757E-08	1.424E-08	6.999E-09	4.421E-09	3.127E-09	
NNW	7.238E-08	1.797E-07	1.760E-07	1.311E-07	8.789E-08	4.133E-08	1.515E-08	7.415E-09	4.722E-09	3.390E-09	
N	5.638E-08	6.975E-08	5.965E-08	4.494E-08	3.451E-08	2.076E-08	1.309E-08	9.086E-09	6.050E-09	4.327E-09	
NNE	5.055E-08	5.231E-08	4.037E-08	2.968E-08	2.489E-08	3.052E-08	1.517E-08	7.528E-09	4.799E-09	3.441E-09	
NE	1.774E-08	2.547E-08	2.046E-08	1.479E-08	1.194E-08	1.588E-08	8.237E-09	4.185E-09	2.756E-09	2.013E-09	
ENE	7.772E-09	1.394E-08	1.394E-08	1.031E-08	8.212E-09	8.389E-09	4.165E-09	2.155E-09	1.474E-09	1.073E-09	
E	6.712E-09	1.462E-08	1.326E-08	1.000E-08	8.158E-09	8.648E-09	4.296E-09	2.175E-09	1.416E-09	1.062E-09	
ESE	1.481E-08	2.915E-08	2.482E-08	1.810E-08	1.435E-08	1.467E-08	7.448E-09	3.860E-09	2.515E-09	1.829E-09	
SE	2.237E-08	4.262E-08	3.602E-08	2.623E-08	1.967E-08	1.103E-08	5.589E-09	3.244E-09	2.200E-09	1.586E-09	
SSE	3.678E-08	5.979E-08	4.943E-08	3.583E-08	2.855E-08	2.416E-08	1.064E-08	5.094E-09	3.173E-09	2.237E-09	

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ERP ELEVATED STACK RELEASES - JUL-DEC 2016
 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	2.919E-10	1.866E-08	4.271E-08	5.359E-08	5.760E-08	5.072E-08	4.257E-08	3.560E-08	3.006E-08	3.489E-08	3.821E-08
SSW	1.034E-09	1.124E-08	3.057E-08	4.551E-08	4.552E-08	4.963E-08	4.240E-08	4.731E-08	4.992E-08	4.421E-08	3.968E-08
SW	3.386E-11	2.873E-09	2.918E-08	7.929E-08	1.578E-07	1.115E-07	8.239E-08	6.359E-08	5.087E-08	4.187E-08	3.526E-08
WSW	6.662E-11	5.811E-09	4.219E-08	1.027E-07	1.863E-07	1.211E-07	8.555E-08	6.420E-08	5.035E-08	4.085E-08	3.402E-08
W	9.521E-10	6.250E-08	1.962E-07	2.485E-07	2.409E-07	1.525E-07	1.056E-07	7.801E-08	6.040E-08	4.846E-08	3.997E-08
WNW	5.423E-10	3.400E-08	1.466E-07	2.459E-07	3.084E-07	1.892E-07	1.289E-07	9.904E-08	7.950E-08	6.322E-08	5.181E-08
NW	2.249E-10	1.784E-08	1.422E-07	3.527E-07	5.680E-07	3.333E-07	2.205E-07	1.609E-07	1.236E-07	9.719E-08	7.888E-08
NNW	1.172E-09	1.114E-08	5.452E-08	1.162E-07	1.967E-07	1.976E-07	1.801E-07	1.563E-07	1.355E-07	1.063E-07	8.621E-08
N	9.495E-09	3.400E-08	5.714E-08	6.690E-08	7.274E-08	6.861E-08	6.091E-08	5.214E-08	4.490E-08	3.904E-08	3.430E-08
NNE	8.761E-09	3.763E-08	5.206E-08	5.577E-08	5.525E-08	4.816E-08	4.073E-08	3.454E-08	2.962E-08	2.574E-08	2.266E-08
NE	1.046E-10	6.076E-09	1.699E-08	2.408E-08	2.749E-08	2.449E-08	2.067E-08	1.737E-08	1.473E-08	1.266E-08	1.102E-08
ENE	1.445E-11	1.057E-09	6.268E-09	1.222E-08	1.707E-08	1.624E-08	1.410E-08	1.201E-08	1.024E-08	8.819E-09	7.677E-09
E	2.023E-16	2.660E-10	5.134E-09	1.109E-08	1.589E-08	1.529E-08	1.342E-08	1.155E-08	9.945E-09	8.634E-09	7.573E-09
ESE	8.114E-16	6.995E-10	1.187E-08	2.402E-08	3.191E-08	2.940E-08	2.509E-08	2.118E-08	1.800E-08	1.547E-08	1.347E-08
SE	1.492E-15	1.157E-09	1.837E-08	3.592E-08	4.658E-08	4.273E-08	3.646E-08	3.077E-08	2.613E-08	2.244E-08	1.950E-08
SSE	7.728E-10	9.148E-09	3.307E-08	5.326E-08	6.487E-08	5.882E-08	4.996E-08	4.206E-08	3.565E-08	3.057E-08	2.653E-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	3.405E-08	2.304E-08	1.492E-08	8.489E-09	5.936E-09	4.465E-09	3.441E-09	2.758E-09	2.297E-09	1.949E-09	1.671E-09
SSW	3.733E-08	3.119E-08	2.030E-08	1.163E-08	8.313E-09	6.209E-09	4.785E-09	3.835E-09	3.165E-09	2.667E-09	2.286E-09
SW	3.287E-08	2.695E-08	1.783E-08	1.042E-08	7.532E-09	5.790E-09	4.644E-09	3.740E-09	3.098E-09	2.622E-09	2.257E-09
WSW	3.042E-08	2.069E-08	1.486E-08	9.201E-09	6.152E-09	4.500E-09	3.483E-09	2.802E-09	2.319E-09	1.961E-09	1.687E-09
W	3.370E-08	1.825E-08	1.282E-08	8.060E-09	5.760E-09	4.200E-09	3.231E-09	2.587E-09	2.132E-09	1.796E-09	1.540E-09
WNW	4.403E-08	2.480E-08	1.692E-08	1.031E-08	7.032E-09	5.214E-09	4.092E-09	3.313E-09	2.743E-09	2.316E-09	1.988E-09
NW	6.622E-08	3.548E-08	2.348E-08	1.365E-08	9.019E-09	6.536E-09	5.078E-09	4.071E-09	3.348E-09	2.816E-09	2.410E-09
NNW	7.285E-08	3.979E-08	2.557E-08	1.444E-08	9.632E-09	7.036E-09	5.474E-09	4.422E-09	3.695E-09	3.133E-09	2.693E-09
N	3.052E-08	1.958E-08	1.628E-08	1.297E-08	1.089E-08	8.989E-09	7.027E-09	5.682E-09	4.714E-09	3.997E-09	3.447E-09
NNE	2.582E-08	3.938E-08	2.548E-08	1.456E-08	9.814E-09	7.233E-09	5.638E-09	4.567E-09	3.804E-09	3.237E-09	2.802E-09
NE	1.192E-08	2.075E-08	1.353E-08	7.791E-09	5.271E-09	3.891E-09	3.079E-09	2.517E-09	2.115E-09	1.794E-09	1.547E-09
ENE	7.916E-09	1.029E-08	6.757E-09	3.912E-09	2.646E-09	1.950E-09	1.598E-09	1.333E-09	1.101E-09	9.291E-10	7.973E-10
E	8.021E-09	1.067E-08	6.998E-09	4.042E-09	2.731E-09	2.011E-09	1.564E-09	1.262E-09	1.083E-09	9.403E-10	8.081E-10
ESE	1.382E-08	1.795E-08	1.197E-08	7.063E-09	4.836E-09	3.594E-09	2.815E-09	2.286E-09	1.906E-09	1.621E-09	1.402E-09
SE	1.713E-08	1.048E-08	8.008E-09	5.578E-09	3.984E-09	3.060E-09	2.464E-09	2.047E-09	1.692E-09	1.428E-09	1.226E-09
SSE	2.792E-08	2.844E-08	1.804E-08	9.995E-09	6.578E-09	4.752E-09	3.640E-09	2.903E-09	2.385E-09	2.004E-09	1.713E-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	4.220E-08	5.365E-08	4.196E-08	3.348E-08	3.568E-08	2.188E-08	8.784E-09	4.448E-09	2.777E-09	1.949E-09
SSW	3.291E-08	5.034E-08	4.629E-08	4.700E-08	4.015E-08	2.771E-08	1.208E-08	6.200E-09	3.851E-09	2.674E-09
SW	4.561E-08	1.198E-07	8.263E-08	5.108E-08	3.634E-08	2.421E-08	1.078E-08	5.796E-09	3.754E-09	2.628E-09
WSW	6.099E-08	1.387E-07	8.649E-08	5.069E-08	3.471E-08	2.027E-08	9.105E-09	4.534E-09	2.812E-09	1.965E-09
W	1.897E-07	2.033E-07	1.071E-07	6.088E-08	4.016E-08	1.927E-08	8.096E-09	4.229E-09	2.598E-09	1.801E-09
WNW	1.657E-07	2.415E-07	1.330E-07	7.888E-08	5.231E-08	2.557E-08	1.032E-08	5.250E-09	3.319E-09	2.321E-09
NW	2.081E-07	4.158E-07	2.267E-07	1.242E-07	7.962E-08	3.698E-08	1.378E-08	6.615E-09	4.084E-09	2.823E-09
NNW	7.228E-08	1.792E-07	1.752E-07	1.303E-07	8.722E-08	4.082E-08	1.478E-08	7.103E-09	4.446E-09	3.136E-09
N	5.634E-08	6.961E-08	5.945E-08	4.473E-08	3.430E-08	2.055E-08	1.278E-08	8.711E-09	5.698E-09	4.006E-09
NNE	5.051E-08	5.221E-08	4.023E-08	2.954E-08	2.474E-08	3.019E-08	1.488E-08	7.283E-09	4.582E-09	3.244E-09
NE	1.772E-08	2.540E-08	2.037E-08	1.469E-08	1.184E-08	1.558E-08	7.945E-09	3.934E-09	2.524E-09	1.798E-09
ENE	7.755E-09	1.562E-08	1.383E-08	1.020E-08	8.104E-09	8.191E-09	3.982E-09	1.995E-09	1.320E-09	9.312E-10
E	6.698E-09	1.455E-08	1.317E-08	9.903E-09	8.053E-09	8.450E-09	4.116E-09	2.024E-09	1.280E-09	9.338E-10
ESE	1.479E-08	2.904E-08	2.467E-08	1.794E-08	1.419E-08	1.438E-08	7.164E-09	3.614E-09	2.292E-09	1.624E-09
SE	2.234E-08	4.250E-08	3.586E-08	2.605E-08	1.949E-08	1.086E-08	5.410E-09	3.068E-09	2.031E-09	1.431E-09
SSE	3.673E-08	5.960E-08	4.916E-08	3.554E-08	2.824E-08	2.370E-08	1.026E-08	4.794E-09	2.916E-09	2.009E-09

B314

ERP ELEVATED STACK RELEASES - JUL-DEC 2016
 8.000 DAY DECAY, DELETED
 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	2.920E-10	1.850E-08	4.213E-08	5.303E-08	5.685E-08	4.979E-08	4.155E-08	3.456E-08	2.903E-08	3.370E-08	3.697E-08
SSW	1.034E-09	1.115E-08	3.028E-08	4.526E-08	5.400E-08	4.884E-08	4.147E-08	4.616E-08	4.867E-08	4.300E-08	3.855E-08
SW	3.387E-11	2.853E-09	2.911E-08	7.932E-08	1.569E-07	1.103E-07	8.117E-08	6.247E-08	4.985E-08	4.095E-08	3.444E-08
WSW	6.664E-11	5.768E-09	4.199E-08	1.025E-07	1.847E-07	1.194E-07	8.401E-08	6.284E-08	4.918E-08	3.982E-08	3.311E-08
W	9.525E-10	6.178E-08	1.945E-07	2.457E-07	2.372E-07	1.494E-07	1.031E-07	7.589E-08	5.861E-08	4.693E-08	3.864E-08
WNW	5.425E-10	3.378E-08	1.458E-07	2.439E-07	3.041E-07	1.853E-07	1.256E-07	9.621E-08	7.708E-08	6.106E-08	4.983E-08
NW	2.250E-10	1.770E-08	1.416E-07	3.511E-07	5.614E-07	3.266E-07	2.146E-07	1.559E-07	1.193E-07	9.340E-08	7.543E-08
NNW	1.172E-09	1.105E-08	5.425E-08	1.160E-07	1.954E-07	1.954E-07	1.775E-07	1.539E-07	1.332E-07	1.042E-07	8.408E-08
N	9.496E-09	3.371E-08	5.633E-08	6.616E-08	7.184E-08	6.753E-08	5.975E-08	5.099E-08	4.378E-08	3.798E-08	3.330E-08
NNE	8.762E-09	3.731E-08	5.127E-08	5.509E-08	5.448E-08	4.727E-08	3.980E-08	3.362E-08	2.873E-08	2.489E-08	2.186E-08
NE	1.046E-10	6.027E-09	1.682E-08	2.392E-08	2.719E-08	2.407E-08	2.019E-08	1.687E-08	1.424E-08	1.219E-08	1.057E-08
ENE	1.445E-11	1.050E-09	6.248E-09	1.221E-08	1.696E-08	1.602E-08	1.381E-08	1.169E-08	9.919E-09	8.497E-09	7.363E-09
E	2.023E-16	2.661E-10	5.140E-09	1.110E-08	1.579E-08	1.510E-08	1.317E-08	1.127E-08	9.668E-09	8.362E-09	7.309E-09
ESE	8.115E-16	6.998E-10	1.188E-08	2.405E-08	3.170E-08	2.898E-08	2.455E-08	2.059E-08	1.740E-08	1.489E-08	1.291E-08
SE	1.492E-15	1.157E-09	1.838E-08	3.596E-08	4.626E-08	4.212E-08	3.570E-08	2.995E-08	2.531E-08	2.164E-08	1.872E-08
SSE	7.729E-10	9.082E-09	3.286E-08	5.309E-08	6.430E-08	5.791E-08	4.887E-08	4.090E-08	3.449E-08	2.944E-08	2.545E-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	3.289E-08	2.198E-08	1.386E-08	7.470E-09	4.917E-09	3.524E-09	2.620E-09	2.034E-09	1.652E-09	1.375E-09	1.159E-09
SSW	3.627E-08	3.017E-08	1.912E-08	1.036E-08	6.973E-09	5.060E-09	3.810E-09	2.994E-09	2.427E-09	2.014E-09	1.703E-09
SW	3.213E-08	2.620E-08	1.685E-08	9.284E-09	6.261E-09	4.552E-09	3.551E-09	2.795E-09	2.269E-09	1.886E-09	1.597E-09
WSW	2.962E-08	1.989E-08	1.392E-08	8.231E-09	5.316E-09	3.782E-09	2.859E-09	2.254E-09	1.832E-09	1.525E-09	1.293E-09
W	3.253E-08	1.753E-08	1.223E-08	7.328E-09	4.979E-09	3.532E-09	2.655E-09	2.083E-09	1.687E-09	1.399E-09	1.182E-09
WNW	4.217E-08	2.317E-08	1.540E-08	8.864E-09	5.650E-09	3.985E-09	3.035E-09	2.400E-09	1.946E-09	1.612E-09	1.360E-09
NW	6.300E-08	3.287E-08	2.118E-08	1.167E-08	7.324E-09	5.087E-09	3.836E-09	3.004E-09	2.419E-09	1.996E-09	1.679E-09
NNW	7.071E-08	3.757E-08	2.341E-08	1.241E-08	7.696E-09	5.293E-09	3.917E-09	3.048E-09	2.480E-09	2.055E-09	1.730E-09
N	2.958E-08	1.888E-08	1.572E-08	1.262E-08	1.045E-08	8.294E-09	6.342E-09	5.031E-09	4.103E-09	3.426E-09	2.914E-09
NNE	2.501E-08	3.836E-08	2.405E-08	1.306E-08	8.431E-09	5.996E-09	4.533E-09	3.575E-09	2.908E-09	2.421E-09	2.054E-09
NE	1.146E-08	2.029E-08	1.285E-08	7.038E-09	4.537E-09	3.220E-09	2.469E-09	1.975E-09	1.629E-09	1.359E-09	1.155E-09
ENE	7.586E-09	9.988E-09	6.397E-09	3.515E-09	2.236E-09	1.566E-09	1.230E-09	9.933E-10	8.010E-10	6.615E-10	5.567E-10
E	7.749E-09	1.043E-08	6.658E-09	3.639E-09	2.303E-09	1.608E-09	1.194E-09	9.260E-10	7.667E-10	6.454E-10	5.416E-10
ESE	1.324E-08	1.746E-08	1.135E-08	6.349E-09	4.080E-09	2.878E-09	2.156E-09	1.683E-09	1.354E-09	1.116E-09	9.363E-10
SE	1.639E-08	9.899E-09	7.539E-09	5.258E-09	3.760E-09	2.900E-09	2.349E-09	1.960E-09	1.601E-09	1.340E-09	1.141E-09
SSE	2.679E-08	2.729E-08	1.681E-08	8.862E-09	5.561E-09	3.865E-09	2.865E-09	2.221E-09	1.779E-09	1.460E-09	1.223E-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	4.172E-08	5.286E-08	4.095E-08	3.239E-08	3.449E-08	2.080E-08	7.755E-09	3.534E-09	2.056E-09	1.377E-09
SSW	3.269E-08	4.976E-08	4.531E-08	4.580E-08	3.902E-08	2.661E-08	1.080E-08	5.070E-09	3.011E-09	2.021E-09
SW	4.559E-08	1.189E-07	8.145E-08	5.007E-08	3.551E-08	2.336E-08	9.623E-09	4.607E-09	2.811E-09	1.892E-09
WSW	6.083E-08	1.374E-07	8.499E-08	4.952E-08	3.381E-08	1.940E-08	8.200E-09	3.822E-09	2.266E-09	1.530E-09
W	1.878E-07	2.001E-07	1.046E-07	5.910E-08	3.883E-08	1.851E-08	7.373E-09	3.567E-09	2.096E-09	1.404E-09
WNW	1.645E-07	2.379E-07	1.298E-07	7.644E-08	5.032E-08	2.394E-08	8.887E-09	4.049E-09	2.408E-09	1.618E-09
NW	2.072E-07	4.103E-07	2.210E-07	1.199E-07	7.615E-08	3.437E-08	1.185E-08	5.183E-09	3.019E-09	2.004E-09
NNW	7.209E-08	1.777E-07	1.728E-07	1.281E-07	8.508E-08	3.864E-08	1.276E-08	5.383E-09	3.080E-09	2.061E-09
N	5.567E-08	6.866E-08	5.832E-08	4.363E-08	3.331E-08	1.985E-08	1.235E-08	8.088E-09	5.052E-09	3.437E-09
NNE	4.986E-08	5.141E-08	3.932E-08	2.866E-08	2.392E-08	2.903E-08	1.345E-08	6.060E-09	3.595E-09	2.429E-09
NE	1.757E-08	2.508E-08	1.990E-08	1.421E-08	1.138E-08	1.502E-08	7.218E-09	3.270E-09	1.984E-09	1.363E-09
ENE	7.744E-09	1.549E-08	1.355E-08	9.883E-09	7.782E-09	7.859E-09	3.587E-09	1.610E-09	9.876E-10	6.640E-10
E	6.708E-09	1.444E-08	1.293E-08	9.630E-09	7.784E-09	8.157E-09	3.716E-09	1.628E-09	9.419E-10	6.429E-10
ESE	1.481E-08	2.879E-08	2.415E-08	1.735E-08	1.362E-08	1.381E-08	6.453E-09	2.910E-09	1.693E-09	1.120E-09
SE	2.237E-08	4.213E-08	3.511E-08	2.524E-08	1.872E-08	1.029E-08	5.099E-09	2.909E-09	1.934E-09	1.344E-09
SSE	3.657E-08	5.897E-08	4.809E-08	3.440E-08	2.713E-08	2.252E-08	9.162E-09	3.917E-09	2.236E-09	1.467E-09

B315

ERP ELEVATED STACK RELEASES - JUL-DEC 2016
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		2.508E-09	2.294E-09	2.325E-09	1.821E-09	9.777E-10	6.234E-10	4.298E-10	3.119E-10	2.348E-10	1.917E-10	1.729E-10		
SSW		9.678E-10	1.108E-09	1.417E-09	1.251E-09	7.226E-10	4.727E-10	3.300E-10	2.410E-10	2.259E-10	1.709E-10	1.338E-10		
SW		3.025E-10	4.727E-10	7.370E-10	7.017E-10	7.763E-10	4.270E-10	2.665E-10	1.818E-10	1.318E-10	9.983E-11	7.819E-11		
WSW		5.579E-10	6.624E-10	8.717E-10	1.418E-09	8.607E-10	4.667E-10	2.884E-10	1.954E-10	1.411E-10	1.066E-10	8.341E-11		
W		9.429E-10	3.589E-09	3.102E-09	2.061E-09	9.585E-10	5.167E-10	3.183E-10	2.153E-10	1.552E-10	1.173E-10	9.176E-11		
WNW		1.603E-09	1.563E-09	4.005E-09	2.987E-09	1.786E-09	9.075E-10	5.429E-10	3.656E-10	2.763E-10	2.152E-10	1.772E-10		
NW		1.936E-09	2.220E-09	2.842E-09	5.818E-09	3.778E-09	1.881E-09	1.109E-09	7.317E-10	5.246E-10	4.012E-10	3.236E-10		
NNW		1.522E-09	1.751E-09	2.246E-09	1.987E-09	2.143E-09	1.167E-09	7.324E-10	6.128E-10	4.544E-10	3.625E-10	3.066E-10		
N		4.840E-09	4.206E-09	3.972E-09	2.971E-09	1.544E-09	9.728E-10	6.667E-10	4.823E-10	3.625E-10	2.805E-10	2.221E-10		
NNE		4.554E-09	3.831E-09	3.444E-09	2.486E-09	1.258E-09	7.844E-10	5.347E-10	3.858E-10	2.895E-10	2.239E-10	1.773E-10		
NE		1.063E-09	1.010E-09	1.074E-09	8.653E-10	4.732E-10	3.037E-10	2.101E-10	1.527E-10	1.151E-10	8.914E-11	7.058E-11		
ENE		1.519E-10	2.403E-10	3.769E-10	3.595E-10	2.161E-10	1.432E-10	1.006E-10	7.371E-11	5.575E-11	4.325E-11	3.425E-11		
E		2.423E-11	1.454E-10	3.096E-10	3.207E-10	2.003E-10	1.343E-10	9.486E-11	6.968E-11	5.278E-11	4.096E-11	3.244E-11		
ESE		6.681E-11	4.008E-10	8.534E-10	8.840E-10	5.522E-10	3.702E-10	2.615E-10	1.921E-10	1.455E-10	1.129E-10	8.943E-11		
SE		1.094E-10	6.562E-10	1.397E-09	1.447E-09	9.040E-10	6.062E-10	4.282E-10	3.145E-10	2.382E-10	1.849E-10	1.464E-10		
SSE		1.018E-09	1.407E-09	2.053E-09	1.910E-09	1.134E-09	7.485E-10	5.248E-10	3.841E-10	2.904E-10	2.252E-10	1.784E-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		1.391E-10	1.072E-10	7.490E-11	4.428E-11	2.821E-11	1.879E-11	1.343E-11	1.005E-11	8.033E-12	6.411E-12	5.235E-12
SSW		1.087E-10	9.117E-11	6.478E-11	3.877E-11	2.298E-11	1.629E-11	1.167E-11	8.767E-12	6.901E-12	5.512E-12	4.499E-12
SW		6.411E-11	8.078E-11	6.134E-11	3.860E-11	2.482E-11	1.486E-11	1.037E-11	7.783E-12	6.052E-12	4.834E-12	3.946E-12
WSW		6.859E-11	6.224E-11	4.516E-11	2.759E-11	1.670E-11	1.119E-11	8.078E-12	6.066E-12	4.716E-12	3.768E-12	3.075E-12
W		7.386E-11	3.333E-11	5.046E-11	3.185E-11	1.892E-11	1.289E-11	9.237E-12	6.936E-12	5.393E-12	4.308E-12	3.516E-12
WNW		1.535E-10	9.299E-11	6.649E-11	4.006E-11	2.554E-11	1.682E-11	1.188E-11	8.920E-12	7.019E-12	5.607E-12	4.576E-12
NW		2.741E-10	1.554E-10	1.075E-10	6.788E-11	4.147E-11	2.776E-11	1.999E-11	1.501E-11	1.176E-11	9.391E-12	7.665E-12
NNW		2.722E-10	1.788E-10	1.325E-10	8.197E-11	5.251E-11	3.482E-11	2.375E-11	1.711E-11	1.326E-11	1.059E-11	8.650E-12
N		1.792E-10	8.526E-11	5.225E-11	2.782E-11	8.854E-11	5.057E-11	3.621E-11	2.719E-11	2.114E-11	1.689E-11	1.379E-11
NNE		1.431E-10	2.610E-10	1.594E-10	8.135E-11	4.939E-11	3.309E-11	2.368E-11	1.776E-11	1.379E-11	1.101E-11	8.978E-12
NE		5.692E-11	9.397E-11	5.784E-11	2.983E-11	1.817E-11	1.216E-11	8.939E-12	6.635E-12	5.159E-12	4.141E-12	3.380E-12
ENE		2.759E-11	3.200E-11	2.327E-11	1.417E-11	9.046E-12	5.998E-12	4.223E-12	2.862E-12	2.227E-12	1.780E-12	1.455E-12
E		2.613E-11	3.569E-11	2.664E-11	1.655E-11	1.059E-11	7.007E-12	4.908E-12	3.587E-12	2.729E-12	2.022E-12	1.648E-12
ESE		7.203E-11	7.872E-11	5.655E-11	3.411E-11	2.169E-11	1.437E-11	1.010E-11	7.419E-12	5.664E-12	4.458E-12	3.594E-12
SE		1.179E-10	5.583E-11	3.403E-11	1.787E-11	1.087E-11	7.462E-12	5.570E-12	1.067E-11	8.196E-12	6.492E-12	5.273E-12
SSE		1.437E-10	1.607E-10	9.953E-11	5.170E-11	3.156E-11	2.112E-11	1.508E-11	1.128E-11	8.750E-12	6.974E-12	5.683E-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		2.094E-09	1.008E-09	4.343E-10	2.404E-10	1.659E-10	9.994E-11	4.394E-11	1.916E-11	1.025E-11	6.456E-12		
SSW		1.275E-09	7.290E-10	3.324E-10	2.092E-10	1.355E-10	8.333E-11	3.753E-11	1.623E-11	8.886E-12	5.549E-12		
SW		6.626E-10	6.045E-10	2.754E-10	1.339E-10	7.939E-11	6.844E-11	3.753E-11	1.572E-11	7.861E-12	4.866E-12		
WSW		1.068E-09	8.095E-10	2.988E-10	1.435E-10	8.479E-11	5.606E-11	2.665E-11	1.141E-11	6.127E-12	3.792E-12		
W		2.747E-09	1.007E-09	3.300E-10	1.579E-10	9.269E-11	4.995E-11	3.024E-11	1.304E-11	7.005E-12	4.336E-12		
WNW		3.010E-09	1.663E-09	5.692E-10	2.786E-10	1.797E-10	9.465E-11	3.948E-11	1.717E-11	9.040E-12	5.643E-12		
NW		4.026E-09	3.388E-09	1.164E-09	5.367E-10	3.283E-10	1.605E-10	6.495E-11	2.831E-11	1.519E-11	9.452E-12		
NNW		2.021E-09	1.674E-09	8.004E-10	4.646E-10	3.104E-10	1.790E-10	8.011E-11	3.511E-11	1.754E-11	1.066E-11		
N		3.579E-09	1.607E-09	6.746E-10	3.655E-10	2.235E-10	9.146E-11	6.023E-11	5.495E-11	2.747E-11	1.700E-11		
NNE		3.104E-09	1.320E-09	5.417E-10	2.920E-10	1.784E-10	1.896E-10	8.448E-11	3.367E-11	1.794E-11	1.108E-11		
NE		9.671E-10	4.850E-10	2.121E-10	1.160E-10	7.102E-11	6.968E-11	3.087E-11	1.248E-11	6.731E-12	4.161E-12		
ENE		3.388E-10	2.156E-10	1.012E-10	5.612E-11	3.445E-11	2.714E-11	1.391E-11	6.101E-12	3.009E-12	1.792E-12		
E		2.780E-10	1.977E-10	9.531E-11	5.311E-11	3.263E-11	2.954E-11	1.614E-11	7.124E-12	3.638E-12	2.093E-12		
ESE		7.664E-10	5.450E-10	2.627E-10	1.464E-10	8.995E-11	6.738E-11	3.358E-11	1.462E-11	7.518E-12	4.495E-12		
SE		1.255E-09	8.924E-10	4.302E-10	2.397E-10	1.473E-10	5.994E-11	1.835E-11	7.615E-12	8.269E-12	6.546E-12		
SSE		1.846E-09	1.135E-09	5.282E-10	2.924E-10	1.794E-10	1.297E-10	5.338E-11	2.149E-11	1.140E-11	7.022E-12		

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ERP ELEVATED STACK RELEASES - JUL-DEC 2016
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE TYPE	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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	4.6E-08	4.6E-08	4.5E-08	2.2E-09
A	Site Boundary	SSW	.82	3.6E-08	3.6E-08	3.5E-08	1.4E-09
A	Site Boundary	SW	.97	7.4E-08	7.4E-08	7.4E-08	7.2E-10
A	Site Boundary	WSW	.93	8.5E-08	8.4E-08	8.4E-08	1.1E-09
A	Site Boundary	W	.91	2.4E-07	2.4E-07	2.3E-07	2.3E-09
A	Site Boundary	WNW	.94	2.3E-07	2.3E-07	2.2E-07	3.3E-09
A	Site Boundary	NW	.81	1.9E-07	1.9E-07	1.9E-07	2.8E-09
A	Site Boundary	NNW	.69	3.8E-08	3.8E-08	3.8E-08	2.1E-09
A	Site Boundary	N	.67	4.9E-08	4.9E-08	4.8E-08	4.0E-09
A	Site Boundary	NNE	.60	4.3E-08	4.3E-08	4.2E-08	3.6E-09
A	Site Boundary	NE	.62	1.1E-08	1.1E-08	1.1E-08	1.0E-09
A	Site Boundary	ENE	.59	2.1E-09	2.1E-09	2.1E-09	2.8E-10
A	Site Boundary	E	.53	4.4E-10	4.4E-10	4.4E-10	1.6E-10
A	Site Boundary	ESE	.54	1.4E-09	1.4E-09	1.4E-09	4.7E-10
A	Site Boundary	SE	.65	9.0E-09	9.0E-09	9.0E-09	1.1E-09
A	Site Boundary	SSE	.81	3.9E-08	3.9E-08	3.9E-08	2.1E-09
A	Nearest Res	SSW	3.00	4.8E-08	4.7E-08	4.6E-08	2.4E-10
A	Nearest Res	SW	1.70	1.4E-07	1.4E-07	1.4E-07	6.0E-10
A	Nearest Res	WSW	1.90	1.3E-07	1.3E-07	1.3E-07	5.2E-10
A	Nearest Res	W	1.00	2.5E-07	2.5E-07	2.5E-07	2.1E-09
A	Nearest Res	WNW	1.70	2.5E-07	2.5E-07	2.5E-07	1.3E-09
A	Nearest Res	NW	.90	2.7E-07	2.7E-07	2.7E-07	6.1E-09
A	Nearest Res	NNW	1.90	2.0E-07	2.0E-07	2.0E-07	1.3E-09
A	Nearest Res	N	2.90	5.4E-08	5.4E-08	5.3E-08	5.1E-10
A	Nearest Res	NNE	1.70	5.3E-08	5.3E-08	5.2E-08	1.0E-09
A	Nearest Res	ENE	1.70	1.7E-08	1.7E-08	1.7E-08	1.8E-10
A	Nearest Res	E	2.20	1.5E-08	1.5E-08	1.4E-08	1.2E-10
A	Nearest Res	ESE	2.80	2.3E-08	2.3E-08	2.2E-08	2.2E-10
A	Nearest Res	SE	3.00	3.1E-08	3.1E-08	3.0E-08	3.1E-10
A	Nearest Res	SSE	3.00	4.2E-08	4.2E-08	4.1E-08	3.8E-10
A	Nearest Cow	NNW	3.50	1.4E-07	1.4E-07	1.3E-07	4.5E-10
A	Nearest Garde	SSW	3.00	4.8E-08	4.7E-08	4.6E-08	2.4E-10
A	Nearest Garde	SW	2.20	9.9E-08	9.8E-08	9.7E-08	3.5E-10
A	Nearest Garde	NNW	3.00	1.6E-07	1.6E-07	1.5E-07	6.1E-10
A	Nearest Garde	ENE	1.70	1.7E-08	1.7E-08	1.7E-08	1.8E-10
A	Nearest Garde	ESE	2.30	2.7E-08	2.7E-08	2.6E-08	3.0E-10
A	Nearest Garde	SSE	3.00	4.2E-08	4.2E-08	4.1E-08	3.8E-10
A	MAXIMUM CHI/Q	S	1.50	5.8E-08	5.8E-08	5.7E-08	9.8E-10
A	MAXIMUM CHI/Q	SSW	1.50	5.5E-08	5.5E-08	5.4E-08	7.2E-10
A	MAXIMUM CHI/Q	SW	1.50	1.6E-07	1.6E-07	1.6E-07	7.8E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.9E-07	1.9E-07	1.8E-07	8.6E-10
A	MAXIMUM CHI/Q	W	1.00	2.5E-07	2.5E-07	2.5E-07	2.1E-09
A	MAXIMUM CHI/Q	WNW	1.50	3.1E-07	3.1E-07	3.0E-07	1.8E-09
A	MAXIMUM CHI/Q	NW	1.50	5.7E-07	5.7E-07	5.6E-07	3.8E-09
A	MAXIMUM CHI/Q	NNW	2.00	2.0E-07	2.0E-07	2.0E-07	1.2E-09
A	MAXIMUM CHI/Q	N	1.50	7.3E-08	7.3E-08	7.2E-08	1.5E-09
A	MAXIMUM CHI/Q	NNE	1.00	5.6E-08	5.6E-08	5.5E-08	2.5E-09
A	MAXIMUM CHI/Q	NE	1.50	2.8E-08	2.7E-08	2.7E-08	4.7E-10
A	MAXIMUM CHI/Q	ENE	1.50	1.7E-08	1.7E-08	1.7E-08	2.2E-10
A	MAXIMUM CHI/Q	E	1.50	1.6E-08	1.6E-08	1.6E-08	2.0E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.2E-08	3.2E-08	3.2E-08	5.5E-10
A	MAXIMUM CHI/Q	SE	1.50	4.7E-08	4.7E-08	4.6E-08	9.0E-10
A	MAXIMUM CHI/Q	SSE	1.50	6.5E-08	6.5E-08	6.4E-08	1.1E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-December 2016

ERP ELEVATED STACK RELEASES - JAN-DEC 2016
 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	1.043E-09	2.229E-08	4.665E-08	5.545E-08	5.661E-08	4.877E-08	4.048E-08	3.362E-08	2.825E-08	3.238E-08	3.500E-08
SSW	9.168E-10	1.171E-08	3.259E-08	4.744E-08	5.496E-08	4.904E-08	4.135E-08	4.504E-08	4.640E-08	4.064E-08	3.610E-08
SW	1.703E-11	1.712E-09	2.523E-08	6.747E-08	1.231E-07	8.546E-08	6.253E-08	4.797E-08	3.821E-08	3.135E-08	2.635E-08
WSW	3.351E-11	3.155E-09	3.375E-08	8.970E-08	1.599E-07	1.028E-07	7.202E-08	5.370E-08	4.192E-08	3.388E-08	2.813E-08
W	4.790E-10	4.369E-08	1.612E-07	2.067E-07	1.980E-07	1.250E-07	8.656E-08	6.398E-08	4.959E-08	3.984E-08	3.291E-08
WNW	1.735E-09	2.446E-08	1.274E-07	2.306E-07	3.042E-07	1.878E-07	1.283E-07	9.861E-08	7.901E-08	6.283E-08	5.149E-08
NW	6.436E-09	3.424E-08	1.411E-07	3.241E-07	5.117E-07	3.000E-07	1.984E-07	1.448E-07	1.113E-07	8.756E-08	7.111E-08
NNW	3.491E-09	2.253E-08	6.802E-08	1.233E-07	1.907E-07	1.866E-07	1.683E-07	1.458E-07	1.266E-07	9.943E-08	8.068E-08
N	6.349E-09	3.569E-08	6.553E-08	7.664E-08	7.960E-08	7.208E-08	6.214E-08	5.219E-08	4.429E-08	3.807E-08	3.315E-08
NNE	4.459E-09	2.224E-08	3.887E-08	4.784E-08	5.115E-08	4.519E-08	3.825E-08	3.233E-08	2.760E-08	2.386E-08	2.091E-08
NE	5.258E-11	3.382E-09	1.393E-08	2.292E-08	2.842E-08	2.612E-08	2.245E-08	1.910E-08	1.636E-08	1.416E-08	1.240E-08
ENE	3.644E-11	2.728E-09	1.127E-08	1.880E-08	2.352E-08	2.148E-08	1.828E-08	1.539E-08	1.305E-08	1.120E-08	9.727E-09
E	4.136E-16	4.703E-10	8.396E-09	1.726E-08	2.339E-08	2.188E-08	1.890E-08	1.610E-08	1.378E-08	1.192E-08	1.043E-08
ESE	8.515E-12	1.263E-09	1.213E-08	2.303E-08	2.965E-08	2.711E-08	2.309E-08	1.949E-08	1.658E-08	1.427E-08	1.244E-08
SE	5.312E-11	4.442E-09	2.665E-08	4.581E-08	5.545E-08	4.957E-08	4.171E-08	3.490E-08	2.947E-08	2.521E-08	2.184E-08
SSE	3.410E-09	2.158E-08	5.800E-08	8.076E-08	8.787E-08	7.571E-08	6.241E-08	5.150E-08	4.305E-08	3.653E-08	3.146E-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	3.105E-08	2.058E-08	1.335E-08	7.645E-09	5.373E-09	4.072E-09	3.171E-09	2.569E-09	2.162E-09	1.854E-09	1.607E-09
SSW	3.349E-08	2.594E-08	1.686E-08	9.683E-09	6.892E-09	5.175E-09	4.033E-09	3.269E-09	2.729E-09	2.328E-09	2.020E-09
SW	2.441E-08	1.955E-08	1.297E-08	7.638E-09	5.561E-09	4.314E-09	3.498E-09	2.849E-09	2.387E-09	2.043E-09	1.779E-09
WSW	2.497E-08	1.665E-08	1.194E-08	7.451E-09	5.030E-09	3.717E-09	2.907E-09	2.363E-09	1.976E-09	1.689E-09	1.469E-09
W	2.779E-08	1.518E-08	1.078E-08	6.931E-09	5.060E-09	3.742E-09	2.916E-09	2.365E-09	1.973E-09	1.683E-09	1.461E-09
WNW	4.372E-08	2.450E-08	1.667E-08	1.014E-08	6.959E-09	5.199E-09	4.113E-09	3.362E-09	2.814E-09	2.401E-09	2.085E-09
NW	5.973E-08	3.214E-08	2.137E-08	1.254E-08	8.377E-09	6.138E-09	4.820E-09	3.907E-09	3.249E-09	2.763E-09	2.391E-09
NNW	6.826E-08	3.756E-08	2.425E-08	1.382E-08	9.305E-09	6.860E-09	5.389E-09	4.395E-09	3.709E-09	3.174E-09	2.753E-09
N	2.927E-08	1.831E-08	1.483E-08	1.145E-08	9.460E-09	7.781E-09	6.118E-09	4.980E-09	4.160E-09	3.551E-09	3.084E-09
NNE	2.316E-08	3.086E-08	1.994E-08	1.139E-08	7.691E-09	5.684E-09	4.446E-09	3.615E-09	3.024E-09	2.584E-09	2.247E-09
NE	1.358E-08	2.196E-08	1.435E-08	8.332E-09	5.687E-09	4.239E-09	3.384E-09	2.793E-09	2.371E-09	2.033E-09	1.773E-09
ENE	1.003E-08	1.287E-08	8.499E-09	4.983E-09	3.418E-09	2.555E-09	2.120E-09	1.792E-09	1.503E-09	1.288E-09	1.122E-09
E	1.104E-08	1.447E-08	9.520E-09	5.551E-09	3.792E-09	2.825E-09	2.223E-09	1.816E-09	1.572E-09	1.376E-09	1.198E-09
ESE	1.283E-08	1.645E-08	1.102E-08	6.572E-09	4.552E-09	3.425E-09	2.715E-09	2.232E-09	1.884E-09	1.623E-09	1.421E-09
SE	1.914E-08	1.165E-08	8.890E-09	6.269E-09	4.563E-09	3.584E-09	2.955E-09	2.516E-09	2.108E-09	1.804E-09	1.570E-09
SSE	3.248E-08	3.434E-08	2.198E-08	1.239E-08	8.291E-09	6.083E-09	4.729E-09	3.826E-09	3.187E-09	2.714E-09	2.351E-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	4.515E-08	5.287E-08	3.994E-08	3.136E-08	3.276E-08	1.969E-08	7.903E-09	4.059E-09	2.586E-09	1.854E-09
SSW	3.455E-08	5.066E-08	4.488E-08	4.382E-08	3.648E-08	2.358E-08	1.004E-08	5.176E-09	3.282E-09	2.333E-09
SW	3.877E-08	9.401E-08	6.282E-08	3.839E-08	2.712E-08	1.770E-08	7.899E-09	4.320E-09	2.859E-09	2.047E-09
WSW	5.182E-08	1.189E-07	7.290E-08	4.222E-08	2.866E-08	1.640E-08	7.372E-09	3.743E-09	2.371E-09	1.693E-09
W	1.553E-07	1.675E-07	8.779E-08	4.999E-08	3.307E-08	1.603E-08	6.956E-09	3.763E-09	2.373E-09	1.687E-09
WNW	1.504E-07	2.361E-07	1.323E-07	7.844E-08	5.197E-08	2.529E-08	1.018E-08	5.234E-09	3.368E-09	2.406E-09
NW	1.987E-07	3.759E-07	2.041E-07	1.118E-07	7.177E-08	3.348E-08	1.265E-08	6.208E-09	3.917E-09	2.769E-09
NNW	8.250E-08	1.739E-07	1.642E-07	1.217E-07	8.164E-08	3.847E-08	1.413E-08	6.923E-09	4.418E-09	3.177E-09
N	6.384E-08	7.560E-08	6.081E-08	4.418E-08	3.317E-08	1.920E-08	1.132E-08	7.564E-09	4.993E-09	3.559E-09
NNE	3.916E-08	4.776E-08	3.773E-08	2.753E-08	2.262E-08	2.430E-08	1.165E-08	5.724E-09	3.627E-09	2.590E-09
NE	1.558E-08	2.617E-08	2.209E-08	1.630E-08	1.336E-08	1.672E-08	8.495E-09	4.283E-09	2.801E-09	2.037E-09
ENE	1.272E-08	2.156E-08	1.798E-08	1.301E-08	1.027E-08	1.030E-08	5.069E-09	2.611E-09	1.776E-09	1.290E-09
E	1.058E-08	2.136E-08	1.857E-08	1.373E-08	1.110E-08	1.151E-08	5.651E-09	2.842E-09	1.839E-09	1.368E-09
ESE	1.456E-08	2.705E-08	2.272E-08	1.653E-08	1.313E-08	1.323E-08	6.663E-09	3.442E-09	2.238E-09	1.626E-09
SE	3.023E-08	5.069E-08	4.109E-08	2.940E-08	2.184E-08	1.209E-08	6.093E-09	3.593E-09	2.486E-09	1.807E-09
SSE	6.002E-08	8.089E-08	6.159E-08	4.298E-08	3.334E-08	2.843E-08	1.270E-08	6.130E-09	3.841E-09	2.720E-09

B319

ERP ELEVATED STACK RELEASES - JAN-DEC 2016
 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	1.042E-09	2.228E-08	4.660E-08	5.537E-08	5.647E-08	4.860E-08	4.029E-08	3.343E-08	2.807E-08	3.214E-08	3.470E-08
SSW	9.165E-10	1.171E-08	3.255E-08	4.735E-08	5.484E-08	4.884E-08	4.133E-08	4.476E-08	4.604E-08	4.027E-08	3.573E-08
SW	1.702E-11	1.711E-09	2.519E-08	6.733E-08	1.227E-07	8.506E-08	6.216E-08	4.763E-08	3.789E-08	3.105E-08	2.606E-08
WSW	3.349E-11	3.152E-09	3.370E-08	8.950E-08	1.593E-07	1.023E-07	7.155E-08	5.328E-08	4.153E-08	3.352E-08	2.779E-08
W	4.788E-10	4.365E-08	1.609E-07	2.062E-07	1.973E-07	1.245E-07	8.605E-08	6.351E-08	4.917E-08	3.946E-08	3.255E-08
WNW	1.735E-09	2.445E-08	1.273E-07	2.302E-07	3.032E-07	1.870E-07	1.276E-07	9.792E-08	7.836E-08	6.223E-08	5.094E-08
NW	6.434E-09	3.422E-08	1.410E-07	3.236E-07	5.102E-07	2.989E-07	1.975E-07	1.440E-07	1.105E-07	8.687E-08	7.047E-08
NNW	3.491E-09	2.252E-08	6.796E-08	1.232E-07	1.903E-07	1.860E-07	1.676E-07	1.451E-07	1.259E-07	9.877E-08	8.008E-08
N	6.348E-09	3.568E-08	6.548E-08	7.655E-08	7.944E-08	7.188E-08	6.193E-08	5.197E-08	4.407E-08	3.786E-08	3.294E-08
NNE	4.458E-09	2.223E-08	3.885E-08	4.779E-08	5.105E-08	4.508E-08	3.813E-08	3.220E-08	2.748E-08	2.374E-08	2.078E-08
NE	5.258E-11	3.380E-09	1.392E-08	2.288E-08	2.835E-08	2.602E-08	2.234E-08	1.899E-08	1.624E-08	1.404E-08	1.229E-08
ENE	3.643E-11	2.727E-09	1.125E-08	1.876E-08	2.345E-08	2.139E-08	1.818E-08	1.529E-08	1.295E-08	1.110E-08	9.633E-09
E	4.135E-16	4.700E-10	8.385E-09	1.723E-08	2.332E-08	2.179E-08	1.879E-08	1.599E-08	1.368E-08	1.182E-08	1.033E-08
ESE	8.512E-12	1.262E-09	1.212E-08	2.299E-08	2.957E-08	2.700E-08	2.298E-08	1.937E-08	1.646E-08	1.416E-08	1.233E-08
SE	5.311E-11	4.440E-09	2.663E-08	4.575E-08	5.534E-08	4.943E-08	4.156E-08	3.474E-08	2.931E-08	2.504E-08	2.167E-08
SSE	3.409E-09	2.157E-08	5.795E-08	8.067E-08	8.770E-08	7.549E-08	6.218E-08	5.127E-08	4.282E-08	3.630E-08	3.123E-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	3.076E-08	2.026E-08	1.308E-08	7.408E-09	5.146E-09	3.854E-09	2.968E-09	2.378E-09	1.978E-09	1.677E-09	1.438E-09
SSW	3.310E-08	2.544E-08	1.643E-08	9.311E-09	6.534E-09	4.839E-09	3.720E-09	2.975E-09	2.451E-09	2.062E-09	1.766E-09
SW	2.412E-08	1.918E-08	1.264E-08	7.349E-09	5.280E-09	4.042E-09	3.233E-09	2.600E-09	2.150E-09	1.817E-09	1.562E-09
WSW	2.464E-08	1.631E-08	1.161E-08	7.145E-09	4.757E-09	3.467E-09	2.675E-09	2.145E-09	1.770E-09	1.493E-09	1.283E-09
W	2.746E-08	1.490E-08	1.052E-08	6.672E-09	4.807E-09	3.510E-09	2.701E-09	2.163E-09	1.783E-09	1.502E-09	1.287E-09
WNW	4.319E-08	2.405E-08	1.626E-08	9.759E-09	6.610E-09	4.875E-09	3.806E-09	3.071E-09	2.537E-09	2.138E-09	1.832E-09
NW	5.914E-08	3.165E-08	2.094E-08	1.216E-08	8.038E-09	5.830E-09	4.530E-09	3.634E-09	2.992E-09	2.519E-09	2.158E-09
NNW	6.769E-08	3.708E-08	2.383E-08	1.346E-08	8.987E-09	6.569E-09	5.115E-09	4.135E-09	3.458E-09	2.934E-09	2.523E-09
N	2.906E-08	1.812E-08	1.463E-08	1.120E-08	9.161E-09	7.455E-09	5.809E-09	4.687E-09	3.881E-09	3.285E-09	2.828E-09
NNE	2.301E-08	3.056E-08	1.968E-08	1.117E-08	7.492E-09	5.500E-09	4.274E-09	3.453E-09	2.870E-09	2.437E-09	2.105E-09
NE	1.344E-08	2.157E-08	1.401E-08	8.031E-09	5.415E-09	3.987E-09	3.143E-09	2.562E-09	2.147E-09	1.819E-09	1.567E-09
ENE	9.925E-09	1.264E-08	8.293E-09	4.800E-09	3.250E-09	2.398E-09	1.961E-09	1.634E-09	1.353E-09	1.144E-09	9.837E-10
E	1.092E-08	1.421E-08	9.293E-09	5.353E-09	3.612E-09	2.658E-09	2.067E-09	1.668E-09	1.426E-09	1.233E-09	1.061E-09
ESE	1.270E-08	1.619E-08	1.079E-08	6.356E-09	4.352E-09	3.237E-09	2.537E-09	2.062E-09	1.721E-09	1.465E-09	1.268E-09
SE	1.898E-08	1.150E-08	8.731E-09	6.091E-09	4.386E-09	3.408E-09	2.779E-09	2.340E-09	1.940E-09	1.643E-09	1.415E-09
SSE	3.221E-08	3.382E-08	2.153E-08	1.201E-08	7.949E-09	5.770E-09	4.438E-09	3.553E-09	2.928E-09	2.467E-09	2.115E-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	4.509E-08	5.273E-08	3.976E-08	3.115E-08	3.248E-08	1.940E-08	7.663E-09	3.844E-09	2.394E-09	1.678E-09
SSW	3.449E-08	5.049E-08	4.464E-08	4.348E-08	3.610E-08	2.314E-08	9.659E-09	4.843E-09	2.988E-09	2.068E-09
SW	3.870E-08	9.367E-08	6.245E-08	3.807E-08	2.682E-08	1.737E-08	7.605E-09	4.048E-09	2.609E-09	1.822E-09
WSW	5.171E-08	1.185E-07	7.244E-08	4.183E-08	2.832E-08	1.607E-08	7.077E-09	3.494E-09	2.154E-09	1.496E-09
W	1.550E-07	1.669E-07	8.727E-08	4.957E-08	3.271E-08	1.574E-08	6.698E-09	3.532E-09	2.172E-09	1.506E-09
WNW	1.502E-07	2.353E-07	1.316E-07	7.781E-08	5.142E-08	2.484E-08	9.803E-09	4.910E-09	3.077E-09	2.143E-09
NW	1.984E-07	3.748E-07	2.031E-07	1.111E-07	7.113E-08	3.300E-08	1.228E-08	5.899E-09	3.646E-09	2.525E-09
NNW	8.240E-08	1.735E-07	1.635E-07	1.210E-07	8.103E-08	3.799E-08	1.378E-08	6.632E-09	4.157E-09	2.937E-09
N	6.378E-08	7.544E-08	6.060E-08	4.396E-08	3.296E-08	1.900E-08	1.106E-08	7.252E-09	4.700E-09	3.292E-09
NNE	3.913E-08	4.767E-08	3.761E-08	2.740E-08	2.248E-08	2.405E-08	1.142E-08	5.541E-09	3.465E-09	2.443E-09
NE	1.556E-08	2.610E-08	2.198E-08	1.619E-08	1.323E-08	1.640E-08	8.197E-09	4.030E-09	2.570E-09	1.823E-09
ENE	1.270E-08	2.149E-08	1.788E-08	1.292E-08	1.018E-08	1.010E-08	4.887E-09	2.450E-09	1.620E-09	1.146E-09
E	1.056E-08	2.129E-08	1.847E-08	1.363E-08	1.099E-08	1.129E-08	5.455E-09	2.676E-09	1.690E-09	1.226E-09
ESE	1.454E-08	2.697E-08	2.261E-08	1.642E-08	1.301E-08	1.301E-08	6.450E-09	3.254E-09	2.068E-09	1.468E-09
SE	3.020E-08	5.058E-08	4.093E-08	2.924E-08	2.168E-08	1.193E-08	5.920E-09	3.417E-09	2.313E-09	1.646E-09
SSE	5.996E-08	8.071E-08	6.136E-08	4.275E-08	3.309E-08	2.800E-08	1.232E-08	5.818E-09	3.568E-09	2.473E-09

B320

ERP ELEVATED STACK RELEASES - JAN-DEC 2016
 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	1.043E-09	2.209E-08	4.594E-08	5.472E-08	5.567E-08	4.765E-08	3.927E-08	3.240E-08	2.706E-08	3.100E-08	3.351E-08
SSW	9.167E-10	1.162E-08	3.223E-08	4.707E-08	5.423E-08	4.802E-08	4.018E-08	4.357E-08	4.475E-08	3.902E-08	3.455E-08
SW	1.703E-11	1.701E-09	2.517E-08	6.737E-08	1.218E-07	8.391E-08	6.103E-08	4.659E-08	3.695E-08	3.021E-08	2.531E-08
WSW	3.350E-11	3.130E-09	3.361E-08	8.943E-08	1.579E-07	1.007E-07	7.008E-08	5.197E-08	4.038E-08	3.250E-08	2.689E-08
W	4.790E-10	4.330E-08	1.598E-07	2.040E-07	1.941E-07	1.218E-07	8.384E-08	6.168E-08	4.762E-08	3.813E-08	3.140E-08
WNW	1.735E-09	2.429E-08	1.268E-07	2.285E-07	2.994E-07	1.834E-07	1.246E-07	9.533E-08	7.613E-08	6.024E-08	4.910E-08
NW	6.435E-09	3.394E-08	1.401E-07	3.219E-07	5.041E-07	2.927E-07	1.921E-07	1.394E-07	1.066E-07	8.337E-08	6.729E-08
NNW	3.491E-09	2.234E-08	6.738E-08	1.227E-07	1.888E-07	1.836E-07	1.650E-07	1.426E-07	1.236E-07	9.658E-08	7.794E-08
N	6.349E-09	3.538E-08	6.455E-08	7.567E-08	7.837E-08	7.060E-08	6.055E-08	5.060E-08	4.275E-08	3.660E-08	3.175E-08
NNE	4.459E-09	2.205E-08	3.836E-08	4.736E-08	5.045E-08	4.430E-08	3.727E-08	3.134E-08	2.663E-08	2.293E-08	2.001E-08
NE	5.258E-11	3.356E-09	1.383E-08	2.281E-08	2.811E-08	2.563E-08	2.188E-08	1.850E-08	1.576E-08	1.357E-08	1.183E-08
ENE	3.644E-11	2.707E-09	1.118E-08	1.870E-08	2.325E-08	2.105E-08	1.778E-08	1.486E-08	1.252E-08	1.068E-08	9.223E-09
E	4.136E-16	4.702E-10	8.393E-09	1.725E-08	2.317E-08	2.149E-08	1.842E-08	1.558E-08	1.326E-08	1.141E-08	9.937E-09
ESE	8.514E-12	1.258E-09	1.211E-08	2.300E-08	2.936E-08	2.661E-08	2.248E-08	1.884E-08	1.592E-08	1.363E-08	1.182E-08
SE	5.311E-11	4.415E-09	2.654E-08	4.569E-08	5.488E-08	4.865E-08	4.063E-08	3.376E-08	2.833E-08	2.409E-08	2.076E-08
SSE	3.410E-09	2.140E-08	5.741E-08	8.016E-08	8.671E-08	7.412E-08	6.061E-08	4.965E-08	4.122E-08	3.476E-08	2.976E-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	2.964E-08	1.926E-08	1.210E-08	6.491E-09	4.246E-09	3.031E-09	2.252E-09	1.749E-09	1.418E-09	1.179E-09	9.931E-10
SSW	3.199E-08	2.442E-08	1.535E-08	8.237E-09	5.455E-09	3.922E-09	2.943E-09	2.305E-09	1.864E-09	1.544E-09	1.302E-09
SW	2.343E-08	1.855E-08	1.189E-08	6.529E-09	4.386E-09	3.180E-09	2.475E-09	1.946E-09	1.578E-09	1.310E-09	1.108E-09
WSW	2.384E-08	1.557E-08	1.082E-08	6.385E-09	4.113E-09	2.920E-09	2.203E-09	1.733E-09	1.407E-09	1.169E-09	9.897E-10
W	2.644E-08	1.427E-08	9.998E-09	6.051E-09	4.151E-09	2.949E-09	2.218E-09	1.741E-09	1.411E-09	1.170E-09	9.894E-10
WNW	4.146E-08	2.252E-08	1.482E-08	8.403E-09	5.321E-09	3.736E-09	2.829E-09	2.230E-09	1.804E-09	1.492E-09	1.257E-09
NW	5.618E-08	2.927E-08	1.883E-08	1.037E-08	6.525E-09	4.544E-09	3.428E-09	2.685E-09	2.163E-09	1.786E-09	1.503E-09
NNW	6.558E-08	3.494E-08	2.178E-08	1.156E-08	7.179E-09	4.942E-09	3.662E-09	2.851E-09	2.322E-09	1.925E-09	1.621E-09
N	2.794E-08	1.727E-08	1.393E-08	1.074E-08	8.669E-09	6.805E-09	5.188E-09	4.106E-09	3.342E-09	2.786E-09	2.366E-09
NNE	2.221E-08	2.961E-08	1.848E-08	9.966E-09	6.401E-09	4.534E-09	3.416E-09	2.687E-09	2.179E-09	1.811E-09	1.533E-09
NE	1.297E-08	2.108E-08	1.330E-08	7.247E-09	4.649E-09	3.287E-09	2.510E-09	2.001E-09	1.646E-09	1.371E-09	1.164E-09
ENE	9.497E-09	1.224E-08	7.822E-09	4.286E-09	2.723E-09	1.906E-09	1.491E-09	1.202E-09	9.705E-10	8.028E-10	6.767E-10
E	1.051E-08	1.383E-08	8.797E-09	4.787E-09	3.024E-09	2.107E-09	1.564E-09	1.212E-09	9.980E-10	8.370E-10	7.030E-10
ESE	1.218E-08	1.573E-08	1.020E-08	5.687E-09	3.648E-09	2.570E-09	1.923E-09	1.500E-09	1.207E-09	9.937E-10	8.338E-10
SE	1.811E-08	1.082E-08	8.177E-09	5.709E-09	4.116E-09	3.212E-09	2.635E-09	2.228E-09	1.826E-09	1.530E-09	1.306E-09
SSE	3.067E-08	3.231E-08	1.997E-08	1.057E-08	6.658E-09	4.640E-09	3.447E-09	2.677E-09	2.148E-09	1.766E-09	1.481E-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	4.455E-08	5.189E-08	3.876E-08	3.009E-08	3.133E-08	1.838E-08	6.739E-09	3.043E-09	1.767E-09	1.181E-09
SSW	3.424E-08	4.988E-08	4.363E-08	4.223E-08	3.493E-08	2.207E-08	8.581E-09	3.939E-09	2.319E-09	1.549E-09
SW	3.871E-08	9.288E-08	6.135E-08	3.714E-08	2.606E-08	1.667E-08	6.768E-09	3.220E-09	1.957E-09	1.314E-09
WSW	5.165E-08	1.173E-07	7.100E-08	4.069E-08	2.742E-08	1.530E-08	6.362E-09	2.952E-09	1.743E-09	1.173E-09
W	1.536E-07	1.642E-07	8.510E-08	4.802E-08	3.156E-08	1.507E-08	6.083E-09	2.977E-09	1.752E-09	1.175E-09
WNW	1.492E-07	2.321E-07	1.286E-07	7.556E-08	4.957E-08	2.331E-08	8.458E-09	3.796E-09	2.239E-09	1.497E-09
NW	1.973E-07	3.696E-07	1.978E-07	1.071E-07	6.794E-08	3.061E-08	1.054E-08	4.626E-09	2.698E-09	1.793E-09
NNW	8.195E-08	1.718E-07	1.610E-07	1.187E-07	7.889E-08	3.590E-08	1.188E-08	5.027E-09	2.881E-09	1.930E-09
N	6.301E-08	7.432E-08	5.925E-08	4.265E-08	3.177E-08	1.816E-08	1.053E-08	6.655E-09	4.124E-09	2.795E-09
NNE	3.874E-08	4.703E-08	3.677E-08	2.656E-08	2.169E-08	2.302E-08	1.027E-08	4.585E-09	2.702E-09	1.817E-09
NE	1.550E-08	2.583E-08	2.153E-08	1.571E-08	1.277E-08	1.582E-08	7.438E-09	3.339E-09	2.011E-09	1.376E-09
ENE	1.264E-08	2.126E-08	1.748E-08	1.249E-08	9.755E-09	9.668E-09	4.377E-09	1.958E-09	1.196E-09	8.058E-10
E	1.057E-08	2.111E-08	1.810E-08	1.322E-08	1.059E-08	1.085E-08	4.894E-09	2.134E-09	1.231E-09	8.351E-10
ESE	1.454E-08	2.672E-08	2.212E-08	1.588E-08	1.249E-08	1.249E-08	5.784E-09	2.598E-09	1.509E-09	9.975E-10
SE	3.013E-08	5.007E-08	4.002E-08	2.826E-08	2.076E-08	1.127E-08	5.549E-09	3.222E-09	2.191E-09	1.535E-09
SSE	5.952E-08	7.966E-08	5.983E-08	4.116E-08	3.158E-08	2.646E-08	1.092E-08	4.701E-09	2.696E-09	1.773E-09

B321

ERP ELEVATED STACK RELEASES - JAN-DEC 2016
 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	2.846E-09	2.566E-09	2.553E-09	1.977E-09	1.053E-09	6.693E-10	4.608E-10	3.342E-10	2.515E-10	2.055E-10	1.849E-10
SSW	1.043E-09	1.193E-09	1.526E-09	1.347E-09	7.781E-10	5.089E-10	3.553E-10	2.595E-10	2.443E-10	1.848E-10	1.446E-10
SW	1.738E-10	3.680E-10	6.482E-10	6.403E-10	7.448E-10	4.079E-10	2.537E-10	1.726E-10	1.249E-10	9.454E-11	7.401E-11
WSW	3.025E-10	4.654E-10	7.200E-10	1.290E-09	7.943E-10	4.314E-10	2.667E-10	1.807E-10	1.305E-10	9.861E-11	7.715E-11
W	4.987E-10	3.104E-09	2.824E-09	1.886E-09	9.227E-10	4.926E-10	3.016E-10	2.030E-10	1.458E-10	1.098E-10	8.576E-11
WNW	1.034E-09	1.140E-09	3.556E-09	2.758E-09	1.667E-09	8.480E-10	5.079E-10	3.421E-10	2.598E-10	2.025E-10	1.669E-10
NW	2.699E-09	2.698E-09	3.036E-09	5.560E-09	3.551E-09	1.768E-09	1.043E-09	6.889E-10	4.945E-10	3.786E-10	3.058E-10
NNW	2.875E-09	2.740E-09	2.923E-09	2.360E-09	2.343E-09	1.270E-09	7.909E-10	6.501E-10	4.767E-10	3.751E-10	3.125E-10
N	5.264E-09	4.588E-09	4.352E-09	3.265E-09	1.701E-09	1.073E-09	7.354E-10	5.321E-10	4.000E-10	3.095E-10	2.451E-10
NNE	2.919E-09	2.663E-09	2.692E-09	2.105E-09	1.129E-09	7.194E-10	4.959E-10	3.599E-10	2.709E-10	2.097E-10	1.661E-10
NE	5.649E-10	6.897E-10	9.269E-10	8.359E-10	4.883E-10	3.206E-10	2.242E-10	1.639E-10	1.238E-10	9.602E-11	7.603E-11
ENE	4.227E-10	5.114E-10	6.826E-10	6.138E-10	3.580E-10	2.350E-10	1.643E-10	1.201E-10	9.072E-11	7.034E-11	5.570E-11
E	4.116E-11	2.469E-10	5.258E-10	5.446E-10	3.402E-10	2.281E-10	1.611E-10	1.184E-10	8.964E-11	6.957E-11	5.510E-11
ESE	1.277E-10	4.290E-10	8.457E-10	8.604E-10	5.332E-10	3.567E-10	2.517E-10	1.848E-10	1.399E-10	1.086E-10	8.598E-11
SE	6.466E-10	1.180E-09	1.970E-09	1.916E-09	1.163E-09	7.731E-10	5.439E-10	3.987E-10	3.017E-10	2.341E-10	1.853E-10
SSE	2.822E-09	3.093E-09	3.810E-09	3.310E-09	1.894E-09	1.235E-09	8.610E-10	6.284E-10	4.744E-10	3.677E-10	2.912E-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	1.487E-10	1.061E-10	7.271E-11	4.233E-11	2.689E-11	1.875E-11	1.341E-11	1.005E-11	7.974E-12	6.367E-12	5.198E-12
SSW	1.170E-10	8.689E-11	6.006E-11	3.515E-11	2.183E-11	1.558E-11	1.116E-11	8.385E-12	6.574E-12	5.252E-12	4.287E-12
SW	6.020E-11	6.100E-11	4.484E-11	2.754E-11	1.761E-11	1.111E-11	7.861E-12	5.902E-12	4.589E-12	3.666E-12	2.992E-12
WSW	6.341E-11	5.174E-11	3.673E-11	2.268E-11	1.373E-11	9.203E-12	6.703E-12	5.033E-12	3.913E-12	3.126E-12	2.552E-12
W	6.903E-11	3.125E-11	4.409E-11	2.760E-11	1.672E-11	1.137E-11	8.147E-12	6.118E-12	4.757E-12	3.800E-12	3.101E-12
WNW	1.454E-10	8.881E-11	6.375E-11	3.849E-11	2.466E-11	1.602E-11	1.135E-11	8.527E-12	6.707E-12	5.358E-12	4.373E-12
NW	2.593E-10	1.474E-10	1.021E-10	6.409E-11	3.909E-11	2.618E-11	1.897E-11	1.425E-11	1.115E-11	8.910E-12	7.273E-12
NNW	2.734E-10	1.718E-10	1.250E-10	7.628E-11	4.882E-11	3.248E-11	2.269E-11	1.651E-11	1.281E-11	1.023E-11	8.354E-12
N	1.977E-10	9.407E-11	5.764E-11	3.068E-11	7.269E-11	4.426E-11	3.171E-11	2.381E-11	1.851E-11	1.479E-11	1.207E-11
NNE	1.339E-10	2.186E-10	1.334E-10	6.806E-11	4.132E-11	2.768E-11	1.981E-11	1.486E-11	1.154E-11	9.214E-12	7.517E-12
NE	6.127E-11	1.025E-10	6.341E-11	3.289E-11	2.007E-11	1.343E-11	9.747E-12	7.233E-12	5.624E-12	4.517E-12	3.687E-12
ENE	4.489E-11	4.857E-11	3.492E-11	2.109E-11	1.344E-11	8.930E-12	6.295E-12	4.424E-12	3.443E-12	2.754E-12	2.251E-12
E	4.437E-11	5.510E-11	4.052E-11	2.489E-11	1.589E-11	1.052E-11	7.377E-12	5.402E-12	4.114E-12	3.172E-12	2.586E-12
ESE	6.925E-11	7.941E-11	5.760E-11	3.501E-11	2.230E-11	1.478E-11	1.038E-11	7.613E-12	5.807E-12	4.566E-12	3.678E-12
SE	1.493E-10	7.074E-11	4.314E-11	2.270E-11	1.384E-11	9.508E-12	7.092E-12	5.276E-12	4.114E-12	3.172E-12	2.586E-12
SSE	2.347E-10	2.359E-10	1.454E-10	7.506E-11	4.572E-11	3.061E-11	2.187E-11	1.638E-11	1.270E-11	1.013E-11	8.254E-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	2.300E-09	1.088E-09	4.657E-10	2.576E-10	1.776E-10	1.007E-10	4.222E-11	1.878E-11	1.022E-11	6.410E-12
SSW	1.372E-09	7.849E-10	3.580E-10	2.260E-10	1.463E-10	8.166E-11	3.477E-11	1.548E-11	8.490E-12	5.286E-12
SW	5.824E-10	5.718E-10	2.624E-10	1.270E-10	7.498E-11	5.364E-11	2.697E-11	1.154E-11	5.962E-12	3.690E-12
WSW	9.166E-10	7.431E-10	2.762E-10	1.327E-10	7.842E-11	4.766E-11	2.182E-11	9.409E-12	5.084E-12	3.147E-12
W	2.469E-09	9.456E-10	3.131E-10	1.484E-10	8.668E-11	4.535E-11	2.643E-11	1.151E-11	6.179E-12	3.825E-12
WNW	2.665E-09	1.545E-09	5.323E-10	2.615E-10	1.695E-10	9.025E-11	3.796E-11	1.646E-11	8.641E-12	5.393E-12
NW	4.082E-09	3.205E-09	1.095E-09	5.059E-10	3.101E-10	1.521E-10	6.143E-11	2.674E-11	1.442E-11	8.969E-12
NNW	2.632E-09	1.870E-09	8.623E-10	4.876E-10	3.166E-10	1.735E-10	7.489E-11	3.292E-11	1.687E-11	1.030E-11
N	3.921E-09	1.769E-09	7.440E-10	4.033E-10	2.466E-10	1.009E-10	5.534E-11	4.682E-11	2.405E-11	1.489E-11
NNE	2.425E-09	1.164E-09	5.011E-10	2.730E-10	1.671E-10	1.619E-10	7.070E-11	2.817E-11	1.501E-11	9.276E-12
NE	8.337E-10	4.910E-10	2.258E-10	1.247E-10	7.649E-11	7.595E-11	3.397E-11	1.373E-11	7.338E-12	4.538E-12
ENE	6.140E-10	3.602E-10	1.655E-10	9.135E-11	5.604E-11	4.168E-11	2.076E-11	9.079E-12	4.585E-12	2.772E-12
E	4.722E-10	3.358E-10	1.619E-10	9.020E-11	5.542E-11	4.624E-11	2.437E-11	1.070E-11	5.476E-12	3.234E-12
ESE	7.596E-10	5.275E-10	2.529E-10	1.408E-10	8.648E-11	6.746E-11	3.438E-11	1.502E-11	7.715E-12	4.605E-12
SE	1.771E-09	1.157E-09	5.469E-10	3.036E-10	1.864E-10	7.593E-11	2.331E-11	9.696E-12	1.002E-11	7.851E-12
SSE	3.429E-09	1.916E-09	8.677E-10	4.777E-10	2.929E-10	1.954E-10	7.765E-11	3.114E-11	1.655E-11	1.020E-11

B322

ERP ELEVATED STACK RELEASES - JAN-DEC 2016
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	2.26 DAY	8.0 DAY		
			DECAY	DECAY	DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	4.9E-08	4.9E-08	4.8E-08	2.5E-09
A	Site Boundary	SSW	.82	3.8E-08	3.8E-08	3.7E-08	1.5E-09
A	Site Boundary	SW	.97	6.3E-08	6.3E-08	6.3E-08	6.6E-10
A	Site Boundary	WSW	.93	7.3E-08	7.3E-08	7.3E-08	1.1E-09
A	Site Boundary	W	.91	2.0E-07	2.0E-07	2.0E-07	2.1E-09
A	Site Boundary	WNW	.94	2.1E-07	2.1E-07	2.1E-07	3.1E-09
A	Site Boundary	NW	.81	1.9E-07	1.8E-07	1.8E-07	3.0E-09
A	Site Boundary	NNW	.69	5.1E-08	5.1E-08	5.1E-08	2.8E-09
A	Site Boundary	N	.67	5.6E-08	5.6E-08	5.5E-08	4.4E-09
A	Site Boundary	NNE	.60	2.8E-08	2.8E-08	2.7E-08	2.6E-09
A	Site Boundary	NE	.62	7.5E-09	7.4E-09	7.4E-09	8.0E-10
A	Site Boundary	ENE	.59	4.8E-09	4.8E-09	4.8E-09	5.6E-10
A	Site Boundary	E	.53	7.6E-10	7.6E-10	7.6E-10	2.7E-10
A	Site Boundary	ESE	.54	2.0E-09	2.0E-09	2.0E-09	4.9E-10
A	Site Boundary	SE	.65	1.5E-08	1.5E-08	1.5E-08	1.6E-09
A	Site Boundary	SSE	.81	6.5E-08	6.5E-08	6.5E-08	3.8E-09
A	Nearest Res	SSW	3.00	4.5E-08	4.5E-08	4.4E-08	2.6E-10
A	Nearest Res	SW	1.70	1.1E-07	1.1E-07	1.0E-07	5.7E-10
A	Nearest Res	WSW	1.90	1.1E-07	1.1E-07	1.1E-07	4.8E-10
A	Nearest Res	W	1.00	2.1E-07	2.1E-07	2.0E-07	1.9E-09
A	Nearest Res	WNW	1.70	2.5E-07	2.5E-07	2.4E-07	1.2E-09
A	Nearest Res	NW	.90	2.5E-07	2.5E-07	2.5E-07	5.9E-09
A	Nearest Res	NNW	1.90	1.9E-07	1.9E-07	1.9E-07	1.4E-09
A	Nearest Res	N	2.90	5.4E-08	5.4E-08	5.2E-08	5.7E-10
A	Nearest Res	NNE	1.70	4.9E-08	4.9E-08	4.8E-08	9.2E-10
A	Nearest Res	ENE	1.70	2.3E-08	2.3E-08	2.3E-08	3.0E-10
A	Nearest Res	E	2.20	2.1E-08	2.1E-08	2.0E-08	2.0E-10
A	Nearest Res	ESE	2.80	2.1E-08	2.1E-08	2.0E-08	2.1E-10
A	Nearest Res	SE	3.00	3.5E-08	3.5E-08	3.4E-08	4.0E-10
A	Nearest Res	SSE	3.00	5.2E-08	5.1E-08	5.0E-08	6.3E-10
A	Nearest Cow	NNW	3.50	1.3E-07	1.3E-07	1.2E-07	4.8E-10
A	Nearest Garde	SSW	3.00	4.5E-08	4.5E-08	4.4E-08	2.6E-10
A	Nearest Garde	SW	2.20	7.5E-08	7.5E-08	7.3E-08	3.3E-10
A	Nearest Garde	NNW	3.00	1.5E-07	1.5E-07	1.4E-07	6.5E-10
A	Nearest Garde	ENE	1.70	2.3E-08	2.3E-08	2.3E-08	3.0E-10
A	Nearest Garde	ESE	2.30	2.5E-08	2.5E-08	2.4E-08	2.9E-10
A	Nearest Garde	SSE	3.00	5.2E-08	5.1E-08	5.0E-08	6.3E-10
A	MAXIMUM CHI/Q	S	1.50	5.7E-08	5.6E-08	5.6E-08	1.1E-09
A	MAXIMUM CHI/Q	SSW	1.50	5.5E-08	5.5E-08	5.4E-08	7.8E-10
A	MAXIMUM CHI/Q	SW	1.50	1.2E-07	1.2E-07	1.2E-07	7.4E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.6E-07	1.6E-07	1.6E-07	7.9E-10
A	MAXIMUM CHI/Q	W	1.00	2.1E-07	2.1E-07	2.0E-07	1.9E-09
A	MAXIMUM CHI/Q	WNW	1.50	3.0E-07	3.0E-07	3.0E-07	1.7E-09
A	MAXIMUM CHI/Q	NW	1.50	5.1E-07	5.1E-07	5.0E-07	3.6E-09
A	MAXIMUM CHI/Q	NNW	1.50	1.9E-07	1.9E-07	1.9E-07	2.3E-09
A	MAXIMUM CHI/Q	N	1.50	8.0E-08	7.9E-08	7.8E-08	1.7E-09
A	MAXIMUM CHI/Q	NNE	1.50	5.1E-08	5.1E-08	5.0E-08	1.1E-09
A	MAXIMUM CHI/Q	NE	1.50	2.8E-08	2.8E-08	2.8E-08	4.9E-10
A	MAXIMUM CHI/Q	ENE	1.50	2.4E-08	2.3E-08	2.3E-08	3.6E-10
A	MAXIMUM CHI/Q	E	1.50	2.3E-08	2.3E-08	2.3E-08	3.4E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.0E-08	3.0E-08	2.9E-08	5.3E-10
A	MAXIMUM CHI/Q	SE	1.50	5.5E-08	5.5E-08	5.5E-08	1.2E-09
A	MAXIMUM CHI/Q	SSE	1.50	8.8E-08	8.8E-08	8.7E-08	1.9E-09

ATMOSPHERIC DIFFUSION MODEL

Onsite meteorological data from January 1 through December 31, 2016 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

$$\Sigma_{zk} = (\sigma_{zk}^2 + 0.5 D_z^2 / \pi)^{1/2} \leq \sqrt{3} \sigma_{zk} \quad (\text{Eq. 2})$$

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;
Σ_z	=	vertical plume spread with volumetric building wake correction for a release within the building wake cavity;
σ_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 Σ_{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 latest version of the LADTAP II computer program included as part of NRC Dose 2.3.20 (ORNL 2015). 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 C66).

No Liquid Releases 2016

TABLE 1. Doses to Maximum Individual at the Site Boundary, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2016 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 2016, 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
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>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
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 3rd & 4th 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 3. Summary of Doses to Maximum Individual at the Site Boundary, Resulting from Exposure to Radioactivity Discharged in Liquid Effluents, January-December 2016, Cooper Nuclear Station

Period and Pathway	Dose to Individual, mrem							
	Skin	Bone	Liver	Total Body	Thyroid	Kidney	Lung	GI-LLI
1st Quarter	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
2nd Quarter	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+001	0.00 E+00	0.00 E+00
3rd Quarter	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
4th Quarter	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 2016	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

TABLE 4. Doses to Population Within a 50-Mile Radius, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2016, 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 2016, 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
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>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
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 3rd & 4th 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 6. Summary of Doses to Population Within a 50-Mile Radius, Resulting from Exposure to Radioactivity Discharged in Liquid Effluents, January-December 2016 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
Totals for 2016	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

GASEOUS EFFLUENT DOSE CALCULATIONS (EXCEPT CARBON-14)

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 latest version of the GASPAR computer code included as part of NRCDose 2.3.20 (ORNL 2015). Four sites were selected for individual dose calculations: the site boundary, the nearest residence, the nearest garden and the nearest cow. GASPAR 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 GASPAR code are described in a separate section of this appendix (see page C66).

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.61E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 3.24E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.17E-06	2.17E-06	2.17E-06	2.17E-06	2.17E-06	2.17E-06	2.18E-06	3.91E-06
GROUND	3.02E-04	3.02E-04	3.02E-04	3.02E-04	3.02E-04	3.02E-04	3.02E-04	3.55E-04
VEGET								
ADULT	7.53E-06	3.88E-05	3.65E-06	7.02E-06	5.02E-06	7.88E-04	2.90E-07	0.00E+00
TEEN	1.04E-05	4.13E-05	5.83E-06	1.09E-05	7.68E-06	1.06E-03	5.44E-07	0.00E+00
CHILD	1.87E-05	2.71E-05	1.38E-05	1.80E-05	1.24E-05	2.03E-03	8.27E-07	0.00E+00
MEAT								
ADULT	1.38E-06	1.03E-05	2.00E-07	8.22E-07	1.82E-07	2.12E-05	2.37E-08	0.00E+00
TEEN	1.04E-06	5.54E-06	1.66E-07	6.47E-07	1.48E-07	1.53E-05	2.24E-08	0.00E+00
CHILD	1.56E-06	2.80E-06	3.06E-07	7.99E-07	1.88E-07	2.31E-05	2.64E-08	0.00E+00
COW MILK								
ADULT	2.47E-06	2.80E-06	2.58E-06	3.74E-06	3.76E-06	5.92E-04	2.01E-07	0.00E+00
TEEN	3.28E-06	3.38E-06	4.68E-06	6.60E-06	6.69E-06	9.37E-04	4.15E-07	0.00E+00
CHILD	4.93E-06	2.34E-06	1.13E-05	1.14E-05	1.11E-05	1.86E-03	6.37E-07	0.00E+00
INFANT	8.33E-06	2.12E-06	2.08E-05	2.52E-05	1.91E-05	4.51E-03	1.15E-06	0.00E+00
GOATMILK								
ADULT	4.77E-06	1.00E-06	5.44E-06	7.55E-06	5.60E-06	7.11E-04	6.02E-07	0.00E+00
TEEN	5.41E-06	1.30E-06	9.87E-06	1.34E-05	9.95E-06	1.12E-03	1.24E-06	0.00E+00
CHILD	6.36E-06	9.90E-07	2.38E-05	2.32E-05	1.65E-05	2.23E-03	1.91E-06	0.00E+00
INFANT	9.71E-06	9.54E-07	4.14E-05	4.86E-05	2.81E-05	5.41E-03	3.46E-06	0.00E+00
INHAL								
ADULT	2.08E-07	1.04E-06	2.19E-07	3.65E-07	5.02E-07	7.00E-05	1.95E-05	0.00E+00
TEEN	2.56E-07	9.73E-07	3.08E-07	5.00E-07	6.92E-07	8.83E-05	2.85E-05	0.00E+00
CHILD	2.67E-07	4.01E-07	4.18E-07	4.86E-07	6.50E-07	1.03E-04	2.31E-05	0.00E+00
INFANT	1.75E-07	1.50E-07	3.18E-07	4.28E-07	4.28E-07	9.45E-05	1.48E-05	0.00E+00

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TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .60 MILES NNE

ANNUAL BETA AIR DOSE = 6.58E-07 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.33E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	8.89E-07	8.89E-07	8.89E-07	8.89E-07	8.89E-07	8.89E-07	8.96E-07	1.60E-06
GROUND	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.03E-04	2.39E-04
VEGET								
ADULT	5.06E-06	2.61E-05	2.44E-06	4.71E-06	3.37E-06	5.27E-04	1.95E-07	0.00E+00
TEEN	6.99E-06	2.78E-05	3.90E-06	7.30E-06	5.15E-06	7.10E-04	3.66E-07	0.00E+00
CHILD	1.25E-05	1.82E-05	9.25E-06	1.21E-05	8.32E-06	1.36E-03	5.57E-07	0.00E+00
MEAT								
ADULT	9.29E-07	6.93E-06	1.34E-07	5.52E-07	1.22E-07	1.42E-05	1.59E-08	0.00E+00
TEEN	7.02E-07	3.73E-06	1.11E-07	4.35E-07	9.94E-08	1.03E-05	1.51E-08	0.00E+00
CHILD	1.05E-06	1.88E-06	2.05E-07	5.37E-07	1.26E-07	1.55E-05	1.77E-08	0.00E+00
COW MILK								
ADULT	1.66E-06	1.88E-06	1.73E-06	2.51E-06	2.52E-06	3.96E-04	1.35E-07	0.00E+00
TEEN	2.20E-06	2.27E-06	3.14E-06	4.43E-06	4.48E-06	6.27E-04	2.79E-07	0.00E+00
CHILD	3.31E-06	1.57E-06	7.60E-06	7.68E-06	7.45E-06	1.24E-03	4.29E-07	0.00E+00
INFANT	5.58E-06	1.42E-06	1.40E-05	1.69E-05	1.28E-05	3.02E-03	7.76E-07	0.00E+00
GOATMILK								
ADULT	3.21E-06	6.70E-07	3.65E-06	5.07E-06	3.75E-06	4.76E-04	4.05E-07	0.00E+00
TEEN	3.63E-06	8.69E-07	6.63E-06	8.97E-06	6.67E-06	7.53E-04	8.37E-07	0.00E+00
CHILD	4.27E-06	6.63E-07	1.60E-05	1.56E-05	1.11E-05	1.49E-03	1.29E-06	0.00E+00
INFANT	6.51E-06	6.39E-07	2.78E-05	3.27E-05	1.88E-05	3.62E-03	2.33E-06	0.00E+00
INHAL								
ADULT	1.64E-07	8.17E-07	1.73E-07	2.89E-07	3.97E-07	5.54E-05	1.53E-05	0.00E+00
TEEN	2.02E-07	7.64E-07	2.43E-07	3.96E-07	5.48E-07	6.99E-05	2.24E-05	0.00E+00
CHILD	2.11E-07	3.07E-07	3.31E-07	3.85E-07	5.15E-07	8.17E-05	1.82E-05	0.00E+00
INFANT	1.38E-07	1.10E-07	2.52E-07	3.38E-07	3.39E-07	7.49E-05	1.16E-05	0.00E+00

C10

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 7.82E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.58E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.06E-05	1.91E-05
GROUND	9.32E-05	9.32E-05	9.32E-05	9.32E-05	9.32E-05	9.32E-05	9.32E-05	1.10E-04
VEGET								
ADULT	2.38E-06	1.20E-05	1.26E-06	2.26E-06	1.70E-06	2.72E-04	8.97E-08	0.00E+00
TEEN	3.29E-06	1.28E-05	2.02E-06	3.49E-06	2.60E-06	3.66E-04	1.68E-07	0.00E+00
CHILD	5.90E-06	8.41E-06	4.79E-06	5.79E-06	4.20E-06	7.02E-04	2.56E-07	0.00E+00
MEAT								
ADULT	4.28E-07	3.18E-06	6.40E-08	2.56E-07	6.02E-08	7.30E-06	7.33E-09	0.00E+00
TEEN	3.24E-07	1.71E-06	5.32E-08	2.02E-07	4.90E-08	5.29E-06	6.93E-09	0.00E+00
CHILD	4.83E-07	8.65E-07	9.81E-08	2.49E-07	6.23E-08	7.98E-06	8.15E-09	0.00E+00
COW MILK								
ADULT	8.00E-07	8.86E-07	8.48E-07	1.22E-06	1.28E-06	2.05E-04	6.20E-08	0.00E+00
TEEN	1.08E-06	1.07E-06	1.54E-06	2.16E-06	2.28E-06	3.24E-04	1.28E-07	0.00E+00
CHILD	1.64E-06	7.46E-07	3.72E-06	3.75E-06	3.78E-06	6.42E-04	1.97E-07	0.00E+00
INFANT	2.80E-06	6.78E-07	6.90E-06	8.30E-06	6.51E-06	1.56E-03	3.56E-07	0.00E+00
GOATMILK								
ADULT	1.52E-06	3.35E-07	1.75E-06	2.42E-06	1.87E-06	2.45E-04	1.86E-07	0.00E+00
TEEN	1.75E-06	4.35E-07	3.17E-06	4.27E-06	3.33E-06	3.89E-04	3.84E-07	0.00E+00
CHILD	2.11E-06	3.34E-07	7.64E-06	7.42E-06	5.53E-06	7.70E-04	5.91E-07	0.00E+00
INFANT	3.27E-06	3.23E-07	1.34E-05	1.56E-05	9.40E-06	1.87E-03	1.07E-06	0.00E+00
INHAL								
ADULT	4.55E-08	2.19E-07	4.89E-08	8.12E-08	1.13E-07	1.57E-05	4.05E-06	0.00E+00
TEEN	5.62E-08	2.16E-07	6.88E-08	1.11E-07	1.56E-07	1.98E-05	5.92E-06	0.00E+00
CHILD	5.90E-08	1.93E-07	9.34E-08	1.08E-07	1.47E-07	2.31E-05	4.80E-06	0.00E+00
INFANT	3.87E-08	1.28E-07	7.14E-08	9.56E-08	9.65E-08	2.12E-05	3.07E-06	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 4.53E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 9.14E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.11E-06	6.11E-06	6.11E-06	6.11E-06	6.11E-06	6.11E-06	6.16E-06	1.10E-05
GROUND	5.27E-06	5.27E-06	5.27E-06	5.27E-06	5.27E-06	5.27E-06	5.27E-06	6.19E-06
VEGET								
ADULT	1.37E-07	6.81E-07	7.85E-08	1.32E-07	1.04E-07	1.68E-05	5.06E-09	0.00E+00
TEEN	1.90E-07	7.26E-07	1.26E-07	2.04E-07	1.59E-07	2.26E-05	9.49E-09	0.00E+00
CHILD	3.40E-07	4.77E-07	2.98E-07	3.38E-07	2.56E-07	4.34E-05	1.44E-08	0.00E+00
MEAT								
ADULT	2.42E-08	1.80E-07	3.74E-09	1.46E-08	3.61E-09	4.52E-07	4.14E-10	0.00E+00
TEEN	1.83E-08	9.68E-08	3.11E-09	1.15E-08	2.94E-09	3.27E-07	3.92E-10	0.00E+00
CHILD	2.74E-08	4.89E-08	5.73E-09	1.42E-08	3.73E-09	4.94E-07	4.60E-10	0.00E+00
COW MILK								
ADULT	4.71E-08	5.11E-08	5.05E-08	7.25E-08	7.81E-08	1.27E-05	3.50E-09	0.00E+00
TEEN	6.40E-08	6.20E-08	9.16E-08	1.28E-07	1.39E-07	2.00E-05	7.24E-09	0.00E+00
CHILD	9.87E-08	4.32E-08	2.22E-07	2.22E-07	2.31E-07	3.97E-05	1.11E-08	0.00E+00
INFANT	1.69E-07	3.94E-08	4.14E-07	4.95E-07	3.98E-07	9.65E-05	2.01E-08	0.00E+00
GOATMILK								
ADULT	8.82E-08	2.02E-08	1.02E-07	1.41E-07	1.13E-07	1.52E-05	1.05E-08	0.00E+00
TEEN	1.03E-07	2.63E-08	1.85E-07	2.49E-07	2.00E-07	2.40E-05	2.17E-08	0.00E+00
CHILD	1.26E-07	2.02E-08	4.46E-07	4.32E-07	3.33E-07	4.76E-05	3.34E-08	0.00E+00
INFANT	1.98E-07	1.96E-08	7.85E-07	9.15E-07	5.67E-07	1.16E-04	6.04E-08	0.00E+00
INHAL								
ADULT	5.30E-09	2.29E-08	6.06E-09	9.90E-09	1.43E-08	1.95E-06	3.98E-07	0.00E+00
TEEN	6.63E-09	2.80E-08	8.52E-09	1.36E-08	1.97E-08	2.46E-06	5.83E-07	0.00E+00
CHILD	7.06E-09	7.37E-08	1.16E-08	1.32E-08	1.85E-08	2.88E-06	4.73E-07	0.00E+00
INFANT	4.72E-09	6.09E-08	8.92E-09	1.18E-08	1.22E-08	2.64E-06	3.04E-07	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 1.23E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 2.49E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.67E-06	1.67E-06	1.67E-06	1.67E-06	1.67E-06	1.67E-06	1.68E-06	3.01E-06
GROUND	1.10E-05	1.10E-05	1.10E-05	1.10E-05	1.10E-05	1.10E-05	1.10E-05	1.29E-05
VEGET								
ADULT	2.78E-07	1.41E-06	1.43E-07	2.62E-07	1.94E-07	3.07E-05	1.06E-08	0.00E+00
TEEN	3.84E-07	1.51E-06	2.28E-07	4.05E-07	2.96E-07	4.14E-05	1.98E-08	0.00E+00
CHILD	6.88E-07	9.88E-07	5.42E-07	6.71E-07	4.79E-07	7.93E-05	3.01E-08	0.00E+00
MEAT								
ADULT	5.03E-08	3.74E-07	7.43E-09	3.00E-08	6.91E-09	8.26E-07	8.62E-10	0.00E+00
TEEN	3.80E-08	2.02E-07	6.17E-09	2.37E-08	5.63E-09	5.98E-07	8.16E-10	0.00E+00
CHILD	5.68E-08	1.02E-07	1.14E-08	2.92E-08	7.15E-09	9.03E-07	9.59E-10	0.00E+00
COW MILK								
ADULT	9.25E-08	1.03E-07	9.76E-08	1.41E-07	1.45E-07	2.31E-05	7.30E-09	0.00E+00
TEEN	1.24E-07	1.25E-07	1.77E-07	2.49E-07	2.59E-07	3.66E-05	1.51E-08	0.00E+00
CHILD	1.88E-07	8.67E-08	4.28E-07	4.32E-07	4.30E-07	7.25E-05	2.32E-08	0.00E+00
INFANT	3.19E-07	7.86E-08	7.92E-07	9.53E-07	7.39E-07	1.76E-04	4.19E-08	0.00E+00
GOATMILK								
ADULT	1.77E-07	3.82E-08	2.03E-07	2.81E-07	2.14E-07	2.77E-05	2.19E-08	0.00E+00
TEEN	2.02E-07	4.96E-08	3.67E-07	4.96E-07	3.80E-07	4.39E-05	4.52E-08	0.00E+00
CHILD	2.42E-07	3.80E-08	8.87E-07	8.61E-07	6.32E-07	8.70E-05	6.95E-08	0.00E+00
INFANT	3.73E-07	3.67E-08	1.55E-06	1.81E-06	1.07E-06	2.11E-04	1.26E-07	0.00E+00
INHAL								
ADULT	1.04E-08	4.98E-08	1.11E-08	1.84E-08	2.56E-08	3.58E-06	9.25E-07	0.00E+00
TEEN	1.28E-08	4.83E-08	1.56E-08	2.52E-08	3.53E-08	4.51E-06	1.35E-06	0.00E+00
CHILD	1.34E-08	3.60E-08	2.12E-08	2.45E-08	3.32E-08	5.27E-06	1.10E-06	0.00E+00
INFANT	8.80E-09	2.20E-08	1.62E-08	2.16E-08	2.18E-08	4.83E-06	7.00E-07	0.00E+00

C13

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.73E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.13E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.17E-06	7.17E-06	7.17E-06	7.17E-06	7.17E-06	7.17E-06	7.34E-06	1.58E-05
GROUND	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.48E-04	2.92E-04
VEGET								
ADULT	7.67E-06	3.54E-05	1.21E-04	4.42E-06	4.66E-06	8.83E-04	1.91E-09	0.00E+00
TEEN	1.13E-05	3.83E-05	1.66E-04	6.71E-06	7.05E-06	1.19E-03	3.57E-09	0.00E+00
CHILD	2.24E-05	2.57E-05	3.42E-04	1.09E-05	1.14E-05	2.28E-03	5.42E-09	0.00E+00
MEAT								
ADULT	1.07E-06	8.61E-06	1.47E-06	5.29E-07	1.24E-07	2.37E-05	1.53E-10	0.00E+00
TEEN	8.47E-07	4.63E-06	1.03E-06	4.13E-07	1.02E-07	1.72E-05	1.45E-10	0.00E+00
CHILD	1.31E-06	2.34E-06	1.64E-06	4.99E-07	1.29E-07	2.59E-05	1.70E-10	0.00E+00
COW MILK								
ADULT	1.50E-06	2.60E-06	6.79E-06	2.18E-06	3.55E-06	6.64E-04	1.19E-09	0.00E+00
TEEN	2.49E-06	3.18E-06	1.07E-05	3.86E-06	6.34E-06	1.05E-03	2.46E-09	0.00E+00
CHILD	4.71E-06	2.24E-06	2.31E-05	6.70E-06	1.05E-05	2.08E-03	3.79E-09	0.00E+00
INFANT	8.45E-06	2.06E-06	3.18E-05	1.63E-05	1.83E-05	5.07E-03	6.87E-09	0.00E+00
GOATMILK								
ADULT	1.67E-06	1.22E-06	1.30E-05	2.52E-06	4.27E-06	7.97E-04	3.52E-09	0.00E+00
TEEN	2.74E-06	1.62E-06	2.02E-05	4.48E-06	7.61E-06	1.26E-03	7.28E-09	0.00E+00
CHILD	5.13E-06	1.26E-06	4.29E-05	7.81E-06	1.27E-05	2.50E-03	1.12E-08	0.00E+00
INFANT	9.12E-06	1.24E-06	5.50E-05	1.91E-05	2.20E-05	6.08E-03	2.03E-08	0.00E+00
INHAL								
ADULT	1.82E-07	7.85E-07	1.16E-06	3.15E-07	4.99E-07	7.01E-05	1.39E-05	0.00E+00
TEEN	2.37E-07	7.48E-07	1.38E-06	4.33E-07	6.89E-07	8.87E-05	2.04E-05	0.00E+00
CHILD	2.64E-07	3.55E-07	1.66E-06	4.22E-07	6.47E-07	1.04E-04	1.66E-05	0.00E+00
INFANT	1.72E-07	1.55E-07	8.09E-07	3.85E-07	4.27E-07	9.55E-05	1.07E-05	0.00E+00

C14

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .65 MILES SE

ANNUAL BETA AIR DOSE = 1.30E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.84E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.56E-06	3.56E-06	3.56E-06	3.56E-06	3.56E-06	3.56E-06	3.69E-06	8.84E-06
GROUND	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.63E-04	1.91E-04
VEGET								
ADULT	5.00E-06	2.32E-05	7.91E-05	2.85E-06	2.98E-06	5.65E-04	6.59E-10	0.00E+00
TEEN	7.37E-06	2.51E-05	1.09E-04	4.33E-06	4.51E-06	7.61E-04	1.23E-09	0.00E+00
CHILD	1.46E-05	1.68E-05	2.23E-04	7.05E-06	7.27E-06	1.46E-03	1.87E-09	0.00E+00
MEAT								
ADULT	7.04E-07	5.64E-06	9.62E-07	3.45E-07	7.95E-08	1.52E-05	5.27E-11	0.00E+00
TEEN	5.55E-07	3.04E-06	6.70E-07	2.70E-07	6.50E-08	1.10E-05	4.98E-11	0.00E+00
CHILD	8.60E-07	1.54E-06	1.07E-06	3.26E-07	8.25E-08	1.66E-05	5.84E-11	0.00E+00
COW MILK								
ADULT	9.62E-07	1.69E-06	4.42E-06	1.39E-06	2.27E-06	4.25E-04	4.11E-10	0.00E+00
TEEN	1.60E-06	2.07E-06	6.96E-06	2.47E-06	4.05E-06	6.73E-04	8.48E-10	0.00E+00
CHILD	3.03E-06	1.46E-06	1.50E-05	4.28E-06	6.74E-06	1.33E-03	1.30E-09	0.00E+00
INFANT	5.43E-06	1.34E-06	2.06E-05	1.04E-05	1.17E-05	3.24E-03	2.37E-09	0.00E+00
GOATMILK								
ADULT	1.07E-06	7.87E-07	8.45E-06	1.61E-06	2.73E-06	5.10E-04	1.21E-09	0.00E+00
TEEN	1.75E-06	1.04E-06	1.31E-05	2.85E-06	4.87E-06	8.08E-04	2.51E-09	0.00E+00
CHILD	3.29E-06	8.14E-07	2.79E-05	4.97E-06	8.09E-06	1.60E-03	3.85E-09	0.00E+00
INFANT	5.85E-06	7.97E-07	3.56E-05	1.21E-05	1.41E-05	3.89E-03	6.97E-09	0.00E+00
INHAL								
ADULT	1.63E-07	7.20E-07	1.06E-06	2.81E-07	4.44E-07	6.25E-05	1.29E-05	0.00E+00
TEEN	2.13E-07	6.82E-07	1.27E-06	3.86E-07	6.13E-07	7.90E-05	1.89E-05	0.00E+00
CHILD	2.38E-07	2.86E-07	1.52E-06	3.77E-07	5.76E-07	9.28E-05	1.53E-05	0.00E+00
INFANT	1.54E-07	1.07E-07	7.37E-07	3.43E-07	3.80E-07	8.51E-05	9.84E-06	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 1.31E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.16E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.44E-05	1.44E-05	1.44E-05	1.44E-05	1.44E-05	1.44E-05	1.45E-05	2.67E-05
GROUND	8.94E-05	8.94E-05	8.94E-05	8.94E-05	8.94E-05	8.94E-05	8.94E-05	1.05E-04
VEGET								
ADULT	2.86E-06	1.29E-05	4.45E-05	1.72E-06	1.88E-06	3.56E-04	2.32E-09	0.00E+00
TEEN	4.20E-06	1.39E-05	6.12E-05	2.61E-06	2.85E-06	4.79E-04	4.33E-09	0.00E+00
CHILD	8.31E-06	9.35E-06	1.26E-04	4.27E-06	4.59E-06	9.18E-04	6.58E-09	0.00E+00
MEAT								
ADULT	3.90E-07	3.11E-06	5.43E-07	1.95E-07	5.05E-08	9.55E-06	1.86E-10	0.00E+00
TEEN	3.07E-07	1.67E-06	3.79E-07	1.52E-07	4.12E-08	6.92E-06	1.75E-10	0.00E+00
CHILD	4.76E-07	8.46E-07	6.05E-07	1.84E-07	5.24E-08	1.04E-05	2.06E-10	0.00E+00
COW MILK								
ADULT	5.97E-07	9.65E-07	2.55E-06	8.83E-07	1.44E-06	2.68E-04	1.45E-09	0.00E+00
TEEN	9.88E-07	1.19E-06	4.04E-06	1.57E-06	2.56E-06	4.24E-04	2.99E-09	0.00E+00
CHILD	1.86E-06	8.41E-07	8.75E-06	2.72E-06	4.26E-06	8.41E-04	4.59E-09	0.00E+00
INFANT	3.35E-06	7.75E-07	1.22E-05	6.59E-06	7.41E-06	2.04E-03	8.33E-09	0.00E+00
GOATMILK								
ADULT	6.81E-07	4.77E-07	4.85E-06	1.04E-06	1.73E-06	3.21E-04	4.28E-09	0.00E+00
TEEN	1.11E-06	6.32E-07	7.55E-06	1.85E-06	3.09E-06	5.09E-04	8.84E-09	0.00E+00
CHILD	2.05E-06	4.96E-07	1.61E-05	3.23E-06	5.13E-06	1.01E-03	1.36E-08	0.00E+00
INFANT	3.66E-06	4.86E-07	2.10E-05	7.84E-06	8.93E-06	2.45E-03	2.46E-08	0.00E+00
INHAL								
ADULT	3.58E-08	1.49E-07	2.18E-07	6.32E-08	9.96E-08	1.38E-05	2.58E-06	0.00E+00
TEEN	4.68E-08	1.60E-07	2.61E-07	8.68E-08	1.37E-07	1.74E-05	3.80E-06	0.00E+00
CHILD	5.23E-08	2.47E-07	3.14E-07	8.48E-08	1.29E-07	2.05E-05	3.09E-06	0.00E+00
INFANT	3.43E-08	1.90E-07	1.55E-07	7.73E-08	8.52E-08	1.88E-05	1.99E-06	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 4.91E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 9.31E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.23E-06	6.23E-06	6.23E-06	6.23E-06	6.23E-06	6.23E-06	6.28E-06	1.14E-05
GROUND	4.47E-06	4.47E-06	4.47E-06	4.47E-06	4.47E-06	4.47E-06	4.47E-06	5.26E-06
VEGET								
ADULT	1.47E-07	6.47E-07	2.26E-06	9.12E-08	1.02E-07	1.93E-05	1.88E-10	0.00E+00
TEEN	2.15E-07	7.00E-07	3.11E-06	1.38E-07	1.55E-07	2.60E-05	3.51E-10	0.00E+00
CHILD	4.25E-07	4.71E-07	6.42E-06	2.27E-07	2.49E-07	4.97E-05	5.33E-10	0.00E+00
MEAT								
ADULT	1.96E-08	1.55E-07	2.76E-08	9.91E-09	2.75E-09	5.18E-07	1.51E-11	0.00E+00
TEEN	1.54E-08	8.37E-08	1.93E-08	7.75E-09	2.24E-09	3.75E-07	1.42E-11	0.00E+00
CHILD	2.39E-08	4.23E-08	3.09E-08	9.40E-09	2.85E-09	5.66E-07	1.67E-11	0.00E+00
COW MILK								
ADULT	3.21E-08	4.93E-08	1.32E-07	4.80E-08	7.79E-08	1.45E-05	1.17E-10	0.00E+00
TEEN	5.30E-08	6.08E-08	2.09E-07	8.51E-08	1.39E-07	2.30E-05	2.42E-10	0.00E+00
CHILD	9.93E-08	4.32E-08	4.55E-07	1.48E-07	2.31E-07	4.55E-05	3.72E-10	0.00E+00
INFANT	1.79E-07	3.99E-08	6.44E-07	3.58E-07	4.02E-07	1.11E-04	6.76E-10	0.00E+00
GOATMILK								
ADULT	3.73E-08	2.52E-08	2.49E-07	5.75E-08	9.41E-08	1.74E-05	3.47E-10	0.00E+00
TEEN	6.00E-08	3.35E-08	3.89E-07	1.02E-07	1.68E-07	2.76E-05	7.16E-10	0.00E+00
CHILD	1.11E-07	2.63E-08	8.34E-07	1.78E-07	2.79E-07	5.46E-05	1.10E-09	0.00E+00
INFANT	1.98E-07	2.58E-08	1.10E-06	4.31E-07	4.85E-07	1.33E-04	1.99E-09	0.00E+00
INHAL								
ADULT	4.12E-09	1.55E-08	2.17E-08	7.56E-09	1.17E-08	1.57E-06	2.44E-07	0.00E+00
TEEN	5.40E-09	2.30E-08	2.62E-08	1.04E-08	1.62E-08	1.99E-06	3.60E-07	0.00E+00
CHILD	6.06E-09	9.07E-08	3.17E-08	1.02E-08	1.52E-08	2.33E-06	2.93E-07	0.00E+00
INFANT	4.05E-09	7.78E-08	1.62E-08	9.32E-09	1.00E-08	2.14E-06	1.92E-07	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 1.79E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 2.39E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.58E-06	1.58E-06	1.58E-06	1.58E-06	1.58E-06	1.58E-06	1.60E-06	3.00E-06
GROUND	9.35E-06	9.35E-06	9.35E-06	9.35E-06	9.35E-06	9.35E-06	9.35E-06	1.10E-05
VEGET								
ADULT	2.93E-07	1.34E-06	4.61E-06	1.72E-07	1.84E-07	3.49E-05	1.48E-10	0.00E+00
TEEN	4.32E-07	1.45E-06	6.33E-06	2.61E-07	2.79E-07	4.70E-05	2.75E-10	0.00E+00
CHILD	8.55E-07	9.73E-07	1.30E-05	4.26E-07	4.49E-07	9.00E-05	4.18E-10	0.00E+00
MEAT								
ADULT	4.06E-08	3.25E-07	5.61E-08	2.01E-08	4.93E-09	9.37E-07	1.18E-11	0.00E+00
TEEN	3.20E-08	1.75E-07	3.91E-08	1.57E-08	4.03E-09	6.78E-07	1.11E-11	0.00E+00
CHILD	4.96E-08	8.84E-08	6.24E-08	1.90E-08	5.12E-09	1.02E-06	1.31E-11	0.00E+00
COW MILK								
ADULT	5.89E-08	9.90E-08	2.61E-07	8.63E-08	1.40E-07	2.63E-05	9.19E-11	0.00E+00
TEEN	9.77E-08	1.21E-07	4.12E-07	1.53E-07	2.51E-07	4.16E-05	1.90E-10	0.00E+00
CHILD	1.84E-07	8.59E-08	8.90E-07	2.65E-07	4.17E-07	8.24E-05	2.92E-10	0.00E+00
INFANT	3.31E-07	7.89E-08	1.23E-06	6.44E-07	7.25E-07	2.00E-04	5.29E-10	0.00E+00
GOATMILK								
ADULT	6.64E-08	4.75E-08	4.97E-07	1.01E-07	1.69E-07	3.15E-05	2.72E-10	0.00E+00
TEEN	1.08E-07	6.29E-08	7.72E-07	1.79E-07	3.02E-07	4.99E-05	5.61E-10	0.00E+00
CHILD	2.02E-07	4.93E-08	1.65E-06	3.12E-07	5.01E-07	9.88E-05	8.62E-10	0.00E+00
INFANT	3.60E-07	4.83E-08	2.12E-06	7.60E-07	8.72E-07	2.40E-04	1.56E-09	0.00E+00
INHAL								
ADULT	9.09E-09	3.86E-08	5.67E-08	1.58E-08	2.50E-08	3.52E-06	6.79E-07	0.00E+00
TEEN	1.19E-08	3.84E-08	6.78E-08	2.17E-08	3.45E-08	4.45E-06	9.96E-07	0.00E+00
CHILD	1.32E-08	3.43E-08	8.14E-08	2.12E-08	3.24E-08	5.21E-06	8.10E-07	0.00E+00
INFANT	8.64E-09	2.27E-08	3.99E-08	1.93E-08	2.14E-08	4.78E-06	5.20E-07	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.89E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.46E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.37E-06	9.37E-06	9.37E-06	9.37E-06	9.37E-06	9.37E-06	9.57E-06	1.97E-05
GROUND	5.54E-04	5.54E-04	5.54E-04	5.54E-04	5.54E-04	5.54E-04	5.54E-04	6.51E-04
VEGET								
ADULT	1.52E-05	7.46E-05	1.19E-04	1.16E-05	9.73E-06	1.67E-03	3.07E-07	0.00E+00
TEEN	2.17E-05	8.00E-05	1.64E-04	1.78E-05	1.48E-05	2.25E-03	5.76E-07	0.00E+00
CHILD	4.10E-05	5.30E-05	3.39E-04	2.94E-05	2.39E-05	4.31E-03	8.77E-07	0.00E+00
MEAT								
ADULT	2.48E-06	1.90E-05	1.61E-06	1.37E-06	3.10E-07	4.48E-05	2.51E-08	0.00E+00
TEEN	1.91E-06	1.02E-05	1.15E-06	1.07E-06	2.53E-07	3.25E-05	2.38E-08	0.00E+00
CHILD	2.89E-06	5.18E-06	1.88E-06	1.32E-06	3.21E-07	4.90E-05	2.79E-08	0.00E+00
COW MILK								
ADULT	4.02E-06	5.42E-06	9.18E-06	6.01E-06	7.34E-06	1.26E-03	2.12E-07	0.00E+00
TEEN	5.82E-06	6.59E-06	1.51E-05	1.06E-05	1.31E-05	1.99E-03	4.39E-07	0.00E+00
CHILD	9.67E-06	4.60E-06	3.39E-05	1.84E-05	2.17E-05	3.94E-03	6.75E-07	0.00E+00
INFANT	1.68E-05	4.19E-06	5.22E-05	4.20E-05	3.76E-05	9.57E-03	1.22E-06	0.00E+00
GOATMILK								
ADULT	6.62E-06	2.21E-06	1.81E-05	1.04E-05	9.95E-06	1.51E-03	6.37E-07	0.00E+00
TEEN	8.30E-06	2.90E-06	2.95E-05	1.83E-05	1.77E-05	2.39E-03	1.32E-06	0.00E+00
CHILD	1.16E-05	2.24E-06	6.58E-05	3.18E-05	2.95E-05	4.73E-03	2.02E-06	0.00E+00
INFANT	1.89E-05	2.18E-06	9.58E-05	6.93E-05	5.05E-05	1.15E-02	3.66E-06	0.00E+00
INHAL								
ADULT	3.79E-07	1.75E-06	1.37E-06	6.64E-07	9.82E-07	1.38E-04	3.21E-05	0.00E+00
TEEN	4.80E-07	1.66E-06	1.68E-06	9.11E-07	1.36E-06	1.74E-04	4.69E-05	0.00E+00
CHILD	5.19E-07	7.29E-07	2.06E-06	8.87E-07	1.27E-06	2.03E-04	3.81E-05	0.00E+00
INFANT	3.39E-07	2.95E-07	1.11E-06	7.94E-07	8.39E-07	1.87E-04	2.44E-05	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .65 MILES SE

ANNUAL BETA AIR DOSE = 1.29E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 7.12E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.44E-06	4.44E-06	4.44E-06	4.44E-06	4.44E-06	4.44E-06	4.57E-06	1.02E-05
GROUND	5.15E-04	5.15E-04	5.15E-04	5.15E-04	5.15E-04	5.15E-04	5.15E-04	6.06E-04
VEGET								
ADULT	1.41E-05	6.94E-05	1.10E-04	1.07E-05	8.86E-06	1.52E-03	2.86E-07	0.00E+00
TEEN	2.01E-05	7.44E-05	1.52E-04	1.64E-05	1.35E-05	2.04E-03	5.35E-07	0.00E+00
CHILD	3.80E-05	4.93E-05	3.14E-04	2.70E-05	2.18E-05	3.92E-03	8.14E-07	0.00E+00
MEAT								
ADULT	2.31E-06	1.77E-05	1.49E-06	1.27E-06	2.83E-07	4.08E-05	2.33E-08	0.00E+00
TEEN	1.77E-06	9.54E-06	1.07E-06	9.97E-07	2.31E-07	2.95E-05	2.21E-08	0.00E+00
CHILD	2.69E-06	4.82E-06	1.74E-06	1.22E-06	2.93E-07	4.46E-05	2.59E-08	0.00E+00
COW MILK								
ADULT	3.70E-06	5.02E-06	8.46E-06	5.50E-06	6.68E-06	1.14E-03	1.97E-07	0.00E+00
TEEN	5.34E-06	6.10E-06	1.39E-05	9.74E-06	1.19E-05	1.81E-03	4.08E-07	0.00E+00
CHILD	8.85E-06	4.25E-06	3.12E-05	1.69E-05	1.98E-05	3.58E-03	6.27E-07	0.00E+00
INFANT	1.54E-05	3.87E-06	4.79E-05	3.84E-05	3.42E-05	8.70E-03	1.13E-06	0.00E+00
GOATMILK								
ADULT	6.09E-06	2.03E-06	1.67E-05	9.53E-06	9.09E-06	1.37E-03	5.92E-07	0.00E+00
TEEN	7.62E-06	2.66E-06	2.73E-05	1.69E-05	1.62E-05	2.17E-03	1.22E-06	0.00E+00
CHILD	1.06E-05	2.05E-06	6.08E-05	2.93E-05	2.69E-05	4.30E-03	1.88E-06	0.00E+00
INFANT	1.73E-05	1.99E-06	8.83E-05	6.37E-05	4.61E-05	1.04E-02	3.40E-06	0.00E+00
INHAL								
ADULT	3.14E-07	1.48E-06	1.15E-06	5.47E-07	8.06E-07	1.13E-04	2.71E-05	0.00E+00
TEEN	3.98E-07	1.39E-06	1.41E-06	7.50E-07	1.11E-06	1.42E-04	3.97E-05	0.00E+00
CHILD	4.29E-07	5.73E-07	1.72E-06	7.31E-07	1.04E-06	1.67E-04	3.22E-05	0.00E+00
INFANT	2.80E-07	2.12E-07	9.28E-07	6.53E-07	6.88E-07	1.53E-04	2.06E-05	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 2.12E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 3.77E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.52E-05	2.52E-05	2.52E-05	2.52E-05	2.52E-05	2.52E-05	2.54E-05	4.61E-05
GROUND	1.81E-04	1.81E-04	1.81E-04	1.81E-04	1.81E-04	1.81E-04	1.81E-04	2.13E-04
VEGET								
ADULT	5.12E-06	2.45E-05	3.98E-05	4.01E-06	3.53E-06	6.11E-04	1.02E-07	0.00E+00
TEEN	7.30E-06	2.63E-05	5.50E-05	6.15E-06	5.36E-06	8.22E-04	1.91E-07	0.00E+00
CHILD	1.38E-05	1.75E-05	1.14E-04	1.01E-05	8.65E-06	1.58E-03	2.91E-07	0.00E+00
MEAT								
ADULT	8.15E-07	6.24E-06	5.39E-07	4.54E-07	1.11E-07	1.64E-05	8.33E-09	0.00E+00
TEEN	6.27E-07	3.36E-06	3.86E-07	3.57E-07	9.03E-08	1.19E-05	7.88E-09	0.00E+00
CHILD	9.51E-07	1.70E-06	6.31E-07	4.38E-07	1.15E-07	1.79E-05	9.26E-09	0.00E+00
COW MILK								
ADULT	1.41E-06	1.82E-06	3.15E-06	2.12E-06	2.66E-06	4.59E-04	7.04E-08	0.00E+00
TEEN	2.05E-06	2.22E-06	5.20E-06	3.76E-06	4.75E-06	7.27E-04	1.46E-07	0.00E+00
CHILD	3.43E-06	1.56E-06	1.17E-05	6.52E-06	7.89E-06	1.44E-03	2.24E-07	0.00E+00
INFANT	6.01E-06	1.42E-06	1.83E-05	1.49E-05	1.36E-05	3.50E-03	4.05E-07	0.00E+00
GOATMILK								
ADULT	2.28E-06	7.83E-07	6.13E-06	3.59E-06	3.58E-06	5.51E-04	2.11E-07	0.00E+00
TEEN	2.90E-06	1.03E-06	1.00E-05	6.36E-06	6.37E-06	8.73E-04	4.36E-07	0.00E+00
CHILD	4.12E-06	7.97E-07	2.24E-05	1.11E-05	1.06E-05	1.73E-03	6.71E-07	0.00E+00
INFANT	6.80E-06	7.76E-07	3.30E-05	2.42E-05	1.82E-05	4.20E-03	1.21E-06	0.00E+00
INHAL								
ADULT	8.11E-08	3.72E-07	2.89E-07	1.42E-07	2.09E-07	2.93E-05	6.74E-06	0.00E+00
TEEN	1.03E-07	3.78E-07	3.55E-07	1.94E-07	2.88E-07	3.70E-05	9.87E-06	0.00E+00
CHILD	1.11E-07	4.36E-07	4.36E-07	1.89E-07	2.70E-07	4.32E-05	8.01E-06	0.00E+00
INFANT	7.27E-08	3.13E-07	2.37E-07	1.70E-07	1.78E-07	3.96E-05	5.14E-06	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 9.89E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 1.93E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.29E-05	1.29E-05	1.29E-05	1.29E-05	1.29E-05	1.29E-05	1.30E-05	2.34E-05
GROUND	9.55E-06	9.55E-06	9.55E-06	9.55E-06	9.55E-06	9.55E-06	9.55E-06	1.12E-05
VEGET								
ADULT	2.77E-07	1.30E-06	2.14E-06	2.22E-07	2.03E-07	3.55E-05	5.43E-09	0.00E+00
TEEN	3.94E-07	1.39E-06	2.96E-06	3.40E-07	3.09E-07	4.77E-05	1.02E-08	0.00E+00
CHILD	7.42E-07	9.25E-07	6.14E-06	5.61E-07	4.99E-07	9.15E-05	1.55E-08	0.00E+00
MEAT								
ADULT	4.31E-08	3.28E-07	2.90E-08	2.42E-08	6.31E-09	9.52E-07	4.44E-10	0.00E+00
TEEN	3.31E-08	1.77E-07	2.08E-08	1.90E-08	5.14E-09	6.89E-07	4.20E-10	0.00E+00
CHILD	5.02E-08	8.94E-08	3.40E-08	2.34E-08	6.53E-09	1.04E-06	4.93E-10	0.00E+00
COW MILK								
ADULT	7.88E-08	9.83E-08	1.73E-07	1.20E-07	1.54E-07	2.67E-05	3.75E-09	0.00E+00
TEEN	1.16E-07	1.20E-07	2.87E-07	2.13E-07	2.74E-07	4.23E-05	7.74E-09	0.00E+00
CHILD	1.95E-07	8.47E-08	6.46E-07	3.69E-07	4.56E-07	8.37E-05	1.19E-08	0.00E+00
INFANT	3.42E-07	7.76E-08	1.02E-06	8.48E-07	7.89E-07	2.03E-04	2.15E-08	0.00E+00
GOATMILK								
ADULT	1.26E-07	4.43E-08	3.33E-07	2.00E-07	2.05E-07	3.20E-05	1.12E-08	0.00E+00
TEEN	1.62E-07	5.83E-08	5.47E-07	3.53E-07	3.65E-07	5.07E-05	2.32E-08	0.00E+00
CHILD	2.34E-07	4.54E-08	1.22E-06	6.14E-07	6.06E-07	1.00E-04	3.57E-08	0.00E+00
INFANT	3.90E-07	4.42E-08	1.82E-06	1.35E-06	1.04E-06	2.44E-04	6.45E-08	0.00E+00
INHAL								
ADULT	9.36E-09	3.78E-08	2.99E-08	1.73E-08	2.60E-08	3.52E-06	6.32E-07	0.00E+00
TEEN	1.20E-08	4.98E-08	3.72E-08	2.38E-08	3.59E-08	4.46E-06	9.28E-07	0.00E+00
CHILD	1.31E-08	1.57E-07	4.61E-08	2.33E-08	3.37E-08	5.23E-06	7.55E-07	0.00E+00
INFANT	8.76E-09	1.32E-07	2.62E-08	2.10E-08	2.22E-08	4.80E-06	4.89E-07	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 3.04E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 4.88E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.28E-06	6.02E-06
GROUND	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.10E-05	2.47E-05
VEGET								
ADULT	5.86E-07	2.84E-06	4.56E-06	4.52E-07	3.89E-07	6.71E-05	1.17E-08	0.00E+00
TEEN	8.34E-07	3.04E-06	6.30E-06	6.95E-07	5.92E-07	9.03E-05	2.20E-08	0.00E+00
CHILD	1.57E-06	2.02E-06	1.30E-05	1.15E-06	9.55E-07	1.73E-04	3.35E-08	0.00E+00
MEAT								
ADULT	9.42E-08	7.22E-07	6.17E-08	5.23E-08	1.23E-08	1.80E-06	9.59E-10	0.00E+00
TEEN	7.24E-08	3.89E-07	4.42E-08	4.10E-08	1.00E-08	1.30E-06	9.07E-10	0.00E+00
CHILD	1.10E-07	1.97E-07	7.22E-08	5.03E-08	1.27E-08	1.97E-06	1.07E-09	0.00E+00
COW MILK								
ADULT	1.58E-07	2.08E-07	3.56E-07	2.37E-07	2.94E-07	5.05E-05	8.11E-09	0.00E+00
TEEN	2.30E-07	2.54E-07	5.88E-07	4.20E-07	5.23E-07	7.99E-05	1.68E-08	0.00E+00
CHILD	3.83E-07	1.77E-07	1.32E-06	7.28E-07	8.70E-07	1.58E-04	2.57E-08	0.00E+00
INFANT	6.67E-07	1.62E-07	2.05E-06	1.66E-06	1.50E-06	3.85E-04	4.66E-08	0.00E+00
GOATMILK								
ADULT	2.58E-07	8.74E-08	6.97E-07	4.05E-07	3.96E-07	6.06E-05	2.43E-08	0.00E+00
TEEN	3.26E-07	1.15E-07	1.14E-06	7.16E-07	7.06E-07	9.59E-05	5.03E-08	0.00E+00
CHILD	4.59E-07	8.89E-08	2.55E-06	1.24E-06	1.17E-06	1.90E-04	7.72E-08	0.00E+00
INFANT	7.53E-07	8.64E-08	3.73E-06	2.72E-06	2.01E-06	4.62E-04	1.40E-07	0.00E+00
INHAL								
ADULT	1.95E-08	8.88E-08	6.94E-08	3.44E-08	5.09E-08	7.13E-06	1.61E-06	0.00E+00
TEEN	2.48E-08	8.72E-08	8.53E-08	4.72E-08	7.03E-08	9.01E-06	2.36E-06	0.00E+00
CHILD	2.68E-08	7.06E-08	1.05E-07	4.59E-08	6.60E-08	1.05E-05	1.91E-06	0.00E+00
INFANT	1.76E-08	4.49E-08	5.70E-08	4.12E-08	4.35E-08	9.67E-06	1.23E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.16E-04 MILLRADS
 ANNUAL GAMMA AIR DOSE = 8.33E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.59E-05	5.59E-05	5.59E-05	5.59E-05	5.59E-05	5.59E-05	5.70E-05	1.72E-04
GROUND	3.79E-03	3.79E-03	3.79E-03	3.79E-03	3.79E-03	3.79E-03	3.79E-03	4.46E-03
VEGET								
ADULT	7.91E-05	4.86E-04	2.89E-05	6.20E-05	2.15E-05	2.17E-03	3.21E-06	0.00E+00
TEEN	1.10E-04	5.18E-04	4.70E-05	9.68E-05	3.35E-05	2.92E-03	6.02E-06	0.00E+00
CHILD	2.00E-04	3.39E-04	1.12E-04	1.58E-04	5.43E-05	5.59E-03	9.16E-06	0.00E+00
MEAT								
ADULT	1.68E-05	1.30E-04	1.88E-06	9.48E-06	1.15E-06	5.82E-05	2.62E-07	0.00E+00
TEEN	1.28E-05	6.97E-05	1.56E-06	7.44E-06	9.29E-07	4.21E-05	2.48E-07	0.00E+00
CHILD	1.92E-05	3.52E-05	2.87E-06	9.11E-06	1.17E-06	6.36E-05	2.92E-07	0.00E+00
COW MILK								
ADULT	1.92E-05	3.04E-05	1.81E-05	2.65E-05	1.56E-05	1.63E-03	2.22E-06	0.00E+00
TEEN	2.28E-05	3.60E-05	3.29E-05	4.67E-05	2.76E-05	2.58E-03	4.59E-06	0.00E+00
CHILD	2.98E-05	2.41E-05	7.93E-05	8.05E-05	4.58E-05	5.10E-03	7.05E-06	0.00E+00
INFANT	4.47E-05	2.23E-05	1.34E-04	1.65E-04	7.69E-05	1.24E-02	1.28E-05	0.00E+00
GOATMILK								
ADULT	4.25E-05	6.34E-06	4.77E-05	6.53E-05	3.05E-05	1.95E-03	6.66E-06	0.00E+00
TEEN	4.27E-05	7.89E-06	8.65E-05	1.15E-04	5.40E-05	3.09E-03	1.38E-05	0.00E+00
CHILD	3.87E-05	5.70E-06	2.09E-04	2.00E-04	8.97E-05	6.13E-03	2.12E-05	0.00E+00
INFANT	4.74E-05	5.44E-06	3.42E-04	3.99E-04	1.48E-04	1.49E-02	3.83E-05	0.00E+00
INHAL								
ADULT	1.05E-06	9.58E-06	7.14E-07	1.43E-06	1.20E-06	1.51E-04	1.96E-04	0.00E+00
TEEN	1.22E-06	8.78E-06	1.00E-06	1.93E-06	1.66E-06	1.90E-04	2.86E-04	0.00E+00
CHILD	1.23E-06	3.40E-06	1.36E-06	1.83E-06	1.55E-06	2.22E-04	2.32E-04	0.00E+00
INFANT	7.04E-07	1.20E-06	9.64E-07	1.46E-06	1.01E-06	2.04E-04	1.48E-04	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .65 MILES SE

ANNUAL BETA AIR DOSE = 9.35E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.81E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.89E-05	3.99E-05	1.32E-04
GROUND	1.53E-03	1.53E-03	1.53E-03	1.53E-03	1.53E-03	1.53E-03	1.53E-03	1.80E-03
VEGET								
ADULT	3.19E-05	1.96E-04	1.05E-05	2.49E-05	8.41E-06	8.21E-04	1.31E-06	0.00E+00
TEEN	4.43E-05	2.09E-04	1.72E-05	3.89E-05	1.31E-05	1.11E-03	2.45E-06	0.00E+00
CHILD	8.05E-05	1.37E-04	4.09E-05	6.37E-05	2.12E-05	2.12E-03	3.73E-06	0.00E+00
MEAT								
ADULT	6.80E-06	5.23E-05	7.44E-07	3.81E-06	4.44E-07	2.21E-05	1.07E-07	0.00E+00
TEEN	5.16E-06	2.82E-05	6.18E-07	2.99E-06	3.60E-07	1.60E-05	1.01E-07	0.00E+00
CHILD	7.76E-06	1.42E-05	1.14E-06	3.66E-06	4.56E-07	2.41E-05	1.19E-07	0.00E+00
COW MILK								
ADULT	7.68E-06	1.22E-05	7.21E-06	1.06E-05	6.02E-06	6.17E-04	9.04E-07	0.00E+00
TEEN	9.07E-06	1.44E-05	1.31E-05	1.86E-05	1.07E-05	9.77E-04	1.87E-06	0.00E+00
CHILD	1.17E-05	9.64E-06	3.15E-05	3.21E-05	1.78E-05	1.93E-03	2.87E-06	0.00E+00
INFANT	1.75E-05	8.62E-06	5.32E-05	6.57E-05	2.98E-05	4.70E-03	5.19E-06	0.00E+00
GOATMILK								
ADULT	1.72E-05	2.50E-06	1.92E-05	2.64E-05	1.21E-05	7.41E-04	2.71E-06	0.00E+00
TEEN	1.72E-05	3.10E-06	3.48E-05	4.66E-05	2.15E-05	1.17E-03	5.60E-06	0.00E+00
CHILD	1.54E-05	2.24E-06	8.39E-05	8.08E-05	3.56E-05	2.32E-03	8.61E-06	0.00E+00
INFANT	1.87E-05	2.10E-06	1.37E-04	1.61E-04	5.88E-05	5.64E-03	1.56E-05	0.00E+00
INHAL								
ADULT	9.07E-07	8.29E-06	6.19E-07	1.24E-06	1.04E-06	1.31E-04	1.69E-04	0.00E+00
TEEN	1.06E-06	7.59E-06	8.69E-07	1.68E-06	1.44E-06	1.66E-04	2.47E-04	0.00E+00
CHILD	1.06E-06	2.85E-06	1.18E-06	1.59E-06	1.35E-06	1.93E-04	2.00E-04	0.00E+00
INFANT	6.10E-07	9.57E-07	8.36E-07	1.26E-06	8.81E-07	1.77E-04	1.28E-04	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 8.17E-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	7.36E-05	1.58E-04
GROUND	1.42E-03	1.42E-03	1.42E-03	1.42E-03	1.42E-03	1.42E-03	1.42E-03	1.67E-03
VEGET								
ADULT	2.99E-05	1.83E-04	1.38E-05	2.36E-05	8.86E-06	9.59E-04	1.18E-06	0.00E+00
TEEN	4.17E-05	1.95E-04	2.26E-05	3.68E-05	1.37E-05	1.29E-03	2.21E-06	0.00E+00
CHILD	7.60E-05	1.28E-04	5.41E-05	6.02E-05	2.22E-05	2.47E-03	3.36E-06	0.00E+00
MEAT								
ADULT	6.33E-06	4.85E-05	7.50E-07	3.61E-06	4.88E-07	2.57E-05	9.62E-08	0.00E+00
TEEN	4.81E-06	2.61E-05	6.20E-07	2.83E-06	3.92E-07	1.86E-05	9.11E-08	0.00E+00
CHILD	7.24E-06	1.32E-05	1.14E-06	3.46E-06	4.90E-07	2.81E-05	1.07E-07	0.00E+00
COW MILK								
ADULT	7.40E-06	1.16E-05	7.13E-06	1.04E-05	6.53E-06	7.21E-04	8.14E-07	0.00E+00
TEEN	8.98E-06	1.38E-05	1.29E-05	1.83E-05	1.16E-05	1.14E-03	1.68E-06	0.00E+00
CHILD	1.21E-05	9.26E-06	3.11E-05	3.14E-05	1.92E-05	2.26E-03	2.59E-06	0.00E+00
INFANT	1.83E-05	9.39E-06	5.32E-05	6.46E-05	3.21E-05	5.49E-03	4.68E-06	0.00E+00
GOATMILK								
ADULT	1.59E-05	2.55E-06	1.81E-05	2.44E-05	1.20E-05	8.65E-04	2.44E-06	0.00E+00
TEEN	1.61E-05	3.19E-06	3.28E-05	4.31E-05	2.13E-05	1.37E-03	5.05E-06	0.00E+00
CHILD	1.51E-05	2.32E-06	7.92E-05	7.48E-05	3.53E-05	2.71E-03	7.76E-06	0.00E+00
INFANT	1.90E-05	2.32E-06	1.31E-04	1.50E-04	5.85E-05	6.59E-03	1.40E-05	0.00E+00
INHAL								
ADULT	3.06E-07	2.77E-06	2.17E-07	4.22E-07	3.68E-07	4.62E-05	5.59E-05	0.00E+00
TEEN	3.58E-07	2.59E-06	3.05E-07	5.73E-07	5.07E-07	5.84E-05	8.17E-05	0.00E+00
CHILD	3.61E-07	1.48E-06	4.14E-07	5.44E-07	4.75E-07	6.82E-05	6.62E-05	0.00E+00
INFANT	2.09E-07	7.90E-07	2.95E-07	4.35E-07	3.11E-07	6.26E-05	4.23E-05	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 2.83E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 4.76E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.19E-05	3.19E-05	3.19E-05	3.19E-05	3.19E-05	3.19E-05	3.22E-05	6.19E-05
GROUND	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	8.44E-05	9.93E-05
VEGET								
ADULT	1.78E-06	1.09E-05	9.28E-07	1.42E-06	5.53E-07	6.19E-05	6.92E-08	0.00E+00
TEEN	2.49E-06	1.16E-05	1.52E-06	2.21E-06	8.55E-07	8.33E-05	1.30E-07	0.00E+00
CHILD	4.55E-06	7.62E-06	3.64E-06	3.61E-06	1.38E-06	1.60E-04	1.97E-07	0.00E+00
MEAT								
ADULT	3.77E-07	2.89E-06	4.62E-08	2.17E-07	3.10E-08	1.66E-06	5.65E-09	0.00E+00
TEEN	2.87E-07	1.55E-06	3.81E-08	1.70E-07	2.48E-08	1.20E-06	5.35E-09	0.00E+00
CHILD	4.32E-07	7.85E-07	6.98E-08	2.08E-07	3.09E-08	1.82E-06	6.29E-09	0.00E+00
COW MILK								
ADULT	4.47E-07	7.02E-07	4.36E-07	6.32E-07	4.12E-07	4.65E-05	4.78E-08	0.00E+00
TEEN	5.48E-07	8.33E-07	7.88E-07	1.11E-06	7.29E-07	7.37E-05	9.88E-08	0.00E+00
CHILD	7.51E-07	5.59E-07	1.90E-06	1.91E-06	1.21E-06	1.46E-04	1.52E-07	0.00E+00
INFANT	1.14E-06	5.94E-07	3.26E-06	3.94E-06	2.02E-06	3.54E-04	2.75E-07	0.00E+00
GOATMILK								
ADULT	9.42E-07	1.57E-07	1.08E-06	1.45E-06	7.31E-07	5.58E-05	1.43E-07	0.00E+00
TEEN	9.64E-07	1.97E-07	1.97E-06	2.56E-06	1.30E-06	8.84E-05	2.96E-07	0.00E+00
CHILD	9.17E-07	1.44E-07	4.74E-06	4.44E-06	2.15E-06	1.75E-04	4.56E-07	0.00E+00
INFANT	1.18E-06	1.47E-07	7.88E-06	8.94E-06	3.58E-06	4.25E-04	8.24E-07	0.00E+00
INHAL								
ADULT	3.19E-08	2.73E-07	2.68E-08	4.72E-08	4.74E-08	6.03E-06	5.23E-06	0.00E+00
TEEN	3.81E-08	2.80E-07	3.77E-08	6.41E-08	6.52E-08	7.62E-06	7.64E-06	0.00E+00
CHILD	3.92E-08	3.70E-07	5.13E-08	6.12E-08	6.11E-08	8.92E-06	6.20E-06	0.00E+00
INFANT	2.34E-08	2.75E-07	3.72E-08	5.03E-08	4.00E-08	8.18E-06	3.97E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
 AT 3.00 MILES SSE

ANNUAL BETA AIR DOSE = 6.15E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 9.10E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.09E-06	6.09E-06	6.09E-06	6.09E-06	6.09E-06	6.09E-06	6.16E-06	1.25E-05
GROUND	5.36E-05	5.36E-05	5.36E-05	5.36E-05	5.36E-05	5.36E-05	5.36E-05	6.31E-05
VEGET								
ADULT	1.12E-06	6.90E-06	4.81E-07	8.85E-07	3.22E-07	3.39E-05	4.48E-08	0.00E+00
TEEN	1.57E-06	7.35E-06	7.84E-07	1.38E-06	5.00E-07	4.57E-05	8.40E-08	0.00E+00
CHILD	2.85E-06	4.81E-06	1.88E-06	2.26E-06	8.09E-07	8.75E-05	1.28E-07	0.00E+00
MEAT								
ADULT	2.39E-07	1.83E-06	2.77E-08	1.35E-07	1.76E-08	9.11E-07	3.66E-09	0.00E+00
TEEN	1.81E-07	9.86E-07	2.29E-08	1.06E-07	1.42E-08	6.60E-07	3.46E-09	0.00E+00
CHILD	2.73E-07	4.98E-07	4.21E-08	1.30E-07	1.78E-08	9.96E-07	4.07E-09	0.00E+00
COW MILK								
ADULT	2.76E-07	4.36E-07	2.64E-07	3.85E-07	2.36E-07	2.55E-05	3.10E-08	0.00E+00
TEEN	3.32E-07	5.16E-07	4.79E-07	6.78E-07	4.18E-07	4.04E-05	6.40E-08	0.00E+00
CHILD	4.43E-07	3.46E-07	1.15E-06	1.17E-06	6.92E-07	7.99E-05	9.84E-08	0.00E+00
INFANT	6.68E-07	3.40E-07	1.96E-06	2.40E-06	1.16E-06	1.94E-04	1.78E-07	0.00E+00
GOATMILK								
ADULT	6.00E-07	9.35E-08	6.80E-07	9.22E-07	4.43E-07	3.06E-05	9.29E-08	0.00E+00
TEEN	6.07E-07	1.17E-07	1.23E-06	1.63E-06	7.86E-07	4.84E-05	1.92E-07	0.00E+00
CHILD	5.60E-07	8.46E-08	2.97E-06	2.82E-06	1.31E-06	9.59E-05	2.95E-07	0.00E+00
INFANT	6.99E-07	8.33E-08	4.90E-06	5.65E-06	2.16E-06	2.33E-04	5.34E-07	0.00E+00
INHAL								
ADULT	4.93E-08	4.46E-07	3.44E-08	6.75E-08	5.82E-08	7.43E-06	9.05E-06	0.00E+00
TEEN	5.76E-08	4.13E-07	4.83E-08	9.16E-08	8.02E-08	9.36E-06	1.32E-05	0.00E+00
CHILD	5.80E-08	1.99E-07	6.55E-08	8.69E-08	7.52E-08	1.09E-05	1.07E-05	0.00E+00
INFANT	3.35E-08	9.22E-08	4.66E-08	6.93E-08	4.91E-08	1.00E-05	6.84E-06	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 1.09E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.08E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.39E-06	1.39E-06	1.39E-06	1.39E-06	1.39E-06	1.39E-06	1.40E-06	2.56E-06
GROUND	5.67E-03	5.67E-03	5.67E-03	5.67E-03	5.67E-03	5.67E-03	5.67E-03	6.66E-03
VEGET								
ADULT	1.05E-04	8.22E-04	1.71E-05	8.70E-05	2.33E-05	4.85E-04	2.98E-06	0.00E+00
TEEN	1.63E-04	8.74E-04	2.53E-05	1.33E-04	3.43E-05	6.54E-04	5.26E-06	0.00E+00
CHILD	3.27E-04	5.71E-04	5.42E-05	2.04E-04	5.06E-05	1.25E-03	7.70E-06	0.00E+00
MEAT								
ADULT	3.16E-05	2.26E-04	7.02E-06	3.05E-05	9.32E-06	1.31E-05	1.70E-06	0.00E+00
TEEN	2.50E-05	1.22E-04	5.20E-06	2.36E-05	6.85E-06	9.49E-06	1.52E-06	0.00E+00
CHILD	3.89E-05	6.17E-05	8.39E-06	2.79E-05	7.78E-06	1.43E-05	1.72E-06	0.00E+00
COW MILK								
ADULT	3.05E-05	8.10E-05	1.85E-05	5.80E-05	3.76E-05	3.62E-04	3.19E-07	0.00E+00
TEEN	5.22E-05	9.37E-05	2.90E-05	9.75E-05	6.07E-05	5.72E-04	6.36E-07	0.00E+00
CHILD	1.04E-04	6.07E-05	5.83E-05	1.48E-04	9.07E-05	1.13E-03	9.54E-07	0.00E+00
INFANT	1.41E-04	2.27E-04	8.25E-05	2.62E-04	1.23E-04	2.74E-03	1.87E-06	0.00E+00
GOATMILK								
ADULT	6.26E-06	1.01E-05	5.43E-06	1.11E-05	7.55E-06	4.34E-04	3.68E-07	0.00E+00
TEEN	9.20E-06	1.18E-05	9.26E-06	1.90E-05	1.27E-05	6.86E-04	7.58E-07	0.00E+00
CHILD	1.59E-05	7.72E-06	2.09E-05	3.04E-05	1.98E-05	1.36E-03	1.16E-06	0.00E+00
INFANT	2.22E-05	2.77E-05	3.39E-05	5.78E-05	3.00E-05	3.29E-03	2.12E-06	0.00E+00
INHAL								
ADULT	1.88E-06	2.72E-05	5.18E-07	2.60E-06	9.41E-07	4.33E-05	5.26E-04	0.00E+00
TEEN	2.51E-06	2.49E-05	6.77E-07	3.42E-06	1.23E-06	5.32E-05	7.68E-04	0.00E+00
CHILD	2.86E-06	1.10E-05	8.47E-07	3.00E-06	1.07E-06	5.91E-05	6.22E-04	0.00E+00
INFANT	1.51E-06	5.18E-06	5.46E-07	1.94E-06	5.87E-07	5.40E-05	3.99E-04	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.19E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.28E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.54E-06	2.81E-06
GROUND	9.18E-03	9.18E-03	9.18E-03	9.18E-03	9.18E-03	9.18E-03	9.18E-03	1.08E-02
VEGET								
ADULT	1.69E-04	1.33E-03	2.73E-05	1.41E-04	3.77E-05	7.83E-04	4.82E-06	0.00E+00
TEEN	2.64E-04	1.42E-03	4.04E-05	2.16E-04	5.54E-05	1.06E-03	8.52E-06	0.00E+00
CHILD	5.30E-04	9.25E-04	8.66E-05	3.30E-04	8.19E-05	2.02E-03	1.25E-05	0.00E+00
MEAT								
ADULT	5.12E-05	3.66E-04	1.14E-05	4.93E-05	1.51E-05	2.11E-05	2.76E-06	0.00E+00
TEEN	4.06E-05	1.97E-04	8.41E-06	3.83E-05	1.11E-05	1.53E-05	2.47E-06	0.00E+00
CHILD	6.30E-05	1.00E-04	1.36E-05	4.52E-05	1.26E-05	2.31E-05	2.79E-06	0.00E+00
COW MILK								
ADULT	4.94E-05	1.31E-04	3.00E-05	9.40E-05	6.09E-05	5.84E-04	5.14E-07	0.00E+00
TEEN	8.45E-05	1.52E-04	4.69E-05	1.58E-04	9.83E-05	9.23E-04	1.02E-06	0.00E+00
CHILD	1.69E-04	9.83E-05	9.44E-05	2.40E-04	1.47E-04	1.82E-03	1.54E-06	0.00E+00
INFANT	2.28E-04	3.68E-04	1.33E-04	4.23E-04	2.00E-04	4.43E-03	3.02E-06	0.00E+00
GOATMILK								
ADULT	1.01E-05	1.64E-05	8.70E-06	1.79E-05	1.22E-05	7.00E-04	5.88E-07	0.00E+00
TEEN	1.49E-05	1.91E-05	1.48E-05	3.06E-05	2.05E-05	1.11E-03	1.21E-06	0.00E+00
CHILD	2.58E-05	1.25E-05	3.35E-05	4.89E-05	3.20E-05	2.19E-03	1.85E-06	0.00E+00
INFANT	3.59E-05	4.49E-05	5.43E-05	9.31E-05	4.84E-05	5.31E-03	3.39E-06	0.00E+00
INHAL								
ADULT	3.16E-06	4.63E-05	8.25E-07	4.33E-06	1.52E-06	7.45E-05	8.97E-04	0.00E+00
TEEN	4.21E-06	4.24E-05	1.07E-06	5.69E-06	1.98E-06	9.15E-05	1.31E-03	0.00E+00
CHILD	4.78E-06	1.77E-05	1.33E-06	4.97E-06	1.71E-06	1.02E-04	1.06E-03	0.00E+00
INFANT	2.50E-06	7.73E-06	8.43E-07	3.17E-06	9.32E-07	9.28E-05	6.81E-04	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 7.96E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.52E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.02E-05	1.02E-05	1.02E-05	1.02E-05	1.02E-05	1.02E-05	1.03E-05	1.87E-05
GROUND	2.41E-03	2.41E-03	2.41E-03	2.41E-03	2.41E-03	2.41E-03	2.41E-03	2.84E-03
VEGET								
ADULT	4.51E-05	3.49E-04	1.63E-05	3.80E-05	1.05E-05	2.81E-04	1.36E-06	0.00E+00
TEEN	7.00E-05	3.71E-04	2.46E-05	5.82E-05	1.56E-05	3.79E-04	2.41E-06	0.00E+00
CHILD	1.40E-04	2.42E-04	5.50E-05	8.92E-05	2.32E-05	7.26E-04	3.54E-06	0.00E+00
MEAT								
ADULT	1.34E-05	9.54E-05	3.10E-06	1.29E-05	3.95E-06	7.57E-06	7.23E-07	0.00E+00
TEEN	1.06E-05	5.14E-05	2.30E-06	1.00E-05	2.91E-06	5.48E-06	6.49E-07	0.00E+00
CHILD	1.64E-05	2.61E-05	3.74E-06	1.18E-05	3.31E-06	8.28E-06	7.34E-07	0.00E+00
COW MILK								
ADULT	1.34E-05	3.42E-05	8.77E-06	2.52E-05	1.63E-05	2.10E-04	2.09E-07	0.00E+00
TEEN	2.25E-05	3.96E-05	1.39E-05	4.25E-05	2.65E-05	3.32E-04	4.22E-07	0.00E+00
CHILD	4.44E-05	2.57E-05	2.87E-05	6.48E-05	3.97E-05	6.57E-04	6.39E-07	0.00E+00
INFANT	6.02E-05	9.57E-05	4.16E-05	1.15E-04	5.45E-05	1.60E-03	1.22E-06	0.00E+00
GOATMILK								
ADULT	4.07E-06	4.46E-06	4.67E-06	6.86E-06	4.22E-06	2.52E-04	3.79E-07	0.00E+00
TEEN	5.33E-06	5.22E-06	8.14E-06	1.19E-05	7.19E-06	3.99E-04	7.82E-07	0.00E+00
CHILD	8.05E-06	3.45E-06	1.89E-05	1.95E-05	1.14E-05	7.88E-04	1.20E-06	0.00E+00
INFANT	1.10E-05	1.19E-05	3.08E-05	3.78E-05	1.77E-05	1.92E-03	2.18E-06	0.00E+00
INHAL								
ADULT	1.05E-06	5.75E-06	8.04E-07	1.81E-06	1.19E-06	1.02E-05	1.06E-04	0.00E+00
TEEN	1.43E-06	6.55E-06	1.12E-06	2.47E-06	1.63E-06	1.27E-05	1.55E-04	0.00E+00
CHILD	1.72E-06	1.55E-05	1.50E-06	2.35E-06	1.51E-06	1.42E-05	1.26E-04	0.00E+00
INFANT	1.13E-06	1.41E-05	1.17E-06	2.01E-06	9.76E-07	1.30E-05	8.15E-05	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 3.98E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 7.62E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.10E-06	5.10E-06	5.10E-06	5.10E-06	5.10E-06	5.10E-06	5.14E-06	9.37E-06
GROUND	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.14E-04	1.34E-04
VEGET								
ADULT	2.15E-06	1.65E-05	9.26E-07	1.81E-06	5.10E-07	1.45E-05	6.59E-08	0.00E+00
TEEN	3.32E-06	1.75E-05	1.41E-06	2.78E-06	7.54E-07	1.96E-05	1.17E-07	0.00E+00
CHILD	6.62E-06	1.15E-05	3.15E-06	4.27E-06	1.12E-06	3.75E-05	1.72E-07	0.00E+00
MEAT								
ADULT	6.34E-07	4.50E-06	1.49E-07	6.10E-07	1.87E-07	3.91E-07	3.42E-08	0.00E+00
TEEN	5.01E-07	2.43E-06	1.11E-07	4.73E-07	1.38E-07	2.83E-07	3.07E-08	0.00E+00
CHILD	7.75E-07	1.23E-06	1.80E-07	5.59E-07	1.56E-07	4.27E-07	3.47E-08	0.00E+00
COW MILK								
ADULT	6.40E-07	1.62E-06	4.31E-07	1.20E-06	7.79E-07	1.09E-05	1.11E-08	0.00E+00
TEEN	1.07E-06	1.87E-06	6.86E-07	2.03E-06	1.26E-06	1.72E-05	2.26E-08	0.00E+00
CHILD	2.11E-06	1.21E-06	1.42E-06	3.10E-06	1.90E-06	3.40E-05	3.42E-08	0.00E+00
INFANT	2.86E-06	4.51E-06	2.08E-06	5.52E-06	2.61E-06	8.26E-05	6.49E-08	0.00E+00
GOATMILK								
ADULT	2.17E-07	2.13E-07	2.62E-07	3.62E-07	2.17E-07	1.30E-05	2.18E-08	0.00E+00
TEEN	2.77E-07	2.51E-07	4.58E-07	6.27E-07	3.71E-07	2.06E-05	4.50E-08	0.00E+00
CHILD	4.03E-07	1.66E-07	1.07E-06	1.04E-06	5.92E-07	4.08E-05	6.91E-08	0.00E+00
INFANT	5.48E-07	5.62E-07	1.74E-06	2.02E-06	9.23E-07	9.91E-05	1.25E-07	0.00E+00
INHAL								
ADULT	4.02E-07	9.99E-07	3.73E-07	7.39E-07	5.42E-07	2.18E-06	1.68E-05	0.00E+00
TEEN	5.50E-07	1.57E-06	5.22E-07	1.01E-06	7.45E-07	2.71E-06	2.47E-05	0.00E+00
CHILD	6.75E-07	7.14E-06	7.07E-07	9.84E-07	6.96E-07	3.09E-06	2.01E-05	0.00E+00
INFANT	4.67E-07	6.81E-06	5.58E-07	8.88E-07	4.56E-07	2.83E-06	1.32E-05	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 2.30 MILES ESE

ANNUAL BETA AIR DOSE = 1.27E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 2.42E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.62E-06	1.63E-06	2.98E-06
GROUND	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.07E-04	2.43E-04
VEGET								
ADULT	3.86E-06	2.99E-05	1.34E-06	3.24E-06	8.99E-07	2.35E-05	1.16E-07	0.00E+00
TEEN	5.99E-06	3.18E-05	2.03E-06	4.97E-06	1.33E-06	3.17E-05	2.05E-07	0.00E+00
CHILD	1.19E-05	2.08E-05	4.51E-06	7.62E-06	1.97E-06	6.07E-05	3.02E-07	0.00E+00
MEAT								
ADULT	1.15E-06	8.17E-06	2.65E-07	1.10E-06	3.38E-07	6.33E-07	6.19E-08	0.00E+00
TEEN	9.07E-07	4.40E-06	1.97E-07	8.57E-07	2.49E-07	4.59E-07	5.55E-08	0.00E+00
CHILD	1.41E-06	2.23E-06	3.19E-07	1.01E-06	2.83E-07	6.92E-07	6.28E-08	0.00E+00
COW MILK								
ADULT	1.14E-06	2.93E-06	7.46E-07	2.16E-06	1.40E-06	1.76E-05	1.74E-08	0.00E+00
TEEN	1.93E-06	3.40E-06	1.18E-06	3.63E-06	2.26E-06	2.78E-05	3.52E-08	0.00E+00
CHILD	3.80E-06	2.20E-06	2.43E-06	5.54E-06	3.39E-06	5.50E-05	5.33E-08	0.00E+00
INFANT	5.16E-06	8.20E-06	3.52E-06	9.84E-06	4.65E-06	1.34E-04	1.02E-07	0.00E+00
GOATMILK								
ADULT	3.40E-07	3.81E-07	3.86E-07	5.74E-07	3.55E-07	2.11E-05	3.11E-08	0.00E+00
TEEN	4.48E-07	4.46E-07	6.71E-07	9.93E-07	6.04E-07	3.34E-05	6.42E-08	0.00E+00
CHILD	6.81E-07	2.94E-07	1.56E-06	1.63E-06	9.59E-07	6.60E-05	9.86E-08	0.00E+00
INFANT	9.33E-07	1.01E-06	2.54E-06	3.16E-06	1.48E-06	1.60E-04	1.79E-07	0.00E+00
INHAL								
ADULT	1.89E-07	1.24E-06	1.33E-07	3.18E-07	2.00E-07	2.21E-06	2.32E-05	0.00E+00
TEEN	2.56E-07	1.34E-06	1.85E-07	4.31E-07	2.73E-07	2.72E-06	3.39E-05	0.00E+00
CHILD	3.07E-07	2.58E-06	2.48E-07	4.07E-07	2.52E-07	3.05E-06	2.75E-05	0.00E+00
INFANT	1.96E-07	2.28E-06	1.91E-07	3.41E-07	1.61E-07	2.78E-06	1.78E-05	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016

SPECIAL LOCATION NO. 1A Site Boundary
AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 1.13E-04 MILLRADS
ANNUAL GAMMA AIR DOSE = 7.81E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.23E-05	5.23E-05	5.23E-05	5.23E-05	5.23E-05	5.23E-05	5.35E-05	1.65E-04
GROUND	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.20E-02
VEGET								
ADULT	1.96E-04	1.43E-03	4.39E-05	1.60E-04	4.65E-05	2.34E-03	6.40E-06	0.00E+00
TEEN	2.94E-04	1.52E-03	6.84E-05	2.46E-04	6.99E-05	3.15E-03	1.16E-05	0.00E+00
CHILD	5.72E-04	9.91E-04	1.55E-04	3.84E-04	1.07E-04	6.04E-03	1.73E-05	0.00E+00
MEAT								
ADULT	5.33E-05	3.88E-04	1.03E-05	4.56E-05	1.25E-05	6.29E-05	2.33E-06	0.00E+00
TEEN	4.17E-05	2.09E-04	7.73E-06	3.55E-05	9.25E-06	4.56E-05	2.10E-06	0.00E+00
CHILD	6.42E-05	1.06E-04	1.28E-05	4.21E-05	1.06E-05	6.88E-05	2.38E-06	0.00E+00
COW MILK								
ADULT	5.38E-05	1.26E-04	3.80E-05	9.40E-05	5.93E-05	1.75E-03	2.27E-06	0.00E+00
TEEN	8.36E-05	1.46E-04	6.32E-05	1.60E-04	9.78E-05	2.78E-03	4.65E-06	0.00E+00
CHILD	1.54E-04	9.52E-05	1.38E-04	2.50E-04	1.50E-04	5.49E-03	7.12E-06	0.00E+00
INFANT	2.11E-04	3.00E-04	2.13E-04	4.61E-04	2.16E-04	1.33E-02	1.31E-05	0.00E+00
GOATMILK								
ADULT	4.34E-05	1.78E-05	4.66E-05	6.85E-05	3.46E-05	2.10E-03	6.07E-06	0.00E+00
TEEN	4.71E-05	2.11E-05	8.38E-05	1.20E-04	6.05E-05	3.33E-03	1.25E-05	0.00E+00
CHILD	5.19E-05	1.42E-05	2.00E-04	2.05E-04	9.89E-05	6.59E-03	1.93E-05	0.00E+00
INFANT	6.65E-05	3.88E-05	3.28E-04	4.06E-04	1.60E-04	1.60E-02	3.49E-05	0.00E+00
INHAL								
ADULT	2.74E-06	3.35E-05	1.21E-06	3.79E-06	2.08E-06	1.89E-04	6.58E-04	0.00E+00
TEEN	3.48E-06	3.08E-05	1.65E-06	5.04E-06	2.81E-06	2.37E-04	9.61E-04	0.00E+00
CHILD	3.80E-06	1.38E-05	2.17E-06	4.57E-06	2.56E-06	2.74E-04	7.79E-04	0.00E+00
INFANT	2.08E-06	6.42E-06	1.50E-06	3.25E-06	1.58E-06	2.51E-04	4.99E-04	0.00E+00

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TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.65E-04 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.12E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.53E-05	7.53E-05	7.53E-05	7.53E-05	7.53E-05	7.53E-05	7.69E-05	2.40E-04
GROUND	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.49E-02
VEGET								
ADULT	2.44E-04	1.77E-03	5.81E-05	1.99E-04	5.83E-05	2.98E-03	7.99E-06	0.00E+00
TEEN	3.66E-04	1.89E-03	9.06E-05	3.07E-04	8.76E-05	4.02E-03	1.45E-05	0.00E+00
CHILD	7.12E-04	1.23E-03	2.06E-04	4.80E-04	1.35E-04	7.69E-03	2.16E-05	0.00E+00
MEAT								
ADULT	6.63E-05	4.83E-04	1.28E-05	5.68E-05	1.55E-05	8.02E-05	2.90E-06	0.00E+00
TEEN	5.19E-05	2.60E-04	9.66E-06	4.41E-05	1.15E-05	5.81E-05	2.61E-06	0.00E+00
CHILD	7.99E-05	1.32E-04	1.60E-05	5.24E-05	1.32E-05	8.77E-05	2.96E-06	0.00E+00
COW MILK								
ADULT	6.71E-05	1.56E-04	4.77E-05	1.17E-04	7.41E-05	2.24E-03	2.84E-06	0.00E+00
TEEN	1.04E-04	1.82E-04	7.93E-05	1.99E-04	1.22E-04	3.54E-03	5.84E-06	0.00E+00
CHILD	1.91E-04	1.18E-04	1.74E-04	3.12E-04	1.87E-04	7.00E-03	8.94E-06	0.00E+00
INFANT	2.64E-04	3.73E-04	2.69E-04	5.76E-04	2.70E-04	1.70E-02	1.64E-05	0.00E+00
GOATMILK								
ADULT	5.45E-05	2.22E-05	5.89E-05	8.60E-05	4.36E-05	2.68E-03	7.62E-06	0.00E+00
TEEN	5.92E-05	2.64E-05	1.06E-04	1.51E-04	7.62E-05	4.25E-03	1.57E-05	0.00E+00
CHILD	6.52E-05	1.78E-05	2.53E-04	2.58E-04	1.25E-04	8.40E-03	2.42E-05	0.00E+00
INFANT	8.37E-05	4.83E-05	4.14E-04	5.10E-04	2.02E-04	2.04E-02	4.38E-05	0.00E+00
INHAL								
ADULT	3.99E-06	4.91E-05	1.74E-06	5.51E-06	3.02E-06	2.77E-04	9.65E-04	0.00E+00
TEEN	5.07E-06	4.51E-05	2.38E-06	7.33E-06	4.07E-06	3.48E-04	1.41E-03	0.00E+00
CHILD	5.54E-06	1.97E-05	3.14E-06	6.63E-06	3.71E-06	4.02E-04	1.14E-03	0.00E+00
INFANT	3.01E-06	8.93E-06	2.16E-06	4.70E-06	2.28E-06	3.69E-04	7.32E-04	0.00E+00

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TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 8.22E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.14E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.65E-05	7.65E-05	7.65E-05	7.65E-05	7.65E-05	7.65E-05	7.73E-05	1.62E-04
GROUND	4.06E-03	4.06E-03	4.06E-03	4.06E-03	4.06E-03	4.06E-03	4.06E-03	4.77E-03
VEGET								
ADULT	7.89E-05	5.66E-04	3.07E-05	6.50E-05	2.01E-05	1.20E-03	2.63E-06	0.00E+00
TEEN	1.18E-04	6.02E-04	4.80E-05	1.00E-04	3.03E-05	1.61E-03	4.78E-06	0.00E+00
CHILD	2.29E-04	3.94E-04	1.10E-04	1.57E-04	4.68E-05	3.09E-03	7.12E-06	0.00E+00
MEAT								
ADULT	2.11E-05	1.53E-04	4.22E-06	1.80E-05	4.96E-06	3.22E-05	9.15E-07	0.00E+00
TEEN	1.65E-05	8.27E-05	3.19E-06	1.40E-05	3.68E-06	2.33E-05	8.25E-07	0.00E+00
CHILD	2.54E-05	4.19E-05	5.31E-06	1.67E-05	4.23E-06	3.52E-05	9.36E-07	0.00E+00
COW MILK								
ADULT	2.20E-05	4.98E-05	1.65E-05	3.83E-05	2.46E-05	8.98E-04	9.83E-07	0.00E+00
TEEN	3.40E-05	5.79E-05	2.77E-05	6.52E-05	4.08E-05	1.42E-03	2.02E-06	0.00E+00
CHILD	6.18E-05	3.78E-05	6.11E-05	1.03E-04	6.29E-05	2.81E-03	3.10E-06	0.00E+00
INFANT	8.56E-05	1.18E-04	9.60E-05	1.91E-04	9.16E-05	6.84E-03	5.67E-06	0.00E+00
GOATMILK								
ADULT	1.92E-05	7.42E-06	2.18E-05	3.02E-05	1.58E-05	1.08E-03	2.67E-06	0.00E+00
TEEN	2.08E-05	8.88E-06	3.92E-05	5.30E-05	2.76E-05	1.71E-03	5.51E-06	0.00E+00
CHILD	2.30E-05	6.06E-06	9.38E-05	9.07E-05	4.53E-05	3.38E-03	8.47E-06	0.00E+00
INFANT	3.00E-05	1.57E-05	1.55E-04	1.80E-04	7.38E-05	8.21E-03	1.53E-05	0.00E+00
INHAL								
ADULT	1.53E-06	8.95E-06	1.17E-06	2.55E-06	1.78E-06	5.34E-05	1.69E-04	0.00E+00
TEEN	2.02E-06	9.83E-06	1.64E-06	3.47E-06	2.44E-06	6.71E-05	2.47E-04	0.00E+00
CHILD	2.38E-06	2.02E-05	2.20E-06	3.31E-06	2.27E-06	7.78E-05	2.01E-04	0.00E+00
INFANT	1.54E-06	1.79E-05	1.69E-06	2.82E-06	1.47E-06	7.13E-05	1.29E-04	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 2.97E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 5.13E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.44E-05	3.47E-05	6.59E-05
GROUND	2.06E-04	2.06E-04	2.06E-04	2.06E-04	2.06E-04	2.06E-04	2.06E-04	2.42E-04
VEGET								
ADULT	4.03E-06	2.87E-05	1.91E-06	3.33E-06	1.06E-06	6.74E-05	1.36E-07	0.00E+00
TEEN	6.02E-06	3.05E-05	2.99E-06	5.14E-06	1.60E-06	9.07E-05	2.47E-07	0.00E+00
CHILD	1.17E-05	2.00E-05	6.90E-06	8.07E-06	2.48E-06	1.74E-04	3.68E-07	0.00E+00
MEAT								
ADULT	1.07E-06	7.76E-06	2.18E-07	9.12E-07	2.52E-07	1.81E-06	4.60E-08	0.00E+00
TEEN	8.36E-07	4.18E-06	1.65E-07	7.09E-07	1.87E-07	1.31E-06	4.15E-08	0.00E+00
CHILD	1.28E-06	2.12E-06	2.75E-07	8.44E-07	2.15E-07	1.98E-06	4.71E-08	0.00E+00
COW MILK								
ADULT	1.14E-06	2.52E-06	8.75E-07	1.97E-06	1.28E-06	5.06E-05	5.21E-08	0.00E+00
TEEN	1.74E-06	2.93E-06	1.47E-06	3.35E-06	2.12E-06	8.01E-05	1.07E-07	0.00E+00
CHILD	3.15E-06	1.92E-06	3.26E-06	5.29E-06	3.27E-06	1.58E-04	1.64E-07	0.00E+00
INFANT	4.38E-06	5.95E-06	5.16E-06	9.86E-06	4.79E-06	3.85E-04	3.00E-07	0.00E+00
GOATMILK								
ADULT	1.02E-06	3.85E-07	1.20E-06	1.61E-06	8.52E-07	6.07E-05	1.42E-07	0.00E+00
TEEN	1.11E-06	4.62E-07	2.15E-06	2.83E-06	1.49E-06	9.61E-05	2.94E-07	0.00E+00
CHILD	1.23E-06	3.17E-07	5.13E-06	4.84E-06	2.45E-06	1.90E-04	4.51E-07	0.00E+00
INFANT	1.61E-06	8.00E-07	8.49E-06	9.65E-06	4.00E-06	4.62E-04	8.17E-07	0.00E+00
INHAL								
ADULT	4.91E-07	1.20E-06	4.65E-07	8.99E-07	6.82E-07	8.58E-06	2.03E-05	0.00E+00
TEEN	6.67E-07	1.90E-06	6.52E-07	1.23E-06	9.38E-07	1.08E-05	2.98E-05	0.00E+00
CHILD	8.12E-07	8.66E-06	8.83E-07	1.20E-06	8.78E-07	1.26E-05	2.42E-05	0.00E+00
INFANT	5.62E-07	8.24E-06	6.94E-07	1.09E-06	5.76E-07	1.15E-05	1.59E-05	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 2.30 MILES ESE

ANNUAL BETA AIR DOSE = 7.56E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 1.10E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.40E-06	7.40E-06	7.40E-06	7.40E-06	7.40E-06	7.40E-06	7.47E-06	1.53E-05
GROUND	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.36E-04	2.77E-04
VEGET								
ADULT	4.57E-06	3.29E-05	1.65E-06	3.75E-06	1.15E-06	6.64E-05	1.52E-07	0.00E+00
TEEN	6.85E-06	3.50E-05	2.57E-06	5.79E-06	1.73E-06	8.94E-05	2.75E-07	0.00E+00
CHILD	1.33E-05	2.29E-05	5.91E-06	9.07E-06	2.67E-06	1.71E-04	4.11E-07	0.00E+00
MEAT								
ADULT	1.23E-06	8.92E-06	2.43E-07	1.05E-06	2.88E-07	1.78E-06	5.32E-08	0.00E+00
TEEN	9.60E-07	4.81E-06	1.84E-07	8.15E-07	2.14E-07	1.29E-06	4.79E-08	0.00E+00
CHILD	1.48E-06	2.43E-06	3.06E-07	9.69E-07	2.45E-07	1.95E-06	5.44E-08	0.00E+00
COW MILK								
ADULT	1.27E-06	2.89E-06	9.44E-07	2.21E-06	1.42E-06	4.98E-05	5.62E-08	0.00E+00
TEEN	1.96E-06	3.36E-06	1.58E-06	3.77E-06	2.35E-06	7.88E-05	1.16E-07	0.00E+00
CHILD	3.58E-06	2.20E-06	3.48E-06	5.93E-06	3.61E-06	1.56E-04	1.77E-07	0.00E+00
INFANT	4.95E-06	6.86E-06	5.45E-06	1.10E-05	5.25E-06	3.79E-04	3.24E-07	0.00E+00
GOATMILK								
ADULT	1.09E-06	4.27E-07	1.23E-06	1.72E-06	8.93E-07	5.98E-05	1.52E-07	0.00E+00
TEEN	1.19E-06	5.10E-07	2.22E-06	3.02E-06	1.56E-06	9.46E-05	3.15E-07	0.00E+00
CHILD	1.31E-06	3.47E-07	5.30E-06	5.17E-06	2.56E-06	1.87E-04	4.83E-07	0.00E+00
INFANT	1.70E-06	9.06E-07	8.72E-06	1.03E-05	4.17E-06	4.55E-04	8.75E-07	0.00E+00
INHAL								
ADULT	2.01E-07	1.55E-06	1.36E-07	3.19E-07	2.11E-07	9.24E-06	2.98E-05	0.00E+00
TEEN	2.64E-07	1.57E-06	1.88E-07	4.32E-07	2.89E-07	1.16E-05	4.36E-05	0.00E+00
CHILD	3.04E-07	2.18E-06	2.53E-07	4.07E-07	2.67E-07	1.34E-05	3.53E-05	0.00E+00
INFANT	1.88E-07	1.81E-06	1.91E-07	3.33E-07	1.71E-07	1.23E-05	2.27E-05	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016

SPECIAL LOCATION NO. 1A Site Boundary
 AT .69 MILES NNW

ANNUAL BETA AIR DOSE = 1.07E-04 MILLRADS
 ANNUAL GAMMA AIR DOSE = 7.98E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.32E-05	5.32E-05	5.32E-05	5.32E-05	5.32E-05	5.32E-05	5.42E-05	1.53E-04
GROUND	9.94E-03	9.94E-03	9.94E-03	9.94E-03	9.94E-03	9.94E-03	9.94E-03	1.17E-02
VEGET								
ADULT	1.95E-04	1.39E-03	1.59E-04	1.59E-04	5.25E-05	3.82E-03	6.21E-06	0.00E+00
TEEN	2.93E-04	1.48E-03	2.27E-04	2.44E-04	7.92E-05	5.14E-03	1.13E-05	0.00E+00
CHILD	5.67E-04	9.65E-04	4.84E-04	3.83E-04	1.23E-04	9.85E-03	1.68E-05	0.00E+00
MEAT								
ADULT	5.15E-05	3.76E-04	1.10E-05	4.34E-05	1.18E-05	1.03E-04	2.17E-06	0.00E+00
TEEN	4.03E-05	2.03E-04	8.27E-06	3.37E-05	8.77E-06	7.43E-05	1.96E-06	0.00E+00
CHILD	6.20E-05	1.03E-04	1.37E-05	4.01E-05	1.01E-05	1.12E-04	2.22E-06	0.00E+00
COW MILK								
ADULT	5.36E-05	1.21E-04	4.42E-05	9.26E-05	6.19E-05	2.87E-03	2.31E-06	0.00E+00
TEEN	8.28E-05	1.41E-04	7.34E-05	1.58E-04	1.03E-04	4.54E-03	4.75E-06	0.00E+00
CHILD	1.51E-04	9.22E-05	1.61E-04	2.49E-04	1.60E-04	8.98E-03	7.27E-06	0.00E+00
INFANT	2.11E-04	2.80E-04	2.49E-04	4.67E-04	2.36E-04	2.18E-02	1.33E-05	0.00E+00
GOATMILK								
ADULT	4.68E-05	1.86E-05	6.11E-05	7.37E-05	4.19E-05	3.44E-03	6.25E-06	0.00E+00
TEEN	5.18E-05	2.24E-05	1.07E-04	1.29E-04	7.35E-05	5.44E-03	1.29E-05	0.00E+00
CHILD	5.94E-05	1.54E-05	2.51E-04	2.21E-04	1.21E-04	1.08E-02	1.99E-05	0.00E+00
INFANT	8.02E-05	3.79E-05	3.99E-04	4.45E-04	1.98E-04	2.62E-02	3.60E-05	0.00E+00
INHAL								
ADULT	2.60E-06	2.85E-05	2.28E-06	3.74E-06	2.62E-06	2.71E-04	5.57E-04	0.00E+00
TEEN	3.30E-06	2.63E-05	2.94E-06	5.01E-06	3.57E-06	3.41E-04	8.13E-04	0.00E+00
CHILD	3.62E-06	1.30E-05	3.73E-06	4.60E-06	3.29E-06	3.97E-04	6.59E-04	0.00E+00
INFANT	2.04E-06	6.69E-06	2.30E-06	3.45E-06	2.08E-06	3.64E-04	4.22E-04	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .67 MILES N

ANNUAL BETA AIR DOSE = 1.58E-04 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.11E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.39E-05	7.39E-05	7.39E-05	7.39E-05	7.39E-05	7.39E-05	7.55E-05	2.21E-04
GROUND	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.40E-02
VEGET								
ADULT	2.34E-04	1.66E-03	1.93E-04	1.90E-04	6.32E-05	4.63E-03	7.44E-06	0.00E+00
TEEN	3.50E-04	1.76E-03	2.76E-04	2.93E-04	9.52E-05	6.23E-03	1.35E-05	0.00E+00
CHILD	6.79E-04	1.15E-03	5.88E-04	4.59E-04	1.48E-04	1.19E-02	2.01E-05	0.00E+00
MEAT								
ADULT	6.15E-05	4.49E-04	1.32E-05	5.18E-05	1.41E-05	1.24E-04	2.59E-06	0.00E+00
TEEN	4.82E-05	2.42E-04	9.91E-06	4.03E-05	1.05E-05	9.01E-05	2.34E-06	0.00E+00
CHILD	7.41E-05	1.23E-04	1.64E-05	4.79E-05	1.21E-05	1.36E-04	2.65E-06	0.00E+00
COW MILK								
ADULT	6.42E-05	1.45E-04	5.31E-05	1.11E-04	7.43E-05	3.48E-03	2.78E-06	0.00E+00
TEEN	9.91E-05	1.68E-04	8.82E-05	1.89E-04	1.24E-04	5.50E-03	5.71E-06	0.00E+00
CHILD	1.81E-04	1.10E-04	1.94E-04	2.98E-04	1.92E-04	1.09E-02	8.74E-06	0.00E+00
INFANT	2.53E-04	3.35E-04	3.00E-04	5.60E-04	2.83E-04	2.65E-02	1.60E-05	0.00E+00
GOATMILK								
ADULT	5.63E-05	2.23E-05	7.38E-05	8.87E-05	5.05E-05	4.17E-03	7.53E-06	0.00E+00
TEEN	6.24E-05	2.68E-05	1.29E-04	1.56E-04	8.87E-05	6.60E-03	1.56E-05	0.00E+00
CHILD	7.16E-05	1.85E-05	3.03E-04	2.67E-04	1.46E-04	1.31E-02	2.39E-05	0.00E+00
INFANT	9.67E-05	4.53E-05	4.83E-04	5.36E-04	2.39E-04	3.18E-02	4.33E-05	0.00E+00
INHAL								
ADULT	3.83E-06	4.27E-05	3.36E-06	5.50E-06	3.87E-06	4.11E-04	8.35E-04	0.00E+00
TEEN	4.87E-06	3.93E-05	4.32E-06	7.36E-06	5.26E-06	5.18E-04	1.22E-03	0.00E+00
CHILD	5.32E-06	1.81E-05	5.49E-06	6.75E-06	4.84E-06	6.02E-04	9.88E-04	0.00E+00
INFANT	2.99E-06	8.66E-06	3.37E-06	5.04E-06	3.06E-06	5.52E-04	6.33E-04	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 3A Nearest Resident
 AT .90 MILES NW

ANNUAL BETA AIR DOSE = 9.77E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.46E-04 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.74E-05	9.74E-05	9.74E-05	9.74E-05	9.74E-05	9.74E-05	9.84E-05	1.98E-04
GROUND	3.94E-03	3.94E-03	3.94E-03	3.94E-03	3.94E-03	3.94E-03	3.94E-03	4.63E-03
VEGET								
ADULT	7.85E-05	5.48E-04	7.49E-05	6.44E-05	2.27E-05	1.82E-03	2.54E-06	0.00E+00
TEEN	1.17E-04	5.84E-04	1.09E-04	9.92E-05	3.42E-05	2.45E-03	4.62E-06	0.00E+00
CHILD	2.26E-04	3.82E-04	2.36E-04	1.56E-04	5.32E-05	4.69E-03	6.89E-06	0.00E+00
MEAT								
ADULT	2.03E-05	1.48E-04	4.51E-06	1.71E-05	4.68E-06	4.89E-05	8.49E-07	0.00E+00
TEEN	1.59E-05	7.98E-05	3.39E-06	1.33E-05	3.49E-06	3.54E-05	7.66E-07	0.00E+00
CHILD	2.44E-05	4.04E-05	5.62E-06	1.58E-05	4.01E-06	5.34E-05	8.70E-07	0.00E+00
COW MILK								
ADULT	2.19E-05	4.78E-05	1.89E-05	3.77E-05	2.58E-05	1.37E-03	9.89E-07	0.00E+00
TEEN	3.36E-05	5.58E-05	3.16E-05	6.44E-05	4.31E-05	2.16E-03	2.03E-06	0.00E+00
CHILD	6.08E-05	3.66E-05	7.00E-05	1.02E-04	6.70E-05	4.28E-03	3.12E-06	0.00E+00
INFANT	8.57E-05	1.10E-04	1.10E-04	1.93E-04	1.00E-04	1.04E-02	5.70E-06	0.00E+00
GOATMILK								
ADULT	2.04E-05	7.74E-06	2.73E-05	3.20E-05	1.87E-05	1.64E-03	2.71E-06	0.00E+00
TEEN	2.26E-05	9.37E-06	4.80E-05	5.63E-05	3.30E-05	2.60E-03	5.60E-06	0.00E+00
CHILD	2.60E-05	6.51E-06	1.13E-04	9.66E-05	5.42E-05	5.14E-03	8.60E-06	0.00E+00
INFANT	3.56E-05	1.53E-05	1.81E-04	1.95E-04	8.93E-05	1.25E-02	1.56E-05	0.00E+00
INHAL								
ADULT	1.46E-06	8.02E-06	1.41E-06	2.47E-06	1.87E-06	8.15E-05	1.51E-04	0.00E+00
TEEN	1.93E-06	8.90E-06	1.91E-06	3.36E-06	2.56E-06	1.03E-04	2.20E-04	0.00E+00
CHILD	2.26E-06	1.89E-05	2.52E-06	3.21E-06	2.39E-06	1.20E-04	1.79E-04	0.00E+00
INFANT	1.47E-06	1.68E-05	1.83E-06	2.76E-06	1.55E-06	1.10E-04	1.15E-04	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 3.86E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 6.86E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.60E-05	4.60E-05	4.60E-05	4.60E-05	4.60E-05	4.60E-05	4.64E-05	8.69E-05
GROUND	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.01E-04	2.36E-04
VEGET								
ADULT	4.04E-06	2.79E-05	4.26E-06	3.34E-06	1.22E-06	1.04E-04	1.32E-07	0.00E+00
TEEN	6.01E-06	2.97E-05	6.25E-06	5.15E-06	1.84E-06	1.40E-04	2.41E-07	0.00E+00
CHILD	1.16E-05	1.95E-05	1.37E-05	8.11E-06	2.88E-06	2.68E-04	3.60E-07	0.00E+00
MEAT								
ADULT	1.03E-06	7.52E-06	2.35E-07	8.68E-07	2.39E-07	2.79E-06	4.28E-08	0.00E+00
TEEN	8.07E-07	4.05E-06	1.77E-07	6.75E-07	1.78E-07	2.02E-06	3.87E-08	0.00E+00
CHILD	1.24E-06	2.05E-06	2.94E-07	8.04E-07	2.05E-07	3.05E-06	4.39E-08	0.00E+00
COW MILK								
ADULT	1.14E-06	2.43E-06	1.01E-06	1.96E-06	1.36E-06	7.79E-05	5.32E-08	0.00E+00
TEEN	1.74E-06	2.84E-06	1.70E-06	3.35E-06	2.28E-06	1.23E-04	1.09E-07	0.00E+00
CHILD	3.13E-06	1.86E-06	3.79E-06	5.33E-06	3.55E-06	2.44E-04	1.68E-07	0.00E+00
INFANT	4.43E-06	5.56E-06	6.01E-06	1.01E-05	5.35E-06	5.94E-04	3.07E-07	0.00E+00
GOATMILK								
ADULT	1.11E-06	4.08E-07	1.51E-06	1.74E-06	1.03E-06	9.35E-05	1.47E-07	0.00E+00
TEEN	1.23E-06	4.96E-07	2.65E-06	3.06E-06	1.82E-06	1.48E-04	3.03E-07	0.00E+00
CHILD	1.42E-06	3.47E-07	6.25E-06	5.25E-06	2.99E-06	2.93E-04	4.66E-07	0.00E+00
INFANT	1.95E-06	7.89E-07	1.01E-05	1.06E-05	4.95E-06	7.13E-04	8.43E-07	0.00E+00
INHAL								
ADULT	4.56E-07	1.03E-06	4.66E-07	8.40E-07	6.56E-07	1.17E-05	1.70E-05	0.00E+00
TEEN	6.19E-07	1.69E-06	6.46E-07	1.15E-06	9.04E-07	1.48E-05	2.50E-05	0.00E+00
CHILD	7.54E-07	8.12E-06	8.70E-07	1.12E-06	8.47E-07	1.73E-05	2.03E-05	0.00E+00
INFANT	5.24E-07	7.73E-06	6.72E-07	1.02E-06	5.56E-07	1.59E-05	1.34E-05	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
 AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 9.42E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.36E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.09E-06	9.09E-06	9.09E-06	9.09E-06	9.09E-06	9.09E-06	9.18E-06	1.86E-05
GROUND	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	2.84E-04	3.34E-04
VEGET								
ADULT	5.63E-06	3.95E-05	5.09E-06	4.60E-06	1.58E-06	1.23E-04	1.81E-07	0.00E+00
TEEN	8.40E-06	4.21E-05	7.35E-06	7.08E-06	2.39E-06	1.65E-04	3.29E-07	0.00E+00
CHILD	1.63E-05	2.75E-05	1.58E-05	1.11E-05	3.70E-06	3.16E-04	4.90E-07	0.00E+00
MEAT								
ADULT	1.47E-06	1.07E-05	3.21E-07	1.23E-06	3.37E-07	3.29E-06	6.14E-08	0.00E+00
TEEN	1.15E-06	5.76E-06	2.41E-07	9.59E-07	2.51E-07	2.38E-06	5.54E-08	0.00E+00
CHILD	1.76E-06	2.92E-06	3.99E-07	1.14E-06	2.89E-07	3.60E-06	6.29E-08	0.00E+00
COW MILK								
ADULT	1.56E-06	3.45E-06	1.32E-06	2.69E-06	1.82E-06	9.20E-05	6.93E-08	0.00E+00
TEEN	2.40E-06	4.02E-06	2.21E-06	4.58E-06	3.04E-06	1.46E-04	1.42E-07	0.00E+00
CHILD	4.35E-06	2.63E-06	4.88E-06	7.26E-06	4.72E-06	2.88E-04	2.18E-07	0.00E+00
INFANT	6.12E-06	7.95E-06	7.62E-06	1.37E-05	7.03E-06	7.01E-04	4.00E-07	0.00E+00
GOATMILK								
ADULT	1.42E-06	5.47E-07	1.89E-06	2.23E-06	1.29E-06	1.10E-04	1.89E-07	0.00E+00
TEEN	1.57E-06	6.61E-07	3.31E-06	3.92E-06	2.27E-06	1.75E-04	3.91E-07	0.00E+00
CHILD	1.81E-06	4.57E-07	7.78E-06	6.72E-06	3.73E-06	3.46E-04	6.00E-07	0.00E+00
INFANT	2.46E-06	1.09E-06	1.25E-05	1.35E-05	6.14E-06	8.41E-04	1.09E-06	0.00E+00
INHAL								
ADULT	1.87E-07	1.35E-06	1.75E-07	3.01E-07	2.24E-07	1.36E-05	2.58E-05	0.00E+00
TEEN	2.44E-07	1.38E-06	2.34E-07	4.08E-07	3.07E-07	1.71E-05	3.77E-05	0.00E+00
CHILD	2.81E-07	1.95E-06	3.07E-07	3.86E-07	2.85E-07	1.99E-05	3.06E-05	0.00E+00
INFANT	1.76E-07	1.62E-06	2.13E-07	3.21E-07	1.84E-07	1.82E-05	1.97E-05	0.00E+00

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TABLE 8. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-MARCH 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.63E-06	: 1.63E-06	: 1.63E-06	: 1.63E-06	: 1.63E-06	: 1.63E-06	: 1.65E-06	: 3.64E-06
	: 9.01%	: 7.90%	: 9.09%	: 8.90%	: 9.08%	: 1.00%	: 8.48%	: 16.83%
GROUND	: 1.53E-05	: 1.53E-05	: 1.53E-05	: 1.53E-05	: 1.53E-05	: 1.53E-05	: 1.53E-05	: 1.80E-05
	: 84.76%	: 74.32%	: 85.47%	: 83.74%	: 85.39%	: 9.41%	: 78.81%	: 83.17%
INHAL	: 3.34E-08	: 1.30E-07	: 4.25E-08	: 6.25E-08	: 9.11E-08	: 1.33E-05	: 2.40E-06	: 0.00E+00
	: .18%	: .63%	: .24%	: .34%	: .51%	: 8.15%	: 12.33%	: .00%
VEGET	: 5.33E-07	: 2.35E-06	: 2.51E-07	: 4.16E-07	: 8.75E-08	: 1.57E-06	: 2.78E-08	: 0.00E+00
	: 2.95%	: 11.38%	: 1.40%	: 2.27%	: .49%	: .96%	: .14%	: .00%
COW MILK	: 4.21E-07	: 3.60E-07	: 6.59E-07	: 7.87E-07	: 7.92E-07	: 1.28E-04	: 4.31E-08	: 0.00E+00
	: 2.33%	: 1.75%	: 3.68%	: 4.30%	: 4.42%	: 78.85%	: .22%	: .00%
MEAT	: 1.37E-07	: 8.30E-07	: 2.33E-08	: 8.08E-08	: 2.08E-08	: 2.64E-06	: 2.39E-09	: 0.00E+00
	: .76%	: 4.03%	: .13%	: .44%	: .12%	: 1.62%	: .01%	: .00%
TOTAL	: 1.81E-05	: 2.06E-05	: 1.79E-05	: 1.83E-05	: 1.79E-05	: 1.63E-04	: 1.94E-05	: 2.17E-05

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TABLE 9. DOSES TO POPULATION WITHIN 50 MILES, APRIL-JUNE 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.82E-06	: 1.82E-06	: 1.82E-06	: 1.82E-06	: 1.82E-06	: 1.82E-06	: 1.87E-06	: 4.66E-06
	: 12.10%	: 10.65%	: 7.03%	: 12.34%	: 12.26%	: 1.19%	: 11.69%	: 24.38%
GROUND	: 1.23E-05	: 1.23E-05	: 1.23E-05	: 1.23E-05	: 1.23E-05	: 1.23E-05	: 1.23E-05	: 1.45E-05
	: 81.65%	: 71.87%	: 47.45%	: 83.27%	: 82.71%	: 8.06%	: 76.93%	: 75.62%
INHAL	: 3.05E-08	: 1.14E-07	: 1.64E-07	: 5.40E-08	: 8.61E-08	: 1.27E-05	: 1.82E-06	: 0.00E+00
	: .20%	: .66%	: .63%	: .37%	: .58%	: 8.34%	: 11.36%	: .00%
VEGET	: 5.32E-07	: 1.95E-06	: 1.02E-05	: 1.42E-07	: 1.02E-08	: 1.47E-06	: 9.40E-10	: 0.00E+00
	: 3.53%	: 11.40%	: 39.20%	: .96%	: .07%	: .97%	: .01%	: .00%
COW MILK	: 2.80E-07	: 2.99E-07	: 1.34E-06	: 4.05E-07	: 6.39E-07	: 1.22E-04	: 1.19E-09	: 0.00E+00
	: 1.86%	: 1.75%	: 5.16%	: 2.74%	: 4.30%	: 79.80%	: .01%	: .00%
MEAT	: 9.88E-08	: 6.26E-07	: 1.35E-07	: 4.74E-08	: 1.33E-08	: 2.51E-06	: 7.52E-11	: 0.00E+00
	: .66%	: 3.66%	: .52%	: .32%	: .09%	: 1.64%	: .00%	: .00%
TOTAL	: 1.51E-05	: 1.71E-05	: 2.59E-05	: 1.48E-05	: 1.49E-05	: 1.52E-04	: 1.60E-05	: 1.91E-05

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TABLE 10. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-JUNE 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.62E-06	: 3.62E-06	: 3.62E-06	: 3.62E-06	: 3.62E-06	: 3.62E-06	: 3.69E-06	: 8.66E-06
	: 10.83%	: 9.53%	: 8.21%	: 10.85%	: 10.94%	: 1.15%	: 10.33%	: 20.96%
GROUND	: 2.78E-05	: 2.78E-05	: 2.78E-05	: 2.78E-05	: 2.78E-05	: 2.78E-05	: 2.78E-05	: 3.27E-05
	: 83.00%	: 72.99%	: 62.90%	: 83.18%	: 83.81%	: 8.81%	: 77.68%	: 79.04%
INHAL	: 6.39E-08	: 2.43E-07	: 2.08E-07	: 1.16E-07	: 1.77E-07	: 2.60E-05	: 4.21E-06	: 0.00E+00
	: .19%	: .64%	: .47%	: .35%	: .53%	: 8.24%	: 11.78%	: .00%
VEGET	: 1.06E-06	: 4.29E-06	: 1.04E-05	: 5.58E-07	: 9.76E-08	: 3.04E-06	: 2.87E-08	: 0.00E+00
	: 3.18%	: 11.29%	: 23.55%	: 1.67%	: .29%	: .96%	: .08%	: .00%
COW MILK	: 7.01E-07	: 6.58E-07	: 1.99E-06	: 1.19E-06	: 1.43E-06	: 2.50E-04	: 4.42E-08	: 0.00E+00
	: 2.10%	: 1.73%	: 4.52%	: 3.57%	: 4.32%	: 79.20%	: .12%	: .00%
MEAT	: 2.36E-07	: 1.46E-06	: 1.58E-07	: 1.28E-07	: 3.41E-08	: 5.14E-06	: 2.46E-09	: 0.00E+00
	: .71%	: 3.83%	: .36%	: .38%	: .10%	: 1.63%	: .01%	: .00%
TOTAL	: 3.35E-05	: 3.80E-05	: 4.42E-05	: 3.34E-05	: 3.31E-05	: 3.15E-04	: 3.57E-05	: 4.13E-05

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TABLE 11. DOSES TO POPULATION WITHIN 50 MILES, JULY-SEPTEMBER 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 2.19E-05	: 2.19E-05	: 2.19E-05	: 2.19E-05	: 2.19E-05	: 2.19E-05	: 2.22E-05	: 5.20E-05
	: 9.34%	: 8.30%	: 9.45%	: 9.34%	: 9.58%	: 3.67%	: 8.69%	: 17.92%
GROUND	: 2.02E-04	: 2.02E-04	: 2.02E-04	: 2.02E-04	: 2.02E-04	: 2.02E-04	: 2.02E-04	: 2.38E-04
	: 86.46%	: 76.79%	: 87.40%	: 86.37%	: 88.60%	: 33.94%	: 79.27%	: 82.08%
INHAL	: 1.80E-07	: 1.32E-06	: 1.71E-07	: 2.71E-07	: 2.74E-07	: 3.76E-05	: 3.01E-05	: 0.00E+00
	: .08%	: .50%	: .07%	: .12%	: .12%	: 6.31%	: 11.79%	: .00%
VEGET	: 5.64E-06	: 2.57E-05	: 2.97E-06	: 4.20E-06	: 8.07E-07	: 4.07E-06	: 2.51E-07	: 0.00E+00
	: 2.41%	: 9.75%	: 1.28%	: 1.79%	: .35%	: .68%	: .10%	: .00%
COW MILK	: 2.57E-06	: 3.37E-06	: 3.97E-06	: 4.78E-06	: 2.96E-06	: 3.24E-04	: 3.84E-07	: 0.00E+00
	: 1.10%	: 1.28%	: 1.71%	: 2.04%	: 1.29%	: 54.26%	: .15%	: .00%
MEAT	: 1.44E-06	: 8.91E-06	: 1.96E-07	: 8.04E-07	: 1.24E-07	: 6.81E-06	: 2.14E-08	: 0.00E+00
	: .61%	: 3.38%	: .08%	: .34%	: .05%	: 1.14%	: .01%	: .00%
TOTAL	: 2.34E-04	: 2.64E-04	: 2.32E-04	: 2.34E-04	: 2.29E-04	: 5.97E-04	: 2.55E-04	: 2.90E-04

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TABLE 12. DOSES TO POPULATION WITHIN 50 MILES, OCTOBER-DECEMBER 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 7.37E-06	: 7.37E-06	: 7.37E-06	: 7.37E-06	: 7.37E-06	: 7.37E-06	: 7.42E-06	: 1.47E-05
	: 2.05%	: 1.72%	: 2.12%	: 2.04%	: 2.12%	: 1.56%	: 1.73%	: 3.67%
GROUND	: 3.29E-04	: 3.29E-04	: 3.29E-04	: 3.29E-04	: 3.29E-04	: 3.29E-04	: 3.29E-04	: 3.87E-04
	: 91.64%	: 76.80%	: 94.49%	: 91.10%	: 94.61%	: 69.67%	: 76.63%	: 96.33%
INHAL	: 5.85E-07	: 6.34E-06	: 4.09E-07	: 8.91E-07	: 5.31E-07	: 1.56E-05	: 9.22E-05	: 0.00E+00
	: .16%	: 1.48%	: .12%	: .25%	: .15%	: 3.31%	: 21.51%	: .00%
VEGET	: 1.09E-05	: 5.41E-05	: 5.28E-06	: 7.84E-06	: 1.89E-06	: 1.47E-06	: 2.16E-07	: 0.00E+00
	: 3.05%	: 12.65%	: 1.52%	: 2.17%	: .54%	: .31%	: .05%	: .00%
COW MILK	: 7.54E-06	: 1.12E-05	: 5.27E-06	: 1.28E-05	: 7.96E-06	: 1.16E-04	: 1.52E-07	: 0.00E+00
	: 2.10%	: 2.62%	: 1.51%	: 3.54%	: 2.29%	: 24.63%	: .04%	: .00%
MEAT	: 3.57E-06	: 2.02E-05	: 8.55E-07	: 3.24E-06	: 9.74E-07	: 2.45E-06	: 1.88E-07	: 0.00E+00
	: 1.00%	: 4.73%	: .25%	: .90%	: .28%	: .52%	: .04%	: .00%
TOTAL	: 3.59E-04	: 4.28E-04	: 3.48E-04	: 3.61E-04	: 3.47E-04	: 4.72E-04	: 4.29E-04	: 4.01E-04

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TABLE 13. DOSES TO POPULATION WITHIN 50 MILES, JULY-DECEMBER 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 2.87E-05	: 2.87E-05	: 2.87E-05	: 2.87E-05	: 2.87E-05	: 2.87E-05	: 2.90E-05	: 6.51E-05
	: 4.77%	: 4.10%	: 4.88%	: 4.75%	: 4.91%	: 2.66%	: 4.24%	: 9.29%
GROUND	: 5.40E-04	: 5.40E-04	: 5.40E-04	: 5.40E-04	: 5.40E-04	: 5.40E-04	: 5.40E-04	: 6.35E-04
	: 89.84%	: 77.20%	: 91.85%	: 89.48%	: 92.43%	: 50.14%	: 78.94%	: 90.71%
INHAL	: 7.97E-07	: 7.53E-06	: 6.46E-07	: 1.23E-06	: 8.90E-07	: 5.62E-05	: 1.14E-04	: 0.00E+00
	: .13%	: 1.08%	: .11%	: .20%	: .15%	: 5.22%	: 16.64%	: .00%
VEGET	: 1.65E-05	: 7.97E-05	: 8.30E-06	: 1.20E-05	: 2.69E-06	: 5.52E-06	: 4.67E-07	: 0.00E+00
	: 2.75%	: 11.39%	: 1.41%	: 1.99%	: .46%	: .51%	: .07%	: .00%
COW MILK	: 1.01E-05	: 1.46E-05	: 9.24E-06	: 1.76E-05	: 1.09E-05	: 4.37E-04	: 5.36E-07	: 0.00E+00
	: 1.68%	: 2.08%	: 1.57%	: 2.91%	: 1.87%	: 40.61%	: .08%	: .00%
MEAT	: 5.00E-06	: 2.91E-05	: 1.05E-06	: 4.04E-06	: 1.10E-06	: 9.21E-06	: 2.09E-07	: 0.00E+00
	: .83%	: 4.16%	: .18%	: .67%	: .19%	: .85%	: .03%	: .00%
TOTAL	: 6.01E-04	: 7.00E-04	: 5.88E-04	: 6.04E-04	: 5.84E-04	: 1.08E-03	: 6.84E-04	: 7.00E-04

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TABLE 14. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-DECEMBER 2016

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.06E-05	: 3.06E-05	: 3.06E-05	: 3.06E-05	: 3.06E-05	: 3.06E-05	: 3.10E-05	: 7.00E-05
	: 4.89%	: 4.20%	: 4.90%	: 4.87%	: 5.02%	: 2.21%	: 4.46%	: 9.59%
GROUND	: 5.61E-04	: 5.61E-04	: 5.61E-04	: 5.61E-04	: 5.61E-04	: 5.61E-04	: 5.61E-04	: 6.60E-04
	: 89.61%	: 77.01%	: 89.95%	: 89.27%	: 92.13%	: 40.48%	: 80.71%	: 90.41%
INHAL	: 7.87E-07	: 6.95E-06	: 8.42E-07	: 1.25E-06	: 1.02E-06	: 8.02E-05	: 1.02E-04	: 0.00E+00
	: .13%	: .95%	: .14%	: .20%	: .17%	: 5.79%	: 14.64%	: .00%
VEGET	: 1.76E-05	: 8.41E-05	: 1.88E-05	: 1.26E-05	: 2.79E-06	: 8.59E-06	: 4.97E-07	: 0.00E+00
	: 2.82%	: 11.54%	: 3.01%	: 2.01%	: .46%	: .62%	: .07%	: .00%
COW MILK	: 1.08E-05	: 1.53E-05	: 1.13E-05	: 1.88E-05	: 1.24E-05	: 6.91E-04	: 5.83E-07	: 0.00E+00
	: 1.73%	: 2.10%	: 1.81%	: 2.99%	: 2.03%	: 49.86%	: .08%	: .00%
MEAT	: 5.23E-06	: 3.05E-05	: 1.21E-06	: 4.17E-06	: 1.13E-06	: 1.44E-05	: 2.12E-07	: 0.00E+00
	: .84%	: 4.20%	: .19%	: .66%	: .19%	: 1.04%	: .03%	: .00%
TOTAL	: 6.26E-04	: 7.28E-04	: 6.23E-04	: 6.28E-04	: 6.09E-04	: 1.38E-03	: 6.95E-04	: 7.29E-04

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CARBON-14 GASEOUS EFFLUENT DOSE CALCULATIONS

Doses to the maximum individual resulting from the release of Carbon-14 in gaseous effluents from the Cooper Nuclear Station (CNS) were calculated using the latest version of the GASPAR computer code included as part of NRCDose 2.3.20 (ORNL 2015). Four pathways were selected for individual dose calculations: the nearest site boundary for inhalation, nearest garden for vegetation ingestion, nearest animal for meat ingestion, and the nearest milk animal (cow). Based on the 2016 Land Use Census, there are no meat or milk animals identified within 5 miles of CNS. However, CNS maintains a virtual cow receptor at 3.5 miles north-northwest of the plant and conservatively includes this receptor in dose calculations.

Use of a normalized Carbon-14 source term and scaling factors based on the annual thermal gigawatts (GW_T) power generation were utilized to determine the quantity of Carbon-14 in the CNS gaseous effluent discharge for 2016. Specifically, the Boiling Water Reactor proxy production rate of 5.1 curies Carbon-14 per GW_T generation using the methodology described in EPRI, 2010 was the basis for the CNS total calculated emissions of 10.6 curies of Carbon-14 in 2016.

GASPAR 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 are calculated as a function of age group and pathway for significant body organs.

Tables 15 through 21 present maximum individual doses. Note that the inhalation pathway was calculated at the closest site boundary receptor and was negligible for Carbon-14 and is not included in the tables. In addition, the doses presented were conservatively calculated based on the annual site X/Q_s . These X/Q_s result in doses approximately 20% higher than those calculated with the X/Q_s based on growing season meteorology.

Additional assumptions and data used for input to the GASPAR code are described in a separate section of this appendix (see page C66).

TABLE 15. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	5.07E-03	5.07E-03	2.54E-02	5.07E-03	5.07E-03	5.07E-03	5.07E-03	5.07E-03
TEEN	8.49E-03	8.49E-03	4.24E-02	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03
CHILD	2.07E-02	2.07E-02	1.03E-01	2.07E-02	2.07E-02	2.07E-02	2.07E-02	2.07E-02
MEAT								
ADULT	2.02E-03	2.02E-03	1.01E-02	2.02E-03	2.02E-03	2.02E-03	2.02E-03	2.02E-03
TEEN	1.71E-03	1.71E-03	8.55E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03	1.71E-03
CHILD	3.22E-03	3.22E-03	1.61E-02	3.22E-03	3.22E-03	3.22E-03	3.22E-03	3.22E-03
COW MILK								
ADULT	2.21E-03	2.21E-03	1.10E-02	2.21E-03	2.21E-03	2.21E-03	2.21E-03	2.21E-03
TEEN	4.07E-03	4.07E-03	2.04E-02	4.07E-03	4.07E-03	4.07E-03	4.07E-03	4.07E-03
CHILD	1.00E-02	1.00E-02	5.01E-02	1.00E-02	1.00E-02	1.00E-02	1.00E-02	1.00E-02
INFANT	2.09E-02	2.09E-02	9.81E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02
GOATMILK								
ADULT	2.21E-03	2.21E-03	1.10E-02	2.21E-03	2.21E-03	2.21E-03	2.21E-03	2.21E-03
TEEN	4.07E-03	4.07E-03	2.04E-02	4.07E-03	4.07E-03	4.07E-03	4.07E-03	4.07E-03
CHILD	1.00E-02	1.00E-02	5.01E-02	1.00E-02	1.00E-02	1.00E-02	1.00E-02	1.00E-02
INFANT	2.09E-02	2.09E-02	9.81E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02

TABLE 15. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	1.11E-02	1.11E-02	5.57E-02	1.11E-02	1.11E-02	1.11E-02	1.11E-02	1.11E-02
TEEN	1.86E-02	1.86E-02	9.31E-02	1.86E-02	1.86E-02	1.86E-02	1.86E-02	1.86E-02
CHILD	4.53E-02	4.53E-02	2.27E-01	4.53E-02	4.53E-02	4.53E-02	4.53E-02	4.53E-02
MEAT								
ADULT	4.44E-03	4.44E-03	2.22E-02	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03
TEEN	3.75E-03	3.75E-03	1.88E-02	3.75E-03	3.75E-03	3.75E-03	3.75E-03	3.75E-03
CHILD	7.06E-03	7.06E-03	3.53E-02	7.06E-03	7.06E-03	7.06E-03	7.06E-03	7.06E-03
COW MILK								
ADULT	4.85E-03	4.85E-03	2.42E-02	4.85E-03	4.85E-03	4.85E-03	4.85E-03	4.85E-03
TEEN	8.94E-03	8.94E-03	4.47E-02	8.94E-03	8.94E-03	8.94E-03	8.94E-03	8.94E-03
CHILD	2.20E-02	2.20E-02	1.10E-01	2.20E-02	2.20E-02	2.20E-02	2.20E-02	2.20E-02
INFANT	4.60E-02	4.60E-02	2.15E-01	4.60E-02	4.60E-02	4.60E-02	4.60E-02	4.60E-02
GOATMILK								
ADULT	4.85E-03	4.85E-03	2.42E-02	4.85E-03	4.85E-03	4.85E-03	4.85E-03	4.85E-03
TEEN	8.94E-03	8.94E-03	4.47E-02	8.94E-03	8.94E-03	8.94E-03	8.94E-03	8.94E-03
CHILD	2.20E-02	2.20E-02	1.10E-01	2.20E-02	2.20E-02	2.20E-02	2.20E-02	2.20E-02
INFANT	4.60E-02	4.60E-02	2.15E-01	4.60E-02	4.60E-02	4.60E-02	4.60E-02	4.60E-02

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TABLE 16. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	3.95E-03	3.95E-03	1.97E-02	3.95E-03	3.95E-03	3.95E-03	3.95E-03	3.95E-03
TEEN	6.60E-03	6.60E-03	3.30E-02	6.60E-03	6.60E-03	6.60E-03	6.60E-03	6.60E-03
CHILD	1.61E-02	1.61E-02	8.03E-02	1.61E-02	1.61E-02	1.61E-02	1.61E-02	1.61E-02
MEAT								
ADULT	1.57E-03	1.57E-03	7.87E-03	1.57E-03	1.57E-03	1.57E-03	1.57E-03	1.57E-03
TEEN	1.33E-03	1.33E-03	6.65E-03	1.33E-03	1.33E-03	1.33E-03	1.33E-03	1.33E-03
CHILD	2.50E-03	2.50E-03	1.25E-02	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03
COW MILK								
ADULT	1.72E-03	1.72E-03	8.59E-03	1.72E-03	1.72E-03	1.72E-03	1.72E-03	1.72E-03
TEEN	3.17E-03	3.17E-03	1.58E-02	3.17E-03	3.17E-03	3.17E-03	3.17E-03	3.17E-03
CHILD	7.79E-03	7.79E-03	3.90E-02	7.79E-03	7.79E-03	7.79E-03	7.79E-03	7.79E-03
INFANT	1.63E-02	1.63E-02	7.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02
GOATMILK								
ADULT	1.72E-03	1.72E-03	8.59E-03	1.72E-03	1.72E-03	1.72E-03	1.72E-03	1.72E-03
TEEN	3.17E-03	3.17E-03	1.58E-02	3.17E-03	3.17E-03	3.17E-03	3.17E-03	3.17E-03
CHILD	7.79E-03	7.79E-03	3.90E-02	7.79E-03	7.79E-03	7.79E-03	7.79E-03	7.79E-03
INFANT	1.63E-02	1.63E-02	7.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02

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TABLE 16. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	1.07E-02	1.07E-02	5.36E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02
TEEN	1.79E-02	1.79E-02	8.96E-02	1.79E-02	1.79E-02	1.79E-02	1.79E-02	1.79E-02
CHILD	4.36E-02	4.36E-02	2.18E-01	4.36E-02	4.36E-02	4.36E-02	4.36E-02	4.36E-02
MEAT								
ADULT	4.27E-03	4.27E-03	2.14E-02	4.27E-03	4.27E-03	4.27E-03	4.27E-03	4.27E-03
TEEN	3.61E-03	3.61E-03	1.81E-02	3.61E-03	3.61E-03	3.61E-03	3.61E-03	3.61E-03
CHILD	6.79E-03	6.79E-03	3.39E-02	6.79E-03	6.79E-03	6.79E-03	6.79E-03	6.79E-03
COW MILK								
ADULT	4.66E-03	4.66E-03	2.33E-02	4.66E-03	4.66E-03	4.66E-03	4.66E-03	4.66E-03
TEEN	8.60E-03	8.60E-03	4.30E-02	8.60E-03	8.60E-03	8.60E-03	8.60E-03	8.60E-03
CHILD	2.12E-02	2.12E-02	1.06E-01	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
INFANT	4.42E-02	4.42E-02	2.07E-01	4.42E-02	4.42E-02	4.42E-02	4.42E-02	4.42E-02
GOATMILK								
ADULT	4.66E-03	4.66E-03	2.33E-02	4.66E-03	4.66E-03	4.66E-03	4.66E-03	4.66E-03
TEEN	8.60E-03	8.60E-03	4.30E-02	8.60E-03	8.60E-03	8.60E-03	8.60E-03	8.60E-03
CHILD	2.12E-02	2.12E-02	1.06E-01	2.12E-02	2.12E-02	2.12E-02	2.12E-02	2.12E-02
INFANT	4.42E-02	4.42E-02	2.07E-01	4.42E-02	4.42E-02	4.42E-02	4.42E-02	4.42E-02

CSS

TABLE 17. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	9.00E-03	9.00E-03	4.50E-02	9.00E-03	9.00E-03	9.00E-03	9.00E-03	9.00E-03
TEEN	1.51E-02	1.51E-02	7.53E-02	1.51E-02	1.51E-02	1.51E-02	1.51E-02	1.51E-02
CHILD	3.66E-02	3.66E-02	1.83E-01	3.66E-02	3.66E-02	3.66E-02	3.66E-02	3.66E-02
MEAT								
ADULT	3.59E-03	3.59E-03	1.80E-02	3.59E-03	3.59E-03	3.59E-03	3.59E-03	3.59E-03
TEEN	3.04E-03	3.04E-03	1.52E-02	3.04E-03	3.04E-03	3.04E-03	3.04E-03	3.04E-03
CHILD	5.71E-03	5.71E-03	2.85E-02	5.71E-03	5.71E-03	5.71E-03	5.71E-03	5.71E-03
COW MILK								
ADULT	3.92E-03	3.92E-03	1.96E-02	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03
TEEN	7.23E-03	7.23E-03	3.62E-02	7.23E-03	7.23E-03	7.23E-03	7.23E-03	7.23E-03
CHILD	1.78E-02	1.78E-02	8.89E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02
INFANT	3.72E-02	3.72E-02	1.74E-01	3.72E-02	3.72E-02	3.72E-02	3.72E-02	3.72E-02
GOATMILK								
ADULT	3.92E-03	3.92E-03	1.96E-02	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03
TEEN	7.23E-03	7.23E-03	3.62E-02	7.23E-03	7.23E-03	7.23E-03	7.23E-03	7.23E-03
CHILD	1.78E-02	1.78E-02	8.89E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02
INFANT	3.72E-02	3.72E-02	1.74E-01	3.72E-02	3.72E-02	3.72E-02	3.72E-02	3.72E-02

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TABLE 17. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	2.19E-02	2.19E-02	1.10E-01	2.19E-02	2.19E-02	2.19E-02	2.19E-02	2.19E-02
TEEN	3.67E-02	3.67E-02	1.84E-01	3.67E-02	3.67E-02	3.67E-02	3.67E-02	3.67E-02
CHILD	8.93E-02	8.93E-02	4.47E-01	8.93E-02	8.93E-02	8.93E-02	8.93E-02	8.93E-02
MEAT								
ADULT	8.76E-03	8.76E-03	4.38E-02	8.76E-03	8.76E-03	8.76E-03	8.76E-03	8.76E-03
TEEN	7.40E-03	7.40E-03	3.70E-02	7.40E-03	7.40E-03	7.40E-03	7.40E-03	7.40E-03
CHILD	1.39E-02	1.39E-02	6.95E-02	1.39E-02	1.39E-02	1.39E-02	1.39E-02	1.39E-02
COW MILK								
ADULT	9.55E-03	9.55E-03	4.78E-02	9.55E-03	9.55E-03	9.55E-03	9.55E-03	9.55E-03
TEEN	1.76E-02	1.76E-02	8.81E-02	1.76E-02	1.76E-02	1.76E-02	1.76E-02	1.76E-02
CHILD	4.33E-02	4.33E-02	2.17E-01	4.33E-02	4.33E-02	4.33E-02	4.33E-02	4.33E-02
INFANT	9.06E-02	9.06E-02	4.24E-01	9.06E-02	9.06E-02	9.06E-02	9.06E-02	9.06E-02
GOATMILK								
ADULT	9.55E-03	9.55E-03	4.78E-02	9.55E-03	9.55E-03	9.55E-03	9.55E-03	9.55E-03
TEEN	1.76E-02	1.76E-02	8.81E-02	1.76E-02	1.76E-02	1.76E-02	1.76E-02	1.76E-02
CHILD	4.33E-02	4.33E-02	2.17E-01	4.33E-02	4.33E-02	4.33E-02	4.33E-02	4.33E-02
INFANT	9.06E-02	9.06E-02	4.24E-01	9.06E-02	9.06E-02	9.06E-02	9.06E-02	9.06E-02

CS7

TABLE 18. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	6.39E-03	6.39E-03	3.19E-02	6.39E-03	6.39E-03	6.39E-03	6.39E-03	6.39E-03
TEEN	1.07E-02	1.07E-02	5.34E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02
CHILD	2.60E-02	2.60E-02	1.30E-01	2.60E-02	2.60E-02	2.60E-02	2.60E-02	2.60E-02
MEAT								
ADULT	2.55E-03	2.55E-03	1.28E-02	2.55E-03	2.55E-03	2.55E-03	2.55E-03	2.55E-03
TEEN	2.15E-03	2.15E-03	1.08E-02	2.15E-03	2.15E-03	2.15E-03	2.15E-03	2.15E-03
CHILD	4.05E-03	4.05E-03	2.02E-02	4.05E-03	4.05E-03	4.05E-03	4.05E-03	4.05E-03
COW MILK								
ADULT	2.78E-03	2.78E-03	1.39E-02	2.78E-03	2.78E-03	2.78E-03	2.78E-03	2.78E-03
TEEN	5.13E-03	5.13E-03	2.57E-02	5.13E-03	5.13E-03	5.13E-03	5.13E-03	5.13E-03
CHILD	1.26E-02	1.26E-02	6.31E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02
INFANT	2.64E-02	2.64E-02	1.24E-01	2.64E-02	2.64E-02	2.64E-02	2.64E-02	2.64E-02
GOATMILK								
ADULT	2.78E-03	2.78E-03	1.39E-02	2.78E-03	2.78E-03	2.78E-03	2.78E-03	2.78E-03
TEEN	5.13E-03	5.13E-03	2.57E-02	5.13E-03	5.13E-03	5.13E-03	5.13E-03	5.13E-03
CHILD	1.26E-02	1.26E-02	6.31E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02
INFANT	2.64E-02	2.64E-02	1.24E-01	2.64E-02	2.64E-02	2.64E-02	2.64E-02	2.64E-02

CS8

TABLE 18. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 3.00 MILES SSE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	1.22E-02	1.22E-02	6.11E-02	1.22E-02	1.22E-02	1.22E-02	1.22E-02	1.22E-02
TEEN	2.04E-02	2.04E-02	1.02E-01	2.04E-02	2.04E-02	2.04E-02	2.04E-02	2.04E-02
CHILD	4.97E-02	4.97E-02	2.49E-01	4.97E-02	4.97E-02	4.97E-02	4.97E-02	4.97E-02
MEAT								
ADULT	4.87E-03	4.87E-03	2.44E-02	4.87E-03	4.87E-03	4.87E-03	4.87E-03	4.87E-03
TEEN	4.12E-03	4.12E-03	2.06E-02	4.12E-03	4.12E-03	4.12E-03	4.12E-03	4.12E-03
CHILD	7.74E-03	7.74E-03	3.87E-02	7.74E-03	7.74E-03	7.74E-03	7.74E-03	7.74E-03
COW MILK								
ADULT	5.32E-03	5.32E-03	2.66E-02	5.32E-03	5.32E-03	5.32E-03	5.32E-03	5.32E-03
TEEN	9.81E-03	9.81E-03	4.90E-02	9.81E-03	9.81E-03	9.81E-03	9.81E-03	9.81E-03
CHILD	2.41E-02	2.41E-02	1.21E-01	2.41E-02	2.41E-02	2.41E-02	2.41E-02	2.41E-02
INFANT	5.04E-02	5.04E-02	2.36E-01	5.04E-02	5.04E-02	5.04E-02	5.04E-02	5.04E-02
GOATMILK								
ADULT	5.32E-03	5.32E-03	2.66E-02	5.32E-03	5.32E-03	5.32E-03	5.32E-03	5.32E-03
TEEN	9.81E-03	9.81E-03	4.90E-02	9.81E-03	9.81E-03	9.81E-03	9.81E-03	9.81E-03
CHILD	2.41E-02	2.41E-02	1.21E-01	2.41E-02	2.41E-02	2.41E-02	2.41E-02	2.41E-02
INFANT	5.04E-02	5.04E-02	2.36E-01	5.04E-02	5.04E-02	5.04E-02	5.04E-02	5.04E-02

CS9

TABLE 19. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	9.66E-03	9.66E-03	4.83E-02	9.66E-03	9.66E-03	9.66E-03	9.66E-03	9.66E-03
TEEN	1.61E-02	1.61E-02	8.07E-02	1.61E-02	1.61E-02	1.61E-02	1.61E-02	1.61E-02
CHILD	3.93E-02	3.93E-02	1.97E-01	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
MEAT								
ADULT	3.85E-03	3.85E-03	1.93E-02	3.85E-03	3.85E-03	3.85E-03	3.85E-03	3.85E-03
TEEN	3.26E-03	3.26E-03	1.63E-02	3.26E-03	3.26E-03	3.26E-03	3.26E-03	3.26E-03
CHILD	6.12E-03	6.12E-03	3.06E-02	6.12E-03	6.12E-03	6.12E-03	6.12E-03	6.12E-03
COW MILK								
ADULT	4.20E-03	4.20E-03	2.10E-02	4.20E-03	4.20E-03	4.20E-03	4.20E-03	4.20E-03
TEEN	7.75E-03	7.75E-03	3.88E-02	7.75E-03	7.75E-03	7.75E-03	7.75E-03	7.75E-03
CHILD	1.91E-02	1.91E-02	9.53E-02	1.91E-02	1.91E-02	1.91E-02	1.91E-02	1.91E-02
INFANT	3.99E-02	3.99E-02	1.87E-01	3.99E-02	3.99E-02	3.99E-02	3.99E-02	3.99E-02
GOATMILK								
ADULT	4.20E-03	4.20E-03	2.10E-02	4.20E-03	4.20E-03	4.20E-03	4.20E-03	4.20E-03
TEEN	7.75E-03	7.75E-03	3.88E-02	7.75E-03	7.75E-03	7.75E-03	7.75E-03	7.75E-03
CHILD	1.91E-02	1.91E-02	9.53E-02	1.91E-02	1.91E-02	1.91E-02	1.91E-02	1.91E-02
INFANT	3.99E-02	3.99E-02	1.87E-01	3.99E-02	3.99E-02	3.99E-02	3.99E-02	3.99E-02

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TABLE 19. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
 AT 2.30 MILES ESE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
 ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	1.29E-02	1.29E-02	6.46E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02	1.29E-02
TEEN	2.16E-02	2.16E-02	1.08E-01	2.16E-02	2.16E-02	2.16E-02	2.16E-02	2.16E-02
CHILD	5.26E-02	5.26E-02	2.63E-01	5.26E-02	5.26E-02	5.26E-02	5.26E-02	5.26E-02
MEAT								
ADULT	5.16E-03	5.16E-03	2.58E-02	5.16E-03	5.16E-03	5.16E-03	5.16E-03	5.16E-03
TEEN	4.36E-03	4.36E-03	2.18E-02	4.36E-03	4.36E-03	4.36E-03	4.36E-03	4.36E-03
CHILD	8.19E-03	8.19E-03	4.09E-02	8.19E-03	8.19E-03	8.19E-03	8.19E-03	8.19E-03
COW MILK								
ADULT	5.63E-03	5.63E-03	2.81E-02	5.63E-03	5.63E-03	5.63E-03	5.63E-03	5.63E-03
TEEN	1.04E-02	1.04E-02	5.19E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
CHILD	2.55E-02	2.55E-02	1.28E-01	2.55E-02	2.55E-02	2.55E-02	2.55E-02	2.55E-02
INFANT	5.34E-02	5.34E-02	2.50E-01	5.34E-02	5.34E-02	5.34E-02	5.34E-02	5.34E-02
GOATMILK								
ADULT	5.63E-03	5.63E-03	2.81E-02	5.63E-03	5.63E-03	5.63E-03	5.63E-03	5.63E-03
TEEN	1.04E-02	1.04E-02	5.19E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
CHILD	2.55E-02	2.55E-02	1.28E-01	2.55E-02	2.55E-02	2.55E-02	2.55E-02	2.55E-02
INFANT	5.34E-02	5.34E-02	2.50E-01	5.34E-02	5.34E-02	5.34E-02	5.34E-02	5.34E-02

TABLE 20. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	1.59E-02	1.59E-02	7.97E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02
TEEN	2.66E-02	2.66E-02	1.33E-01	2.66E-02	2.66E-02	2.66E-02	2.66E-02	2.66E-02
CHILD	6.49E-02	6.49E-02	3.24E-01	6.49E-02	6.49E-02	6.49E-02	6.49E-02	6.49E-02
MEAT								
ADULT	6.36E-03	6.36E-03	3.18E-02	6.36E-03	6.36E-03	6.36E-03	6.36E-03	6.36E-03
TEEN	5.37E-03	5.37E-03	2.69E-02	5.37E-03	5.37E-03	5.37E-03	5.37E-03	5.37E-03
CHILD	1.01E-02	1.01E-02	5.05E-02	1.01E-02	1.01E-02	1.01E-02	1.01E-02	1.01E-02
COW MILK								
ADULT	6.94E-03	6.94E-03	3.47E-02	6.94E-03	6.94E-03	6.94E-03	6.94E-03	6.94E-03
TEEN	1.28E-02	1.28E-02	6.40E-02	1.28E-02	1.28E-02	1.28E-02	1.28E-02	1.28E-02
CHILD	3.15E-02	3.15E-02	1.57E-01	3.15E-02	3.15E-02	3.15E-02	3.15E-02	3.15E-02
INFANT	6.58E-02	6.58E-02	3.08E-01	6.58E-02	6.58E-02	6.58E-02	6.58E-02	6.58E-02
GOATMILK								
ADULT	6.94E-03	6.94E-03	3.47E-02	6.94E-03	6.94E-03	6.94E-03	6.94E-03	6.94E-03
TEEN	1.28E-02	1.28E-02	6.40E-02	1.28E-02	1.28E-02	1.28E-02	1.28E-02	1.28E-02
CHILD	3.15E-02	3.15E-02	1.57E-01	3.15E-02	3.15E-02	3.15E-02	3.15E-02	3.15E-02
INFANT	6.58E-02	6.58E-02	3.08E-01	6.58E-02	6.58E-02	6.58E-02	6.58E-02	6.58E-02

TABLE 20. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 2.30 MILES ESE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	2.36E-02	2.36E-02	1.18E-01	2.36E-02	2.36E-02	2.36E-02	2.36E-02	2.36E-02
TEEN	3.95E-02	3.95E-02	1.97E-01	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02
CHILD	9.61E-02	9.61E-02	4.81E-01	9.61E-02	9.61E-02	9.61E-02	9.61E-02	9.61E-02
MEAT								
ADULT	9.43E-03	9.43E-03	4.71E-02	9.43E-03	9.43E-03	9.43E-03	9.43E-03	9.43E-03
TEEN	7.96E-03	7.96E-03	3.98E-02	7.96E-03	7.96E-03	7.96E-03	7.96E-03	7.96E-03
CHILD	1.50E-02	1.50E-02	7.48E-02	1.50E-02	1.50E-02	1.50E-02	1.50E-02	1.50E-02
COW MILK								
ADULT	1.03E-02	1.03E-02	5.14E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02
TEEN	1.90E-02	1.90E-02	9.48E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02
CHILD	4.66E-02	4.66E-02	2.33E-01	4.66E-02	4.66E-02	4.66E-02	4.66E-02	4.66E-02
INFANT	9.75E-02	9.75E-02	4.57E-01	9.75E-02	9.75E-02	9.75E-02	9.75E-02	9.75E-02
GOATMILK								
ADULT	1.03E-02	1.03E-02	5.14E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02
TEEN	1.90E-02	1.90E-02	9.48E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02	1.90E-02
CHILD	4.66E-02	4.66E-02	2.33E-01	4.66E-02	4.66E-02	4.66E-02	4.66E-02	4.66E-02
INFANT	9.75E-02	9.75E-02	4.57E-01	9.75E-02	9.75E-02	9.75E-02	9.75E-02	9.75E-02

TABLE 21. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016

SPECIAL LOCATION NO. 4A Nearest Cow
AT 3.50 MILES NNW

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	2.43E-02	2.43E-02	1.22E-01	2.43E-02	2.43E-02	2.43E-02	2.43E-02	2.43E-02
TEEN	4.07E-02	4.07E-02	2.03E-01	4.07E-02	4.07E-02	4.07E-02	4.07E-02	4.07E-02
CHILD	9.91E-02	9.91E-02	4.95E-01	9.91E-02	9.91E-02	9.91E-02	9.91E-02	9.91E-02
MEAT								
ADULT	9.71E-03	9.71E-03	4.86E-02	9.71E-03	9.71E-03	9.71E-03	9.71E-03	9.71E-03
TEEN	8.20E-03	8.20E-03	4.10E-02	8.20E-03	8.20E-03	8.20E-03	8.20E-03	8.20E-03
CHILD	1.54E-02	1.54E-02	7.71E-02	1.54E-02	1.54E-02	1.54E-02	1.54E-02	1.54E-02
COW MILK								
ADULT	1.06E-02	1.06E-02	5.30E-02	1.06E-02	1.06E-02	1.06E-02	1.06E-02	1.06E-02
TEEN	1.95E-02	1.95E-02	9.77E-02	1.95E-02	1.95E-02	1.95E-02	1.95E-02	1.95E-02
CHILD	4.80E-02	4.80E-02	2.40E-01	4.80E-02	4.80E-02	4.80E-02	4.80E-02	4.80E-02
INFANT	1.00E-01	1.00E-01	4.71E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01
GOATMILK								
ADULT	1.06E-02	1.06E-02	5.30E-02	1.06E-02	1.06E-02	1.06E-02	1.06E-02	1.06E-02
TEEN	1.95E-02	1.95E-02	9.77E-02	1.95E-02	1.95E-02	1.95E-02	1.95E-02	1.95E-02
CHILD	4.80E-02	4.80E-02	2.40E-01	4.80E-02	4.80E-02	4.80E-02	4.80E-02	4.80E-02
INFANT	1.00E-01	1.00E-01	4.71E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01	1.00E-01

TABLE 21. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2016 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
 AT 1.70 MILES ENE

ANNUAL BETA AIR DOSE = 0.00E+00 MILLRADS
 ANNUAL GAMMA AIR DOSE = 0.00E+00 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
GROUND	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
VEGET								
ADULT	3.73E-02	3.73E-02	1.87E-01	3.73E-02	3.73E-02	3.73E-02	3.73E-02	3.73E-02
TEEN	6.25E-02	6.25E-02	3.12E-01	6.25E-02	6.25E-02	6.25E-02	6.25E-02	6.25E-02
CHILD	1.52E-01	1.52E-01	7.60E-01	1.52E-01	1.52E-01	1.52E-01	1.52E-01	1.52E-01
MEAT								
ADULT	1.49E-02	1.49E-02	7.45E-02	1.49E-02	1.49E-02	1.49E-02	1.49E-02	1.49E-02
TEEN	1.26E-02	1.26E-02	6.30E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02	1.26E-02
CHILD	2.37E-02	2.37E-02	1.18E-01	2.37E-02	2.37E-02	2.37E-02	2.37E-02	2.37E-02
COW MILK								
ADULT	1.63E-02	1.63E-02	8.13E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02
TEEN	3.00E-02	3.00E-02	1.50E-01	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02
CHILD	7.37E-02	7.37E-02	3.69E-01	7.37E-02	7.37E-02	7.37E-02	7.37E-02	7.37E-02
INFANT	1.54E-01	1.54E-01	7.22E-01	1.54E-01	1.54E-01	1.54E-01	1.54E-01	1.54E-01
GOATMILK								
ADULT	1.63E-02	1.63E-02	8.13E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02	1.63E-02
TEEN	3.00E-02	3.00E-02	1.50E-01	3.00E-02	3.00E-02	3.00E-02	3.00E-02	3.00E-02
CHILD	7.37E-02	7.37E-02	3.69E-01	7.37E-02	7.37E-02	7.37E-02	7.37E-02	7.37E-02
INFANT	1.54E-01	1.54E-01	7.22E-01	1.54E-01	1.54E-01	1.54E-01	1.54E-01	1.54E-01

C65

DOSE CALCULATION MODELS

To evaluate the radiological consequences of the routine release of liquid and gaseous effluents from the Cooper Nuclear Station, the latest versions of two computer codes were used: LADTAP II for liquid doses and GASPAR for gaseous doses included as part of NRC Dose 2.3.20 (ORNL 2015). 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 22. 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 g/m³)
- 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 22. Values of Parameters Used to Make Dose Estimates Resulting From Liquid Discharges at Cooper Nuclear Station January-December 2016

Parameter	Values Assigned	
	Individual	Population
Cooling flow rate (cfs) * (Average daily value)	Q1 NR	NR
	Q2 NR	NR
	Q3 NR	NR
	Q4 NR	NR
Dilution factor*	Q1 NR	NR
	Q2 NR	NR
	Q3 NR	NR
	Q4 NR	NR
Holding time:		
Fish	24 hr ***	168 hr ***
Drinking water	12 hr ***	22.4 hr **
Shoreline exposure	0 hr ***	22.4 hr **
Swimming	0 hr ***	22.4 hr **
Boating	0 hr ***	22.4 hr **

* Q1, Q2, Q3, and Q4 represent first, second, third and fourth quarter station data for 2016, respectively.

** Based on an average Missouri River water flow of 5.5 ft/sec, 84 miles down the river.

*** Values from Regulatory Guide 1.109, Revision 1.

NR- No release

REFERENCES

Electric Power Research Institute, Technical Report 1021106, "Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents", December 2010.

Oak Ridge National Laboratory, NRC Dose 2.3.20, "Code System for Evaluating Routine Radioactive Effluents from Nuclear Power Plants with Windows Interface", February 2015.

U.S. Nuclear Regulatory Commission, Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants", Revision 1, 1974.

U.S. Nuclear Regulatory Commission, Regulatory Guide 1.23 (Safety Guide 23), "Onsite Meteorological Programs", Revision 0, 1972.

U.S. Nuclear Regulatory Commission, Regulatory Guide 1.111, "Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors", Revision 1, 1977.

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U.S. Nuclear Regulatory Commission, NUREG-0597, "User's Guide to GASPAR Code", December 1980.

U.S. Nuclear Regulatory Commission, NUREG/CR-1276, "User's Manual for LADTAP II: A Computer Code for Calculating Radiation Exposure to Man From Routine Release of Nuclear Reactor Liquid Effluents", 1980.

U.S. Nuclear Regulatory Commission, Regulatory Guide 1.109, "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR 50, Appendix I", Revision 1, 1977.

APPENDIX D
ANNUAL RADIOLOGICAL GROUNDWATER PROTECTION
PROGRAM (ARGPP) REPORT

***NEBRASKA PUBLIC POWER DISTRICT
COOPER NUCLEAR STATION
Radiological Groundwater Protection Program
2016 Annual Report
January 1, 2016 to December 31, 2016***

Prepared by
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Appendices

Appendix A: Location Designation of the Annual Radiological Groundwater Protection Program Report (ARGPPR)

Tables

Table A-1: Radiological Groundwater Protection Program - Sampling Locations, Nebraska Public Power District, Cooper Nuclear Station, 2016

Map

Map A-1: Routine Well Water Sample Locations for the Radiological Groundwater Protection Program, Nebraska Public Power District, Cooper Nuclear Station, 2016

Appendix B: Data Tables of the Annual Radiological Groundwater Protection Program Report (ARGPPR)

Table B-1: Exposure Pathway – Water - Ground, 2016

SECTION I. SUMMARY

I. SUMMARY

In 2008, the Cooper Nuclear Station (CNS) of the Nebraska Public Power District (NPPD) instituted a comprehensive program to evaluate the impact of station operations on groundwater in the vicinity of CNS. This report covers groundwater samples, collected outside of the Licensee required Off-Site Dose Assessment Manual (ODAM) requirements, both on and off station property in 2016. During that time period, analyses were performed on 73 samples from 23 locations.

In assessing all the data gathered for this report, it was concluded that the operation of CNS had no adverse radiological impact on the environment, and there are no known active releases into the groundwater or surface water at Nebraska Public Power District.

Tritium was not detected in any of the groundwater samples at concentrations greater than the United States Environmental Protection Agency (USEPA) drinking water standard (and the Nuclear Regulatory Commission [NRC] reporting limit) of 20,000 pCi/L. The tritium concentrations ranged from 263 ± 175 pCi/L to 982 ± 226 pCi/L.

Gamma-emitting radionuclides associated with licensed plant operations were not detected at concentrations greater than their respective Lower Limits of Detection (LLDs) as specified in NUREG-1302 in any of the groundwater samples. In the case of tritium, CNS specified that the independent laboratory achieve a lower limit of detection 10 times lower than that required by the United States Environmental Protection Agency (USEPA) regulation.

SECTION II. CHARACTERISTICS OF TRITIUM (H-3)

II. CHARACTERISTICS OF TRITIUM (H-3)

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common form of tritium is tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen.

Tritiated water functions the same as ordinary water in both the environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine with a clearance rate characterized by an effective biological half-life of about 14 days. Within one month or so after ingestion, essentially all tritium is cleared. Organically bound tritium (tritium that is incorporated in organic compounds) can remain in the body for a longer period.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors, where the isotopes lithium-6 and/or boron-10 are activated to produce tritium. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to helium-3 (^3He). This radioactive decay releases a beta particle (low-energy electron). The radioactive decay of tritium is the source of the health risk from exposure to tritium. Tritium is one of the least dangerous radionuclides because it emits very weak beta radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

SECTION III. INTRODUCTION

III. INTRODUCTION

Cooper Nuclear Station is located in Nemaha County in the southeast corner of Nebraska on the Missouri River. A portion of the site extends into Missouri. The reactor is an 830-megawatt (net electrical) boiling water reactor. Initial criticality was attained on February 21, 1974.

This report covers those analyses performed by Teledyne Brown Engineering (TBE) on samples collected in 2016.

III. INTRODUCTION (cont)

A. Objectives of the Radiological Groundwater Protection Program (RGPP)

The long-term objectives of the RGPP are as follows:

1. Identify suitable locations to monitor and evaluate potential impacts from station operations before significant radiological impact to the environment and potential drinking water sources.
2. Understand the local hydrogeologic regime in the vicinity of the station and maintain up-to-date knowledge of flow patterns on the surface and shallow subsurface.
3. Perform routine water sampling and radiological analysis of water from selected locations.
4. Report new leaks, spills, or other detections with potential radiological significance to stakeholders in a timely manner.
5. Regularly assess analytical results to identify adverse trends.
6. Take necessary corrective actions to protect groundwater resources.

B. Implementation of the Objectives

The objectives identified have been implemented at CNS as discussed below:

1. Cooper Nuclear Station will continue to perform routine sampling and radiological analysis of water from selected locations.
2. Cooper Nuclear Station has implemented procedures to identify and report new leaks, spills, or other detections with potential radiological significance in a timely manner.
3. Cooper Nuclear Station staff assesses analytical results on an ongoing basis to identify adverse trends.

C. Program Description

1. Sample Collection

Sample locations can be found in Appendix A, Table A-1 and Map A-1.

Groundwater

Samples of water are collected, managed, transported and analyzed in

III. INTRODUCTION (cont)

accordance with approved procedures following regulatory methods. Sample locations, sample collection frequencies and analytical frequencies are controlled in accordance with approved station procedures. Contractor and/or station personnel are trained in the collection, preservation management, and shipment of samples, as well as in documentation of sampling events. Analytical laboratories are subject to internal quality assurance programs, inter-laboratory cross-check programs, as well as nuclear industry audits. Station personnel review and evaluate all analytical data deliverables after initial review by the contractor.

Analytical data results are reviewed by station personnel for adverse trends or changes to hydrogeologic conditions.

SECTION IV. PROGRAM DESCRIPTION

IV. Program Description

A. Sample Analysis

This section describes the general analytical methodologies used by TBE to analyze the environmental samples for radioactivity for the CNS RGPP in 2016.

In order to achieve the stated objectives, the current program analyzes each sample for tritium. If a sample indicates tritium above TBE's lower limit of detection (LLD), then the sample is analyzed for gamma emitters (Be-7, K-40, Mn-54, Co-58, Fe-59, Co-60, Zn-65, Zr-95, Ru-103, Ru-106, I-131, Cs-134, Cs-137, Ba-140, Ce-141, Ce-144, Ra-226 and Th-228). If the sample indicates gamma emitters (other than those that are naturally occurring) above TBE's LLD, then the sample is analyzed for Hard to Detects (HTDs – Gross Alpha, Fe-55, Ni-63, Sr-89, Sr-90).

Note: Statistically positive results include their respective uncertainties. Results reported below TBE's LLD for a given radio nuclide are preceded with "L.T." (= "Less Than").

B. Data Interpretation

The radiological data collected prior to CNS becoming operational were used as a baseline with which these operational data were compared. For the purpose of this report, CNS was considered operational at initial criticality. Several factors were important in the interpretation of the data:

1. Lower Limit of Detection and Minimum Detectable Concentration

The lower limit of detection (LLD) is specified by federal regulation as a minimum sensitivity value that must be achieved routinely by the analytical parameter.

2. Laboratory Measurements Uncertainty

The estimated uncertainty in measurement of tritium in environmental samples is frequently on the order of 50% of the measurement value.

Statistically, the exact value of a measurement is expressed as a range with a stated level of confidence. The convention is to report results with a 95% level of confidence. The uncertainty comes from calibration standards, sample volume or weight measurements, sampling uncertainty and other factors. CNS reports the uncertainty of a measurement created by statistical process (counting error). Each result has two values calculated. CNS reports the result with plus or minus (\pm) the estimated sample standard deviation.

IV. Program Description (cont)

Analytical uncertainties are reported at the 95% confidence level in this report for reporting consistency with the REMP.

SECTION V. RESULTS AND DISCUSSION

V. Results and Discussion

A. *Groundwater Results*

Tritium

Samples from 23 locations were analyzed for tritium activity (Table B-1, Appendix B). Tritium was detected at six locations. Tritium values ranged from 263 to 982 pCi/L. All values were below the United States Environmental Protection Agency (USEPA) drinking water standard (and the Nuclear Regulatory Commission [NRC] reporting limit) of 20,000 pCi/liter.

Gamma Emitters

Naturally occurring Thorium-228 was detected in two of 13 samples with an average concentration of 7.0 pCi/L and a range of 6 to 8 pCi/L. Naturally occurring Potassium-40 was detected in one of 13 samples with a concentration of 50 pCi/L. No other gamma emitting nuclides were detected (Table B-1, Appendix B).

APPENDIX A

**LOCATION DESIGNATION OF THE ANNUAL
RADIOLOGICAL GROUNDWATER PROTECTION
PROGRAM REPORT (ARGPPR)**

Ground High Capacity Non-Potable Well-1A	Ground Water
Ground High Capacity Non-Potable Well-1B	Ground Water
Ground Monitoring Well-1D	Ground Water
Ground Monitoring Well-1S	Ground Water
Ground Monitoring Well-2	Ground Water
Ground Monitoring Well-3	Ground Water
Ground Monitoring Well-4D	Ground Water
Ground Monitoring Well-4S	Ground Water
Ground Monitoring Well-5	Ground Water
Ground Monitoring Well-6	Ground Water
Ground Monitoring Well-7D	Ground Water
Ground Monitoring Well-7S	Ground Water
Ground Monitoring Well-8	Ground Water
Ground Monitoring Well-10	Ground Water
Ground Monitoring Well-10D	Ground Water
Ground Monitoring Well-11	Ground Water
Ground Monitoring Well-12	Ground Water
Ground Monitoring Well-13	Ground Water
Ground Monitoring Well-14	Ground Water
Ground Monitoring Well-15	Ground Water
Ground Monitoring Well-16	Ground Water
Ground Monitoring Well-17	Ground Water
Ground Monitoring Well-18	Ground Water

APPENDIX B

**DATA TABLES OF THE ANNUAL RADIOLOGICAL
GROUNDWATER PROTECTION PROGRAM REPORT
(ARGPPR)**

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER RIVER WELL 1A

DATE COLLECTED	4/26/2016	11/6/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 4.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
**COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)**

STATION NUMBER RIVER WELL 1B

DATE COLLECTED	2/20/2016	7/26/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 1D

DATE COLLECTED	6/8/2016	9/27/2016	11/2/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)
BE-7			
K-40			
MN-54			
CO-58			
FE-59			
CO-60			
ZN-65			
ZR-95			
RU-103			
RU-106			
I-131			
CS-134			
CS-137			
BA-140			
LA-140			
CE-141			
CE-144			
RA-226			
TH-228			
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 1S

DATE COLLECTED	6/8/2016	11/2/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 2

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
**COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)**

STATION NUMBER 3

DATE COLLECTED	6/7/2016	9/28/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 4D

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 2.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 4S

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:			(a)	
BE-7	L.T. 2.E+01	L.T. 1.E+01		L.T. 2.E+01
K-40	L.T. 3.E+01	L.T. 9.E+00		L.T. 4.E+01
MN-54	L.T. 1.E+00	L.T. 9.E-01		L.T. 2.E+00
CO-58	L.T. 1.E+00	L.T. 1.E+00		L.T. 2.E+00
FE-59	L.T. 4.E+00	L.T. 3.E+00		L.T. 5.E+00
CO-60	L.T. 1.E+00	L.T. 1.E+00		L.T. 2.E+00
ZN-65	L.T. 3.E+00	L.T. 2.E+00		L.T. 4.E+00
ZR-95	L.T. 3.E+00	L.T. 2.E+00		L.T. 4.E+00
RU-103	L.T. 2.E+00	L.T. 2.E+00		L.T. 3.E+00
RU-106	L.T. 1.E+01	L.T. 8.E+00		L.T. 2.E+01
I-131	L.T. 1.E+01	L.T. 6.E+01		L.T. 2.E+01
CS-134	L.T. 1.E+00	L.T. 8.E-01		L.T. 2.E+00
CS-137	L.T. 1.E+00	L.T. 9.E-01		L.T. 2.E+00
BA-140	L.T. 2.E+01	L.T. 4.E+01		L.T. 3.E+01
LA-140	L.T. 6.E+00	L.T. 1.E+01		L.T. 9.E+00
CE-141	L.T. 4.E+00	L.T. 4.E+00		L.T. 5.E+00
CE-144	L.T. 1.E+01	L.T. 7.E+00		L.T. 1.E+01
RA-226	L.T. 3.E+01	L.T. 3.E+01		L.T. 5.E+01
TH-228	L.T. 2.E+00	L.T. 2.E+00		8.E+00 ± 4.E+00
H-3	6.11E+02 ± 2.29E+02	8.86E+02 ± 2.21E+02	L.T. 3.E+02	2.65E+02 ± 1.65E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
**COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)**

STATION NUMBER 5

DATE COLLECTED	06/07/16	09/27/16
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 6

DATE COLLECTED	3/28/2016	6/7/2016	8/22/2016	10/31/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 7D

DATE COLLECTED	6/8/2016	9/27/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 7S

DATE COLLECTED	6/8/2016	9/27/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 8

DATE COLLECTED	3/28/2016	6/7/2016	8/22/2016	10/31/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
**COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)**

STATION NUMBER 10

DATE COLLECTED 6/7/2016 9/28/2016

GAMMA SPECTRUM ANALYSIS: (a)

BE-7	L.T. 1.E+01	
K-40	L.T. 2.E+01	
MN-54	L.T. 7.E-01	
CO-58	L.T. 1.E+00	
FE-59	L.T. 3.E+00	
CO-60	L.T. 8.E-01	
ZN-65	L.T. 1.E+00	
ZR-95	L.T. 2.E+00	
RU-103	L.T. 2.E+00	
RU-106	L.T. 8.E+00	
I-131	L.T. 5.E+01	
CS-134	L.T. 6.E-01	
CS-137	L.T. 8.E-01	
BA-140	L.T. 3.E+01	
LA-140	L.T. 1.E+01	
CE-141	L.T. 4.E+00	
CE-144	L.T. 6.E+00	
RA-226	L.T. 2.E+01	
TH-228	L.T. 2.E+00	
H-3	8.06E+02 ± 2.12E+02	L.T. 3.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 10D

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:				
BE-7	L.T. 2.E+01	L.T. 1.E+01	L.T. 3.E+01	L.T. 3.E+01
K-40	L.T. 1.E+01	L.T. 3.E+01	L.T. 2.E+01	L.T. 3.E+01
MN-54	L.T. 1.E+00	L.T. 1.E+00	L.T. 2.E+00	L.T. 3.E+00
CO-58	L.T. 2.E+00	L.T. 1.E+00	L.T. 3.E+00	L.T. 4.E+00
FE-59	L.T. 4.E+00	L.T. 3.E+00	L.T. 6.E+00	L.T. 9.E+00
CO-60	L.T. 2.E+00	L.T. 9.E-01	L.T. 2.E+00	L.T. 3.E+00
ZN-65	L.T. 3.E+00	L.T. 2.E+00	L.T. 5.E+00	L.T. 6.E+00
ZR-95	L.T. 3.E+00	L.T. 2.E+00	L.T. 5.E+00	L.T. 7.E+00
RU-103	L.T. 2.E+00	L.T. 2.E+00	L.T. 4.E+00	L.T. 4.E+00
RU-106	L.T. 1.E+01	L.T. 8.E+00	L.T. 2.E+01	L.T. 3.E+01
I-131	L.T. 1.E+01	L.T. 6.E+01	L.T. 5.E+01	L.T. 3.E+01
CS-134	L.T. 1.E+00	L.T. 8.E-01	L.T. 2.E+00	L.T. 3.E+00
CS-137	L.T. 2.E+00	L.T. 1.E+00	L.T. 2.E+00	L.T. 3.E+00
BA-140	L.T. 2.E+01	L.T. 4.E+01	L.T. 5.E+01	L.T. 5.E+01
LA-140	L.T. 6.E+00	L.T. 1.E+01	L.T. 1.E+01	L.T. 1.E+01
CE-141	L.T. 4.E+00	L.T. 4.E+00	L.T. 7.E+00	L.T. 8.E+00
CE-144	L.T. 1.E+01	L.T. 7.E+00	L.T. 2.E+01	L.T. 2.E+01
RA-226	L.T. 3.E+01	L.T. 3.E+01	L.T. 5.E+01	L.T. 6.E+01
TH-228	L.T. 3.E+00	L.T. 2.E+00	6.E+00 ± 3.E+00	L.T. 5.E+00
H-3	8.38E+02 ± 2.39E+02	9.82E+02 ± 2.26E+02	6.30E+02 ± 2.08E+02	4.65E+02 ± 1.75E+02

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 11

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)			
BE-7		L.T. 1.E+01	L.T. 2.E+01	L.T. 1.E+01
K-40		L.T. 7.E+00	L.T. 1.E+01	L.T. 8.E+00
MN-54		L.T. 8.E-01	L.T. 1.E+00	L.T. 8.E-01
CO-58		L.T. 1.E+00	L.T. 2.E+00	L.T. 1.E+00
FE-59		L.T. 3.E+00	L.T. 4.E+00	L.T. 3.E+00
CO-60		L.T. 9.E-01	L.T. 1.E+00	L.T. 8.E-01
ZN-65		L.T. 2.E+00	L.T. 3.E+00	L.T. 2.E+00
ZR-95		L.T. 2.E+00	L.T. 3.E+00	L.T. 2.E+00
RU-103		L.T. 2.E+00	L.T. 2.E+00	L.T. 1.E+00
RU-106		L.T. 8.E+00	L.T. 1.E+01	L.T. 8.E+00
I-131		L.T. 5.E+01	L.T. 5.E+01	L.T. 1.E+01
CS-134		L.T. 8.E-01	L.T. 1.E+00	L.T. 8.E-01
CS-137		L.T. 8.E-01	L.T. 1.E+00	L.T. 9.E-01
BA-140		L.T. 4.E+01	L.T. 4.E+01	L.T. 2.E+01
LA-140		L.T. 1.E+01	L.T. 1.E+01	L.T. 5.E+00
CE-141		L.T. 4.E+00	L.T. 5.E+00	L.T. 3.E+00
CE-144		L.T. 6.E+00	L.T. 1.E+01	L.T. 7.E+00
RA-226		L.T. 2.E+01	L.T. 3.E+01	L.T. 2.E+01
TH-228		L.T. 2.E+00	L.T. 3.E+00	L.T. 2.E+00
H-3	L.T. 3.E+02	5.30E+02 ± 1.95E+02	4.55E+02 ± 1.98E+02	5.11E+02 ± 1.79E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 12

DATE COLLECTED	9/27/2016	11/2/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)
BE-7		
K-40		
MN-54		
CO-58		
FE-59		
CO-60		
ZN-65		
ZR-95		
RU-103		
RU-106		
I-131		
CS-134		
CS-137		
BA-140		
LA-140		
CE-141		
CE-144		
RA-226		
TH-228		
H-3	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 13

DATE COLLECTED	3/28/2016	6/7/2016	8/22/2016	10/31/2016
GAMMA SPECTRUM ANALYSIS:	(a)		(a)	(a)
BE-7		L.T. 1.E+01		
K-40		5.E+01 ± 3.E+01		
MN-54		L.T. 9.E-01		
CO-58		L.T. 1.E+00		
FE-59		L.T. 4.E+00		
CO-60		L.T. 9.E-01		
ZN-65		L.T. 2.E+00		
ZR-95		L.T. 2.E+00		
RU-103		L.T. 2.E+00		
RU-106		L.T. 8.E+00		
I-131		L.T. 6.E+01		
CS-134		L.T. 9.E-01		
CS-137		L.T. 9.E-01		
BA-140		L.T. 4.E+01		
LA-140		L.T. 1.E+01		
CE-141		L.T. 4.E+00		
CE-144		L.T. 6.E+00		
RA-226		L.T. 2.E+01		
TH-228		L.T. 1.E+00		
H-3	L.T. 3.E+02	2.94E+02 ± 1.86E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 14

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 15

DATE COLLECTED	3/28/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:		(a)	(a)	(a)
BE-7	L.T. 7.E+00			
K-40	L.T. 1.E+01			
MN-54	L.T. 4.E-01			
CO-58	L.T. 6.E-01			
FE-59	L.T. 2.E+00			
CO-60	L.T. 4.E-01			
ZN-65	L.T. 8.E-01			
ZR-95	L.T. 1.E+00			
RU-103	L.T. 1.E+00			
RU-106	L.T. 4.E+00			
I-131	L.T. 1.E+02			
CS-134	L.T. 3.E-01			
CS-137	L.T. 4.E-01			
BA-140	L.T. 5.E+01			
LA-140	L.T. 1.E+01			
CE-141	L.T. 2.E+00			
CE-144	L.T. 3.E+00			
RA-226	L.T. 1.E+01			
TH-228	L.T. 9.E-01			
H-3	5.27E+02 ± 1.41E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 16

DATE COLLECTED	3/28/2016	6/7/2016	8/22/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 17

DATE COLLECTED	3/29/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.

B-1
COOPER NUCLEAR STATION
WATER - GROUND (PCI/LITER)

STATION NUMBER 18

DATE COLLECTED	3/29/2016	6/7/2016	9/28/2016	11/1/2016
GAMMA SPECTRUM ANALYSIS:	(a)	(a)	(a)	(a)
BE-7				
K-40				
MN-54				
CO-58				
FE-59				
CO-60				
ZN-65				
ZR-95				
RU-103				
RU-106				
I-131				
CS-134				
CS-137				
BA-140				
LA-140				
CE-141				
CE-144				
RA-226				
TH-228				
H-3	L.T. 3.E+02	L.T. 3.E+02	L.T. 3.E+02	L.T. 2.E+02

(a) Gamma analysis not performed. Refer to section IV.A for additional information.