



Nebraska Public Power District

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NLS2018027
April 26, 2018

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

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

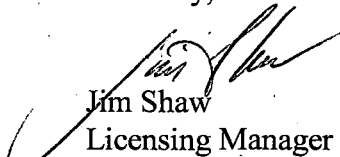
Dear Sir or Madam:

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, 2017, through December 31, 2017. This report is included as Enclosure 1. During the period from January 1, 2017, through December 31, 2017, there were no changes to the Offsite Dose Assessment Manual (ODAM) or the Process Control Program (PCP), and as such, copies of the ODA M and PCP are not being transmitted with this letter. These documents are being submitted for NRC use per the requirements of Technical Specification 5.6.3 and CNS ODA M Section D 5.3.

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

/tf

IE48

NRR

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Enclosure 1 - Annual Radioactive Effluent Release Report January 1, 2017 through
December 31, 2017

cc: Regional Administrator w/ enclosure
USNRC - Region IV

Senior Resident Inspector w/ enclosure
USNRC - CNS

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

CNS Records w/ enclosure

NPG Distribution w/o enclosure

NLS2018027
Enclosure 1

Enclosure 1

Annual Radioactive Effluent Release Report
January 1, 2017 through December 31, 2017

NEBRASKA PUBLIC POWER DISTRICT

COOPER NUCLEAR STATION

RADIOACTIVE EFFLUENT RELEASE REPORT

January 1, 2017 through December 31, 2017

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, 2017. 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 four 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 D presents the latest groundwater report.

APPENDIX A

SOURCE TERMS

EFFLUENT AND WASTE DISPOSAL REPORTS

SUPPLEMENTAL INFORMATION

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

January 1, 2017 through December 31, 2017

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, 2017 through December 31, 2017

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 2017 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	0	minutes
3.	Maximum time period for batch release	0	minutes
4.	Average time period for batch release	0	minutes
5.	Minimum time period for batch release	0	minutes
6.	Average stream flow during periods of release of effluent into a flowing stream	0	liters/minute

b. Gaseous

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

F. Abnormal Release

a. Liquid

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

b. Gaseous

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

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

	UNIT	1st QTR	2nd QTR	3rd QTR	4th QTR	EST. TOTAL ERROR %
A. Fission and activation gases						
1. Total release	Ci	2.52E-01	2.71E-01	4.26E-01	6.32E-01	2.0E+01
2. Average release rate for period	μCi/sec	3.24E-02	3.45E-02	5.36E-02	7.95E-02	
B. Iodines						
1. Total iodine 131	Ci	6.15E-06	5.99E-06	4.72E-06	8.74E-06	3.0E+01
2. Average release rate for period	μCi/sec	7.91E-07	7.62E-07	5.94E-07	1.10E-06	
C. Particulates						
1. Particulates with half-lives >8 days	Ci	6.71E-05	2.47E-05	2.67E-05	4.96E-05	5.0E+01
2. Average release rate for period	μCi/sec	8.63E-06	3.15E-06	3.36E-06	6.24E-06	
3. Gross alpha radioactivity	Ci	8.39E-06	9.93E-07	2.96E-06	4.20E-07	
D. Tritium						
1. Total release	Ci	2.31E+00	1.69E+00	3.07E+00	2.98E+00	3.0E+01
2. Average release rate for period	μCi/sec	2.97E-01	2.15E-01	3.86E-01	3.75E-01	
E. Carbon-14						
1. Total release	Ci	3.01E+00	3.04E+00	3.08E+00	3.08E+00	NA
2. Release Rate	μCi/sec	3.87E-01	3.87E-01	3.87E-01	3.87E-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	2.45E-02	1.30E-02	2.32E-02	2.51E-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	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	0.00E+00	4.59E-03
krypton-88	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
krypton-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-131m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-135m	Ci	2.22E-02	4.42E-02	6.55E-02	4.89E-02
xenon-135	Ci	3.45E-03	6.68E-03	1.11E-02	1.02E-02
xenon-137	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-138	Ci	2.02E-01	2.07E-01	3.26E-01	5.43E-01
Total for period	Ci	2.52E-01	2.71E-01	4.26E-01	6.32E-01
2. Iodines					
iodine-131	Ci	5.64E-06	5.29E-06	4.72E-06	5.71E-06
iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-133	Ci	1.07E-05	1.07E-05	1.26E-05	1.86E-05
iodine-134	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-135	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total for period	Ci	1.63E-05	1.60E-05	1.73E-05	2.43E-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	6.97E-07	1.45E-07	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
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	0.00E+00	0.00E+00
cobalt-60	Ci	5.05E-08	1.13E-07	0.00E+00	5.72E-08
zinc-65	Ci	0.00E+00	5.19E-08	0.00E+00	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	2.98E-04	0.00E+00	0.00E+00
strontium-89	Ci	3.01E-07	2.92E-07	2.69E-07	3.77E-07
strontium-90	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
strontium-91	Ci	2.13E-05	1.83E-05	1.20E-05	1.71E-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	0.00E+00	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	6.74E-08	0.00E+00	2.37E-08	2.58E-08
cesium-138	Ci	2.41E-04	4.24E-04	2.55E-04	6.21E-04
barium-139	Ci	1.33E-03	1.17E-03	9.33E-04	1.29E-03
barium-140	Ci	4.87E-07	0.00E+00	8.96E-08	3.00E-07
lanthanum-140	Ci	8.55E-07	5.51E-07	2.73E-07	4.90E-07
cerium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
praesodymium-144	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Total for period	Ci	1.59E-03	1.91E-03	1.20E-03	1.93E-03
Total for period with >8d half life	Ci	9.06E-07	4.57E-07	3.82E-07	7.60E-07

* 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	0.00E+00	0.00E+00
krypton-88	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
krypton-89	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-131m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-133m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-133	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-135m	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
xenon-135	Ci	0.00E+00	0.00E+00	0.00E+00	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	0.00E+00	0.00E+00	0.00E+00
2. Iodines					
iodine-131	Ci	5.11E-07	7.02E-07	0.00E+00	3.03E-06
iodine-132	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00
iodine-133	Ci	0.00E+00	1.12E-06	4.78E-06	9.92E-06
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	5.11E-07	1.82E-06	4.78E-06	1.30E-05

* 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	0.00E+00	0.00E+00
manganese-54	Ci	5.66E-06	5.10E-07	1.26E-07	9.40E-07
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	4.46E-07	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	5.90E-05	2.33E-05	2.58E-05	4.79E-05
zinc-65	Ci	4.61E-07	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	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
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	6.15E-08	0.00E+00	0.00E+00	1.18E-06
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	0.00E+00
cesium-137	Ci	6.62E-07	4.66E-07	4.32E-07	0.00E+00
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	6.63E-05	2.43E-05	2.64E-05	5.00E-05
Total for period >8 day half life	Ci	6.62E-05	2.43E-05	2.64E-05	4.88E-05

* 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, 2017 through December 31, 2017**

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	5.49E+01	N/A
	Ci	6.50E+02	15%
b. Dry compressible waste, contaminated equip, etc.	m ³	3.21E+02	N/A
	Ci	4.88E+01	25%
c. Irradiated components, control rods, etc.	m ³	4.80E-01	N/A
	Ci	2.32E-01	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	1.93E-04	iron-59	2.09E-02
antimony-124	4.70E-03	lanthanum-140	8.72E-04
barium-140	7.62E-04	maganese-54	3.02E+00
carbon-14	2.51E-02	nickel-63	8.92E-01
cesuim-134	1.01E-02	niobium-95	1.58E-03
cesium-137	1.85E-01	plutonium-238	1.82E-04
chromium-51	1.33E-01	plutonium-239	1.78E-04
cobalt-57	1.27E-02	plutonium-241	3.64E-02
cobalt-58	6.15E-01	silver-110m	1.06E-01
cobalt-60	6.06E+01	strontium-89	2.22E-02
curium-242	1.12E-04	strontium-90	5.43E-03
curium-244	1.70E-04	technetium-99	1.58E-03
iodine-129	1.59E-03	tritium	6.65E-03
iodine-131	6.06E-05	zinc-65	5.82E-00
iron-55	2.85E+01		

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (continued)

PERIOD: January 1, 2017 through December 31, 2017

b. DAW

americium-241	1.89E-04	nickel-63	1.03E-00
antimony-124	5.43E-02	niobium-94	3.56E-06
carbon-14	3.51E-02	niobium-95	2.72E-02
cesium-137	1.67E-01	plutonium-238	1.69E-04
chromium-51	4.32E+00	plutonium-239	1.66E-04
cobalt-58	5.66E-01	plutonium-241	3.38E-02
cobalt-60	5.90E+01	silver-110m	7.06E-03
curium-242	8.79E-05	strontium-89	1.54E-02
curium-244	1.56E-04	strontium-90	6.20E-03
iodine-129	2.13E-03	technetium-99	8.70E-03
iron-55	3.20E+01	tritium	1.22E-03
iron-59	2.78E-01	zinc-65	9.01E-01
manganese-54	1.49E+00	zirconium-95	1.15E-13
nickel-59	4.63E-03		

c. Other

carbon-14	6.88E-03	manganese-54	4.73E-01
chromium-51	9.20E-01	niobium-94	4.30E-05
cobalt-58	1.36E-01	nickel-63	5.38E-00
cobalt-60	2.54E+01	zinc-65	5.12E-02
iron-55	6.75E+01		

TABLE 3

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (continued)
PERIOD: January 1, 2017 through December 31, 2017

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
18	Exclusive Use	UT
9	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	2.54E-06	6.94E-06	4.39E-06	5.87E-06	2.23E-05
	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	8.94E-06	6.24E-06	2.85E-05	2.94E-05	6.74E-05
	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	1.25E-06	3.41E-06	2.16E-06	2.99E-06	1.11E-05
	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	4.39E-06	3.07E-06	1.40E-05	1.49E-05	3.36E-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	N	N	N	N
	1. Total	mrem	2.54E-03	2.43E-03	1.57E-03	4.52E-03	1.15E-02
	Percent of Technical Specification						
	2. Limit		0.03%	0.03%	0.02%	0.06%	0.08%
	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	7.33E-04	3.17E-04	5.92E-04	1.23E-03	2.99E-03
	Percent of Technical Specification						
	2. Limit		0.01%	0.00%	0.01%	0.02%	0.02%
	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 0.0115 mrem/year which was 0.08% 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	2.75E-01	2.86E-01	4.15E-01	2.93E-01	1.15E+00
2. Percent of Technical Specification Limit		2.75%	2.86%	4.15%	2.93%	5.74%
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.2.1. 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, 2017 reporting period.
- a) The ERP process flow element was declared inoperable on 08/27/2017 at 11:20, due to a lightning strike impacting process flow logic. A replacement part was pulled from spares to repair this condition (reduced spares count for this part to zero), and the ERP process flow element was declared operable in 3 1/2 days. A second lightning strike also resulted in the ERP process flow element being declared inoperable on 10/14/2017 at 09:15. This occurred before a new part was available, due to a 4 month lead time. The CNS Materials, Purchasing & Contracts department adjusted the part min/max requirements in support of this or similar conditions. This condition was captured in the station Corrective Actions program (CR CNS-2017-5852). TCC 5213829 was installed to provide the process flow element a conservative flow signal until parts were obtained. Repairs were completed. During 2017, the ERP process flow element was inoperable for almost 78 consecutive days (77 days, 15 hours).
- 2) The following is being reported per the requirements of ODAM Specification D3.3.2, Condition I, Required Action I.2.2. This condition is being reported below due to the condition continuing for a period of greater than four (4) hours during the January 1 - December 31, 2017 reporting period.
- a) The Turbine Building Normal Range rad-monitor was declared inoperable on 2/16/2017 at 18:42. Efforts to establish alternative monitoring within four (4) hours in accordance with ODAM D3.3.2, required Action I.1 was unsuccessful. In accordance with ODAM 3.3.2, Required Action I.2.1 this condition was documented in the station Corrective Actions program (CR CNS-2017-0795). The alternate sampler was placed in service on 2/17/2017 at 17:07; inoperable for a total of approximately 22.5 hours.

APPENDIX B
METEOROLOGY

CONTENTS

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ATMOSPHERIC DIFFUSION MODEL	B324

METEOROLOGICAL DATA SUMMARIES

Meteorological data collected onsite for the period January 1, 2017, through December 31, 2017, 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 2017 was approximately 99.8%.

	<u>Average Data Recovery</u>
January 1 - March 31, 2017 (Q1)	99.9%
April 1 - June 30, 2017 (Q2)	99.9%
First Semiannual Period - January 1 - June 30, 2017 (SEM1)	99.9%
July 1 - September 30, 2017 (Q3)	99.9%
October 1 - December 31, 2017 (Q4)	99.4%
Second Semiannual Period - July 1 - December 31, 2017 (SEM2)	99.7%
Annual Period - January 1 - December 31, 2017 (ANN)	99.8%

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	14.4%	North-northwest	12.8%
Q2	South	16.4%	South	16.8%
SEM1	North-northwest	12.8%	South	13.2%
Q3	South	16.0%	South-southeast	14.9%
Q4	North-northwest	14.3%	South	13.4%
SEM2	South	14.0%	South	13.7%
ANN	South	13.3%	South	13.5%

	<u>Mean Wind Speed at 100m Level</u>		<u>Mean Wind Speed at 10m Level</u>
Q1	14.5 MPH		8.9 MPH
Q2	14.3 MPH		9.0 MPH
SEM1	14.4 MPH		8.9 MPH
Q3	10.5 MPH		5.8 MPH
Q4	14.6 MPH		8.8 MPH
SEM2	12.6 MPH		7.3 MPH
ANN	13.5 MPH		8.1 MPH

	<u>Maximum Hourly Average Wind Speed/ (Date at 100m Level)</u>		<u>Maximum Hourly Average Wind Speed/ (Date at 10m Level)</u>
Q1	52.6 MPH/ (17/03/06)		35.0 MPH/ (17/03/06)
Q2	50.3 MPH/ (17/06/16)		32.3 MPH/ (17/05/10)
SEM1	52.6 MPH/ (17/03/06)		35.0 MPH/ (17/03/06)
Q3	33.9 MPH/ (17/08/20)		20.6 MPH/ (17/08/20)
Q4	48.7 MPH/ (17/11/13)		29.3 MPH/ (17/12/03)
SEM2	48.7 MPH/ (17/11/13)		29.3 MPH/ (17/12/03)
ANN	52.6 MPH/ (17/03/06)		35.0 MPH/ (17/03/06)

TEMPERATURE AT 10-METER LEVEL

	<u>Mean Hourly Average Temperature</u>	<u>Average Daily Maximum</u>	<u>Average Daily Minimum</u>
Q1	38.1 Degrees F	47.0 Degrees F	29.3 Degrees F
Q2	64.9 Degrees F	74.1 Degrees F	55.2 Degrees F
SEM1	51.6 Degrees F	60.6 Degrees F	42.3 Degrees F
Q3	73.4 Degrees F	82.7 Degrees F	64.0 Degrees F
Q4	43.1 Degrees F	52.6 Degrees F	33.8 Degrees F
SEM2	58.3 Degrees F	67.7 Degrees F	48.9 Degrees F
ANN	55.0 Degrees F	64.2 Degrees F	45.6 Degrees F

	<u>Maximum Temperature (Date)</u>	<u>Minimum Temperature (Date)</u>
Q1	89.4 Degrees F (17/03/19)	-7.9 Degrees F (17/01/06)
Q2	95.4 Degrees F (17/06/15)	34.1 Degrees F (17/04/07)
SEM1	95.4 Degrees F (17/06/15)	-7.9 Degrees F (17/01/06)
Q3	98.4 Degrees F (17/07/21)	44.5 Degrees F (17/09/07)
Q4	86.4 Degrees F (17/10/02)	-11.0 Degrees F (17/12/27)
SEM2	98.4 Degrees F (17/07/21)	-11.0 Degrees F (17/12/27)
ANN	98.4 Degrees F (17/07/21)	-11.0 Degrees F (17/12/27)

PRECIPITATION

	<u>Total Precipitation</u>	<u>Maximum Daily Precipitation Total/ (Date)</u>	<u>Maximum Hourly Precipitation Total/ (Date)</u>
Q1	4.79 Inches	1.32 Inches (17/03/29)	0.33 Inches (17/02/20)
Q2	10.46 Inches	1.20 Inches (17/05/19)	0.87 Inches (17/06/16)
SEM1	15.25 Inches	1.32 Inches (17/03/29)	0.87 Inches (17/06/16)
Q3	6.37 Inches	0.80 Inches (17/08/27)	0.77 Inches (17/08/27)
Q4	6.87 Inches	2.27 Inches (17/10/06)	1.13 Inches (17/10/05)
SEM2	13.24 Inches	2.27 Inches (17/10/06)	1.13 Inches (17/10/05)
ANN	28.49 Inches	2.27 Inches (17/10/06)	1.13 Inches (17/10/05)

ATMOSPHERIC STABILITY

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

	<u>Unstable Conditions Classes A-C</u>	<u>Neutral Conditions Class D</u>	<u>Stable Conditions Classes E-G</u>
Q1	6%	59%	35%
Q2	7%	53%	40%
SEM1	6%	56%	37%
Q3	1%	44%	54%
Q4	2%	53%	46%
SEM2	1%	49%	50%
ANN	4%	52%	44%

TABLE 1. Meteorological Data Recovery

Data Recovery (% of total Observations)

	January- March <u>2017</u>	April- June <u>2017</u>	January- June <u>2017</u>	July- Sept. <u>2017</u>	October- Dec. <u>2017</u>	July- Dec. <u>2017</u>	January- Dec. <u>2017</u>
100m wind speed	99.9	99.9	99.9	100.0	99.5	99.7	99.8
100m wind direction	99.9	99.9	99.9	100.0	99.5	99.7	99.8
100m ambient temperature	100.0	100.0	100.0	100.0	99.5	99.7	99.9
60m wind speed	100.0	100.0	100.0	100.0	99.4	99.7	99.9
60m wind direction	100.0	100.0	100.0	100.0	99.4	99.7	99.9
60m ambient temperature	100.0	100.0	100.0	100.0	99.5	99.7	99.9
10m wind speed	100.0	100.0	100.0	100.0	99.4	99.7	99.8
10m wind direction	100.0	100.0	100.0	100.0	99.4	99.7	99.8
10m ambient temperature	100.0	100.0	100.0	100.0	99.5	99.7	99.9
10m dew point	100.0	99.5	99.8	98.6	99.5	99.0	99.4
100m-10m delta T	100.0	100.0	100.0	100.0	99.5	99.7	99.9
100m-60m delta T	100.0	100.0	100.0	100.0	99.5	99.7	99.9
60m-10m delta T	100.0	100.0	100.0	100.0	99.5	99.7	99.9
Precipitation	100.0	99.9	99.9	99.9	99.5	99.7	99.8
100m JFD	99.9	99.9	99.9	100.0	99.5	99.7	99.8
10m JFD	100.0	100.0	100.0	100.0	99.4	99.7	99.8

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, 2017. Summaries for the first quarter, second quarter, third quarter, fourth quarter, and semiannual periods are also provided. The parameters provided are listed below.

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

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

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

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

JANUARY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	26.8	31	23.6	31	88.2	31	3.8	31	25.8
2	31	26.2	31	23.1	31	88.5	31	3.8	31	25.3
3	31	26.0	31	23.1	31	89.0	31	3.8	31	25.2
4	31	26.1	31	23.3	31	89.3	31	3.8	31	25.2
5	31	26.1	31	23.2	31	88.7	31	3.8	31	25.2
6	31	25.7	31	22.7	31	88.3	31	3.7	31	24.8
7	31	25.6	31	22.6	31	88.4	31	3.7	31	24.7
8	31	25.6	31	22.5	31	88.2	31	3.7	31	24.7
9	31	25.6	31	22.6	31	88.1	31	3.7	31	24.7
10	31	26.7	31	22.7	31	84.9	31	3.7	31	25.5
11	31	28.1	31	23.1	31	81.6	31	3.8	31	26.6
12	31	29.6	31	23.4	31	78.5	31	3.8	31	27.7
13	31	31.1	31	23.8	31	75.3	31	3.9	31	28.8
14	31	32.6	31	24.4	31	73.0	31	4.0	31	29.9
15	31	33.6	31	24.7	31	71.5	31	4.0	31	30.5
16	31	34.0	31	24.9	31	71.3	31	4.0	31	30.8
17	31	33.8	31	25.4	31	73.0	31	4.1	31	30.9
18	31	32.8	31	25.8	31	76.8	31	4.2	31	30.4
19	31	31.3	31	25.6	31	80.4	31	4.1	31	29.4
20	31	30.3	31	25.5	31	83.1	31	4.1	31	28.7
21	31	29.5	31	25.2	31	84.7	31	4.1	31	28.1
22	31	28.8	31	24.9	31	86.0	31	4.0	31	27.5
23	31	28.2	31	24.5	31	86.6	31	3.9	31	27.0
24	31	27.8	31	24.2	31	87.2	31	3.9	31	26.7
HOURLY MEAN		28.8		23.9		82.9		3.9		27.3
AVG DAILY MAX		35.6		29.4		94.2		4.7		32.9
AVG DAILY MIN		22.4		18.5		67.9		3.2		21.6
ABSOLUTE MAX		58.8		44.3		100.0		7.7		47.0
ABSOLUTE MIN		-7.9		-12.0		32.0		.7		-8.4
TOTAL OBS		744		744		744		744		744

B8

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

FEBRUARY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	28	37.2	28	29.5	28	74.3	28	4.7	28	34.2
2	28	36.2	28	29.3	28	76.5	28	4.7	28	33.6
3	28	35.5	28	29.2	28	78.3	28	4.7	28	33.1
4	28	35.2	28	29.5	28	80.5	28	4.8	28	33.1
5	28	34.8	28	29.5	28	81.6	28	4.8	28	32.9
6	28	34.3	28	29.2	28	82.4	28	4.8	28	32.4
7	28	33.4	28	28.7	28	83.5	28	4.7	28	31.8
8	28	33.0	28	28.4	28	83.8	28	4.6	28	31.4
9	28	34.1	28	28.8	28	81.6	28	4.7	28	32.2
10	28	37.2	28	29.2	28	74.2	28	4.7	28	34.1
11	28	40.4	28	29.6	28	67.1	28	4.8	28	36.1
12	28	43.1	28	29.6	28	61.1	28	4.8	28	37.5
13	28	45.8	28	29.1	28	54.5	28	4.7	28	38.8
14	28	47.8	28	29.1	28	50.9	28	4.6	28	39.8
15	28	49.1	28	29.5	28	49.6	28	4.7	28	40.6
16	28	50.0	28	30.0	28	49.2	28	4.8	28	41.3
17	28	50.0	28	30.1	28	49.5	28	4.8	28	41.4
18	28	48.8	28	30.9	28	53.2	28	5.0	28	40.9
19	28	46.1	28	31.0	28	58.1	28	5.0	28	39.6
20	28	44.0	28	30.7	28	61.6	28	5.0	28	38.4
21	28	42.0	28	30.2	28	64.3	28	4.8	28	37.1
22	28	40.7	28	30.0	28	67.0	28	4.8	28	36.4
23	28	39.2	28	29.8	28	69.8	28	4.8	28	35.5
24	28	38.1	28	29.6	28	72.4	28	4.7	28	34.8
HOURLY MEAN		40.7		29.6		67.7		4.8		36.1
AVG DAILY MAX		51.6		35.7		87.5		6.0		43.3
AVG DAILY MIN		29.4		23.4		45.6		3.7		27.8
ABSOLUTE MAX		74.0		59.9		100.0		13.2		61.8
ABSOLUTE MIN		12.7		6.0		23.2		1.6		11.3
TOTAL OBS		672		672		672		672		672

B9

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

MARCH

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	42.2	31	33.1	31	72.1	31	5.5	31	38.5
2	31	41.5	31	32.7	31	73.2	31	5.5	31	38.0
3	31	40.7	31	32.5	31	74.5	31	5.4	31	37.5
4	31	40.0	31	32.4	31	76.4	31	5.4	31	37.0
5	31	39.4	31	32.2	31	77.2	31	5.4	31	36.6
6	31	39.1	31	31.8	31	76.8	31	5.3	31	36.2
7	31	38.6	31	31.7	31	77.7	31	5.2	31	35.9
8	31	38.6	31	31.6	31	77.3	31	5.2	31	35.8
9	31	40.0	31	31.6	31	73.5	31	5.2	31	36.7
10	31	42.3	31	32.0	31	69.5	31	5.3	31	38.1
11	31	44.7	31	32.5	31	65.2	31	5.3	31	39.7
12	31	47.1	31	33.0	31	61.4	31	5.4	31	41.1
13	31	49.0	31	33.3	31	58.6	31	5.5	31	42.2
14	31	50.8	31	33.6	31	56.2	31	5.6	31	43.3
15	31	51.9	31	33.8	31	55.2	31	5.7	31	44.0
16	31	52.6	31	34.1	31	54.6	31	5.7	31	44.4
17	31	52.8	31	34.1	31	54.2	31	5.7	31	44.4
18	31	52.1	31	33.9	31	54.9	31	5.7	31	44.0
19	31	50.3	31	34.1	31	58.2	31	5.7	31	43.2
20	31	48.5	31	33.9	31	60.8	31	5.6	31	42.2
21	31	46.8	31	33.5	31	63.2	31	5.5	31	41.1
22	31	45.4	31	33.5	31	65.8	31	5.5	31	40.3
23	31	44.5	31	33.7	31	68.3	31	5.6	31	40.0
24	31	43.5	31	33.8	31	70.8	31	5.7	31	39.5
HOURLY MEAN		45.1	33.0		66.5		5.5		40.0	
AVG DAILY MAX		54.3	39.7		84.1		7.0		46.0	
AVG DAILY MIN		36.0	26.5		50.0		4.2		33.3	
ABSOLUTE MAX		89.4	59.4		100.0		12.3		69.9	
ABSOLUTE MIN		19.8	4.1		17.9		1.5		17.8	
TOTAL OBS		744	744		744		744		744	

B10

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-MAR 2017

JAN-MAR HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	90	35.3	90	28.7	90	78.3	90	4.7	90	32.8
2	90	34.6	90	28.4	90	79.5	90	4.6	90	32.3
3	90	34.0	90	28.2	90	80.7	90	4.6	90	31.9
4	90	33.7	90	28.4	90	82.1	90	4.7	90	31.7
5	90	33.4	90	28.2	90	82.5	90	4.6	90	31.5
6	90	33.0	90	27.9	90	82.5	90	4.6	90	31.1
7	90	32.5	90	27.6	90	83.2	90	4.5	90	30.7
8	90	32.4	90	27.5	90	83.1	90	4.5	90	30.6
9	90	33.2	90	27.6	90	81.1	90	4.5	90	31.2
10	90	35.3	90	27.9	90	76.3	90	4.6	90	32.5
11	90	37.7	90	28.4	90	71.4	90	4.6	90	34.1
12	90	39.8	90	28.6	90	67.2	90	4.7	90	35.4
13	90	41.8	90	28.7	90	63.1	90	4.7	90	36.5
14	90	43.6	90	29.0	90	60.3	90	4.7	90	37.6
15	90	44.7	90	29.3	90	59.1	90	4.8	90	38.3
16	90	45.4	90	29.7	90	58.7	90	4.9	90	38.8
17	90	45.4	90	29.9	90	59.2	90	4.9	90	38.8
18	90	44.4	90	30.2	90	61.9	90	4.9	90	38.4
19	90	42.5	90	30.2	90	65.8	90	4.9	90	37.3
20	90	40.8	90	30.0	90	68.7	90	4.9	90	36.4
21	90	39.3	90	29.6	90	71.0	90	4.8	90	35.4
22	90	38.2	90	29.4	90	73.1	90	4.8	90	34.7
23	90	37.2	90	29.3	90	75.1	90	4.8	90	34.1
24	90	36.4	90	29.2	90	77.0	90	4.8	90	33.6
HOURLY MEAN		38.1		28.8		72.5		4.7		34.4
AVG DAILY MAX		47.0		34.9		88.7		5.9		40.6
AVG DAILY MIN		29.3		22.8		54.8		3.7		27.5
ABSOLUTE MAX		89.4		59.9		100.0		13.2		69.9
ABSOLUTE MIN		-7.9		-12.0		17.9		.7		-8.4
TOTAL OBS		2160		2160		2160		2160		2160

B11

PROGRAM: WETTEMP
 VERSION: PC-1.0

NFPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

APRIL

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	51.9	30	46.6	30	83.2	30	8.5	30	49.2
2	30	51.0	30	46.3	30	84.8	30	8.4	30	48.6
3	30	50.3	30	46.0	30	85.9	30	8.4	30	48.2
4	30	49.7	30	45.9	30	87.5	30	8.3	30	47.8
5	30	48.9	30	45.8	30	89.5	30	8.3	30	47.4
6	30	48.3	30	45.6	30	90.8	30	8.3	30	47.0
7	30	48.1	30	45.3	30	90.4	30	8.2	30	46.7
8	30	49.6	29	45.9	29	86.2	29	8.4	29	48.0
9	30	51.9	29	46.2	29	80.9	29	8.5	29	49.3
10	30	54.1	29	46.0	29	75.0	29	8.4	29	50.3
11	30	56.1	29	45.7	29	70.6	29	8.4	29	51.1
12	30	57.9	29	45.6	29	66.8	29	8.3	29	51.8
13	30	59.5	29	45.9	29	64.2	29	8.4	29	52.6
14	30	60.6	29	46.0	29	62.1	29	8.5	29	53.2
15	30	61.5	29	46.1	29	61.0	29	8.5	29	53.6
16	30	61.9	29	46.5	29	60.7	29	8.6	29	53.9
17	30	62.1	29	46.7	29	60.9	29	8.7	29	54.0
18	30	61.8	29	46.9	29	61.6	29	8.7	29	53.9
19	30	60.7	30	46.9	30	63.8	30	8.7	30	53.5
20	30	58.3	30	47.2	30	69.2	30	8.8	30	52.6
21	30	56.5	30	47.3	30	73.5	30	8.8	30	51.7
22	30	54.8	30	47.0	30	77.0	30	8.7	30	50.8
23	30	53.6	30	47.1	30	80.2	30	8.7	30	50.3
24	30	52.8	30	47.0	30	81.7	30	8.7	30	49.8
HOURLY MEAN		55.1		46.3		75.4		8.5		50.6
AVG DAILY MAX		63.5		51.5		94.3		10.1		55.5
AVG DAILY MIN		46.4		41.1		56.1		7.0		44.9
ABSOLUTE MAX		79.8		66.6		100.0		16.4		69.5
ABSOLUTE MIN		34.1		28.2		22.7		3.9		33.8
TOTAL OBS		720		709		709		709		709

B12

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

MAY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	59.0	31	52.6	31	80.6	31	10.4	31	55.5
2	31	58.1	31	52.2	31	81.9	31	10.3	31	54.9
3	31	57.4	31	51.7	31	82.5	31	10.2	31	54.3
4	31	56.8	31	51.4	31	83.1	31	10.0	31	53.9
5	31	56.1	31	51.0	31	84.1	31	9.9	31	53.4
6	31	55.6	31	50.9	31	85.2	31	9.9	31	53.1
7	31	56.7	31	50.7	31	81.5	31	9.8	31	53.5
8	31	58.9	31	51.1	31	76.5	31	9.9	31	54.7
9	31	61.7	31	51.2	31	70.2	31	9.9	31	56.0
10	31	64.6	31	50.6	31	63.3	31	9.7	31	56.9
11	31	66.8	31	50.0	31	58.1	31	9.5	31	57.6
12	31	68.6	31	49.6	31	54.1	31	9.3	31	58.1
13	31	69.9	31	49.5	31	52.2	31	9.3	31	58.6
14	31	70.9	31	49.6	31	50.8	31	9.3	31	59.0
15	31	72.1	31	49.7	31	48.8	31	9.3	31	59.5
16	31	72.6	31	50.0	31	48.6	31	9.4	31	59.9
17	31	73.0	31	50.2	31	48.0	31	9.4	31	60.1
18	31	72.7	31	50.3	31	48.6	31	9.5	31	60.1
19	31	72.0	31	51.3	31	51.4	31	9.8	31	60.2
20	31	68.8	31	52.1	31	58.2	31	10.2	31	59.4
21	31	65.7	31	52.4	31	64.7	31	10.3	31	58.2
22	31	63.1	31	52.8	31	71.1	31	10.4	31	57.3
23	31	61.6	31	52.8	31	74.2	31	10.4	31	56.7
24	31	60.5	31	52.8	31	77.2	31	10.5	31	56.3
HOURLY MEAN		64.3		51.1		66.4		9.9		57.0
AVG DAILY MAX		73.9		56.2		89.9		11.8		61.5
AVG DAILY MIN		54.2		46.5		45.0		8.3		51.9
ABSOLUTE MAX		91.9		68.6		100.0		17.0		75.3
ABSOLUTE MIN		36.9		36.8		23.4		5.7		36.9
TOTAL OBS		744		744		744		744		744

B13

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

JUNE

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	70.4	30	62.6	30	77.1	30	14.6	30	65.6
2	30	69.1	30	61.9	30	78.6	30	14.3	30	64.7
3	30	67.8	30	61.9	30	82.1	30	14.3	30	64.2
4	30	67.0	30	61.8	30	84.0	30	14.2	30	63.9
5	30	66.2	30	61.4	30	85.4	30	14.1	30	63.4
6	30	65.8	30	61.2	30	85.6	30	13.9	30	63.0
7	30	67.3	30	61.5	30	82.2	30	14.0	30	63.8
8	30	69.8	30	61.4	30	75.9	30	14.0	30	64.7
9	30	72.7	30	61.1	30	68.5	30	13.8	30	65.6
10	30	75.3	30	60.7	30	62.1	30	13.6	30	66.4
11	30	78.1	30	60.1	30	55.7	30	13.3	30	67.1
12	30	80.1	30	59.7	30	51.5	30	13.1	30	67.5
13	30	81.6	30	59.2	30	48.6	30	12.9	30	67.8
14	30	82.8	30	59.1	30	46.8	30	12.9	30	68.2
15	30	83.7	30	59.6	30	46.2	30	13.1	30	68.7
16	30	84.2	30	59.9	30	46.0	30	13.2	30	69.0
17	30	84.4	30	60.4	30	46.4	30	13.4	30	69.4
18	30	83.9	30	61.2	30	48.4	30	13.8	30	69.7
19	30	83.2	30	62.3	30	50.9	30	14.3	30	69.9
20	30	80.5	30	63.5	30	57.6	30	14.9	30	69.7
21	30	77.0	30	63.3	30	63.7	30	14.8	30	68.4
22	30	74.5	30	63.3	30	69.3	30	14.9	30	67.5
23	30	73.0	30	63.5	30	73.4	30	15.0	30	67.1
24	30	71.5	30	63.3	30	76.3	30	14.9	30	66.4
HOURLY MEAN		75.4		61.4		65.1		14.0		66.7
AVG DAILY MAX		84.9		66.6		89.6		16.6		71.0
AVG DAILY MIN		65.1		56.2		44.2		11.6		62.0
ABSOLUTE MAX		95.4		74.8		100.0		21.0		78.4
ABSOLUTE MIN		55.0		40.1		21.6		6.2		51.5
TOTAL OBS		720		720		720		720		720

B14

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY APR-JUN 2017

APR-JUN HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	91	60.4	91	53.9	91	80.3	91	11.2	91	56.8
2	91	59.4	91	53.4	91	81.8	91	11.0	91	56.1
3	91	58.5	91	53.2	91	83.5	91	10.9	91	55.6
4	91	57.8	91	53.0	91	84.8	91	10.9	91	55.2
5	91	57.1	91	52.7	91	86.3	91	10.8	91	54.7
6	91	56.6	91	52.5	91	87.2	91	10.7	91	54.3
7	91	57.4	91	52.5	91	84.7	91	10.7	91	54.7
8	91	59.4	90	52.9	90	79.4	90	10.8	90	55.9
9	91	62.1	90	52.9	90	73.1	90	10.7	90	57.0
10	91	64.7	90	52.5	90	66.7	90	10.6	90	57.9
11	91	67.0	90	52.0	90	61.3	90	10.4	90	58.6
12	91	68.9	90	51.7	90	57.3	90	10.3	90	59.2
13	91	70.3	90	51.6	90	54.8	90	10.2	90	59.7
14	91	71.5	90	51.6	90	53.1	90	10.2	90	60.2
15	91	72.4	90	51.8	90	51.9	90	10.3	90	60.6
16	91	72.9	90	52.2	90	51.6	90	10.4	90	61.0
17	91	73.2	90	52.4	90	51.6	90	10.5	90	61.2
18	91	72.8	90	52.8	90	52.7	90	10.7	90	61.3
19	91	72.0	91	53.5	91	55.3	91	10.9	91	61.2
20	91	69.2	91	54.3	91	61.6	91	11.3	91	60.5
21	91	66.4	91	54.3	91	67.3	91	11.3	91	59.4
22	91	64.1	91	54.4	91	72.5	91	11.3	91	58.6
23	91	62.7	91	54.5	91	75.9	91	11.4	91	58.0
24	91	61.6	91	54.3	91	78.4	91	11.3	91	57.5
HOURLY MEAN		64.9		53.0		68.9		10.8		58.1
AVG DAILY MAX		74.1		58.1		91.3		12.8		62.7
AVG DAILY MIN		55.2		47.9		48.4		9.0		52.9
ABSOLUTE MAX		95.4		74.8		100.0		21.0		78.4
ABSOLUTE MIN		34.1		28.2		21.6		3.9		33.8
TOTAL OBS		2184		2173		2173		2173		2173

B15

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-JUN 2017

JAN-JUN HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	181	48.0	181	41.4	181	79.3	181	7.9	181	44.8
2	181	47.1	181	41.0	181	80.6	181	7.8	181	44.2
3	181	46.3	181	40.8	181	82.1	181	7.8	181	43.8
4	181	45.8	181	40.7	181	83.5	181	7.8	181	43.5
5	181	45.3	181	40.6	181	84.4	181	7.7	181	43.2
6	181	44.8	181	40.3	181	84.8	181	7.6	181	42.8
7	181	45.0	181	40.1	181	83.9	181	7.6	181	42.8
8	181	46.0	180	40.2	180	81.2	180	7.6	180	43.2
9	181	47.7	180	40.2	180	77.1	180	7.6	180	44.1
10	181	50.1	180	40.2	180	71.5	180	7.6	180	45.2
11	181	52.4	180	40.2	180	66.4	180	7.5	180	46.3
12	181	54.4	180	40.2	180	62.3	180	7.5	180	47.3
13	181	56.1	180	40.1	180	59.0	180	7.5	180	48.1
14	181	57.6	180	40.3	180	56.7	180	7.5	180	48.9
15	181	58.6	180	40.6	180	55.5	180	7.6	180	49.5
16	181	59.2	180	40.9	180	55.2	180	7.6	180	49.9
17	181	59.3	180	41.1	180	55.4	180	7.7	180	50.0
18	181	58.7	180	41.5	180	57.3	180	7.8	180	49.8
19	181	57.3	181	41.9	181	60.5	181	8.0	181	49.3
20	181	55.1	181	42.2	181	65.2	181	8.1	181	48.5
21	181	52.9	181	42.0	181	69.1	181	8.1	181	47.5
22	181	51.3	181	42.0	181	72.8	181	8.1	181	46.7
23	181	50.0	181	41.9	181	75.5	181	8.1	181	46.1
24	181	49.1	181	41.8	181	77.7	181	8.1	181	45.6
HOURLY MEAN		51.6		40.9		70.7		7.8		46.3
AVG DAILY MAX		60.6		46.6		90.0		9.4		51.7
AVG DAILY MIN		42.3		35.4		51.6		6.3		40.3
ABSOLUTE MAX		95.4		74.8		100.0		21.0		78.4
ABSOLUTE MIN		-7.9		-12.0		17.9		.7		-8.4
TOTAL OBS		4344		4333		4333		4333		4333

B16

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

JULY

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	74.7	31	70.1	31	86.3	31	18.5	31	71.6
2	31	73.7	31	69.6	31	87.7	31	18.2	31	70.9
3	31	72.8	31	69.2	31	89.0	31	18.0	31	70.4
4	31	72.2	31	68.8	31	89.8	31	17.8	31	69.9
5	31	71.5	31	68.6	31	91.1	31	17.7	31	69.5
6	31	70.9	31	68.2	31	91.6	31	17.5	31	69.1
7	31	71.6	31	68.3	31	89.8	31	17.5	31	69.4
8	31	73.7	31	68.5	31	84.4	31	17.6	31	70.3
9	31	76.2	31	68.8	31	78.5	31	17.7	31	71.3
10	31	78.6	31	69.4	31	74.1	31	18.0	31	72.5
11	31	80.9	31	69.7	31	69.4	31	18.1	31	73.4
12	31	82.8	31	69.0	31	63.9	31	17.7	31	73.6
13	31	84.3	31	68.9	31	60.8	31	17.5	31	73.9
14	31	85.5	31	68.7	31	58.1	31	17.4	31	74.1
15	31	86.3	31	68.6	31	56.6	31	17.3	31	74.3
16	31	86.5	31	69.1	31	57.1	31	17.6	31	74.6
17	31	86.4	31	69.4	31	57.9	31	17.8	31	74.8
18	31	86.1	31	70.2	31	60.0	31	18.3	31	75.2
19	31	85.2	31	71.3	31	64.0	31	19.0	31	75.7
20	31	82.5	31	71.9	31	70.8	31	19.4	31	75.2
21	31	79.5	31	71.8	31	77.7	31	19.4	31	74.2
22	31	77.8	31	71.5	31	81.5	31	19.3	31	73.5
23	31	76.7	31	70.9	31	83.1	31	18.9	31	72.8
24	31	75.5	31	70.6	31	85.5	31	18.8	31	72.2
HOURLY MEAN		78.8		69.6		75.4		18.1		72.6
AVG DAILY MAX		87.4		73.7		96.3		20.6		76.5
AVG DAILY MIN		70.0		66.2		54.1		16.1		68.4
ABSOLUTE MAX		98.4		80.3		100.0		25.0		83.1
ABSOLUTE MIN		58.6		57.4		43.0		11.7		58.4
TOTAL OBS		744		744		744		744		744

B17

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

AUGUST

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	66.4	31	64.5	31	94.0	31	15.6	31	65.2
2	31	65.7	31	64.0	31	94.5	31	15.3	31	64.6
3	31	65.0	31	63.6	31	95.4	31	15.1	31	64.1
4	31	64.3	31	63.1	31	95.8	31	14.8	31	63.5
5	31	63.5	31	62.6	31	96.9	31	14.6	31	63.0
6	31	62.9	31	62.1	31	97.2	31	14.3	31	62.4
7	31	63.2	31	62.0	31	96.0	31	14.3	31	62.5
8	31	65.3	31	62.9	31	92.3	31	14.7	31	63.9
9	31	67.9	31	63.5	31	86.1	31	14.9	31	65.2
10	31	70.7	31	63.7	31	79.1	31	15.0	31	66.4
11	31	73.2	31	63.6	31	72.6	31	14.9	31	67.2
12	31	75.0	31	63.1	31	67.3	31	14.6	31	67.6
13	31	76.3	31	62.6	31	63.8	31	14.3	31	67.7
14	31	77.7	31	62.5	31	60.4	31	14.2	31	68.1
15	31	78.8	31	62.5	31	58.1	31	14.2	31	68.5
16	31	79.2	31	62.5	31	57.2	31	14.2	31	68.6
17	31	78.9	31	62.7	31	58.2	31	14.3	31	68.6
18	31	78.5	31	63.5	31	60.9	31	14.7	31	69.0
19	31	77.0	31	65.2	31	67.5	31	15.6	31	69.4
20	31	73.6	31	65.7	31	76.9	31	16.0	31	68.6
21	31	71.2	31	65.6	31	82.6	31	16.0	31	67.7
22	31	69.5	31	65.4	31	87.1	31	15.9	31	67.0
23	31	68.5	31	65.2	31	89.5	31	15.8	31	66.4
24	31	67.1	31	64.8	31	92.4	31	15.6	31	65.7
HOURLY MEAN		70.8		63.6		80.1		15.0		66.3
AVG DAILY MAX		79.6		67.6		98.9		17.1		70.3
AVG DAILY MIN		61.9		60.0		55.9		13.2		61.4
ABSOLUTE MAX		86.1		76.8		100.0		22.7		78.1
ABSOLUTE MIN		52.6		48.9		40.0		8.6		52.5
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 JUL-SEP 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

SEPTEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	65.6	29	61.4	29	86.1	29	14.1	29	63.1
2	30	64.9	29	61.0	29	87.1	29	13.9	29	62.6
3	30	63.9	29	60.4	29	88.4	29	13.7	29	61.9
4	30	63.3	29	60.2	29	89.5	29	13.6	29	61.5
5	30	62.4	29	59.9	29	91.3	29	13.5	29	61.0
6	30	61.4	29	59.6	29	93.5	29	13.4	29	60.4
7	30	60.8	29	59.2	29	93.7	29	13.2	29	59.9
8	30	62.5	29	59.6	29	89.8	29	13.4	29	60.9
9	30	66.2	28	60.6	28	80.8	28	13.7	28	63.1
10	30	70.3	28	61.1	28	71.2	28	13.9	28	65.1
11	30	74.1	28	60.7	28	61.9	28	13.6	28	66.3
12	30	76.6	28	60.2	28	56.5	28	13.4	28	66.9
13	30	78.3	28	59.7	28	52.8	28	13.1	28	67.3
14	30	79.4	28	59.4	28	50.4	28	13.0	28	67.5
15	30	80.3	28	59.1	28	48.7	28	12.8	28	67.6
16	30	80.4	28	59.6	28	49.3	28	13.0	28	67.9
17	30	80.1	29	60.1	29	51.0	29	13.2	29	67.9
18	30	78.6	29	61.1	29	55.2	29	13.7	29	67.9
19	30	75.3	29	62.1	29	63.6	29	14.2	29	67.2
20	30	72.4	29	62.2	29	70.2	29	14.3	29	66.2
21	30	70.5	29	62.1	29	74.6	29	14.3	29	65.5
22	30	69.0	29	62.1	29	78.5	29	14.4	29	64.9
23	30	67.7	29	61.9	29	81.7	29	14.3	29	64.3
24	30	66.6	29	61.5	29	83.6	29	14.1	29	63.7
HOURLY MEAN		70.4	60.6		73.1		13.7		64.6	
AVG DAILY MAX		81.2	64.7		95.3		15.6		68.8	
AVG DAILY MIN		60.0	56.1		48.7		11.6		58.6	
ABSOLUTE MAX		92.6	75.1		100.0		21.3		78.7	
ABSOLUTE MIN		44.5	41.4		28.2		6.6		44.3	
TOTAL OBS		720	688		688		688		688	

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-SEP 2017

JUL-SEP HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	92	68.9	91	65.4	91	88.9	91	16.1	91	66.8
2	92	68.1	91	64.9	91	89.8	91	15.8	91	66.1
3	92	67.3	91	64.5	91	91.0	91	15.6	91	65.5
4	92	66.6	91	64.1	91	91.8	91	15.4	91	65.1
5	92	65.8	91	63.8	91	93.2	91	15.3	91	64.6
6	92	65.1	91	63.4	91	94.1	91	15.1	91	64.1
7	92	65.3	91	63.3	91	93.1	91	15.1	91	64.1
8	92	67.2	91	63.8	91	88.8	91	15.3	91	65.1
9	92	70.1	90	64.4	90	81.8	90	15.5	90	66.7
10	92	73.2	90	64.9	90	74.9	90	15.7	90	68.1
11	92	76.1	90	64.8	90	68.2	90	15.6	90	69.0
12	92	78.2	90	64.2	90	62.8	90	15.3	90	69.4
13	92	79.6	90	63.9	90	59.3	90	15.1	90	69.7
14	92	80.9	90	63.7	90	56.5	90	14.9	90	70.0
15	92	81.8	90	63.5	90	54.6	90	14.8	90	70.2
16	92	82.1	90	63.8	90	54.7	90	15.0	90	70.5
17	92	81.8	91	64.1	91	55.8	91	15.1	91	70.5
18	92	81.1	91	65.0	91	58.8	91	15.6	91	70.7
19	92	79.2	91	66.3	91	65.1	91	16.3	91	70.9
20	92	76.2	91	66.7	91	72.6	91	16.6	91	70.1
21	92	73.8	91	66.6	91	78.4	91	16.6	91	69.2
22	92	72.1	91	66.4	91	82.5	91	16.6	91	68.5
23	92	71.0	91	66.1	91	84.8	91	16.4	91	67.9
24	92	69.8	91	65.7	91	87.2	91	16.2	91	67.3
HOURLY MEAN		73.4		64.7		76.2		15.6		67.9
AVG DAILY MAX		82.7		68.7		96.9		17.8		71.9
AVG DAILY MIN		64.0		60.8		52.9		13.7		62.9
ABSOLUTE MAX		98.4		80.3		100.0		25.0		83.1
ABSOLUTE MIN		44.5		41.4		28.2		6.6		44.3
TOTAL OBS		2208		2176		2176		2176		2176

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY OCT-DEC 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD

OCTOBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	53.6	30	46.2	30	77.4	30	8.9	30	50.1
2	30	52.7	30	45.8	30	78.8	30	8.8	30	49.5
3	30	52.0	30	45.2	30	79.3	30	8.6	30	48.9
4	30	51.3	30	44.8	30	80.1	30	8.5	30	48.4
5	30	50.9	30	44.5	30	80.4	30	8.4	30	48.0
6	30	50.4	30	44.4	30	81.6	30	8.4	30	47.7
7	31	49.8	31	44.4	31	83.0	31	8.4	31	47.4
8	31	50.2	31	44.4	31	81.8	31	8.4	31	47.6
9	31	52.8	31	44.9	31	75.9	31	8.6	31	49.1
10	31	55.7	31	45.1	31	69.5	31	8.7	31	50.7
11	31	58.4	31	45.3	31	64.4	31	8.7	31	52.0
12	31	60.9	31	45.3	31	59.6	31	8.7	31	53.1
13	31	62.9	31	45.1	31	55.7	31	8.7	31	54.0
14	31	64.0	31	45.1	31	54.1	31	8.7	31	54.5
15	31	65.0	31	45.2	31	53.1	31	8.7	31	54.9
16	31	65.1	31	45.2	31	52.9	31	8.7	31	55.0
17	31	64.3	31	44.9	31	53.4	31	8.5	31	54.5
18	31	62.1	31	45.5	31	57.4	31	8.7	31	53.7
19	30	59.2	30	45.7	30	62.7	30	8.7	30	52.5
20	30	57.1	30	45.9	30	67.4	30	8.8	30	51.6
21	30	56.0	30	46.1	30	70.4	30	8.9	30	51.2
22	30	54.8	30	45.9	30	72.9	30	8.8	30	50.5
23	30	53.7	30	45.6	30	75.0	30	8.7	30	49.9
24	30	53.0	30	45.6	30	76.8	30	8.7	30	49.5
HOURLY MEAN		56.5		45.3		69.2		8.7		51.0
AVG DAILY MAX		66.8		51.1		89.0		10.5		56.8
AVG DAILY MIN		47.5		39.9		48.7		7.2		45.2
ABSOLUTE MAX		86.4		71.3		100.0		19.2		72.2
ABSOLUTE MIN		25.1		7.8		18.3		1.7		23.6
TOTAL OBS		732		732		732		732		732

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PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY OCT-DEC 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD 10/ 1/17 TO 12/31/17

NOVEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	30	40.0	30	32.8	30	76.9	30	5.3	30	37.1
2	30	39.6	30	32.7	30	77.7	30	5.3	30	36.8
3	30	38.8	30	32.6	30	79.6	30	5.2	30	36.3
4	30	37.9	30	32.3	30	81.3	30	5.2	30	35.7
5	30	37.4	30	32.3	30	82.8	30	5.2	30	35.4
6	30	37.1	30	32.5	30	84.4	30	5.2	30	35.3
7	30	36.8	30	32.5	30	85.0	30	5.2	30	35.1
8	30	36.5	30	32.0	30	84.6	30	5.1	30	34.7
9	30	38.0	30	32.2	30	80.3	30	5.1	30	35.7
10	30	40.7	30	33.0	30	74.5	30	5.2	30	37.6
11	30	43.9	30	33.0	30	66.8	30	5.3	30	39.4
12	30	46.4	30	33.1	30	61.6	30	5.3	30	40.8
13	30	48.4	30	33.1	30	57.5	30	5.3	30	41.9
14	30	50.2	30	33.2	30	54.5	30	5.3	30	42.8
15	30	51.5	30	33.2	30	52.0	30	5.3	30	43.5
16	30	51.8	30	33.1	30	51.4	30	5.3	30	43.7
17	30	51.0	30	33.2	30	52.8	30	5.3	30	43.3
18	30	48.8	30	33.5	30	57.4	30	5.4	30	42.2
19	30	46.5	30	33.5	30	62.0	30	5.4	30	41.0
20	30	44.8	30	33.5	30	66.0	30	5.4	30	40.1
21	30	43.4	30	33.2	30	68.7	30	5.3	30	39.2
22	30	42.3	30	33.1	30	71.1	30	5.3	30	38.6
23	30	41.5	30	32.9	30	72.9	30	5.3	30	38.1
24	30	40.6	30	32.8	30	74.8	30	5.3	30	37.5
HOURLY MEAN		43.1		32.9		69.9		5.3		38.8
AVG DAILY MAX		53.0		39.2		90.3		6.6		45.8
AVG DAILY MIN		32.5		26.2		47.7		4.0		30.5
ABSOLUTE MAX		73.1		57.9		100.0		12.2		61.1
ABSOLUTE MIN		14.9		11.6		29.8		2.1		14.2
TOTAL OBS		720		720		720		720		720

B22

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY OCT-DEC 2017

MONTHLY HOUR AVERAGES FOR THE PERIOD 10/ 1/17 TO 12/31/17

DECEMBER

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	31	28.4	31	20.5	31	73.1	31	3.4	31	25.7
2	31	27.9	31	20.4	31	74.0	31	3.4	31	25.4
3	31	27.1	31	20.1	31	75.5	31	3.4	31	24.8
4	31	26.9	31	20.0	31	75.8	31	3.4	31	24.6
5	31	26.5	31	19.8	31	76.7	31	3.4	31	24.3
6	31	26.2	31	19.6	31	77.0	31	3.4	31	24.0
7	31	26.0	31	19.3	31	77.0	31	3.4	31	23.8
8	31	25.9	31	19.3	31	77.5	31	3.4	31	23.7
9	31	26.4	31	19.0	31	75.1	31	3.3	31	24.0
10	31	28.6	31	19.6	31	70.3	31	3.4	31	25.5
11	31	31.0	31	20.1	31	65.3	31	3.4	31	27.2
12	31	32.8	31	20.0	31	60.8	31	3.3	31	28.2
13	31	34.2	31	20.0	31	58.1	31	3.3	31	29.1
14	31	35.5	31	20.3	31	56.2	31	3.4	31	29.9
15	31	36.3	31	20.7	31	55.7	31	3.4	31	30.5
16	31	36.3	31	21.0	31	56.8	31	3.4	31	30.6
17	31	35.3	31	21.4	31	59.8	31	3.5	31	30.2
18	31	33.3	31	21.2	31	63.1	31	3.5	31	28.9
19	31	31.3	31	20.7	31	66.6	31	3.4	31	27.5
20	31	29.8	31	20.3	31	69.1	31	3.4	31	26.5
21	31	28.7	31	20.0	31	71.0	31	3.3	31	25.7
22	31	28.0	31	19.6	31	72.0	31	3.3	31	25.1
23	31	27.5	31	19.2	31	72.0	31	3.3	31	24.7
24	31	27.2	31	19.1	31	72.5	31	3.3	31	24.5
HOURLY MEAN		29.9	20.0		68.8		3.4		26.4	
AVG DAILY MAX		37.9	25.8		84.8		4.3		32.2	
AVG DAILY MIN		21.3	14.0		51.6		2.6		19.4	
ABSOLUTE MAX		65.6	59.6		100.0		13.0		61.9	
ABSOLUTE MIN		-11.0	-15.2		29.3		.6		-11.4	
TOTAL OBS		744	744		744		744		744	

B23

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY OCT-DEC 2017

OCT-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	91	40.5	91	33.0	91	75.7	91	5.9	91	37.5
2	91	39.9	91	32.8	91	76.8	91	5.8	91	37.1
3	91	39.2	91	32.5	91	78.1	91	5.7	91	36.5
4	91	38.6	91	32.3	91	79.1	91	5.7	91	36.1
5	91	38.2	91	32.1	91	80.0	91	5.6	91	35.8
6	91	37.8	91	32.0	91	81.0	91	5.7	91	35.5
7	92	37.6	92	32.1	92	81.6	92	5.7	92	35.4
8	92	37.5	92	31.9	92	81.2	92	5.6	92	35.3
9	92	39.1	92	32.0	92	77.1	92	5.7	92	36.3
10	92	41.7	92	32.6	92	71.4	92	5.8	92	37.9
11	92	44.4	92	32.8	92	65.5	92	5.8	92	39.5
12	92	46.7	92	32.8	92	60.7	92	5.8	92	40.7
13	92	48.5	92	32.7	92	57.1	92	5.8	92	41.6
14	92	49.9	92	32.9	92	55.0	92	5.8	92	42.4
15	92	50.9	92	33.0	92	53.6	92	5.8	92	43.0
16	92	51.1	92	33.1	92	53.7	92	5.8	92	43.1
17	92	50.2	92	33.2	92	55.4	92	5.8	92	42.6
18	92	48.1	92	33.4	92	59.3	92	5.9	92	41.6
19	91	45.5	91	33.2	91	63.8	91	5.8	91	40.2
20	91	43.7	91	33.1	91	67.5	91	5.8	91	39.3
21	91	42.5	91	32.9	91	70.1	91	5.8	91	38.6
22	91	41.5	91	32.7	91	72.0	91	5.8	91	37.9
23	91	40.7	91	32.4	91	73.3	91	5.8	91	37.4
24	91	40.1	91	32.3	91	74.7	91	5.8	91	37.0
HOURLY MEAN		43.1		32.7		69.3		5.8		38.7
AVG DAILY MAX		52.6		38.7		88.0		7.1		44.9
AVG DAILY MIN		33.8		26.7		49.4		4.6		31.7
ABSOLUTE MAX		86.4		71.3		100.0		19.2		72.2
ABSOLUTE MIN		-11.0		-15.2		18.3		.6		-11.4
TOTAL OBS		2196		2196		2196		2196		2196

B24

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JUL-DEC 2017

JUL-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	183	54.8	182	49.2	182	82.3	182	11.0	182	52.1
2	183	54.1	182	48.9	182	83.3	182	10.8	182	51.6
3	183	53.3	182	48.5	182	84.6	182	10.7	182	51.0
4	183	52.7	182	48.2	182	85.4	182	10.6	182	50.6
5	183	52.1	182	47.9	182	86.6	182	10.5	182	50.2
6	183	51.5	182	47.7	182	87.5	182	10.4	182	49.8
7	184	51.4	183	47.6	183	87.4	183	10.3	183	49.7
8	184	52.4	183	47.8	183	85.0	183	10.4	183	50.2
9	184	54.6	182	48.0	182	79.4	182	10.5	182	51.3
10	184	57.5	182	48.5	182	73.1	182	10.7	182	52.8
11	184	60.3	182	48.6	182	66.8	182	10.6	182	54.1
12	184	62.4	182	48.3	182	61.7	182	10.5	182	54.9
13	184	64.1	182	48.1	182	58.2	182	10.4	182	55.5
14	184	65.4	182	48.1	182	55.7	182	10.3	182	56.0
15	184	66.4	182	48.1	182	54.1	182	10.3	182	56.4
16	184	66.6	182	48.3	182	54.2	182	10.3	182	56.6
17	184	66.0	183	48.6	183	55.6	183	10.4	183	56.5
18	184	64.6	183	49.1	183	59.0	183	10.7	183	56.1
19	183	62.5	182	49.7	182	64.4	182	11.1	182	55.5
20	183	60.1	182	49.9	182	70.1	182	11.2	182	54.7
21	183	58.2	182	49.8	182	74.2	182	11.2	182	53.9
22	183	56.9	182	49.6	182	77.2	182	11.2	182	53.2
23	183	55.9	182	49.3	182	79.1	182	11.1	182	52.7
24	183	55.0	182	49.0	182	81.0	182	11.0	182	52.1
HOURLY MEAN		58.3		48.6		72.8		10.7		53.2
AVG DAILY MAX		67.7		53.7		92.4		12.5		58.4
AVG DAILY MIN		48.9		43.8		51.2		9.1		47.3
ABSOLUTE MAX		98.4		80.3		100.0		25.0		83.1
ABSOLUTE MIN		-11.0		-15.2		18.3		.6		-11.4
TOTAL OBS		4404		4372		4372		4372		4372

B25

PROGRAM: WETTEMP
 VERSION: PC-1.0

NPPD-COOPER NUCLEAR STATION 10-M TEMPERATURE SUMMARY JAN-DEC 2017

JAN-DEC HOUR AVERAGES FOR THE PERIOD

10.0 METERS LEVEL

HOUR	TEMPERATURE		DEW POINT		RELATIVE HUM		ABSOLUTE HUM		WET BULB	
	NUMBER		NUMBER		NUMBER		NUMBER		NUMBER	
	OBS	(DEG F)	OBS	(DEG F)	OBS	(%)	OBS	(GM/M3)	OBS	(DEG F)
1	364	51.4	363	45.3	363	80.8	363	9.5	363	48.5
2	364	50.6	363	44.9	363	82.0	363	9.3	363	47.9
3	364	49.8	363	44.6	363	83.3	363	9.2	363	47.4
4	364	49.3	363	44.5	363	84.5	363	9.2	363	47.1
5	364	48.7	363	44.3	363	85.5	363	9.1	363	46.7
6	364	48.2	363	44.0	363	86.2	363	9.0	363	46.3
7	365	48.2	364	43.9	364	85.6	364	9.0	364	46.2
8	365	49.2	363	44.0	363	83.1	363	9.0	363	46.7
9	365	51.2	362	44.2	362	78.3	362	9.1	362	47.7
10	365	53.8	362	44.4	362	72.3	362	9.1	362	49.1
11	365	56.4	362	44.4	362	66.6	362	9.1	362	50.3
12	365	58.5	362	44.3	362	62.0	362	9.0	362	51.1
13	365	60.1	362	44.2	362	58.6	362	8.9	362	51.8
14	365	61.5	362	44.2	362	56.2	362	8.9	362	52.5
15	365	62.5	362	44.4	362	54.8	362	8.9	362	53.0
16	365	62.9	362	44.6	362	54.7	362	9.0	362	53.3
17	365	62.7	363	44.9	363	55.5	363	9.1	363	53.3
18	365	61.7	363	45.3	363	58.2	363	9.3	363	53.0
19	364	59.9	363	45.8	363	62.5	363	9.5	363	52.4
20	364	57.6	363	46.1	363	67.6	363	9.7	363	51.6
21	364	55.6	363	45.9	363	71.7	363	9.7	363	50.7
22	364	54.1	363	45.8	363	75.0	363	9.6	363	50.0
23	364	53.0	363	45.6	363	77.3	363	9.6	363	49.4
24	364	52.1	363	45.4	363	79.3	363	9.5	363	48.9
HOURLY MEAN		55.0		44.8		71.7		9.2		49.8
AVG DAILY MAX		64.2		50.1		91.2		10.9		55.1
AVG DAILY MIN		45.6		39.6		51.4		7.7		43.8
ABSOLUTE MAX		98.4		80.3		100.0		25.0		83.1
ABSOLUTE MIN		-11.0		-15.2		17.9		.6		-11.4
TOTAL OBS		8748		8705		8705		8705		8705

B26

Wind Direction Frequencies

10-Meter Level

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JANUARY

HR. OF DAY	WIND DIRECTION																CALM	TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
1	9.7	3.2	6.5	3.2	3.2	3.2	9.7	3.2	6.5	6.5	00.0	00.0	3.2	9.7	22.6	9.7	00.0	100.
2	12.9	00.0	3.2	00.0	3.2	3.2	6.5	9.7	3.2	9.7	00.0	00.0	00.0	16.1	22.6	6.5	3.2	100.
3	6.5	6.5	3.2	00.0	3.2	3.2	3.2	6.5	9.7	6.5	3.2	00.0	00.0	22.6	12.9	9.7	3.2	100.
4	9.7	3.2	3.2	00.0	3.2	3.2	3.2	12.9	6.5	3.2	00.0	3.2	3.2	19.4	9.7	16.1	00.0	100.
5	6.5	3.2	6.5	3.2	3.2	00.0	00.0	12.9	12.9	00.0	3.2	00.0	00.0	12.9	19.4	12.9	3.2	100.
6	12.9	3.2	6.5	3.2	6.5	00.0	3.2	3.2	9.7	6.5	00.0	6.5	00.0	12.9	12.9	12.9	00.0	100.
7	00.0	3.2	3.2	6.5	3.2	6.5	3.2	6.5	6.5	3.2	9.7	00.0	00.0	12.9	22.6	12.9	00.0	100.
8	3.2	3.2	3.2	00.0	6.5	6.5	3.2	6.5	6.5	3.2	00.0	6.5	3.2	16.1	19.4	12.9	00.0	100.
9	6.5	3.2	3.2	3.2	6.5	3.2	9.7	6.5	3.2	3.2	00.0	3.2	3.2	19.4	9.7	16.1	00.0	100.
10	00.0	6.5	6.5	00.0	6.5	3.2	6.5	6.5	00.0	3.2	6.5	3.2	6.5	9.7	16.1	19.4	00.0	100.
11	6.5	00.0	9.7	3.2	3.2	00.0	9.7	6.5	00.0	3.2	6.5	00.0	3.2	12.9	22.6	12.9	00.0	100.
12	6.5	3.2	6.5	3.2	6.5	9.7	00.0	9.7	3.2	00.0	6.5	00.0	00.0	9.7	19.4	16.1	00.0	100.
13	6.5	3.2	9.7	00.0	12.9	3.2	6.5	3.2	3.2	3.2	3.2	00.0	6.5	3.2	22.6	12.9	00.0	100.
14	9.7	00.0	9.7	00.0	9.7	6.5	9.7	3.2	3.2	00.0	6.5	00.0	00.0	12.9	19.4	9.7	00.0	100.
15	6.5	3.2	6.5	00.0	12.9	00.0	12.9	6.5	00.0	00.0	3.2	6.5	00.0	6.5	22.6	12.9	00.0	100.
16	9.7	3.2	00.0	00.0	16.1	3.2	9.7	3.2	3.2	00.0	6.5	3.2	00.0	6.5	22.6	12.9	00.0	100.
17	9.7	00.0	00.0	3.2	16.1	00.0	6.5	9.7	00.0	3.2	3.2	00.0	3.2	9.7	12.9	22.6	00.0	100.
18	6.5	00.0	3.2	3.2	12.9	00.0	00.0	9.7	3.2	3.2	00.0	9.7	00.0	6.5	19.4	22.6	00.0	100.
19	6.5	3.2	3.2	6.5	6.5	3.2	3.2	00.0	9.7	6.5	00.0	00.0	3.2	9.7	19.4	16.1	3.2	100.
20	6.5	00.0	3.2	3.2	9.7	3.2	00.0	3.2	9.7	3.2	00.0	3.2	3.2	12.9	19.4	19.4	00.0	100.
21	16.1	3.2	00.0	00.0	9.7	6.5	00.0	00.0	9.7	00.0	00.0	6.5	9.7	3.2	12.9	16.1	6.5	100.
22	16.1	3.2	00.0	00.0	9.7	3.2	3.2	6.5	9.7	3.2	3.2	3.2	3.2	6.5	19.4	9.7	00.0	100.
23	6.5	6.5	00.0	00.0	12.9	3.2	3.2	00.0	12.9	00.0	6.5	3.2	3.2	9.7	9.7	19.4	3.2	100.
24	9.7	3.2	00.0	3.2	6.5	3.2	6.5	3.2	9.7	3.2	9.7	00.0	3.2	16.1	9.7	12.9	00.0	100.
ALL	7.9	2.8	4.0	1.9	7.9	3.2	5.0	5.8	5.9	3.1	3.2	2.4	2.4	11.6	17.5	14.4	.9	100.

NUMBER OF OBS = 744

B28

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	21.4	3.6	00.0	00.0	00.0	00.0	3.6	7.1	17.9	7.1	00.0	00.0	7.1	3.6	17.9	10.7	00.0	100.
2	14.3	00.0	00.0	00.0	00.0	00.0	3.6	14.3	17.9	10.7	00.0	3.6	3.6	00.0	7.1	25.0	00.0	100.
3	7.1	7.1	00.0	00.0	00.0	00.0	10.7	3.6	14.3	10.7	3.6	00.0	3.6	00.0	14.3	25.0	00.0	100.
4	7.1	3.6	00.0	00.0	00.0	00.0	7.1	3.6	14.3	7.1	7.1	00.0	00.0	3.6	10.7	28.6	7.1	100.
5	17.9	3.6	00.0	00.0	00.0	3.6	00.0	10.7	7.1	14.3	7.1	00.0	3.6	00.0	7.1	25.0	00.0	100.
6	14.3	00.0	00.0	00.0	00.0	00.0	3.6	10.7	7.1	7.1	7.1	00.0	00.0	7.1	10.7	25.0	7.1	100.
7	14.3	7.1	00.0	3.6	00.0	00.0	00.0	14.3	10.7	10.7	7.1	00.0	00.0	00.0	10.7	17.9	3.6	100.
8	14.3	7.1	00.0	00.0	00.0	3.6	3.6	10.7	14.3	7.1	3.6	00.0	00.0	7.1	7.1	17.9	3.6	100.
9	10.7	3.6	3.6	3.6	3.6	00.0	3.6	14.3	7.1	10.7	7.1	00.0	00.0	7.1	7.1	17.9	00.0	100.
10	17.9	3.6	3.6	00.0	3.6	3.6	7.1	3.6	7.1	17.9	3.6	7.1	00.0	00.0	7.1	14.3	00.0	100.
11	17.9	7.1	7.1	00.0	00.0	3.6	00.0	14.3	7.1	3.6	10.7	7.1	3.6	3.6	00.0	14.3	00.0	100.
12	17.9	10.7	3.6	3.6	00.0	3.6	3.6	3.6	7.1	10.7	10.7	7.1	7.1	00.0	7.1	3.6	00.0	100.
13	14.3	3.6	7.1	7.1	00.0	00.0	10.7	3.6	00.0	10.7	14.3	10.7	3.6	00.0	7.1	7.1	00.0	100.
14	10.7	00.0	14.3	3.6	00.0	00.0	3.6	3.6	3.6	10.7	17.9	00.0	7.1	7.1	7.1	10.7	00.0	100.
15	10.7	3.6	7.1	3.6	3.6	00.0	7.1	00.0	3.6	21.4	3.6	3.6	7.1	3.6	10.7	10.7	00.0	100.
16	7.1	3.6	00.0	3.6	00.0	00.0	10.7	00.0	3.6	17.9	7.1	3.6	7.1	3.6	7.1	25.0	00.0	100.
17	7.1	3.6	3.6	00.0	00.0	3.6	10.7	00.0	10.7	7.1	17.9	3.6	00.0	00.0	14.3	17.9	00.0	100.
18	10.7	7.1	00.0	3.6	00.0	3.6	7.1	3.6	7.1	17.9	10.7	00.0	00.0	00.0	7.1	21.4	00.0	100.
19	14.3	3.6	3.6	00.0	00.0	3.6	00.0	3.6	17.9	17.9	3.6	00.0	00.0	00.0	17.9	14.3	00.0	100.
20	10.7	3.6	3.6	00.0	00.0	00.0	00.0	10.7	10.7	10.7	10.7	3.6	00.0	00.0	14.3	21.4	00.0	100.
21	14.3	3.6	00.0	00.0	00.0	00.0	00.0	7.1	25.0	3.6	7.1	7.1	00.0	00.0	7.1	25.0	00.0	100.
22	17.9	00.0	00.0	00.0	00.0	00.0	00.0	14.3	10.7	3.6	7.1	3.6	00.0	3.6	7.1	21.4	10.7	100.
23	10.7	00.0	3.6	00.0	00.0	3.6	00.0	10.7	14.3	3.6	3.6	7.1	00.0	3.6	17.9	14.3	7.1	100.
24	10.7	3.6	00.0	00.0	00.0	3.6	00.0	7.1	14.3	3.6	3.6	10.7	00.0	7.1	14.3	17.9	3.6	100.
ALL	13.1	3.9	2.5	1.3	.4	1.5	4.0	7.3	10.6	10.3	7.3	3.3	2.2	2.5	10.0	18.0	1.8	100.

NUMBER OF OBS = 672

B29

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	16.1	00.0	3.2	3.2	9.7	9.7	9.7	00.0	3.2	3.2	3.2	3.2	9.7	9.7	00.0	100.
2	12.9	3.2	9.7	9.7	00.0	3.2	6.5	6.5	19.4	00.0	3.2	6.5	00.0	00.0	12.9	6.5	00.0	100.
3	19.4	6.5	6.5	3.2	3.2	3.2	6.5	9.7	12.9	00.0	00.0	3.2	00.0	9.7	12.9	3.2	00.0	100.
4	19.4	6.5	9.7	6.5	00.0	00.0	12.9	3.2	12.9	3.2	3.2	3.2	00.0	9.7	9.7	00.0	00.0	100.
5	16.1	12.9	3.2	6.5	6.5	00.0	12.9	00.0	16.1	00.0	00.0	00.0	3.2	3.2	16.1	3.2	00.0	100.
6	9.7	16.1	6.5	3.2	3.2	3.2	12.9	00.0	9.7	6.5	00.0	00.0	3.2	6.5	6.5	12.9	00.0	100.
7	16.1	16.1	3.2	6.5	00.0	3.2	12.9	00.0	12.9	6.5	00.0	00.0	00.0	3.2	6.5	12.9	00.0	100.
8	22.6	9.7	6.5	6.5	00.0	00.0	16.1	6.5	9.7	3.2	3.2	00.0	00.0	00.0	9.7	6.5	00.0	100.
9	19.4	16.1	00.0	6.5	6.5	00.0	19.4	3.2	9.7	00.0	3.2	3.2	00.0	00.0	3.2	9.7	00.0	100.
10	25.8	16.1	00.0	9.7	3.2	00.0	9.7	12.9	9.7	00.0	00.0	3.2	00.0	6.5	3.2	00.0	00.0	100.
11	19.4	16.1	6.5	00.0	6.5	3.2	9.7	16.1	3.2	3.2	00.0	3.2	3.2	00.0	6.5	3.2	00.0	100.
12	22.6	16.1	6.5	00.0	6.5	6.5	00.0	22.6	00.0	6.5	00.0	3.2	00.0	3.2	6.5	00.0	00.0	100.
13	16.1	9.7	12.9	6.5	3.2	3.2	00.0	16.1	9.7	3.2	00.0	00.0	3.2	3.2	3.2	9.7	00.0	100.
14	12.9	19.4	6.5	3.2	6.5	3.2	00.0	12.9	12.9	3.2	00.0	00.0	3.2	00.0	6.5	9.7	00.0	100.
15	16.1	16.1	6.5	3.2	6.5	3.2	3.2	6.5	19.4	3.2	00.0	00.0	3.2	6.5	00.0	6.5	00.0	100.
16	19.4	12.9	9.7	3.2	00.0	6.5	00.0	12.9	16.1	3.2	00.0	00.0	3.2	00.0	9.7	3.2	00.0	100.
17	16.1	19.4	12.9	00.0	00.0	6.5	00.0	12.9	19.4	00.0	00.0	00.0	3.2	00.0	6.5	3.2	00.0	100.
18	16.1	22.6	9.7	3.2	00.0	3.2	3.2	6.5	19.4	00.0	3.2	00.0	3.2	00.0	00.0	9.7	00.0	100.
19	12.9	29.0	3.2	3.2	00.0	6.5	3.2	6.5	12.9	3.2	00.0	00.0	3.2	6.5	3.2	6.5	00.0	100.
20	12.9	25.8	00.0	3.2	3.2	3.2	6.5	9.7	9.7	00.0	3.2	00.0	00.0	6.5	6.5	9.7	00.0	100.
21	22.6	16.1	3.2	3.2	00.0	3.2	3.2	9.7	12.9	00.0	00.0	3.2	3.2	9.7	00.0	9.7	00.0	100.
22	22.6	19.4	9.7	00.0	3.2	3.2	3.2	3.2	16.1	00.0	00.0	3.2	3.2	6.5	3.2	3.2	00.0	100.
23	16.1	12.9	9.7	6.5	3.2	3.2	6.5	6.5	12.9	3.2	00.0	3.2	3.2	6.5	00.0	6.5	00.0	100.
24	12.9	12.9	12.9	00.0	3.2	3.2	3.2	9.7	12.9	6.5	00.0	3.2	3.2	3.2	00.0	12.9	00.0	100.
ALL	17.2	14.8	7.1	3.9	2.8	3.1	6.7	8.5	12.5	2.3	.9	1.7	2.0	3.9	5.9	6.6	00.0	100.

NUMBER OF OBS = 744

B30

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-MAR

HR. OF DAY	WIND DIRECTION																CALM	TOTAL
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
1	14.4	3.3	7.8	1.1	2.2	2.2	7.8	6.7	11.1	4.4	1.1	1.1	4.4	5.6	16.7	10.0	00.0	100.
2	13.3	1.1	4.4	3.3	1.1	2.2	5.6	10.0	13.3	6.7	1.1	3.3	1.1	5.6	14.4	12.2	1.1	100.
3	11.1	6.7	3.3	1.1	2.2	2.2	6.7	6.7	12.2	5.6	2.2	1.1	1.1	11.1	13.3	12.2	1.1	100.
4	12.2	4.4	4.4	2.2	1.1	1.1	7.8	6.7	11.1	4.4	3.3	2.2	1.1	11.1	10.0	14.4	2.2	100.
5	13.3	6.7	3.3	3.3	3.3	1.1	4.4	7.8	12.2	4.4	3.3	00.0	2.2	5.6	14.4	13.3	1.1	100.
6	12.2	6.7	4.4	2.2	3.3	1.1	6.7	4.4	8.9	6.7	2.2	2.2	1.1	8.9	10.0	16.7	2.2	100.
7	10.0	8.9	2.2	5.6	1.1	3.3	5.6	6.7	10.0	6.7	5.6	00.0	00.0	5.6	13.3	14.4	1.1	100.
8	13.3	6.7	3.3	2.2	2.2	3.3	7.8	7.8	10.0	4.4	2.2	2.2	1.1	7.8	12.2	12.2	1.1	100.
9	12.2	7.8	2.2	4.4	5.6	1.1	11.1	7.8	6.7	4.4	3.3	2.2	1.1	8.9	6.7	14.4	00.0	100.
10	14.4	8.9	3.3	3.3	4.4	2.2	7.8	7.8	5.6	6.7	3.3	4.4	2.2	5.6	8.9	11.1	00.0	100.
11	14.4	7.8	7.8	1.1	3.3	2.2	6.7	12.2	3.3	3.3	5.6	3.3	3.3	5.6	10.0	10.0	00.0	100.
12	15.6	10.0	5.6	2.2	4.4	6.7	1.1	12.2	3.3	5.6	5.6	3.3	2.2	4.4	11.1	6.7	00.0	100.
13	12.2	5.6	10.0	4.4	5.6	2.2	5.6	7.8	4.4	5.6	5.6	3.3	4.4	2.2	11.1	10.0	00.0	100.
14	11.1	6.7	10.0	2.2	5.6	3.3	4.4	6.7	6.7	4.4	7.8	00.0	3.3	6.7	11.1	10.0	00.0	100.
15	11.1	7.8	6.7	2.2	7.8	1.1	7.8	4.4	7.8	7.8	2.2	3.3	3.3	5.6	11.1	10.0	00.0	100.
16	12.2	6.7	3.3	2.2	5.6	3.3	6.7	5.6	7.8	6.7	4.4	2.2	3.3	3.3	13.3	13.3	00.0	100.
17	11.1	7.8	5.6	1.1	5.6	3.3	5.6	7.8	10.0	3.3	6.7	1.1	2.2	3.3	11.1	14.4	00.0	100.
18	11.1	10.0	4.4	3.3	4.4	2.2	3.3	6.7	10.0	6.7	4.4	3.3	1.1	2.2	8.9	17.8	00.0	100.
19	11.1	12.2	3.3	3.3	2.2	4.4	2.2	3.3	13.3	8.9	1.1	00.0	2.2	5.6	13.3	12.2	1.1	100.
20	10.0	10.0	2.2	2.2	4.4	2.2	2.2	7.8	10.0	4.4	4.4	2.2	1.1	6.7	13.3	16.7	00.0	100.
21	17.8	7.8	1.1	1.1	3.3	3.3	1.1	5.6	15.6	1.1	2.2	5.6	4.4	4.4	6.7	16.7	2.2	100.
22	18.9	7.8	3.3	00.0	4.4	2.2	2.2	7.8	12.2	2.2	3.3	3.3	2.2	5.6	10.0	11.1	3.3	100.
23	11.1	6.7	4.4	2.2	5.6	3.3	3.3	5.6	13.3	2.2	3.3	4.4	2.2	6.7	8.9	13.3	3.3	100.
24	11.1	6.7	4.4	1.1	3.3	3.3	3.3	6.7	12.2	4.4	4.4	4.4	2.2	8.9	7.8	14.4	1.1	100.
ALL	12.7	7.3	4.6	2.4	3.8	2.6	5.3	7.2	9.6	5.0	3.7	2.5	2.2	6.1	11.2	12.8	.9	100.

NUMBER OF OBS = 2160

B31

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	13.3	13.3	00.0	3.3	00.0	3.3	00.0	10.0	16.7	6.7	3.3	00.0	3.3	3.3	6.7	16.7	00.0	100.
2	13.3	13.3	00.0	00.0	3.3	3.3	6.7	6.7	16.7	00.0	3.3	00.0	00.0	13.3	10.0	10.0	00.0	100.
3	16.7	6.7	3.3	00.0	3.3	00.0	3.3	10.0	16.7	6.7	00.0	00.0	00.0	6.7	20.0	3.3	3.3	100.
4	23.3	6.7	3.3	00.0	3.3	00.0	00.0	6.7	13.3	6.7	00.0	3.3	3.3	00.0	20.0	6.7	3.3	100.
5	20.0	10.0	6.7	3.3	00.0	00.0	6.7	6.7	13.3	3.3	00.0	3.3	3.3	6.7	13.3	3.3	00.0	100.
6	16.7	13.3	13.3	00.0	00.0	00.0	6.7	13.3	3.3	00.0	00.0	00.0	6.7	6.7	3.3	10.0	6.7	100.
7	13.3	13.3	13.3	00.0	00.0	00.0	3.3	13.3	10.0	00.0	6.7	00.0	00.0	6.7	10.0	3.3	6.7	100.
8	13.3	6.7	13.3	3.3	3.3	00.0	6.7	13.3	16.7	00.0	00.0	3.3	00.0	6.7	6.7	6.7	00.0	100.
9	13.3	6.7	10.0	6.7	3.3	6.7	3.3	3.3	26.7	00.0	00.0	3.3	3.3	00.0	6.7	6.7	00.0	100.
10	3.3	10.0	13.3	6.7	00.0	6.7	3.3	10.0	16.7	00.0	6.7	00.0	6.7	3.3	3.3	10.0	00.0	100.
11	00.0	3.3	20.0	00.0	6.7	3.3	3.3	13.3	16.7	6.7	00.0	00.0	3.3	3.3	3.3	16.7	00.0	100.
12	3.3	10.0	13.3	3.3	00.0	6.7	3.3	10.0	20.0	6.7	00.0	00.0	3.3	3.3	3.3	13.3	00.0	100.
13	6.7	6.7	13.3	3.3	6.7	3.3	00.0	10.0	26.7	3.3	00.0	00.0	6.7	00.0	3.3	10.0	00.0	100.
14	6.7	6.7	13.3	6.7	3.3	3.3	00.0	10.0	20.0	6.7	00.0	00.0	6.7	00.0	6.7	10.0	00.0	100.
15	6.7	10.0	10.0	6.7	3.3	6.7	00.0	3.3	26.7	6.7	00.0	3.3	00.0	3.3	00.0	13.3	00.0	100.
16	6.7	13.3	10.0	00.0	00.0	6.7	6.7	6.7	26.7	3.3	00.0	00.0	3.3	00.0	3.3	13.3	00.0	100.
17	10.0	13.3	6.7	3.3	00.0	00.0	10.0	10.0	23.3	6.7	00.0	00.0	3.3	00.0	6.7	6.7	00.0	100.
18	10.0	13.3	6.7	3.3	00.0	00.0	6.7	16.7	16.7	10.0	00.0	00.0	3.3	00.0	3.3	10.0	00.0	100.
19	6.7	13.3	6.7	00.0	00.0	00.0	10.0	16.7	16.7	6.7	00.0	00.0	00.0	00.0	3.3	20.0	00.0	100.
20	16.7	10.0	00.0	00.0	00.0	00.0	6.7	16.7	10.0	6.7	6.7	00.0	00.0	00.0	3.3	20.0	3.3	100.
21	13.3	10.0	6.7	00.0	00.0	3.3	3.3	13.3	10.0	3.3	3.3	3.3	3.3	00.0	10.0	16.7	00.0	100.
22	3.3	20.0	00.0	00.0	3.3	3.3	00.0	10.0	13.3	3.3	00.0	00.0	3.3	3.3	10.0	26.7	00.0	100.
23	3.3	20.0	3.3	3.3	00.0	3.3	00.0	16.7	6.7	00.0	00.0	00.0	3.3	3.3	16.7	13.3	6.7	100.
24	3.3	20.0	00.0	00.0	3.3	3.3	00.0	20.0	10.0	6.7	3.3	00.0	00.0	3.3	10.0	13.3	3.3	100.
ALL	10.1	11.2	7.8	2.2	1.8	2.6	3.8	11.1	16.4	4.2	1.4	.8	2.8	3.1	7.6	11.7	1.4	100.

NUMBER OF OBS = 720

B32

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
 VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

MAY

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.9	3.2	3.2	3.2	00.0	3.2	3.2	3.2	12.9	6.5	00.0	6.5	9.7	3.2	12.9	12.9	3.2	100.
2	12.9	00.0	00.0	6.5	00.0	6.5	00.0	3.2	16.1	3.2	3.2	00.0	9.7	6.5	19.4	12.9	00.0	100.
3	12.9	00.0	3.2	00.0	3.2	6.5	00.0	6.5	16.1	3.2	00.0	00.0	12.9	6.5	19.4	6.5	3.2	100.
4	12.9	12.9	3.2	00.0	3.2	00.0	3.2	6.5	12.9	3.2	3.2	00.0	9.7	6.5	12.9	9.7	00.0	100.
5	16.1	00.0	6.5	00.0	3.2	00.0	3.2	3.2	12.9	6.5	00.0	00.0	16.1	3.2	12.9	16.1	00.0	100.
6	6.5	3.2	00.0	6.5	00.0	6.5	00.0	9.7	12.9	6.5	00.0	00.0	6.5	6.5	12.9	16.1	6.5	100.
7	16.1	3.2	6.5	3.2	00.0	6.5	00.0	6.5	9.7	9.7	3.2	00.0	3.2	6.5	12.9	12.9	00.0	100.
8	9.7	16.1	3.2	00.0	3.2	00.0	9.7	9.7	12.9	3.2	00.0	3.2	00.0	9.7	3.2	16.1	00.0	100.
9	16.1	9.7	9.7	00.0	00.0	6.5	6.5	12.9	9.7	00.0	3.2	3.2	00.0	6.5	6.5	9.7	00.0	100.
10	16.1	6.5	6.5	9.7	00.0	3.2	6.5	6.5	12.9	6.5	3.2	3.2	00.0	6.5	9.7	3.2	00.0	100.
11	12.9	9.7	6.5	6.5	00.0	00.0	3.2	9.7	12.9	6.5	6.5	00.0	3.2	6.5	6.5	9.7	00.0	100.
12	6.5	9.7	9.7	3.2	00.0	00.0	3.2	6.5	12.9	9.7	3.2	00.0	00.0	9.7	9.7	16.1	00.0	100.
13	9.7	12.9	9.7	00.0	00.0	00.0	00.0	9.7	19.4	00.0	6.5	00.0	3.2	6.5	6.5	16.1	00.0	100.
14	9.7	6.5	6.5	3.2	00.0	00.0	00.0	9.7	9.7	9.7	3.2	3.2	00.0	9.7	9.7	19.4	00.0	100.
15	6.5	9.7	9.7	00.0	00.0	3.2	3.2	3.2	6.5	9.7	6.5	3.2	3.2	9.7	9.7	16.1	00.0	100.
16	19.4	6.5	6.5	3.2	00.0	00.0	3.2	3.2	12.9	9.7	6.5	3.2	3.2	3.2	9.7	9.7	00.0	100.
17	16.1	3.2	9.7	3.2	00.0	00.0	3.2	6.5	6.5	16.1	3.2	3.2	00.0	9.7	6.5	12.9	00.0	100.
18	9.7	6.5	9.7	3.2	00.0	3.2	3.2	6.5	9.7	6.5	3.2	9.7	00.0	3.2	12.9	12.9	00.0	100.
19	12.9	6.5	6.5	6.5	00.0	00.0	3.2	6.5	6.5	9.7	6.5	3.2	00.0	6.5	9.7	16.1	00.0	100.
20	9.7	6.5	6.5	00.0	3.2	00.0	6.5	6.5	6.5	12.9	6.5	3.2	00.0	6.5	3.2	22.6	00.0	100.
21	16.1	3.2	3.2	00.0	3.2	3.2	3.2	00.0	16.1	3.2	00.0	9.7	3.2	3.2	19.4	12.9	00.0	100.
22	12.9	3.2	00.0	3.2	3.2	3.2	3.2	00.0	9.7	6.5	9.7	3.2	9.7	6.5	3.2	22.6	00.0	100.
23	16.1	00.0	3.2	6.5	00.0	00.0	6.5	3.2	16.1	6.5	3.2	3.2	6.5	3.2	12.9	9.7	3.2	100.
24	12.9	3.2	00.0	6.5	00.0	00.0	9.7	3.2	6.5	9.7	00.0	9.7	6.5	00.0	19.4	9.7	3.2	100.
ALL	12.6	5.9	5.4	3.1	.9	2.2	3.5	5.9	11.7	6.9	3.4	3.0	4.4	6.0	10.9	13.4	.8	100.

NUMBER OF OBS = 744

B33

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	3.3	6.7	00.0	3.3	00.0	00.0	00.0	16.7	16.7	13.3	6.7	3.3	6.7	10.0	3.3	10.0	00.0	100.
2	6.7	00.0	00.0	3.3	6.7	00.0	00.0	10.0	30.0	16.7	00.0	00.0	00.0	10.0	6.7	10.0	00.0	100.
3	13.3	00.0	00.0	00.0	3.3	00.0	00.0	16.7	30.0	6.7	3.3	3.3	00.0	6.7	3.3	6.7	6.7	100.
4	10.0	00.0	00.0	00.0	3.3	3.3	00.0	6.7	20.0	10.0	6.7	3.3	6.7	6.7	3.3	16.7	3.3	100.
5	10.0	00.0	3.3	00.0	6.7	3.3	3.3	10.0	16.7	6.7	6.7	3.3	3.3	13.3	00.0	13.3	00.0	100.
6	10.0	3.3	00.0	3.3	3.3	3.3	3.3	10.0	23.3	3.3	00.0	3.3	6.7	6.7	3.3	3.3	13.3	100.
7	3.3	3.3	3.3	6.7	3.3	00.0	00.0	20.0	26.7	6.7	00.0	3.3	3.3	3.3	10.0	3.3	3.3	100.
8	10.0	00.0	6.7	3.3	3.3	3.3	13.3	6.7	16.7	13.3	00.0	6.7	3.3	3.3	6.7	3.3	00.0	100.
9	6.7	3.3	3.3	3.3	00.0	3.3	13.3	6.7	16.7	10.0	10.0	3.3	00.0	6.7	3.3	10.0	00.0	100.
10	3.3	3.3	00.0	00.0	3.3	3.3	13.3	10.0	23.3	16.7	00.0	6.7	00.0	00.0	6.7	10.0	00.0	100.
11	10.0	3.3	3.3	00.0	6.7	3.3	6.7	00.0	33.3	13.3	3.3	3.3	3.3	00.0	3.3	6.7	00.0	100.
12	10.0	00.0	3.3	3.3	00.0	3.3	6.7	10.0	16.7	23.3	3.3	00.0	6.7	00.0	3.3	10.0	00.0	100.
13	6.7	00.0	00.0	3.3	00.0	3.3	00.0	10.0	33.3	16.7	00.0	00.0	6.7	00.0	6.7	13.3	00.0	100.
14	3.3	3.3	3.3	3.3	3.3	00.0	00.0	16.7	23.3	20.0	00.0	00.0	3.3	3.3	00.0	16.7	00.0	100.
15	6.7	3.3	3.3	3.3	00.0	3.3	6.7	13.3	16.7	16.7	6.7	00.0	00.0	6.7	6.7	6.7	00.0	100.
16	10.0	00.0	3.3	3.3	00.0	3.3	00.0	23.3	23.3	10.0	00.0	3.3	00.0	3.3	6.7	10.0	00.0	100.
17	6.7	6.7	3.3	00.0	00.0	3.3	00.0	23.3	26.7	3.3	3.3	00.0	3.3	6.7	3.3	10.0	00.0	100.
18	13.3	3.3	00.0	3.3	00.0	00.0	3.3	20.0	26.7	6.7	3.3	00.0	00.0	10.0	00.0	10.0	00.0	100.
19	6.7	3.3	3.3	3.3	6.7	3.3	3.3	16.7	23.3	3.3	3.3	00.0	00.0	10.0	6.7	6.7	00.0	100.
20	6.7	00.0	3.3	00.0	6.7	6.7	00.0	16.7	23.3	3.3	3.3	00.0	10.0	00.0	13.3	6.7	00.0	100.
21	3.3	00.0	00.0	00.0	3.3	00.0	00.0	13.3	26.7	6.7	3.3	6.7	6.7	6.7	20.0	3.3	00.0	100.
22	6.7	3.3	00.0	3.3	3.3	00.0	3.3	16.7	16.7	13.3	3.3	00.0	3.3	6.7	13.3	3.3	3.3	100.
23	3.3	00.0	3.3	00.0	6.7	3.3	00.0	13.3	16.7	13.3	3.3	3.3	6.7	00.0	16.7	10.0	00.0	100.
24	00.0	3.3	3.3	00.0	00.0	00.0	00.0	23.3	10.0	13.3	6.7	3.3	00.0	6.7	3.3	20.0	6.7	100.
ALL	7.1	2.1	2.1	2.1	2.9	2.2	3.2	13.8	22.4	11.1	3.2	2.4	3.3	5.3	6.3	9.2	1.5	100.

NUMBER OF OBS = 720

B34

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APR-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	9.9	7.7	1.1	3.3	00.0	2.2	1.1	9.9	15.4	8.8	3.3	3.3	6.6	5.5	7.7	13.2	1.1	100.
2	11.0	4.4	00.0	3.3	3.3	3.3	2.2	6.6	20.9	6.6	2.2	00.0	3.3	9.9	12.1	11.0	00.0	100.
3	14.3	2.2	2.2	00.0	3.3	2.2	1.1	11.0	20.9	5.5	1.1	1.1	4.4	6.6	14.3	5.5	4.4	100.
4	15.4	6.6	2.2	00.0	3.3	1.1	1.1	6.6	15.4	6.6	3.3	2.2	6.6	4.4	12.1	11.0	2.2	100.
5	15.4	3.3	5.5	1.1	3.3	1.1	4.4	6.6	14.3	5.5	2.2	2.2	7.7	7.7	8.8	11.0	00.0	100.
6	11.0	6.6	4.4	3.3	1.1	3.3	3.3	11.0	13.2	3.3	00.0	1.1	6.6	6.6	6.6	9.9	8.8	100.
7	11.0	6.6	7.7	3.3	1.1	2.2	1.1	13.2	15.4	5.5	3.3	1.1	2.2	5.5	11.0	6.6	3.3	100.
8	11.0	7.7	7.7	2.2	3.3	1.1	9.9	9.9	15.4	5.5	00.0	4.4	1.1	6.6	5.5	8.8	00.0	100.
9	12.1	6.6	7.7	3.3	1.1	5.5	7.7	7.7	17.6	3.3	4.4	3.3	1.1	4.4	5.5	8.8	00.0	100.
10	7.7	6.6	6.6	5.5	1.1	4.4	7.7	8.8	17.6	7.7	3.3	3.3	2.2	3.3	6.6	7.7	00.0	100.
11	7.7	5.5	9.9	2.2	4.4	2.2	4.4	7.7	20.9	8.8	3.3	1.1	3.3	3.3	4.4	11.0	00.0	100.
12	6.6	6.6	8.8	3.3	00.0	3.3	4.4	8.8	16.5	13.2	2.2	00.0	3.3	4.4	5.5	13.2	00.0	100.
13	7.7	6.6	7.7	2.2	2.2	2.2	00.0	9.9	26.4	6.6	2.2	00.0	5.5	2.2	5.5	13.2	00.0	100.
14	6.6	5.5	7.7	4.4	2.2	1.1	00.0	12.1	17.6	12.1	1.1	1.1	3.3	4.4	5.5	15.4	00.0	100.
15	6.6	7.7	7.7	3.3	1.1	4.4	3.3	6.6	16.5	11.0	4.4	2.2	1.1	6.6	5.5	12.1	00.0	100.
16	12.1	6.6	6.6	2.2	00.0	3.3	3.3	11.0	20.9	7.7	2.2	2.2	2.2	2.2	6.6	11.0	00.0	100.
17	11.0	7.7	6.6	2.2	00.0	1.1	4.4	13.2	18.7	8.8	2.2	1.1	2.2	5.5	5.5	9.9	00.0	100.
18	11.0	7.7	5.5	3.3	00.0	1.1	4.4	14.3	17.6	7.7	2.2	3.3	1.1	4.4	5.5	11.0	00.0	100.
19	8.8	7.7	5.5	3.3	2.2	1.1	5.5	13.2	15.4	6.6	3.3	1.1	00.0	5.5	6.6	14.3	00.0	100.
20	11.0	5.5	3.3	00.0	3.3	2.2	4.4	13.2	13.2	7.7	5.5	1.1	3.3	2.2	6.6	16.5	1.1	100.
21	11.0	4.4	3.3	00.0	2.2	2.2	2.2	8.8	17.6	4.4	2.2	6.6	4.4	3.3	16.5	11.0	00.0	100.
22	7.7	8.8	00.0	2.2	3.3	2.2	2.2	8.8	13.2	7.7	4.4	1.1	5.5	5.5	8.8	17.6	1.1	100.
23	7.7	6.6	3.3	3.3	2.2	2.2	2.2	11.0	13.2	6.6	2.2	2.2	5.5	2.2	15.4	11.0	3.3	100.
24	5.5	8.8	1.1	2.2	1.1	1.1	3.3	15.4	8.8	9.9	3.3	4.4	2.2	3.3	11.0	14.3	4.4	100.
ALL	10.0	6.4	5.1	2.5	1.9	2.3	3.5	10.2	16.8	7.4	2.7	2.1	3.5	4.8	8.3	11.4	1.2	100.

NUMBER OF OBS = 2184

B35

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
 VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	12.2	5.5	4.4	2.2	1.1	2.2	4.4	8.3	13.3	6.6	2.2	2.2	5.5	5.5	12.2	11.6	.6	100.
2	12.2	2.8	2.2	3.3	2.2	2.8	3.9	8.3	17.1	6.6	1.7	1.7	2.2	7.7	13.3	11.6	.6	100.
3	12.7	4.4	2.8	.6	2.8	2.2	3.9	8.8	16.6	5.5	1.7	1.1	2.8	8.8	13.8	8.8	2.8	100.
4	13.8	5.5	3.3	1.1	2.2	1.1	4.4	6.6	13.3	5.5	3.3	2.2	3.9	7.7	11.0	12.7	2.2	100.
5	14.4	5.0	4.4	2.2	3.3	1.1	4.4	7.2	13.3	5.0	2.8	1.1	5.0	6.6	11.6	12.2	.6	100.
6	11.6	6.6	4.4	2.8	2.2	2.2	5.0	7.7	11.0	5.0	1.1	1.7	3.9	7.7	8.3	13.3	5.5	100.
7	10.5	7.7	5.0	4.4	1.1	2.8	3.3	9.9	12.7	6.1	4.4	.6	1.1	5.5	12.2	10.5	2.2	100.
8	12.2	7.2	5.5	2.2	2.8	2.2	8.8	8.8	12.7	5.0	1.1	3.3	1.1	7.2	8.8	10.5	.6	100.
9	12.2	7.2	5.0	3.9	3.3	3.3	9.4	7.7	12.2	3.9	3.9	2.8	1.1	6.6	6.1	11.6	00.0	100.
10	11.0	7.7	5.0	4.4	2.8	3.3	7.7	8.3	11.6	7.2	3.3	3.9	2.2	4.4	7.7	9.4	00.0	100.
11	11.0	6.6	8.8	1.7	3.9	2.2	5.5	9.9	12.2	6.1	4.4	2.2	3.3	4.4	7.2	10.5	00.0	100.
12	11.0	8.3	7.2	2.8	2.2	5.0	2.8	10.5	9.9	9.4	3.9	1.7	2.8	4.4	8.3	9.9	00.0	100.
13	9.9	6.1	8.8	3.3	3.9	2.2	2.8	8.8	15.5	6.1	3.9	1.7	5.0	2.2	8.3	11.6	00.0	100.
14	8.8	6.1	8.8	3.3	3.9	2.2	2.2	9.4	12.2	8.3	4.4	.6	3.3	5.5	8.3	12.7	00.0	100.
15	8.8	7.7	7.2	2.8	4.4	2.8	5.5	5.5	12.2	9.4	3.3	2.8	2.2	6.1	8.3	11.0	00.0	100.
16	12.2	6.6	5.0	2.2	2.8	3.3	5.0	8.3	14.4	7.2	3.3	2.2	2.8	2.8	9.9	12.2	00.0	100.
17	11.0	7.7	6.1	1.7	2.8	2.2	5.0	10.5	14.4	6.1	4.4	1.1	2.2	4.4	8.3	12.2	00.0	100.
18	11.0	8.8	5.0	3.3	2.2	1.7	3.9	10.5	13.8	7.2	3.3	3.3	1.1	3.3	7.2	14.4	00.0	100.
19	9.9	9.9	4.4	3.3	2.2	2.8	3.9	8.3	14.4	7.7	2.2	.6	1.1	5.5	9.9	13.3	.6	100.
20	10.5	7.7	2.8	1.1	3.9	2.2	3.3	10.5	11.6	6.1	5.0	1.7	2.2	4.4	9.9	16.6	.6	100.
21	14.4	6.1	2.2	.6	2.8	2.8	1.7	7.2	16.6	2.8	2.2	6.1	4.4	3.9	11.6	13.8	1.1	100.
22	13.3	8.3	1.7	1.1	3.9	2.2	2.2	8.3	12.7	5.0	3.9	2.2	3.9	5.5	9.4	14.4	2.2	100.
23	9.4	6.6	3.9	2.8	3.9	2.8	2.8	8.3	13.3	4.4	2.8	3.3	3.9	4.4	12.2	12.2	3.3	100.
24	8.3	7.7	2.8	1.7	2.2	2.2	3.3	11.0	10.5	7.2	3.9	4.4	2.2	6.1	9.4	14.4	2.8	100.
ALL	11.3	6.8	4.9	2.4	2.9	2.5	4.4	8.7	13.2	6.2	3.2	2.3	2.9	5.5	9.7	12.1	1.1	100.

NUMBER OF OBS = 4344

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	00.0	00.0	6.5	00.0	25.8	16.1	00.0	00.0	00.0	12.9	9.7	12.9	3.2	100.
2	16.1	3.2	00.0	00.0	00.0	3.2	6.5	6.5	32.3	12.9	6.5	3.2	00.0	00.0	6.5	3.2	00.0	100.
3	12.9	3.2	3.2	00.0	00.0	00.0	6.5	12.9	16.1	16.1	6.5	3.2	6.5	3.2	00.0	6.5	3.2	100.
4	19.4	3.2	3.2	3.2	00.0	00.0	00.0	9.7	12.9	9.7	6.5	3.2	00.0	6.5	12.9	6.5	3.2	100.
5	25.8	3.2	00.0	3.2	00.0	6.5	00.0	9.7	12.9	6.5	12.9	3.2	3.2	00.0	3.2	3.2	6.5	100.
6	16.1	3.2	00.0	3.2	6.5	3.2	3.2	9.7	29.0	3.2	6.5	6.5	00.0	6.5	3.2	00.0	00.0	100.
7	16.1	9.7	3.2	00.0	00.0	00.0	16.1	16.1	22.6	3.2	3.2	6.5	00.0	00.0	00.0	3.2	00.0	100.
8	9.7	00.0	3.2	6.5	6.5	6.5	00.0	19.4	9.7	16.1	6.5	00.0	12.9	3.2	00.0	00.0	00.0	100.
9	6.5	6.5	00.0	3.2	12.9	3.2	6.5	12.9	9.7	12.9	6.5	3.2	3.2	6.5	3.2	3.2	00.0	100.
10	9.7	00.0	00.0	3.2	9.7	16.1	6.5	12.9	3.2	16.1	3.2	6.5	6.5	3.2	3.2	00.0	00.0	100.
11	6.5	3.2	3.2	3.2	6.5	9.7	6.5	12.9	12.9	9.7	6.5	6.5	6.5	00.0	3.2	3.2	00.0	100.
12	9.7	00.0	00.0	6.5	9.7	3.2	6.5	12.9	16.1	12.9	6.5	6.5	3.2	3.2	3.2	00.0	00.0	100.
13	9.7	3.2	00.0	9.7	3.2	6.5	6.5	16.1	22.6	3.2	00.0	9.7	3.2	00.0	3.2	3.2	00.0	100.
14	16.1	3.2	00.0	3.2	6.5	3.2	6.5	16.1	22.6	6.5	00.0	3.2	6.5	3.2	00.0	3.2	00.0	100.
15	12.9	3.2	00.0	9.7	3.2	9.7	6.5	12.9	16.1	9.7	00.0	3.2	3.2	6.5	00.0	3.2	00.0	100.
16	16.1	3.2	3.2	3.2	9.7	9.7	6.5	6.5	19.4	9.7	00.0	3.2	00.0	3.2	00.0	6.5	00.0	100.
17	22.6	6.5	00.0	9.7	3.2	9.7	6.5	16.1	12.9	3.2	3.2	00.0	6.5	00.0	00.0	00.0	00.0	100.
18	12.9	6.5	6.5	9.7	9.7	9.7	6.5	19.4	16.1	3.2	00.0	00.0	00.0	00.0	00.0	00.0	00.0	100.
19	3.2	9.7	6.5	6.5	9.7	3.2	9.7	22.6	19.4	3.2	00.0	00.0	00.0	00.0	00.0	6.5	00.0	100.
20	6.5	12.9	3.2	6.5	3.2	3.2	3.2	16.1	12.9	16.1	3.2	3.2	00.0	3.2	3.2	3.2	00.0	100.
21	6.5	00.0	00.0	00.0	00.0	00.0	3.2	9.7	16.1	16.1	3.2	3.2	00.0	9.7	22.6	9.7	00.0	100.
22	9.7	00.0	3.2	00.0	00.0	00.0	6.5	6.5	22.6	9.7	3.2	3.2	6.5	3.2	9.7	6.5	9.7	100.
23	9.7	3.2	00.0	00.0	00.0	3.2	3.2	9.7	29.0	3.2	12.9	6.5	3.2	00.0	9.7	3.2	3.2	100.
24	16.1	3.2	00.0	00.0	00.0	00.0	6.5	9.7	16.1	9.7	12.9	3.2	3.2	6.5	9.7	3.2	00.0	100.
ALL	12.5	3.9	1.6	3.8	4.2	4.6	5.6	12.4	17.9	9.5	4.6	3.6	3.1	3.4	4.4	3.8	1.2	100.

NUMBER OF OBS = 744

B37

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	3.2	3.2	3.2	00.0	00.0	6.5	00.0	16.1	12.9	3.2	3.2	3.2	3.2	6.5	9.7	16.1	9.7	100.
2	16.1	00.0	3.2	6.5	00.0	6.5	00.0	6.5	19.4	12.9	00.0	00.0	9.7	3.2	9.7	00.0	6.5	100.
3	9.7	00.0	00.0	3.2	3.2	3.2	00.0	3.2	22.6	6.5	00.0	3.2	6.5	3.2	16.1	9.7	9.7	100.
4	3.2	12.9	3.2	00.0	00.0	3.2	3.2	12.9	3.2	12.9	3.2	6.5	00.0	9.7	9.7	12.9	3.2	100.
5	6.5	9.7	00.0	00.0	00.0	6.5	3.2	16.1	6.5	6.5	00.0	6.5	6.5	6.5	6.5	12.9	6.5	100.
6	00.0	3.2	6.5	00.0	3.2	6.5	00.0	6.5	9.7	16.1	00.0	6.5	3.2	6.5	6.5	22.6	3.2	100.
7	16.1	3.2	00.0	3.2	3.2	3.2	9.7	12.9	6.5	9.7	00.0	00.0	00.0	16.1	00.0	9.7	6.5	100.
8	19.4	3.2	3.2	3.2	6.5	6.5	9.7	9.7	16.1	3.2	00.0	3.2	00.0	6.5	3.2	3.2	3.2	100.
9	16.1	9.7	3.2	00.0	3.2	16.1	6.5	3.2	12.9	00.0	9.7	3.2	3.2	6.5	3.2	3.2	00.0	100.
10	12.9	9.7	00.0	6.5	3.2	12.9	12.9	9.7	6.5	00.0	3.2	3.2	3.2	6.5	3.2	6.5	00.0	100.
11	9.7	6.5	12.9	6.5	6.5	6.5	6.5	6.5	9.7	00.0	3.2	6.5	00.0	3.2	12.9	3.2	00.0	100.
12	12.9	6.5	3.2	6.5	9.7	6.5	12.9	9.7	6.5	00.0	00.0	6.5	00.0	00.0	3.2	16.1	00.0	100.
13	22.6	3.2	00.0	3.2	12.9	6.5	16.1	3.2	9.7	3.2	00.0	00.0	00.0	3.2	6.5	9.7	00.0	100.
14	16.1	12.9	00.0	6.5	9.7	9.7	12.9	12.9	00.0	3.2	00.0	00.0	3.2	00.0	9.7	3.2	00.0	100.
15	9.7	9.7	9.7	12.9	6.5	9.7	3.2	12.9	6.5	3.2	00.0	3.2	00.0	3.2	6.5	3.2	00.0	100.
16	9.7	12.9	00.0	9.7	9.7	9.7	00.0	19.4	3.2	3.2	00.0	3.2	00.0	3.2	3.2	12.9	00.0	100.
17	16.1	6.5	9.7	00.0	12.9	9.7	3.2	16.1	9.7	00.0	00.0	3.2	00.0	6.5	00.0	6.5	00.0	100.
18	9.7	12.9	9.7	3.2	9.7	3.2	6.5	16.1	9.7	00.0	00.0	00.0	00.0	3.2	6.5	9.7	00.0	100.
19	19.4	6.5	00.0	6.5	6.5	6.5	9.7	12.9	3.2	3.2	00.0	00.0	3.2	6.5	3.2	12.9	00.0	100.
20	00.0	6.5	00.0	6.5	3.2	3.2	9.7	9.7	9.7	3.2	00.0	3.2	3.2	9.7	6.5	25.8	00.0	100.
21	00.0	00.0	00.0	00.0	3.2	3.2	9.7	6.5	9.7	9.7	9.7	3.2	00.0	00.0	25.8	19.4	00.0	100.
22	9.7	00.0	00.0	3.2	3.2	00.0	6.5	9.7	9.7	3.2	3.2	3.2	12.9	3.2	19.4	6.5	6.5	100.
23	6.5	00.0	00.0	3.2	00.0	6.5	6.5	9.7	9.7	9.7	3.2	00.0	00.0	22.6	9.7	9.7	3.2	100.
24	9.7	3.2	00.0	6.5	3.2	00.0	3.2	6.5	16.1	3.2	9.7	3.2	3.2	3.2	9.7	9.7	9.7	100.
ALL	10.6	5.9	2.8	4.0	5.0	6.3	6.3	10.3	9.5	4.8	2.0	3.0	2.6	5.8	7.9	10.2	2.8	100.

NUMBER OF OBS = 744

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	10.0	10.0	20.0	6.7	3.3	00.0	00.0	00.0	10.0	13.3	10.0	100.
2	3.3	13.3	00.0	3.3	00.0	3.3	6.7	10.0	33.3	6.7	00.0	00.0	3.3	6.7	00.0	10.0	00.0	100.
3	3.3	00.0	6.7	3.3	00.0	3.3	6.7	23.3	20.0	13.3	00.0	00.0	00.0	3.3	6.7	6.7	3.3	100.
4	3.3	00.0	00.0	00.0	3.3	13.3	10.0	20.0	10.0	10.0	6.7	00.0	3.3	00.0	6.7	6.7	6.7	100.
5	3.3	00.0	00.0	00.0	6.7	10.0	10.0	16.7	13.3	6.7	6.7	00.0	3.3	3.3	3.3	6.7	10.0	100.
6	3.3	00.0	00.0	00.0	00.0	13.3	10.0	10.0	20.0	3.3	3.3	6.7	00.0	6.7	6.7	6.7	10.0	100.
7	6.7	00.0	00.0	00.0	00.0	6.7	6.7	16.7	20.0	6.7	3.3	00.0	3.3	3.3	6.7	6.7	13.3	100.
8	10.0	00.0	00.0	3.3	00.0	10.0	16.7	13.3	16.7	00.0	00.0	00.0	3.3	3.3	6.7	00.0	16.7	100.
9	3.3	6.7	00.0	00.0	3.3	00.0	26.7	20.0	13.3	6.7	3.3	00.0	00.0	00.0	10.0	3.3	3.3	100.
10	6.7	6.7	00.0	3.3	3.3	13.3	13.3	16.7	6.7	10.0	00.0	3.3	6.7	00.0	6.7	3.3	00.0	100.
11	6.7	3.3	6.7	6.7	3.3	3.3	6.7	23.3	13.3	6.7	3.3	3.3	6.7	00.0	3.3	3.3	00.0	100.
12	6.7	10.0	6.7	3.3	00.0	6.7	10.0	26.7	10.0	00.0	00.0	3.3	00.0	3.3	3.3	10.0	00.0	100.
13	13.3	3.3	6.7	6.7	00.0	10.0	10.0	20.0	16.7	00.0	00.0	00.0	3.3	3.3	00.0	6.7	00.0	100.
14	6.7	3.3	3.3	3.3	10.0	6.7	6.7	30.0	10.0	00.0	00.0	00.0	3.3	00.0	3.3	13.3	00.0	100.
15	3.3	00.0	6.7	3.3	00.0	13.3	3.3	36.7	10.0	00.0	00.0	00.0	00.0	00.0	10.0	13.3	00.0	100.
16	10.0	00.0	6.7	00.0	3.3	6.7	6.7	33.3	13.3	00.0	00.0	00.0	00.0	00.0	6.7	13.3	00.0	100.
17	10.0	00.0	3.3	3.3	3.3	10.0	6.7	26.7	13.3	3.3	00.0	00.0	00.0	00.0	00.0	20.0	00.0	100.
18	3.3	3.3	3.3	3.3	6.7	6.7	6.7	30.0	10.0	00.0	00.0	00.0	00.0	00.0	00.0	26.7	00.0	100.
19	3.3	00.0	3.3	00.0	00.0	3.3	13.3	36.7	3.3	00.0	00.0	00.0	00.0	00.0	13.3	23.3	00.0	100.
20	13.3	00.0	3.3	00.0	00.0	00.0	13.3	23.3	10.0	6.7	3.3	00.0	00.0	00.0	10.0	16.7	00.0	100.
21	13.3	00.0	00.0	6.7	00.0	10.0	10.0	13.3	23.3	00.0	00.0	00.0	3.3	00.0	6.7	10.0	3.3	100.
22	10.0	00.0	00.0	00.0	6.7	00.0	16.7	23.3	10.0	6.7	3.3	3.3	3.3	10.0	3.3	3.3	00.0	100.
23	6.7	00.0	00.0	00.0	00.0	3.3	3.3	30.0	16.7	00.0	3.3	00.0	10.0	00.0	13.3	10.0	3.3	100.
24	13.3	3.3	00.0	00.0	00.0	3.3	6.7	20.0	23.3	3.3	00.0	00.0	3.3	00.0	3.3	10.0	10.0	100.
ALL	7.2	2.4	2.4	2.1	2.1	6.7	9.9	22.1	14.9	4.0	1.7	.8	2.4	1.8	5.8	10.1	3.8	100.

NUMBER OF OBS = 720

B39

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	7.6	3.3	1.1	00.0	00.0	3.3	5.4	8.7	19.6	8.7	2.2	1.1	1.1	6.5	9.8	14.1	7.6	100.
2	12.0	5.4	1.1	3.3	00.0	4.3	4.3	7.6	28.3	10.9	2.2	1.1	4.3	3.3	5.4	4.3	2.2	100.
3	8.7	1.1	3.3	2.2	1.1	2.2	4.3	13.0	19.6	12.0	2.2	2.2	4.3	3.3	7.6	7.6	5.4	100.
4	8.7	5.4	2.2	1.1	1.1	5.4	4.3	14.1	8.7	10.9	5.4	3.3	1.1	5.4	9.8	8.7	4.3	100.
5	12.0	4.3	00.0	1.1	2.2	7.6	4.3	14.1	10.9	6.5	6.5	3.3	4.3	3.3	4.3	7.6	7.6	100.
6	6.5	2.2	2.2	1.1	3.3	7.6	4.3	8.7	19.6	7.6	3.3	6.5	1.1	6.5	5.4	9.8	4.3	100.
7	13.0	4.3	1.1	1.1	1.1	3.3	10.9	15.2	16.3	6.5	2.2	2.2	1.1	6.5	2.2	6.5	6.5	100.
8	13.0	1.1	2.2	4.3	4.3	7.6	8.7	14.1	14.1	6.5	2.2	1.1	5.4	4.3	3.3	1.1	6.5	100.
9	8.7	7.6	1.1	1.1	6.5	6.5	13.0	12.0	12.0	6.5	6.5	2.2	2.2	4.3	5.4	3.3	1.1	100.
10	9.8	5.4	00.0	4.3	5.4	14.1	10.9	13.0	5.4	8.7	2.2	4.3	5.4	3.3	4.3	3.3	00.0	100.
11	7.6	4.3	7.6	5.4	5.4	6.5	6.5	14.1	12.0	5.4	4.3	5.4	4.3	1.1	6.5	3.3	00.0	100.
12	9.8	5.4	3.3	5.4	6.5	5.4	9.8	16.3	10.9	4.3	2.2	5.4	1.1	2.2	3.3	8.7	00.0	100.
13	15.2	3.3	2.2	6.5	5.4	7.6	10.9	13.0	16.3	2.2	00.0	3.3	2.2	2.2	3.3	6.5	00.0	100.
14	13.0	6.5	1.1	4.3	8.7	6.5	8.7	19.6	10.9	3.3	00.0	1.1	4.3	1.1	4.3	6.5	00.0	100.
15	8.7	4.3	5.4	8.7	3.3	10.9	4.3	20.7	10.9	4.3	00.0	2.2	1.1	3.3	5.4	6.5	00.0	100.
16	12.0	5.4	3.3	4.3	7.6	8.7	4.3	19.6	12.0	4.3	00.0	2.2	00.0	2.2	3.3	10.9	00.0	100.
17	16.3	4.3	4.3	4.3	6.5	9.8	5.4	19.6	12.0	2.2	1.1	1.1	2.2	2.2	00.0	8.7	00.0	100.
18	8.7	7.6	6.5	5.4	8.7	6.5	6.5	21.7	12.0	1.1	00.0	00.0	00.0	1.1	2.2	12.0	00.0	100.
19	8.7	5.4	3.3	4.3	5.4	4.3	10.9	23.9	8.7	2.2	00.0	00.0	1.1	2.2	5.4	14.1	00.0	100.
20	6.5	6.5	2.2	4.3	2.2	2.2	8.7	16.3	10.9	8.7	2.2	2.2	1.1	4.3	6.5	15.2	00.0	100.
21	6.5	00.0	00.0	2.2	1.1	4.3	7.6	9.8	16.3	8.7	4.3	2.2	1.1	3.3	18.5	13.0	1.1	100.
22	9.8	00.0	1.1	1.1	3.3	00.0	9.8	13.0	14.1	6.5	3.3	3.3	7.6	5.4	10.9	5.4	5.4	100.
23	7.6	1.1	00.0	1.1	00.0	4.3	4.3	16.3	18.5	4.3	6.5	2.2	4.3	7.6	10.9	7.6	3.3	100.
24	13.0	3.3	00.0	2.2	1.1	1.1	5.4	12.0	18.5	5.4	7.6	2.2	3.3	3.3	7.6	7.6	6.5	100.
ALL	10.1	4.1	2.3	3.3	3.8	5.8	7.2	14.9	14.1	6.2	2.8	2.5	2.7	3.7	6.1	8.0	2.6	100.

NUMBER OF OBS = 2208

B40

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	6.7	6.7	00.0	00.0	00.0	3.3	10.0	6.7	26.7	00.0	00.0	00.0	3.3	3.3	6.7	26.7	00.0	100.
2	6.7	6.7	00.0	00.0	00.0	3.3	6.7	13.3	13.3	13.3	00.0	00.0	6.7	00.0	13.3	13.3	3.3	100.
3	16.7	00.0	00.0	00.0	00.0	3.3	3.3	6.7	26.7	6.7	00.0	3.3	3.3	00.0	10.0	16.7	3.3	100.
4	13.3	00.0	3.3	00.0	00.0	00.0	13.3	3.3	30.0	3.3	3.3	3.3	00.0	3.3	16.7	6.7	00.0	100.
5	16.7	00.0	00.0	00.0	00.0	3.3	10.0	13.3	20.0	3.3	00.0	3.3	3.3	6.7	16.7	3.3	00.0	100.
6	10.0	10.0	00.0	00.0	00.0	00.0	6.7	10.0	23.3	3.3	3.3	3.3	00.0	10.0	13.3	3.3	3.3	100.
7	6.5	9.7	00.0	3.2	3.2	00.0	3.2	6.5	25.8	6.5	00.0	00.0	3.2	12.9	12.9	6.5	00.0	100.
8	3.2	12.9	00.0	00.0	00.0	00.0	9.7	9.7	25.8	3.2	00.0	00.0	6.5	6.5	12.9	9.7	00.0	100.
9	3.2	9.7	00.0	00.0	3.2	3.2	6.5	12.9	16.1	9.7	00.0	00.0	00.0	6.5	16.1	12.9	00.0	100.
10	9.7	3.2	3.2	00.0	3.2	6.5	9.7	00.0	19.4	16.1	00.0	00.0	3.2	00.0	16.1	9.7	00.0	100.
11	12.9	3.2	3.2	00.0	3.2	3.2	9.7	00.0	25.8	9.7	3.2	00.0	00.0	6.5	9.7	9.7	00.0	100.
12	6.5	3.2	00.0	00.0	6.5	00.0	12.9	00.0	19.4	19.4	00.0	00.0	3.2	3.2	16.1	9.7	00.0	100.
13	00.0	6.5	00.0	00.0	3.2	3.2	6.5	3.2	22.6	12.9	6.5	00.0	3.2	3.2	19.4	9.7	00.0	100.
14	3.2	3.2	00.0	3.2	00.0	3.2	3.2	6.5	22.6	12.9	3.2	3.2	3.2	3.2	9.7	19.4	00.0	100.
15	00.0	6.5	00.0	3.2	3.2	00.0	3.2	6.5	19.4	12.9	3.2	6.5	3.2	3.2	6.5	22.6	00.0	100.
16	00.0	6.5	00.0	00.0	3.2	3.2	00.0	16.1	6.5	19.4	3.2	9.7	3.2	3.2	9.7	16.1	00.0	100.
17	3.2	6.5	3.2	00.0	00.0	3.2	3.2	12.9	9.7	16.1	3.2	6.5	00.0	6.5	6.5	19.4	00.0	100.
18	3.2	6.5	00.0	00.0	3.2	00.0	6.5	9.7	9.7	16.1	9.7	00.0	3.2	3.2	9.7	19.4	00.0	100.
19	6.7	3.3	00.0	00.0	3.3	3.3	3.3	13.3	16.7	10.0	00.0	3.3	00.0	00.0	16.7	16.7	3.3	100.
20	13.3	3.3	00.0	00.0	3.3	6.7	3.3	10.0	26.7	3.3	3.3	00.0	00.0	00.0	6.7	16.7	3.3	100.
21	10.0	3.3	00.0	00.0	00.0	3.3	00.0	23.3	20.0	6.7	00.0	3.3	00.0	3.3	13.3	10.0	3.3	100.
22	13.3	3.3	00.0	3.3	00.0	3.3	00.0	16.7	20.0	6.7	6.7	00.0	00.0	6.7	6.7	13.3	00.0	100.
23	3.3	6.7	00.0	00.0	00.0	6.7	3.3	20.0	16.7	00.0	00.0	6.7	00.0	6.7	10.0	16.7	3.3	100.
24	6.7	3.3	00.0	00.0	3.3	10.0	00.0	16.7	13.3	6.7	00.0	3.3	3.3	6.7	6.7	20.0	00.0	100.
ALL	7.2	5.2	.5	.5	1.8	3.0	5.6	9.8	19.8	9.2	2.0	2.3	2.2	4.4	11.7	13.7	1.0	100.

NUMBER OF OBS = 732

B41

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	13.3	13.3	3.3	00.0	00.0	00.0	6.7	10.0	13.3	10.0	00.0	3.3	00.0	10.0	13.3	00.0	3.3	100.
2	10.0	6.7	6.7	00.0	00.0	00.0	6.7	16.7	6.7	13.3	3.3	00.0	3.3	3.3	16.7	3.3	3.3	100.
3	10.0	6.7	3.3	6.7	00.0	00.0	6.7	10.0	16.7	6.7	6.7	00.0	6.7	3.3	6.7	10.0	00.0	100.
4	10.0	10.0	00.0	3.3	6.7	00.0	3.3	10.0	3.3	13.3	3.3	3.3	3.3	3.3	13.3	10.0	3.3	100.
5	13.3	10.0	00.0	6.7	3.3	00.0	10.0	6.7	10.0	10.0	00.0	3.3	3.3	00.0	10.0	10.0	3.3	100.
6	20.7	6.9	3.4	00.0	3.4	00.0	13.8	3.4	10.3	6.9	00.0	3.4	00.0	10.3	6.9	10.3	00.0	100.
7	16.7	10.0	00.0	00.0	00.0	3.3	16.7	6.7	6.7	6.7	3.3	00.0	3.3	00.0	10.0	16.7	00.0	100.
8	23.3	3.3	3.3	00.0	00.0	6.7	6.7	13.3	10.0	13.3	00.0	6.7	00.0	3.3	3.3	6.7	00.0	100.
9	20.0	10.0	3.3	00.0	00.0	6.7	6.7	13.3	13.3	10.0	3.3	3.3	00.0	3.3	3.3	3.3	00.0	100.
10	10.0	6.7	3.3	6.7	00.0	3.3	6.7	13.3	20.0	3.3	3.3	3.3	00.0	6.7	00.0	13.3	00.0	100.
11	10.0	10.0	00.0	3.3	3.3	00.0	10.0	6.7	20.0	10.0	3.3	3.3	00.0	3.3	6.7	10.0	00.0	100.
12	10.0	6.7	00.0	3.3	3.3	3.3	6.7	00.0	20.0	13.3	6.7	3.3	00.0	00.0	10.0	13.3	00.0	100.
13	13.3	6.7	00.0	3.3	3.3	3.3	10.0	3.3	13.3	16.7	3.3	3.3	00.0	3.3	6.7	10.0	00.0	100.
14	13.3	3.3	00.0	6.7	00.0	3.3	10.0	00.0	16.7	10.0	6.7	6.7	3.3	6.7	3.3	10.0	00.0	100.
15	13.3	6.7	3.3	3.3	00.0	00.0	13.3	00.0	20.0	10.0	10.0	00.0	00.0	3.3	6.7	10.0	00.0	100.
16	13.3	3.3	00.0	6.7	00.0	00.0	13.3	10.0	16.7	6.7	6.7	00.0	00.0	6.7	00.0	16.7	00.0	100.
17	13.3	3.3	00.0	3.3	3.3	6.7	6.7	10.0	16.7	10.0	3.3	00.0	00.0	00.0	6.7	16.7	00.0	100.
18	10.0	6.7	3.3	3.3	3.3	3.3	6.7	10.0	13.3	10.0	6.7	3.3	00.0	3.3	00.0	16.7	00.0	100.
19	6.7	6.7	6.7	3.3	3.3	3.3	6.7	3.3	23.3	6.7	3.3	00.0	00.0	3.3	00.0	20.0	3.3	100.
20	23.3	6.7	3.3	3.3	00.0	3.3	10.0	00.0	20.0	6.7	6.7	3.3	3.3	00.0	00.0	10.0	00.0	100.
21	20.0	3.3	13.3	00.0	00.0	3.3	10.0	00.0	20.0	10.0	6.7	00.0	00.0	00.0	00.0	10.0	3.3	100.
22	20.0	3.3	6.7	00.0	00.0	3.3	10.0	6.7	20.0	3.3	3.3	00.0	3.3	00.0	6.7	10.0	3.3	100.
23	16.7	6.7	3.3	00.0	00.0	6.7	13.3	6.7	16.7	3.3	6.7	3.3	3.3	3.3	3.3	6.7	00.0	100.
24	23.3	3.3	3.3	00.0	00.0	6.7	6.7	10.0	13.3	6.7	00.0	3.3	3.3	6.7	6.7	00.0	6.7	100.
ALL	14.7	6.7	2.9	2.6	1.4	2.8	9.0	7.1	15.0	9.0	4.0	2.4	1.5	3.5	5.8	10.2	1.3	100.

NUMBER OF OBS = 719

B42

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	19.4	6.5	00.0	00.0	3.2	00.0	3.2	6.5	9.7	6.5	12.9	3.2	3.2	9.7	9.7	6.5	00.0	100.
2	19.4	12.9	00.0	00.0	00.0	00.0	6.5	00.0	3.2	6.5	12.9	00.0	9.7	6.5	16.1	6.5	00.0	100.
3	12.9	3.2	3.2	00.0	6.5	00.0	6.5	3.2	9.7	00.0	9.7	00.0	9.7	9.7	3.2	16.1	6.5	100.
4	13.3	00.0	3.3	10.0	00.0	00.0	3.3	00.0	3.3	10.0	6.7	6.7	6.7	10.0	13.3	13.3	00.0	100.
5	12.9	3.2	00.0	3.2	6.5	00.0	6.5	3.2	3.2	6.5	3.2	6.5	12.9	6.5	19.4	6.5	00.0	100.
6	6.5	6.5	3.2	6.5	00.0	3.2	3.2	00.0	3.2	6.5	3.2	12.9	12.9	6.5	9.7	12.9	3.2	100.
7	9.7	00.0	3.2	3.2	3.2	3.2	00.0	3.2	00.0	9.7	6.5	6.5	6.5	6.5	22.6	12.9	3.2	100.
8	9.7	9.7	00.0	00.0	3.2	6.5	00.0	3.2	3.2	12.9	3.2	6.5	00.0	22.6	6.5	9.7	3.2	100.
9	6.5	3.2	00.0	00.0	3.2	6.5	00.0	6.5	3.2	16.1	3.2	3.2	3.2	19.4	6.5	12.9	6.5	100.
10	12.9	3.2	00.0	3.2	00.0	6.5	00.0	6.5	9.7	6.5	00.0	9.7	3.2	12.9	12.9	12.9	00.0	100.
11	16.1	6.5	3.2	00.0	00.0	3.2	6.5	00.0	9.7	00.0	6.5	6.5	3.2	00.0	29.0	9.7	00.0	100.
12	9.7	19.4	00.0	00.0	00.0	6.5	6.5	00.0	6.5	00.0	9.7	00.0	6.5	6.5	16.1	12.9	00.0	100.
13	9.7	16.1	3.2	00.0	3.2	3.2	6.5	00.0	3.2	3.2	6.5	3.2	6.5	6.5	19.4	9.7	00.0	100.
14	6.5	12.9	00.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	6.5	00.0	12.9	16.1	16.1	00.0	100.
15	16.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	6.5	6.5	3.2	6.5	19.4	12.9	00.0	100.
16	16.1	6.5	6.5	3.2	00.0	3.2	6.5	00.0	6.5	00.0	6.5	6.5	3.2	12.9	9.7	12.9	00.0	100.
17	9.7	12.9	3.2	00.0	00.0	3.2	3.2	6.5	00.0	9.7	00.0	3.2	3.2	9.7	9.7	25.8	00.0	100.
18	12.9	6.5	6.5	00.0	00.0	3.2	6.5	00.0	6.5	6.5	00.0	6.5	3.2	6.5	9.7	22.6	3.2	100.
19	9.7	3.2	6.5	00.0	00.0	3.2	6.5	00.0	3.2	9.7	6.5	3.2	6.5	3.2	19.4	19.4	00.0	100.
20	12.9	3.2	3.2	00.0	00.0	6.5	00.0	6.5	9.7	9.7	6.5	00.0	6.5	3.2	22.6	9.7	00.0	100.
21	12.9	6.5	3.2	00.0	00.0	3.2	00.0	9.7	6.5	9.7	6.5	3.2	3.2	3.2	9.7	19.4	3.2	100.
22	16.1	3.2	3.2	00.0	3.2	3.2	00.0	12.9	9.7	00.0	9.7	3.2	6.5	3.2	3.2	22.6	00.0	100.
23	22.6	6.5	00.0	00.0	00.0	3.2	3.2	3.2	9.7	3.2	16.1	3.2	6.5	6.5	3.2	12.9	00.0	100.
24	25.8	3.2	00.0	00.0	00.0	00.0	6.5	00.0	6.5	3.2	16.1	3.2	3.2	9.7	6.5	16.1	00.0	100.
ALL	13.3	6.6	2.3	1.5	1.6	3.1	3.6	3.2	5.5	5.9	6.9	4.6	5.4	8.3	13.1	13.9	1.2	100.

NUMBER OF OBS = 743

B43

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

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	13.2	8.8	1.1	00.0	1.1	1.1	6.6	7.7	16.5	5.5	4.4	2.2	2.2	7.7	9.9	11.0	1.1	100.
2	12.1	8.8	2.2	00.0	00.0	1.1	6.6	9.9	7.7	11.0	5.5	00.0	6.6	3.3	15.4	7.7	2.2	100.
3	13.2	3.3	2.2	2.2	2.2	1.1	5.5	6.6	17.6	4.4	5.5	1.1	6.6	4.4	6.6	14.3	3.3	100.
4	12.2	3.3	2.2	4.4	2.2	00.0	6.7	4.4	12.2	8.9	4.4	4.4	3.3	5.6	14.4	10.0	1.1	100.
5	14.3	4.4	00.0	3.3	3.3	1.1	8.8	7.7	11.0	6.6	1.1	4.4	6.6	4.4	15.4	6.6	1.1	100.
6	12.2	7.8	2.2	2.2	1.1	1.1	7.8	4.4	12.2	5.6	2.2	6.7	4.4	8.9	10.0	8.9	2.2	100.
7	10.9	6.5	1.1	2.2	2.2	2.2	6.5	5.4	10.9	7.6	3.3	2.2	4.3	6.5	15.2	12.0	1.1	100.
8	12.0	8.7	1.1	00.0	1.1	4.3	5.4	8.7	13.0	9.8	1.1	4.3	2.2	10.9	7.6	8.7	1.1	100.
9	9.8	7.6	1.1	00.0	2.2	5.4	4.3	10.9	10.9	12.0	2.2	2.2	1.1	9.8	8.7	9.8	2.2	100.
10	10.9	4.3	2.2	3.3	1.1	5.4	5.4	6.5	16.3	8.7	1.1	4.3	2.2	6.5	9.8	12.0	00.0	100.
11	13.0	6.5	2.2	1.1	2.2	2.2	8.7	2.2	18.5	6.5	4.3	3.3	1.1	3.3	15.2	9.8	00.0	100.
12	8.7	9.8	00.0	1.1	3.3	3.3	8.7	00.0	15.2	10.9	5.4	1.1	3.3	3.3	14.1	12.0	00.0	100.
13	7.6	9.8	1.1	1.1	3.3	3.3	7.6	2.2	13.0	10.9	5.4	2.2	3.3	4.3	15.2	9.8	00.0	100.
14	7.6	6.5	00.0	4.3	1.1	3.3	5.4	3.3	14.1	8.7	5.4	5.4	2.2	7.6	9.8	15.2	00.0	100.
15	9.8	5.4	2.2	3.3	2.2	1.1	6.5	3.3	14.1	8.7	6.5	4.3	2.2	4.3	10.9	15.2	00.0	100.
16	9.8	5.4	2.2	3.3	1.1	2.2	6.5	8.7	9.8	8.7	5.4	5.4	2.2	7.6	6.5	15.2	00.0	100.
17	8.7	7.6	2.2	1.1	1.1	4.3	4.3	9.8	8.7	12.0	2.2	3.3	1.1	5.4	7.6	20.7	00.0	100.
18	8.7	6.5	3.3	1.1	2.2	2.2	6.5	6.5	9.8	10.9	5.4	3.3	2.2	4.3	6.5	19.6	1.1	100.
19	7.7	4.4	4.4	1.1	2.2	3.3	5.5	5.5	14.3	8.8	3.3	2.2	2.2	2.2	12.1	18.7	2.2	100.
20	16.5	4.4	2.2	1.1	1.1	5.5	4.4	5.5	18.7	6.6	5.5	1.1	3.3	1.1	9.9	12.1	1.1	100.
21	14.3	4.4	5.5	00.0	00.0	3.3	3.3	11.0	15.4	8.8	4.4	2.2	1.1	2.2	7.7	13.2	3.3	100.
22	16.5	3.3	3.3	1.1	1.1	3.3	3.3	12.1	16.5	3.3	6.6	1.1	3.3	3.3	5.5	15.4	1.1	100.
23	14.3	6.6	1.1	00.0	00.0	5.5	6.6	9.9	14.3	2.2	7.7	4.4	3.3	5.5	5.5	12.1	1.1	100.
24	18.7	3.3	1.1	00.0	1.1	5.5	4.4	8.8	11.0	5.5	5.5	3.3	3.3	7.7	6.6	12.1	2.2	100.
ALL	11.8	6.2	1.9	1.5	1.6	3.0	6.1	6.7	13.4	8.0	4.3	3.1	3.1	5.4	10.3	12.6	1.1	100.

NUMBER OF OBS = 2194

B44

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JUL-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	10.4	6.0	1.1	00.0	.5	2.2	6.0	8.2	18.0	7.1	3.3	1.6	1.6	7.1	9.8	12.6	4.4	100.
2	12.0	7.1	1.6	1.6	00.0	2.7	5.5	8.7	18.0	10.9	3.8	.5	5.5	3.3	10.4	6.0	2.2	100.
3	10.9	2.2	2.7	2.2	1.6	1.6	4.9	9.8	18.6	8.2	3.8	1.6	5.5	3.8	7.1	10.9	4.4	100.
4	10.4	4.4	2.2	2.7	1.6	2.7	5.5	9.3	10.4	9.9	4.9	3.8	2.2	5.5	12.1	9.3	2.7	100.
5	13.1	4.4	00.0	2.2	2.7	4.4	6.6	10.9	10.9	6.6	3.8	3.8	5.5	3.8	9.8	7.1	4.4	100.
6	9.3	4.9	2.2	1.6	2.2	4.4	6.0	6.6	15.9	6.6	2.7	6.6	2.7	7.7	7.7	9.3	3.3	100.
7	12.0	5.4	1.1	1.6	1.6	2.7	8.7	10.3	13.6	7.1	2.7	2.2	2.7	6.5	8.7	9.2	3.8	100.
8	12.5	4.9	1.6	2.2	2.7	6.0	7.1	11.4	13.6	8.2	1.6	2.7	3.8	7.6	5.4	4.9	3.8	100.
9	9.2	7.6	1.1	.5	4.3	6.0	8.7	11.4	11.4	9.2	4.3	2.2	1.6	7.1	7.1	6.5	1.6	100.
10	10.3	4.9	1.1	3.8	3.3	9.8	8.2	9.8	10.9	8.7	1.6	4.3	3.8	4.9	7.1	7.6	00.0	100.
11	10.3	5.4	4.9	3.3	3.8	4.3	7.6	8.2	15.2	6.0	4.3	4.3	2.7	2.2	10.9	6.5	00.0	100.
12	9.2	7.6	1.6	3.3	4.9	4.3	9.2	8.2	13.0	7.6	3.8	3.3	2.2	2.7	8.7	10.3	00.0	100.
13	11.4	6.5	1.6	3.8	4.3	5.4	9.2	7.6	14.7	6.5	2.7	2.7	2.7	3.3	9.2	8.2	00.0	100.
14	10.3	6.5	.5	4.3	4.9	4.9	7.1	11.4	12.5	6.0	2.7	3.3	3.3	4.3	7.1	10.9	00.0	100.
15	9.2	4.9	3.8	6.0	2.7	6.0	5.4	12.0	12.5	6.5	3.3	3.3	1.6	3.8	8.2	10.9	00.0	100.
16	10.9	5.4	2.7	3.8	4.3	5.4	5.4	14.1	10.9	6.5	2.7	3.8	1.1	4.9	4.9	13.0	00.0	100.
17	12.5	6.0	3.3	2.7	3.8	7.1	4.9	14.7	10.3	7.1	1.6	2.2	1.6	3.8	3.8	14.7	00.0	100.
18	8.7	7.1	4.9	3.3	5.4	4.3	6.5	14.1	10.9	6.0	2.7	1.6	1.1	2.7	4.3	15.8	.5	100.
19	8.2	4.9	3.8	2.7	3.8	3.8	8.2	14.8	11.5	5.5	1.6	1.1	1.6	2.2	8.7	16.4	1.1	100.
20	11.5	5.5	2.2	2.7	1.6	3.8	6.6	10.9	14.8	7.7	3.8	1.6	2.2	2.7	8.2	13.7	.5	100.
21	10.4	2.2	2.7	1.1	.5	3.8	5.5	10.4	15.8	8.7	4.4	2.2	1.1	2.7	13.1	13.1	2.2	100.
22	13.1	1.6	2.2	1.1	2.2	1.6	6.6	12.6	15.3	4.9	4.9	2.2	5.5	4.4	8.2	10.4	3.3	100.
23	10.9	3.8	.5	.5	00.0	4.9	5.5	13.1	16.4	3.3	7.1	3.3	3.8	6.6	8.2	9.8	2.2	100.
24	15.8	3.3	.5	1.1	1.1	3.3	4.9	10.4	14.8	5.5	6.6	2.7	3.3	5.5	7.1	9.8	4.4	100.
ALL	10.9	5.1	2.1	2.4	2.7	4.4	6.7	10.8	13.7	7.1	3.5	2.8	2.9	4.5	8.2	10.3	1.9	100.

NUMBER OF OBS = 4402

B45

NPPD-COOPER NUCLEAR STATION 10-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

JAN-DEC

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	11.3	5.8	2.7	1.1	.8	2.2	5.2	8.2	15.7	6.9	2.7	1.9	3.6	6.3	11.0	12.1	2.5	100.
2	12.1	4.9	1.9	2.5	1.1	2.7	4.7	8.5	17.6	8.8	2.7	1.1	3.8	5.5	11.8	8.8	1.4	100.
3	11.8	3.3	2.7	1.4	2.2	1.9	4.4	9.3	17.6	6.9	2.7	1.4	4.1	6.3	10.4	9.9	3.6	100.
4	12.1	5.0	2.8	1.9	1.9	1.9	5.0	8.0	11.8	7.7	4.1	3.0	3.0	6.6	11.6	11.0	2.5	100.
5	13.7	4.7	2.2	2.2	3.0	2.7	5.5	9.1	12.1	5.8	3.3	2.5	5.2	5.2	10.7	9.6	2.5	100.
6	10.5	5.8	3.3	2.2	2.2	3.3	5.5	7.2	13.5	5.8	1.9	4.1	3.3	7.7	8.0	11.3	4.4	100.
7	11.2	6.6	3.0	3.0	1.4	2.7	6.0	10.1	13.2	6.6	3.6	1.4	1.9	6.0	10.4	9.9	3.0	100.
8	12.3	6.0	3.6	2.2	2.7	4.1	7.9	10.1	13.2	6.6	1.4	3.0	2.5	7.4	7.1	7.7	2.2	100.
9	10.7	7.4	3.0	2.2	3.8	4.7	9.0	9.6	11.8	6.6	4.1	2.5	1.4	6.8	6.6	9.0	.8	100.
10	10.7	6.3	3.0	4.1	3.0	6.6	7.9	9.0	11.2	7.9	2.5	4.1	3.0	4.7	7.4	8.5	00.0	100.
11	10.7	6.0	6.8	2.5	3.8	3.3	6.6	9.0	13.7	6.0	4.4	3.3	3.0	3.3	9.0	8.5	00.0	100.
12	10.1	7.9	4.4	3.0	3.6	4.7	6.0	9.3	11.5	8.5	3.8	2.5	2.5	3.6	8.5	10.1	00.0	100.
13	10.7	6.3	5.2	3.6	4.1	3.8	6.0	8.2	15.1	6.3	3.3	2.2	3.8	2.7	8.8	9.9	00.0	100.
14	9.6	6.3	4.7	3.8	4.4	3.6	4.7	10.4	12.3	7.1	3.6	1.9	3.3	4.9	7.7	11.8	00.0	100.
15	9.0	6.3	5.5	4.4	3.6	4.4	5.5	8.8	12.3	7.9	3.3	3.0	1.9	4.9	8.2	11.0	00.0	100.
16	11.5	6.0	3.8	3.0	3.6	4.4	5.2	11.2	12.6	6.8	3.0	3.0	1.9	3.8	7.4	12.6	00.0	100.
17	11.8	6.8	4.7	2.2	3.3	4.7	4.9	12.6	12.3	6.6	3.0	1.6	1.9	4.1	6.0	13.4	00.0	100.
18	9.9	7.9	4.9	3.3	3.8	3.0	5.2	12.3	12.3	6.6	3.0	2.5	1.1	3.0	5.8	15.1	.3	100.
19	9.1	7.4	4.1	3.0	3.0	3.3	6.0	11.5	12.9	6.6	1.9	.8	1.4	3.8	9.3	14.8	.8	100.
20	11.0	6.6	2.5	1.9	2.7	3.0	4.9	10.7	13.2	6.9	4.4	1.6	2.2	3.6	9.1	15.1	.5	100.
21	12.4	4.1	2.5	.8	1.6	3.3	3.6	8.8	16.2	5.8	3.3	4.1	2.7	3.3	12.4	13.5	1.6	100.
22	13.2	4.9	1.9	1.1	3.0	1.9	4.4	10.4	14.0	4.9	4.4	2.2	4.7	4.9	8.8	12.4	2.7	100.
23	10.2	5.2	2.2	1.6	1.9	3.8	4.1	10.7	14.8	3.8	4.9	3.3	3.8	5.5	10.2	11.0	2.7	100.
24	12.1	5.5	1.6	1.4	1.6	2.7	4.1	10.7	12.6	6.3	5.2	3.6	2.7	5.8	8.2	12.1	3.6	100.
ALL	11.1	6.0	3.5	2.4	2.8	3.5	5.5	9.8	13.5	6.7	3.4	2.5	2.9	5.0	8.9	11.2	1.5	100.

NUMBER OF OBS = 8746

B46

Wind Direction Frequencies

100-Meter Level

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	3.2	6.5	00.0	3.2	3.2	9.7	6.5	3.2	3.2	6.5	3.2	6.5	00.0	6.5	25.8	12.9	00.0	100.
2	9.7	6.5	3.2	3.2	00.0	9.7	3.2	12.9	00.0	3.2	6.5	3.2	00.0	00.0	25.8	12.9	00.0	100.
3	12.9	3.2	3.2	3.2	3.2	3.2	6.5	6.5	6.5	3.2	6.5	3.2	00.0	00.0	25.8	12.9	00.0	100.
4	6.5	3.2	3.2	6.5	3.2	3.2	9.7	6.5	3.2	00.0	3.2	9.7	00.0	6.5	19.4	16.1	00.0	100.
5	3.2	3.2	6.5	3.2	6.5	3.2	3.2	6.5	3.2	6.5	00.0	6.5	3.2	6.5	19.4	19.4	00.0	100.
6	6.5	3.2	6.5	00.0	3.2	9.7	3.2	3.2	9.7	3.2	00.0	00.0	9.7	6.5	22.6	12.9	00.0	100.
7	3.2	00.0	6.5	3.2	6.5	3.2	6.5	3.2	6.5	3.2	00.0	3.2	3.2	12.9	25.8	12.9	00.0	100.
8	00.0	00.0	3.2	3.2	6.5	9.7	3.2	00.0	9.7	3.2	00.0	6.5	00.0	6.5	38.7	9.7	00.0	100.
9	00.0	00.0	3.2	3.2	3.2	3.2	9.7	9.7	6.5	00.0	00.0	3.2	3.2	16.1	19.4	19.4	00.0	100.
10	3.2	00.0	3.2	3.2	6.5	3.2	6.5	6.5	6.5	00.0	00.0	3.2	3.2	12.9	25.8	16.1	00.0	100.
11	3.2	00.0	3.2	3.2	6.5	3.2	9.7	9.7	00.0	00.0	3.2	3.2	00.0	9.7	25.8	19.4	00.0	100.
12	6.7	6.7	00.0	6.7	6.7	6.7	3.3	6.7	3.3	3.3	00.0	6.7	00.0	6.7	23.3	13.3	00.0	100.
13	6.7	3.3	3.3	6.7	3.3	13.3	3.3	3.3	3.3	3.3	00.0	00.0	10.0	23.3	13.3	00.0	00.0	100.
14	9.7	00.0	6.5	3.2	6.5	9.7	3.2	6.5	3.2	00.0	6.5	00.0	00.0	12.9	22.6	9.7	00.0	100.
15	6.5	3.2	6.5	3.2	6.5	6.5	6.5	6.5	3.2	00.0	3.2	3.2	3.2	6.5	19.4	16.1	00.0	100.
16	12.9	6.5	00.0	00.0	9.7	9.7	3.2	3.2	6.5	00.0	3.2	3.2	3.2	6.5	19.4	12.9	00.0	100.
17	12.9	00.0	00.0	00.0	19.4	3.2	3.2	6.5	3.2	00.0	6.5	3.2	00.0	12.9	12.9	16.1	00.0	100.
18	9.7	00.0	3.2	3.2	9.7	6.5	00.0	9.7	3.2	3.2	6.5	00.0	3.2	6.5	12.9	22.6	00.0	100.
19	12.9	3.2	00.0	3.2	6.5	9.7	00.0	12.9	6.5	3.2	3.2	00.0	00.0	6.5	19.4	12.9	00.0	100.
20	16.1	00.0	00.0	3.2	6.5	9.7	00.0	12.9	9.7	00.0	3.2	00.0	00.0	3.2	22.6	12.9	00.0	100.
21	9.7	9.7	3.2	00.0	3.2	16.1	00.0	6.5	6.5	00.0	6.5	00.0	00.0	6.5	12.9	19.4	00.0	100.
22	6.5	9.7	3.2	00.0	3.2	9.7	6.5	9.7	3.2	3.2	00.0	00.0	6.5	9.7	16.1	12.9	00.0	100.
23	6.5	6.5	3.2	3.2	6.5	9.7	6.5	3.2	6.5	00.0	3.2	00.0	6.5	3.2	19.4	16.1	00.0	100.
24	6.5	6.5	00.0	00.0	6.5	9.7	6.5	6.5	3.2	3.2	3.2	00.0	00.0	12.9	16.1	19.4	00.0	100.
ALL	7.3	3.4	3.0	2.8	5.9	7.5	4.6	6.7	4.9	2.0	3.0	2.7	1.9	7.8	21.4	15.1	00.0	100.

NUMBER OF OBS = 742

B48

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	21.4	7.1	00.0	00.0	00.0	00.0	10.7	7.1	7.1	10.7	3.6	00.0	7.1	00.0	14.3	10.7	00.0	100.
2	14.3	7.1	00.0	00.0	00.0	00.0	7.1	3.6	14.3	7.1	10.7	00.0	00.0	00.0	7.1	28.6	00.0	100.
3	7.1	7.1	7.1	00.0	00.0	00.0	00.0	14.3	10.7	7.1	7.1	3.6	00.0	00.0	3.6	32.1	00.0	100.
4	7.1	3.6	7.1	00.0	00.0	3.6	00.0	7.1	10.7	10.7	10.7	3.6	00.0	00.0	3.6	32.1	00.0	100.
5	10.7	10.7	3.6	00.0	00.0	00.0	00.0	3.6	14.3	14.3	7.1	3.6	00.0	00.0	3.6	28.6	00.0	100.
6	14.3	10.7	00.0	00.0	3.6	00.0	00.0	7.1	10.7	7.1	17.9	00.0	00.0	00.0	7.1	21.4	00.0	100.
7	10.7	7.1	3.6	00.0	00.0	00.0	00.0	7.1	14.3	10.7	14.3	00.0	00.0	00.0	7.1	25.0	00.0	100.
8	14.3	3.6	7.1	00.0	00.0	00.0	00.0	7.1	10.7	10.7	14.3	3.6	00.0	3.6	3.6	21.4	00.0	100.
9	17.9	00.0	7.1	00.0	00.0	00.0	00.0	3.6	14.3	14.3	7.1	7.1	00.0	7.1	3.6	17.9	00.0	100.
10	14.3	7.1	3.6	3.6	00.0	00.0	00.0	10.7	7.1	7.1	14.3	7.1	00.0	3.6	7.1	14.3	00.0	100.
11	10.7	7.1	3.6	3.6	00.0	00.0	3.6	3.6	10.7	3.6	17.9	7.1	3.6	3.6	00.0	21.4	00.0	100.
12	17.9	7.1	00.0	7.1	00.0	00.0	00.0	10.7	3.6	14.3	10.7	7.1	7.1	00.0	00.0	14.3	00.0	100.
13	7.1	3.6	7.1	7.1	00.0	00.0	3.6	7.1	3.6	10.7	14.3	10.7	3.6	00.0	7.1	14.3	00.0	100.
14	7.1	00.0	7.1	10.7	00.0	00.0	3.6	3.6	3.6	10.7	10.7	7.1	3.6	7.1	10.7	14.3	00.0	100.
15	14.3	00.0	7.1	7.1	00.0	3.6	3.6	3.6	3.6	7.1	14.3	7.1	7.1	3.6	7.1	10.7	00.0	100.
16	3.6	7.1	3.6	3.6	00.0	00.0	10.7	00.0	3.6	10.7	10.7	7.1	3.6	7.1	7.1	21.4	00.0	100.
17	3.6	3.6	3.6	3.6	00.0	3.6	7.1	3.6	3.6	14.3	14.3	7.1	00.0	00.0	7.1	25.0	00.0	100.
18	10.7	00.0	3.6	00.0	3.6	3.6	3.6	7.1	10.7	3.6	17.9	7.1	00.0	00.0	3.6	25.0	00.0	100.
19	10.7	00.0	3.6	00.0	3.6	00.0	7.1	7.1	14.3	3.6	21.4	00.0	00.0	00.0	3.6	25.0	00.0	100.
20	3.6	10.7	00.0	00.0	3.6	00.0	3.6	14.3	14.3	00.0	10.7	10.7	00.0	00.0	3.6	25.0	00.0	100.
21	14.3	3.6	3.6	00.0	00.0	7.1	3.6	14.3	3.6	7.1	7.1	7.1	3.6	00.0	3.6	21.4	00.0	100.
22	21.4	7.1	00.0	00.0	3.6	00.0	7.1	10.7	7.1	10.7	3.6	3.6	3.6	00.0	3.6	17.9	00.0	100.
23	10.7	3.6	3.6	00.0	3.6	00.0	7.1	7.1	7.1	10.7	7.1	3.6	00.0	00.0	10.7	25.0	00.0	100.
24	10.7	7.1	00.0	3.6	00.0	3.6	7.1	10.7	7.1	7.1	3.6	3.6	3.6	3.6	14.3	14.3	00.0	100.
ALL	11.6	5.2	3.6	2.1	.9	1.0	3.7	7.3	8.8	8.9	11.3	4.9	1.9	1.6	6.0	21.1	00.0	100.

NUMBER OF OBS = 672

B49

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	6.5	12.9	9.7	00.0	6.5	9.7	3.2	9.7	3.2	3.2	00.0	6.5	00.0	9.7	6.5	00.0	100.
2	9.7	9.7	6.5	9.7	6.5	3.2	12.9	3.2	9.7	3.2	3.2	00.0	6.5	00.0	9.7	6.5	00.0	100.
3	6.5	19.4	6.5	3.2	3.2	3.2	12.9	6.5	9.7	3.2	00.0	3.2	6.5	3.2	6.5	6.5	00.0	100.
4	6.5	16.1	6.5	6.5	3.2	00.0	19.4	3.2	6.5	3.2	00.0	6.5	6.5	6.5	6.5	3.2	00.0	100.
5	9.7	6.5	9.7	9.7	3.2	6.5	12.9	3.2	9.7	00.0	3.2	00.0	00.0	6.5	12.9	6.5	00.0	100.
6	9.7	6.5	12.9	6.5	3.2	3.2	12.9	3.2	9.7	3.2	3.2	00.0	00.0	6.5	3.2	16.1	00.0	100.
7	9.7	9.7	6.5	9.7	3.2	00.0	16.1	3.2	12.9	3.2	00.0	3.2	00.0	00.0	9.7	12.9	00.0	100.
8	19.4	12.9	3.2	9.7	3.2	00.0	16.1	3.2	12.9	00.0	6.5	00.0	00.0	3.2	3.2	6.5	00.0	100.
9	9.7	19.4	3.2	6.5	6.5	00.0	16.1	3.2	12.9	00.0	3.2	00.0	3.2	00.0	3.2	12.9	00.0	100.
10	16.1	19.4	6.5	6.5	3.2	3.2	6.5	12.9	3.2	9.7	00.0	3.2	00.0	3.2	6.5	00.0	00.0	100.
11	16.1	9.7	12.9	3.2	6.5	3.2	3.2	16.1	6.5	3.2	3.2	3.2	00.0	3.2	6.5	3.2	00.0	100.
12	19.4	12.9	9.7	3.2	6.5	6.5	00.0	19.4	3.2	6.5	00.0	3.2	00.0	3.2	6.5	00.0	00.0	100.
13	9.7	16.1	16.1	3.2	6.5	3.2	00.0	9.7	12.9	6.5	00.0	00.0	3.2	3.2	3.2	6.5	00.0	100.
14	3.2	22.6	12.9	3.2	6.5	3.2	00.0	9.7	12.9	6.5	00.0	00.0	3.2	00.0	3.2	12.9	00.0	100.
15	9.7	22.6	6.5	3.2	6.5	3.2	3.2	6.5	19.4	3.2	00.0	00.0	3.2	3.2	3.2	6.5	00.0	100.
16	9.7	12.9	19.4	3.2	00.0	3.2	6.5	3.2	19.4	6.5	00.0	00.0	00.0	3.2	3.2	9.7	00.0	100.
17	6.5	22.6	19.4	00.0	00.0	6.5	00.0	6.5	25.8	00.0	00.0	00.0	3.2	00.0	6.5	3.2	00.0	100.
18	6.5	22.6	16.1	6.5	00.0	3.2	3.2	3.2	22.6	00.0	3.2	00.0	00.0	3.2	00.0	9.7	00.0	100.
19	9.7	19.4	16.1	3.2	00.0	3.2	6.5	6.5	12.9	3.2	00.0	00.0	3.2	3.2	3.2	9.7	00.0	100.
20	3.2	22.6	16.1	3.2	00.0	6.5	3.2	6.5	16.1	00.0	3.2	00.0	00.0	6.5	00.0	12.9	00.0	100.
21	6.5	25.8	9.7	9.7	00.0	3.2	9.7	3.2	16.1	00.0	00.0	00.0	3.2	6.5	00.0	6.5	00.0	100.
22	6.5	29.0	6.5	12.9	00.0	6.5	3.2	3.2	19.4	00.0	00.0	00.0	00.0	6.5	00.0	6.5	00.0	100.
23	3.2	25.8	9.7	6.5	6.5	3.2	6.5	3.2	12.9	6.5	00.0	00.0	3.2	3.2	00.0	9.7	00.0	100.
24	3.2	22.6	9.7	6.5	9.7	00.0	9.7	3.2	9.7	6.5	00.0	00.0	6.5	3.2	3.2	6.5	00.0	100.
ALL	9.3	17.2	10.6	6.0	3.5	3.4	7.9	6.0	12.8	3.2	1.3	.9	2.4	3.2	4.6	7.5	00.0	100.

NUMBER OF OBS = 744

BS0

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	12.2	6.7	4.4	4.4	1.1	5.6	8.9	4.4	6.7	6.7	3.3	2.2	4.4	2.2	16.7	10.0	00.0	100.
2	11.1	7.8	3.3	4.4	2.2	4.4	7.8	6.7	7.8	4.4	6.7	1.1	2.2	00.0	14.4	15.6	00.0	100.
3	8.9	10.0	5.6	2.2	2.2	2.2	6.7	8.9	8.9	4.4	4.4	3.3	2.2	1.1	12.2	16.7	00.0	100.
4	6.7	7.8	5.6	4.4	2.2	2.2	10.0	5.6	6.7	4.4	4.4	6.7	2.2	4.4	10.0	16.7	00.0	100.
5	7.8	6.7	6.7	4.4	3.3	3.3	5.6	4.4	8.9	6.7	3.3	3.3	1.1	4.4	12.2	17.8	00.0	100.
6	10.0	6.7	6.7	2.2	3.3	4.4	5.6	4.4	10.0	4.4	6.7	00.0	3.3	4.4	11.1	16.7	00.0	100.
7	7.8	5.6	5.6	4.4	3.3	1.1	7.8	4.4	11.1	5.6	4.4	2.2	1.1	4.4	14.4	16.7	00.0	100.
8	11.1	5.6	4.4	4.4	3.3	3.3	6.7	3.3	11.1	4.4	6.7	3.3	00.0	4.4	15.6	12.2	00.0	100.
9	8.9	6.7	4.4	3.3	3.3	1.1	8.9	5.6	11.1	4.4	3.3	3.3	2.2	7.8	8.9	16.7	00.0	100.
10	11.1	8.9	4.4	4.4	3.3	2.2	4.4	10.0	5.6	5.6	4.4	4.4	1.1	6.7	13.3	10.0	00.0	100.
11	10.0	5.6	6.7	3.3	4.4	2.2	5.6	10.0	5.6	2.2	7.8	4.4	1.1	5.6	11.1	14.4	00.0	100.
12	14.6	9.0	3.4	5.6	4.5	4.5	1.1	12.4	3.4	7.9	3.4	5.6	2.2	3.4	10.1	9.0	00.0	100.
13	7.9	7.9	9.0	5.6	3.4	5.6	2.2	6.7	6.7	6.7	5.6	3.4	2.2	4.5	11.2	11.2	00.0	100.
14	6.7	7.8	8.9	5.6	4.4	4.4	2.2	6.7	6.7	5.6	5.6	2.2	2.2	6.7	12.2	12.2	00.0	100.
15	10.0	8.9	6.7	4.4	4.4	4.4	4.4	5.6	8.9	3.3	5.6	3.3	4.4	4.4	10.0	11.1	00.0	100.
16	8.9	8.9	7.8	2.2	3.3	4.4	6.7	2.2	10.0	5.6	4.4	3.3	2.2	5.6	10.0	14.4	00.0	100.
17	7.8	8.9	7.8	1.1	6.7	4.4	3.3	5.6	11.1	4.4	6.7	3.3	1.1	4.4	8.9	14.4	00.0	100.
18	8.9	7.8	7.8	3.3	4.4	4.4	2.2	6.7	12.2	2.2	8.9	2.2	1.1	3.3	5.6	18.9	00.0	100.
19	11.1	7.8	6.7	2.2	3.3	4.4	4.4	8.9	11.1	3.3	7.8	00.0	1.1	3.3	8.9	15.6	00.0	100.
20	7.8	11.1	5.6	2.2	3.3	5.6	2.2	11.1	13.3	00.0	5.6	3.3	00.0	3.3	8.9	16.7	00.0	100.
21	10.0	13.3	5.6	3.3	1.1	8.9	4.4	7.8	8.9	2.2	4.4	2.2	2.2	4.4	5.6	15.6	00.0	100.
22	11.1	15.6	3.3	4.4	2.2	5.6	5.6	7.8	10.0	4.4	1.1	1.1	3.3	5.6	6.7	12.2	00.0	100.
23	6.7	12.2	5.6	3.3	5.6	4.4	6.7	4.4	8.9	5.6	3.3	1.1	3.3	2.2	10.0	16.7	00.0	100.
24	6.7	12.2	3.3	3.3	5.6	4.4	7.8	6.7	6.7	5.6	2.2	1.1	3.3	6.7	11.1	13.3	00.0	100.
ALL	9.3	8.7	5.8	3.7	3.5	4.1	5.5	6.7	8.8	4.6	5.0	2.8	2.1	4.3	10.8	14.4	00.0	100.

NUMBER OF OBS = 2158

BS1

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	20.0	3.3	3.3	3.3	3.3	6.7	6.7	23.3	00.0	3.3	00.0	3.3	00.0	10.0	10.0	00.0	100.
2	3.3	23.3	00.0	3.3	3.3	3.3	6.7	6.7	20.0	3.3	00.0	3.3	00.0	3.3	10.0	10.0	00.0	100.
3	6.7	13.3	6.7	3.3	6.7	00.0	3.3	00.0	23.3	10.0	00.0	3.3	00.0	00.0	13.3	10.0	00.0	100.
4	10.0	20.0	3.3	6.7	3.3	3.3	00.0	6.7	13.3	3.3	3.3	6.7	00.0	00.0	13.3	6.7	00.0	100.
5	3.3	16.7	10.0	6.7	3.3	3.3	00.0	10.0	16.7	00.0	3.3	00.0	3.3	10.0	10.0	3.3	00.0	100.
6	00.0	20.0	13.3	3.3	3.3	00.0	6.7	6.7	16.7	3.3	00.0	00.0	10.0	6.7	3.3	6.7	00.0	100.
7	3.3	13.3	13.3	10.0	00.0	00.0	3.3	16.7	13.3	00.0	00.0	00.0	6.7	6.7	6.7	6.7	00.0	100.
8	6.7	3.3	23.3	3.3	3.3	00.0	3.3	6.7	20.0	3.3	00.0	3.3	3.3	6.7	6.7	6.7	00.0	100.
9	6.7	10.0	10.0	10.0	3.3	3.3	3.3	3.3	16.7	10.0	00.0	6.7	3.3	00.0	3.3	10.0	00.0	100.
10	6.7	10.0	10.0	3.3	6.7	6.7	00.0	10.0	13.3	6.7	6.7	00.0	6.7	3.3	00.0	10.0	00.0	100.
11	3.3	3.3	13.3	6.7	3.3	3.3	3.3	10.0	20.0	10.0	00.0	00.0	3.3	3.3	3.3	13.3	00.0	100.
12	3.3	3.3	16.7	3.3	3.3	3.3	6.7	3.3	20.0	13.3	00.0	00.0	3.3	3.3	00.0	16.7	00.0	100.
13	6.7	00.0	16.7	6.7	3.3	3.3	3.3	00.0	36.7	3.3	00.0	00.0	6.7	00.0	00.0	13.3	00.0	100.
14	6.7	6.7	13.3	3.3	6.7	3.3	00.0	3.3	20.0	13.3	00.0	00.0	6.7	00.0	6.7	10.0	00.0	100.
15	3.3	3.3	13.3	10.0	6.7	00.0	3.3	6.7	13.3	16.7	00.0	00.0	3.3	3.3	00.0	16.7	00.0	100.
16	3.3	3.3	16.7	3.3	00.0	6.7	6.7	6.7	13.3	16.7	00.0	00.0	3.3	00.0	3.3	16.7	00.0	100.
17	00.0	16.7	6.7	3.3	00.0	00.0	10.0	10.0	20.0	10.0	00.0	00.0	3.3	00.0	3.3	16.7	00.0	100.
18	6.9	13.8	10.3	00.0	3.4	00.0	6.9	10.3	20.7	10.3	00.0	3.4	00.0	00.0	3.4	10.3	00.0	100.
19	6.9	13.8	10.3	3.4	00.0	00.0	3.4	13.8	20.7	10.3	00.0	00.0	00.0	3.4	3.4	10.3	00.0	100.
20	10.0	20.0	10.0	00.0	00.0	00.0	3.3	20.0	16.7	00.0	6.7	3.3	00.0	00.0	3.3	6.7	00.0	100.
21	3.3	16.7	13.3	3.3	00.0	3.3	3.3	13.3	16.7	3.3	3.3	3.3	00.0	3.3	3.3	10.0	00.0	100.
22	6.7	6.7	13.3	3.3	3.3	6.7	3.3	13.3	13.3	3.3	00.0	3.3	00.0	3.3	3.3	16.7	00.0	100.
23	6.7	16.7	3.3	00.0	6.7	00.0	6.7	13.3	13.3	6.7	00.0	00.0	00.0	00.0	10.0	16.7	00.0	100.
24	3.3	16.7	6.7	00.0	3.3	3.3	00.0	13.3	16.7	10.0	00.0	00.0	00.0	3.3	10.0	13.3	00.0	100.
ALL	5.0	12.1	10.7	4.2	3.2	2.4	3.9	8.8	18.2	7.0	1.1	1.5	2.8	2.5	5.4	11.1	00.0	100.

NUMBER OF OBS = 718

B52

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	9.7	3.2	9.7	3.2	3.2	6.5	12.9	6.5	6.5	00.0	6.5	3.2	12.9	00.0	12.9	00.0	100.
2	3.2	9.7	6.5	3.2	3.2	3.2	3.2	6.5	22.6	3.2	00.0	3.2	3.2	9.7	9.7	9.7	00.0	100.
3	6.5	9.7	3.2	3.2	3.2	3.2	6.5	6.5	9.7	12.9	00.0	00.0	6.5	6.5	9.7	12.9	00.0	100.
4	6.5	3.2	6.5	00.0	6.5	3.2	6.5	6.5	6.5	9.7	6.5	00.0	3.2	6.5	16.1	12.9	00.0	100.
5	6.5	3.2	9.7	3.2	00.0	6.5	00.0	9.7	9.7	00.0	9.7	3.2	6.5	3.2	16.1	12.9	00.0	100.
6	3.2	6.5	3.2	3.2	6.5	6.5	00.0	6.5	9.7	3.2	12.9	3.2	3.2	6.5	12.9	12.9	00.0	100.
7	00.0	9.7	3.2	3.2	6.5	3.2	3.2	3.2	12.9	3.2	12.9	3.2	3.2	6.5	12.9	12.9	00.0	100.
8	9.7	3.2	9.7	3.2	00.0	3.2	00.0	6.5	16.1	3.2	9.7	00.0	00.0	6.5	16.1	12.9	00.0	100.
9	6.5	12.9	6.5	6.5	3.2	3.2	00.0	9.7	9.7	9.7	00.0	6.5	00.0	6.5	9.7	9.7	00.0	100.
10	16.1	9.7	6.5	6.5	3.2	00.0	6.5	3.2	9.7	9.7	3.2	6.5	00.0	6.5	9.7	3.2	00.0	100.
11	12.9	9.7	3.2	9.7	00.0	00.0	00.0	9.7	16.1	3.2	9.7	00.0	3.2	3.2	6.5	12.9	00.0	100.
12	6.5	3.2	9.7	9.7	00.0	00.0	00.0	9.7	6.5	12.9	3.2	3.2	3.2	6.5	9.7	16.1	00.0	100.
13	12.9	3.2	16.1	3.2	00.0	00.0	00.0	6.5	12.9	9.7	3.2	3.2	00.0	6.5	9.7	12.9	00.0	100.
14	9.7	6.5	9.7	3.2	00.0	00.0	00.0	6.5	6.5	16.1	3.2	3.2	00.0	9.7	6.5	19.4	00.0	100.
15	6.5	6.5	9.7	3.2	00.0	00.0	6.5	00.0	3.2	16.1	3.2	6.5	00.0	12.9	6.5	19.4	00.0	100.
16	9.7	6.5	9.7	3.2	00.0	00.0	3.2	3.2	6.5	12.9	9.7	3.2	3.2	3.2	9.7	16.1	00.0	100.
17	12.9	6.5	6.5	3.2	3.2	00.0	00.0	6.5	3.2	19.4	3.2	3.2	3.2	9.7	6.5	12.9	00.0	100.
18	9.7	3.2	6.5	9.7	00.0	3.2	6.5	3.2	6.5	3.2	9.7	6.5	3.2	3.2	12.9	12.9	00.0	100.
19	9.7	6.5	9.7	00.0	6.5	00.0	3.2	6.5	6.5	3.2	6.5	6.5	3.2	6.5	6.5	19.4	00.0	100.
20	9.7	9.7	9.7	3.2	3.2	00.0	3.2	9.7	6.5	6.5	6.5	6.5	3.2	3.2	00.0	19.4	00.0	100.
21	16.1	12.9	6.5	3.2	3.2	3.2	6.5	3.2	16.1	00.0	6.5	3.2	3.2	3.2	6.5	6.5	00.0	100.
22	12.9	9.7	6.5	00.0	6.5	9.7	3.2	9.7	12.9	00.0	3.2	3.2	9.7	00.0	6.5	6.5	00.0	100.
23	12.9	6.5	6.5	6.5	3.2	3.2	12.9	3.2	9.7	9.7	00.0	6.5	12.9	00.0	6.5	00.0	00.0	100.
24	6.5	6.5	6.5	9.7	3.2	3.2	9.7	6.5	9.7	6.5	00.0	3.2	9.7	9.7	00.0	9.7	00.0	100.
ALL	8.7	7.3	7.3	4.6	2.7	2.4	3.6	6.5	9.8	7.5	5.1	3.8	3.6	6.2	8.6	12.4	00.0	100.

NUMBER OF OBS = 744

B53

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	3.3	00.0	00.0	6.7	6.7	00.0	6.7	10.0	20.0	13.3	10.0	6.7	6.7	00.0	3.3	6.7	00.0	100.
2	3.3	3.3	3.3	00.0	3.3	3.3	3.3	20.0	13.3	13.3	13.3	00.0	10.0	00.0	3.3	6.7	00.0	100.
3	3.3	3.3	00.0	00.0	00.0	6.7	10.0	16.7	10.0	13.3	13.3	3.3	6.7	3.3	3.3	6.7	00.0	100.
4	3.3	3.3	00.0	00.0	00.0	10.0	3.3	10.0	23.3	13.3	3.3	6.7	6.7	3.3	6.7	6.7	00.0	100.
5	6.7	3.3	3.3	00.0	00.0	6.7	6.7	10.0	30.0	3.3	6.7	3.3	3.3	3.3	3.3	10.0	00.0	100.
6	6.7	00.0	00.0	00.0	3.3	6.7	10.0	13.3	20.0	13.3	3.3	3.3	3.3	3.3	3.3	10.0	00.0	100.
7	00.0	3.3	3.3	00.0	00.0	10.0	6.7	13.3	13.3	13.3	10.0	3.3	00.0	6.7	6.7	10.0	00.0	100.
8	6.7	00.0	00.0	00.0	10.0	6.7	3.3	6.7	20.0	13.3	6.7	6.7	00.0	3.3	10.0	6.7	00.0	100.
9	00.0	3.3	6.7	00.0	3.3	00.0	6.7	3.3	23.3	16.7	6.7	3.3	3.3	3.3	10.0	10.0	00.0	100.
10	3.3	3.3	00.0	00.0	00.0	6.7	10.0	10.0	23.3	13.3	6.7	6.7	00.0	3.3	3.3	10.0	00.0	100.
11	00.0	00.0	00.0	3.3	00.0	6.7	10.0	00.0	23.3	23.3	3.3	3.3	3.3	00.0	3.3	20.0	00.0	100.
12	10.0	00.0	3.3	00.0	3.3	3.3	3.3	10.0	13.3	23.3	10.0	00.0	3.3	3.3	3.3	10.0	00.0	100.
13	6.7	00.0	00.0	3.3	00.0	3.3	00.0	3.3	30.0	23.3	3.3	00.0	6.7	00.0	00.0	20.0	00.0	100.
14	3.3	3.3	00.0	6.7	3.3	00.0	00.0	6.7	23.3	30.0	00.0	00.0	3.3	3.3	00.0	16.7	00.0	100.
15	3.3	3.3	3.3	3.3	00.0	3.3	3.3	6.7	23.3	20.0	6.7	00.0	00.0	3.3	10.0	10.0	00.0	100.
16	10.0	00.0	3.3	00.0	3.3	3.3	00.0	16.7	20.0	16.7	3.3	3.3	00.0	3.3	6.7	10.0	00.0	100.
17	10.0	3.3	00.0	3.3	00.0	00.0	3.3	10.0	26.7	16.7	3.3	00.0	3.3	6.7	3.3	10.0	00.0	100.
18	6.7	6.7	3.3	3.3	00.0	00.0	3.3	10.0	36.7	6.7	3.3	00.0	00.0	10.0	00.0	10.0	00.0	100.
19	3.3	6.7	3.3	3.3	3.3	10.0	00.0	16.7	16.7	13.3	3.3	00.0	3.3	6.7	6.7	3.3	00.0	100.
20	3.3	3.3	00.0	3.3	13.3	10.0	00.0	10.0	26.7	6.7	3.3	00.0	6.7	00.0	6.7	6.7	00.0	100.
21	00.0	00.0	3.3	3.3	3.3	6.7	10.0	10.0	30.0	3.3	3.3	00.0	3.3	3.3	6.7	13.3	00.0	100.
22	3.3	00.0	00.0	3.3	3.3	3.3	10.0	23.3	16.7	10.0	3.3	00.0	00.0	6.7	6.7	10.0	00.0	100.
23	3.3	00.0	00.0	00.0	3.3	10.0	3.3	16.7	16.7	13.3	10.0	6.7	00.0	6.7	00.0	10.0	00.0	100.
24	00.0	3.3	3.3	00.0	00.0	10.0	3.3	13.3	13.3	20.0	3.3	10.0	3.3	00.0	3.3	13.3	00.0	100.
ALL	4.2	2.2	1.7	1.8	2.6	5.3	4.9	11.1	21.4	14.7	5.8	2.8	3.2	3.5	4.6	10.3	00.0	100.

NUMBER OF OBS = 720

BS4

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

APR-JUN

WIND DIRECTION

HR. OF DAY	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM	TOTAL
1	3.3	9.9	2.2	6.6	4.4	2.2	6.6	9.9	16.5	6.6	4.4	4.4	4.4	4.4	4.4	9.9	00.0	100.
2	3.3	12.1	3.3	2.2	3.3	3.3	4.4	11.0	18.7	6.6	4.4	2.2	4.4	4.4	7.7	8.8	00.0	100.
3	5.5	8.8	3.3	2.2	3.3	3.3	6.6	7.7	14.3	12.1	4.4	2.2	4.4	3.3	8.8	9.9	00.0	100.
4	6.6	8.8	3.3	2.2	3.3	5.5	3.3	7.7	14.3	8.8	4.4	4.4	3.3	3.3	12.1	8.8	00.0	100.
5	5.5	7.7	7.7	3.3	1.1	5.5	2.2	9.9	18.7	1.1	6.6	2.2	4.4	5.5	9.9	8.8	00.0	100.
6	3.3	8.8	5.5	2.2	4.4	4.4	5.5	8.8	15.4	6.6	5.5	2.2	5.5	5.5	6.6	9.9	00.0	100.
7	1.1	8.8	6.6	4.4	2.2	4.4	4.4	11.0	13.2	5.5	7.7	2.2	3.3	6.6	8.8	9.9	00.0	100.
8	7.7	2.2	11.0	2.2	4.4	3.3	2.2	6.6	18.7	6.6	5.5	3.3	1.1	5.5	11.0	8.8	00.0	100.
9	4.4	8.8	7.7	5.5	3.3	2.2	3.3	5.5	16.5	12.1	2.2	5.5	2.2	3.3	7.7	9.9	00.0	100.
10	8.8	7.7	5.5	3.3	3.3	4.4	5.5	7.7	15.4	9.9	5.5	4.4	2.2	4.4	4.4	7.7	00.0	100.
11	5.5	4.4	5.5	6.6	1.1	3.3	4.4	6.6	19.8	12.1	4.4	1.1	3.3	2.2	4.4	15.4	00.0	100.
12	6.6	2.2	9.9	4.4	2.2	2.2	3.3	7.7	13.2	16.5	4.4	1.1	3.3	4.4	4.4	14.3	00.0	100.
13	8.8	1.1	11.0	4.4	1.1	2.2	1.1	3.3	26.4	12.1	2.2	1.1	4.4	2.2	3.3	15.4	00.0	100.
14	6.6	5.5	7.7	4.4	3.3	1.1	00.0	5.5	16.5	19.8	1.1	1.1	3.3	4.4	4.4	15.4	00.0	100.
15	4.4	4.4	8.8	5.5	2.2	1.1	4.4	4.4	13.2	17.6	3.3	2.2	1.1	6.6	5.5	15.4	00.0	100.
16	7.7	3.3	9.9	2.2	1.1	3.3	3.3	8.8	13.2	15.4	4.4	2.2	2.2	2.2	6.6	14.3	00.0	100.
17	7.7	8.8	4.4	3.3	1.1	00.0	4.4	8.8	16.5	15.4	2.2	1.1	3.3	5.5	4.4	13.2	00.0	100.
18	7.8	7.8	6.7	4.4	1.1	1.1	5.6	7.8	21.1	6.7	4.4	3.3	1.1	4.4	5.6	11.1	00.0	100.
19	6.7	8.9	7.8	2.2	3.3	3.3	2.2	12.2	14.4	8.9	3.3	2.2	2.2	5.6	5.6	11.1	00.0	100.
20	7.7	11.0	6.6	2.2	5.5	3.3	2.2	13.2	16.5	4.4	5.5	3.3	3.3	1.1	3.3	11.0	00.0	100.
21	6.6	9.9	7.7	3.3	2.2	4.4	6.6	8.8	20.9	2.2	4.4	2.2	2.2	3.3	5.5	9.9	00.0	100.
22	7.7	5.5	6.6	2.2	4.4	6.6	5.5	15.4	14.3	4.4	2.2	2.2	3.3	3.3	5.5	11.0	00.0	100.
23	7.7	7.7	3.3	2.2	4.4	4.4	7.7	11.0	13.2	9.9	3.3	4.4	4.4	2.2	5.5	8.8	00.0	100.
24	3.3	8.8	5.5	3.3	2.2	5.5	4.4	11.0	13.2	12.1	1.1	4.4	4.4	4.4	4.4	12.1	00.0	100.
ALL	6.0	7.2	6.6	3.5	2.8	3.3	4.1	8.8	16.4	9.7	4.0	2.7	3.2	4.1	6.2	11.3	00.0	100.

NUMBER OF OBS = 2182

B55

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	7.7	8.3	3.3	5.5	2.8	3.9	7.7	7.2	11.6	6.6	3.9	3.3	4.4	3.3	10.5	9.9	00.0	100.
2	7.2	9.9	3.3	3.3	2.8	3.9	6.1	8.8	13.3	5.5	5.5	1.7	3.3	2.2	11.0	12.2	00.0	100.
3	7.2	9.4	4.4	2.2	2.8	2.8	6.6	8.3	11.6	8.3	4.4	2.8	3.3	2.2	10.5	13.3	00.0	100.
4	6.6	8.3	4.4	3.3	2.8	3.9	6.6	6.6	10.5	6.6	4.4	5.5	2.8	3.9	11.0	12.7	00.0	100.
5	6.6	7.2	7.2	3.9	2.2	4.4	3.9	7.2	13.8	3.9	5.0	2.8	2.8	5.0	11.0	13.3	00.0	100.
6	6.6	7.7	6.1	2.2	3.9	4.4	5.5	6.6	12.7	5.5	6.1	1.1	4.4	5.0	8.8	13.3	00.0	100.
7	4.4	7.2	6.1	4.4	2.8	2.8	6.1	7.7	12.2	5.5	6.1	2.2	2.2	5.5	11.6	13.3	00.0	100.
8	9.4	3.9	7.7	3.3	3.9	3.3	4.4	5.0	14.9	5.5	6.1	3.3	.6	5.0	13.3	10.5	00.0	100.
9	6.6	7.7	6.1	4.4	3.3	1.7	6.1	5.5	13.8	8.3	2.8	4.4	2.2	5.5	8.3	13.3	00.0	100.
10	9.9	8.3	5.0	3.9	3.3	3.3	5.0	8.8	10.5	7.7	5.0	4.4	1.7	5.5	8.8	8.8	00.0	100.
11	7.7	5.0	6.1	5.0	2.8	2.8	5.0	8.3	12.7	7.2	6.1	2.8	2.2	3.9	7.7	14.9	00.0	100.
12	10.6	5.6	6.7	5.0	3.3	3.3	2.2	10.0	8.3	12.2	3.9	3.3	2.8	3.9	7.2	11.7	00.0	100.
13	8.3	4.4	10.0	5.0	2.2	3.9	1.7	5.0	16.7	9.4	3.9	2.2	3.3	3.3	7.2	13.3	00.0	100.
14	6.6	6.6	8.3	5.0	3.9	2.8	1.1	6.1	11.6	12.7	3.3	1.7	2.8	5.5	8.3	13.8	00.0	100.
15	7.2	6.6	7.7	5.0	3.3	2.8	4.4	5.0	11.0	10.5	4.4	2.8	2.8	5.5	7.7	13.3	00.0	100.
16	8.3	6.1	8.8	2.2	2.2	3.9	5.0	5.5	11.6	10.5	4.4	2.8	2.2	3.9	8.3	14.4	00.0	100.
17	7.7	8.8	6.1	2.2	3.9	2.2	3.9	7.2	13.8	9.9	4.4	2.2	2.2	5.0	6.6	13.8	00.0	100.
18	8.3	7.8	7.2	3.9	2.8	2.8	3.9	7.2	16.7	4.4	6.7	2.8	1.1	3.9	5.6	15.0	00.0	100.
19	8.9	8.3	7.2	2.2	3.3	3.9	3.3	10.6	12.8	6.1	5.6	1.1	1.7	4.4	7.2	13.3	00.0	100.
20	7.7	11.0	6.1	2.2	4.4	4.4	2.2	12.2	14.9	2.2	5.5	3.3	1.7	2.2	6.1	13.8	00.0	100.
21	8.3	11.6	6.6	3.3	1.7	6.6	5.5	8.3	14.9	2.2	4.4	2.2	2.2	3.9	5.5	12.7	00.0	100.
22	9.4	10.5	5.0	3.3	3.3	6.1	5.5	11.6	12.2	4.4	1.7	1.7	3.3	4.4	6.1	11.6	00.0	100.
23	7.2	9.9	4.4	2.8	5.0	4.4	7.2	7.7	11.0	7.7	3.3	2.8	3.9	2.2	7.7	12.7	00.0	100.
24	5.0	10.5	4.4	3.3	3.9	5.0	6.1	8.8	9.9	8.8	1.7	2.8	3.9	5.5	7.7	12.7	00.0	100.
ALL	7.6	7.9	6.2	3.6	3.2	3.7	4.8	7.7	12.6	7.2	4.5	2.7	2.6	4.2	8.5	12.8	00.0	100.

NUMBER OF OBS = 4340

B56

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	00.0	3.2	12.9	00.0	6.5	00.0	6.5	9.7	16.1	29.0	6.5	00.0	00.0	6.5	3.2	00.0	00.0	100.
2	00.0	3.2	6.5	3.2	9.7	00.0	3.2	9.7	12.9	22.6	12.9	6.5	3.2	00.0	3.2	3.2	00.0	100.
3	00.0	3.2	9.7	9.7	00.0	6.5	3.2	6.5	16.1	12.9	16.1	3.2	6.5	3.2	00.0	3.2	00.0	100.
4	6.5	6.5	6.5	6.5	3.2	9.7	00.0	3.2	16.1	12.9	9.7	9.7	3.2	00.0	00.0	6.5	00.0	100.
5	00.0	9.7	9.7	3.2	6.5	9.7	3.2	6.5	9.7	12.9	6.5	12.9	6.5	00.0	3.2	00.0	00.0	100.
6	3.2	6.5	3.2	3.2	12.9	00.0	16.1	6.5	9.7	9.7	9.7	9.7	9.7	00.0	00.0	00.0	00.0	100.
7	6.5	3.2	3.2	3.2	3.2	3.2	19.4	00.0	16.1	6.5	12.9	9.7	9.7	00.0	00.0	3.2	00.0	100.
8	6.5	3.2	3.2	6.5	00.0	3.2	9.7	9.7	6.5	12.9	9.7	9.7	9.7	9.7	00.0	00.0	00.0	100.
9	3.2	6.5	3.2	00.0	3.2	9.7	12.9	6.5	3.2	16.1	9.7	9.7	00.0	9.7	6.5	00.0	00.0	100.
10	6.5	3.2	00.0	3.2	3.2	12.9	12.9	6.5	9.7	16.1	00.0	12.9	3.2	6.5	3.2	00.0	00.0	100.
11	3.2	3.2	3.2	6.5	00.0	12.9	9.7	9.7	9.7	12.9	6.5	9.7	6.5	00.0	3.2	3.2	00.0	100.
12	3.2	6.5	00.0	3.2	3.2	9.7	12.9	6.5	16.1	12.9	9.7	6.5	3.2	3.2	3.2	00.0	00.0	100.
13	6.5	6.5	3.2	3.2	3.2	9.7	00.0	22.6	12.9	9.7	3.2	3.2	9.7	00.0	3.2	3.2	00.0	100.
14	9.7	6.5	3.2	3.2	00.0	9.7	6.5	19.4	16.1	9.7	00.0	3.2	9.7	00.0	00.0	3.2	00.0	100.
15	9.7	9.7	00.0	9.7	00.0	6.5	12.9	9.7	19.4	9.7	00.0	3.2	6.5	3.2	00.0	00.0	00.0	100.
16	12.9	6.5	00.0	3.2	6.5	12.9	6.5	9.7	12.9	16.1	00.0	3.2	00.0	3.2	00.0	6.5	00.0	100.
17	9.7	16.1	3.2	6.5	3.2	9.7	9.7	3.2	22.6	6.5	3.2	3.2	3.2	00.0	00.0	00.0	00.0	100.
18	6.5	12.9	3.2	6.5	9.7	6.5	12.9	6.5	22.6	9.7	00.0	00.0	3.2	00.0	00.0	00.0	00.0	100.
19	3.2	9.7	9.7	3.2	9.7	12.9	00.0	25.8	16.1	6.5	3.2	00.0	00.0	00.0	00.0	00.0	00.0	100.
20	3.2	9.7	6.5	00.0	12.9	9.7	6.5	29.0	16.1	3.2	00.0	00.0	00.0	00.0	3.2	00.0	00.0	100.
21	00.0	12.9	9.7	00.0	6.5	6.5	12.9	29.0	16.1	3.2	00.0	3.2	00.0	00.0	00.0	00.0	00.0	100.
22	3.2	9.7	6.5	3.2	3.2	6.5	9.7	9.7	32.3	9.7	3.2	00.0	00.0	00.0	00.0	3.2	00.0	100.
23	00.0	6.5	9.7	3.2	00.0	3.2	16.1	6.5	35.5	9.7	6.5	00.0	00.0	00.0	00.0	3.2	00.0	100.
24	3.2	6.5	6.5	3.2	00.0	3.2	12.9	6.5	25.8	16.1	9.7	3.2	00.0	00.0	3.2	00.0	00.0	100.
ALL	4.4	7.1	5.1	3.9	4.4	7.3	9.0	10.8	16.3	12.0	5.8	5.1	3.9	1.9	1.5	1.6	00.0	100.

NUMBER OF OBS = 744

BS7

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	12.9	3.2	3.2	9.7	3.2	6.5	3.2	12.9	16.1	6.5	6.5	9.7	00.0	00.0	6.5	00.0	00.0	100.
2	9.7	3.2	00.0	6.5	6.5	6.5	6.5	9.7	19.4	3.2	6.5	00.0	6.5	9.7	00.0	6.5	00.0	100.
3	6.5	6.5	6.5	00.0	9.7	6.5	3.2	9.7	19.4	6.5	3.2	3.2	00.0	6.5	3.2	9.7	00.0	100.
4	12.9	6.5	3.2	3.2	6.5	6.5	9.7	9.7	16.1	00.0	3.2	3.2	6.5	3.2	00.0	9.7	00.0	100.
5	19.4	3.2	9.7	00.0	00.0	9.7	9.7	9.7	9.7	6.5	00.0	3.2	6.5	6.5	3.2	3.2	00.0	100.
6	16.1	00.0	6.5	6.5	00.0	9.7	00.0	16.1	6.5	6.5	6.5	3.2	3.2	12.9	00.0	6.5	00.0	100.
7	12.9	6.5	3.2	3.2	6.5	3.2	6.5	9.7	12.9	3.2	6.5	3.2	3.2	12.9	3.2	3.2	00.0	100.
8	16.1	3.2	6.5	3.2	00.0	12.9	6.5	12.9	9.7	6.5	00.0	00.0	9.7	6.5	3.2	3.2	00.0	100.
9	9.7	9.7	9.7	00.0	3.2	6.5	9.7	6.5	12.9	00.0	9.7	3.2	3.2	6.5	9.7	00.0	00.0	100.
10	6.5	6.5	12.9	3.2	00.0	9.7	12.9	9.7	6.5	00.0	3.2	00.0	9.7	6.5	3.2	9.7	00.0	100.
11	6.5	16.1	00.0	9.7	3.2	9.7	6.5	9.7	9.7	3.2	00.0	3.2	3.2	00.0	12.9	6.5	00.0	100.
12	12.9	9.7	3.2	6.5	6.5	9.7	9.7	6.5	12.9	00.0	00.0	6.5	00.0	00.0	3.2	12.9	00.0	100.
13	9.7	9.7	3.2	3.2	6.5	9.7	16.1	3.2	12.9	3.2	00.0	00.0	00.0	3.2	9.7	9.7	00.0	100.
14	12.9	16.1	3.2	3.2	6.5	12.9	6.5	9.7	9.7	3.2	00.0	00.0	3.2	00.0	6.5	6.5	00.0	100.
15	12.9	9.7	9.7	6.5	12.9	3.2	9.7	12.9	6.5	00.0	3.2	3.2	00.0	00.0	6.5	3.2	00.0	100.
16	6.5	16.1	6.5	3.2	9.7	12.9	00.0	16.1	3.2	6.5	00.0	00.0	6.5	00.0	3.2	9.7	00.0	100.
17	12.9	9.7	6.5	3.2	9.7	6.5	9.7	12.9	12.9	00.0	00.0	3.2	00.0	3.2	3.2	6.5	00.0	100.
18	3.2	19.4	9.7	3.2	6.5	6.5	9.7	16.1	9.7	00.0	00.0	00.0	00.0	3.2	6.5	6.5	00.0	100.
19	6.5	16.1	12.9	3.2	3.2	9.7	12.9	12.9	3.2	6.5	00.0	00.0	00.0	6.5	00.0	6.5	00.0	100.
20	6.5	16.1	6.5	3.2	9.7	3.2	12.9	19.4	6.5	00.0	00.0	00.0	3.2	3.2	00.0	9.7	00.0	100.
21	6.5	9.7	6.5	3.2	00.0	12.9	16.1	19.4	6.5	00.0	00.0	00.0	3.2	6.5	3.2	6.5	00.0	100.
22	6.5	9.7	6.5	00.0	6.5	6.5	12.9	22.6	9.7	3.2	00.0	00.0	6.5	3.2	00.0	6.5	00.0	100.
23	9.7	6.5	9.7	00.0	3.2	00.0	22.6	16.1	12.9	9.7	00.0	00.0	00.0	3.2	6.5	00.0	00.0	100.
24	9.7	3.2	3.2	12.9	3.2	3.2	9.7	9.7	25.8	6.5	3.2	00.0	00.0	00.0	6.5	3.2	00.0	100.
ALL	10.2	9.0	6.2	4.0	5.1	7.7	9.3	12.2	11.3	3.4	2.2	1.9	3.1	4.3	4.2	6.0	00.0	100.

NUMBER OF OBS = 744

B58

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	13.3	3.3	6.7	00.0	00.0	6.7	6.7	16.7	23.3	6.7	3.3	00.0	00.0	00.0	3.3	10.0	00.0	100.
2	6.7	6.7	00.0	00.0	6.7	6.7	3.3	16.7	26.7	00.0	6.7	3.3	00.0	3.3	00.0	10.0	3.3	100.
3	3.3	6.7	00.0	00.0	3.3	6.7	13.3	10.0	23.3	6.7	6.7	00.0	6.7	00.0	6.7	6.7	00.0	100.
4	3.3	3.3	3.3	00.0	3.3	6.7	6.7	10.0	26.7	10.0	6.7	6.7	00.0	3.3	6.7	3.3	00.0	100.
5	3.3	3.3	00.0	00.0	00.0	10.0	10.0	16.7	23.3	10.0	00.0	6.7	3.3	3.3	00.0	10.0	00.0	100.
6	3.3	3.3	00.0	6.7	00.0	00.0	13.3	16.7	26.7	3.3	00.0	10.0	3.3	3.3	6.7	3.3	00.0	100.
7	3.3	6.7	00.0	00.0	3.3	00.0	13.3	10.0	30.0	6.7	00.0	00.0	13.3	3.3	6.7	3.3	00.0	100.
8	00.0	10.0	00.0	00.0	3.3	00.0	16.7	10.0	20.0	10.0	3.3	3.3	6.7	3.3	10.0	3.3	00.0	100.
9	00.0	6.7	6.7	00.0	00.0	00.0	6.7	16.7	20.0	13.3	3.3	00.0	10.0	00.0	6.7	10.0	00.0	100.
10	6.7	3.3	6.7	00.0	00.0	00.0	13.3	16.7	20.0	3.3	6.7	00.0	10.0	00.0	3.3	10.0	00.0	100.
11	3.3	10.0	3.3	6.7	00.0	00.0	13.3	13.3	16.7	13.3	3.3	00.0	6.7	3.3	00.0	6.7	00.0	100.
12	3.3	10.0	6.7	00.0	3.3	00.0	13.3	13.3	23.3	3.3	00.0	3.3	00.0	6.7	3.3	10.0	00.0	100.
13	10.0	6.7	6.7	3.3	00.0	3.3	16.7	20.0	16.7	3.3	00.0	00.0	3.3	3.3	00.0	6.7	00.0	100.
14	3.3	3.3	6.7	00.0	3.3	6.7	10.0	16.7	26.7	00.0	00.0	00.0	00.0	6.7	00.0	16.7	00.0	100.
15	00.0	6.7	3.3	3.3	3.3	3.3	6.7	23.3	26.7	00.0	00.0	00.0	00.0	00.0	6.7	16.7	00.0	100.
16	6.7	00.0	6.7	00.0	3.3	3.3	6.7	20.0	26.7	3.3	00.0	00.0	00.0	00.0	6.7	16.7	00.0	100.
17	13.3	00.0	3.3	00.0	3.3	6.7	13.3	16.7	23.3	3.3	00.0	00.0	00.0	00.0	00.0	16.7	00.0	100.
18	20.0	6.7	00.0	3.3	10.0	00.0	10.0	26.7	16.7	00.0	00.0	00.0	00.0	00.0	00.0	6.7	00.0	100.
19	13.3	6.7	3.3	00.0	3.3	00.0	20.0	33.3	6.7	00.0	00.0	00.0	00.0	00.0	3.3	10.0	00.0	100.
20	10.0	10.0	3.3	6.7	00.0	3.3	13.3	36.7	6.7	00.0	00.0	00.0	00.0	00.0	00.0	10.0	00.0	100.
21	3.3	16.7	3.3	00.0	3.3	3.3	10.0	36.7	13.3	00.0	00.0	00.0	00.0	00.0	00.0	10.0	00.0	100.
22	10.0	10.0	3.3	00.0	00.0	6.7	10.0	33.3	13.3	3.3	00.0	00.0	3.3	00.0	00.0	6.7	00.0	100.
23	6.7	10.0	3.3	00.0	00.0	3.3	10.0	30.0	16.7	6.7	00.0	00.0	00.0	3.3	3.3	6.7	00.0	100.
24	6.7	10.0	6.7	00.0	00.0	3.3	3.3	26.7	20.0	13.3	00.0	00.0	00.0	00.0	3.3	6.7	00.0	100.
ALL	6.4	6.7	3.5	1.3	2.2	3.3	10.8	20.3	20.6	5.0	1.7	1.4	2.8	1.8	3.2	9.0	.1	100.

NUMBER OF OBS = 720

B59

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	3.3	7.6	3.3	3.3	4.3	5.4	13.0	18.5	14.1	5.4	3.3	00.0	2.2	4.3	3.3	00.0	100.
2	5.4	4.3	2.2	3.3	7.6	4.3	4.3	12.0	19.6	8.7	8.7	3.3	3.3	4.3	1.1	6.5	1.1	100.
3	3.3	5.4	5.4	3.3	4.3	6.5	6.5	8.7	19.6	8.7	8.7	2.2	4.3	3.3	3.3	6.5	00.0	100.
4	7.6	5.4	4.3	3.3	4.3	7.6	5.4	7.6	19.6	7.6	6.5	6.5	3.3	2.2	2.2	6.5	00.0	100.
5	7.6	5.4	6.5	1.1	2.2	9.8	7.6	10.9	14.1	9.8	2.2	7.6	5.4	3.3	2.2	4.3	00.0	100.
6	7.6	3.3	3.3	5.4	4.3	3.3	9.8	13.0	14.1	6.5	5.4	7.6	5.4	5.4	2.2	3.3	00.0	100.
7	7.6	5.4	2.2	2.2	4.3	2.2	13.0	6.5	19.6	5.4	6.5	4.3	8.7	5.4	3.3	3.3	00.0	100.
8	7.6	5.4	3.3	3.3	1.1	5.4	10.9	10.9	12.0	9.8	4.3	4.3	8.7	6.5	4.3	2.2	00.0	100.
9	4.3	7.6	6.5	00.0	2.2	5.4	9.8	9.8	12.0	9.8	7.6	4.3	4.3	5.4	7.6	3.3	00.0	100.
10	6.5	4.3	6.5	2.2	1.1	7.6	13.0	10.9	12.0	6.5	3.3	4.3	7.6	4.3	3.3	6.5	00.0	100.
11	4.3	9.8	2.2	7.6	1.1	7.6	9.8	10.9	12.0	9.8	3.3	4.3	5.4	1.1	5.4	5.4	00.0	100.
12	6.5	8.7	3.3	3.3	4.3	6.5	12.0	8.7	17.4	5.4	3.3	5.4	1.1	3.3	3.3	7.6	00.0	100.
13	8.7	7.6	4.3	3.3	3.3	7.6	10.9	15.2	14.1	5.4	1.1	1.1	4.3	2.2	4.3	6.5	00.0	100.
14	8.7	8.7	4.3	2.2	3.3	9.8	7.6	15.2	17.4	4.3	00.0	1.1	4.3	2.2	2.2	8.7	00.0	100.
15	7.6	8.7	4.3	6.5	5.4	4.3	9.8	15.2	17.4	3.3	1.1	2.2	2.2	1.1	4.3	6.5	00.0	100.
16	8.7	7.6	4.3	2.2	6.5	9.8	4.3	15.2	14.1	8.7	00.0	1.1	2.2	1.1	3.3	10.9	00.0	100.
17	12.0	8.7	4.3	3.3	5.4	7.6	10.9	10.9	19.6	3.3	1.1	2.2	1.1	1.1	1.1	7.6	00.0	100.
18	9.8	13.0	4.3	4.3	8.7	4.3	10.9	16.3	16.3	3.3	00.0	00.0	1.1	1.1	2.2	4.3	00.0	100.
19	7.6	10.9	8.7	2.2	5.4	7.6	10.9	23.9	8.7	4.3	1.1	00.0	00.0	2.2	1.1	5.4	00.0	100.
20	6.5	12.0	5.4	3.3	7.6	5.4	10.9	28.3	9.8	1.1	00.0	00.0	1.1	1.1	1.1	6.5	00.0	100.
21	3.3	13.0	6.5	1.1	3.3	7.6	13.0	28.3	12.0	1.1	00.0	1.1	1.1	2.2	1.1	5.4	00.0	100.
22	6.5	9.8	5.4	1.1	3.3	6.5	10.9	21.7	18.5	5.4	1.1	00.0	3.3	1.1	00.0	5.4	00.0	100.
23	5.4	7.6	7.6	1.1	1.1	2.2	16.3	17.4	21.7	8.7	2.2	00.0	00.0	2.2	3.3	3.3	00.0	100.
24	6.5	6.5	5.4	5.4	1.1	3.3	8.7	14.1	23.9	12.0	4.3	1.1	00.0	00.0	4.3	3.3	00.0	100.
ALL	7.0	7.6	4.9	3.1	3.9	6.1	9.7	14.4	16.0	6.8	3.2	2.8	3.3	2.7	2.9	5.5	.0	100.

NUMBER OF OBS = 2208

B60

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	10.0	00.0	3.3	00.0	00.0	00.0	10.0	13.3	10.0	20.0	00.0	00.0	3.3	6.7	10.0	13.3	00.0	100.
2	10.0	00.0	3.3	00.0	00.0	3.3	6.7	6.7	16.7	16.7	3.3	00.0	00.0	6.7	13.3	13.3	00.0	100.
3	6.7	3.3	3.3	00.0	3.3	00.0	3.3	10.0	23.3	10.0	00.0	00.0	6.7	3.3	13.3	13.3	00.0	100.
4	6.7	3.3	3.3	3.3	00.0	3.3	3.3	10.0	23.3	10.0	00.0	00.0	6.7	3.3	6.7	16.7	00.0	100.
5	6.7	6.7	00.0	00.0	00.0	3.3	13.3	3.3	26.7	00.0	6.7	00.0	6.7	6.7	13.3	6.7	00.0	100.
6	3.3	6.7	6.7	3.3	00.0	3.3	3.3	13.3	23.3	00.0	3.3	3.3	3.3	6.7	10.0	10.0	00.0	100.
7	9.7	3.2	3.2	00.0	3.2	6.5	3.2	6.5	22.6	3.2	6.5	00.0	3.2	9.7	12.9	6.5	00.0	100.
8	3.2	9.7	3.2	00.0	3.2	00.0	6.5	6.5	25.8	3.2	3.2	3.2	3.2	3.2	19.4	6.5	00.0	100.
9	6.5	6.5	3.2	3.2	00.0	3.2	3.2	6.5	22.6	12.9	00.0	00.0	00.0	6.5	16.1	9.7	00.0	100.
10	6.5	3.2	00.0	3.2	00.0	12.9	3.2	00.0	19.4	16.1	00.0	3.2	00.0	3.2	16.1	12.9	00.0	100.
11	6.5	6.5	00.0	3.2	00.0	00.0	9.7	3.2	25.8	12.9	3.2	00.0	00.0	6.5	12.9	9.7	00.0	100.
12	6.5	3.2	00.0	00.0	3.2	3.2	6.5	6.5	16.1	22.6	00.0	00.0	3.2	3.2	16.1	9.7	00.0	100.
13	00.0	3.2	3.2	00.0	3.2	00.0	6.5	6.5	22.6	12.9	6.5	00.0	3.2	3.2	16.1	12.9	00.0	100.
14	00.0	6.5	00.0	3.2	00.0	00.0	6.5	3.2	22.6	16.1	3.2	3.2	3.2	3.2	12.9	16.1	00.0	100.
15	00.0	6.5	00.0	3.2	00.0	00.0	6.5	6.5	16.1	16.1	3.2	6.5	3.2	6.5	9.7	16.1	00.0	100.
16	00.0	6.5	00.0	00.0	00.0	6.5	00.0	16.1	6.5	16.1	3.2	9.7	6.5	3.2	9.7	16.1	00.0	100.
17	3.2	6.5	00.0	00.0	00.0	3.2	3.2	9.7	16.1	12.9	6.5	3.2	3.2	6.5	9.7	16.1	00.0	100.
18	3.2	6.5	00.0	00.0	3.2	00.0	9.7	9.7	9.7	22.6	3.2	3.2	00.0	3.2	9.7	16.1	00.0	100.
19	3.3	6.7	00.0	00.0	3.3	00.0	6.7	16.7	20.0	6.7	6.7	00.0	3.3	00.0	10.0	16.7	00.0	100.
20	6.7	6.7	00.0	00.0	3.3	00.0	6.7	16.7	20.0	10.0	3.3	3.3	00.0	00.0	6.7	16.7	00.0	100.
21	3.3	10.0	00.0	00.0	00.0	3.3	3.3	20.0	23.3	6.7	3.3	3.3	00.0	00.0	13.3	10.0	00.0	100.
22	00.0	10.0	00.0	00.0	00.0	3.3	3.3	20.0	16.7	13.3	6.7	00.0	00.0	6.7	3.3	16.7	00.0	100.
23	00.0	10.0	00.0	00.0	00.0	00.0	6.7	16.7	13.3	13.3	00.0	6.7	3.3	6.7	6.7	16.7	00.0	100.
24	00.0	10.0	00.0	00.0	3.3	3.3	6.7	6.7	16.7	16.7	00.0	3.3	00.0	10.0	13.3	10.0	00.0	100.
ALL	4.2	5.9	1.4	1.0	1.2	2.5	5.7	9.7	19.1	12.2	3.0	2.2	2.6	4.8	11.7	12.8	00.0	100.

NUMBER OF OBS = 732

B61

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	00.0	20.0	3.3	6.7	3.3	00.0	6.7	6.7	10.0	16.7	6.7	3.3	3.3	3.3	3.3	6.7	00.0	100.
2	00.0	20.0	3.3	3.3	3.3	00.0	6.7	3.3	10.0	13.3	10.0	3.3	00.0	6.7	6.7	10.0	00.0	100.
3	3.3	6.7	10.0	3.3	3.3	00.0	6.7	3.3	10.0	10.0	6.7	6.7	3.3	00.0	10.0	13.3	3.3	100.
4	6.7	3.3	10.0	3.3	3.3	00.0	6.7	6.7	6.7	6.7	6.7	3.3	10.0	00.0	13.3	13.3	00.0	100.
5	00.0	6.7	6.7	3.3	3.3	3.3	6.7	10.0	3.3	13.3	3.3	3.3	3.3	3.3	3.3	26.7	00.0	100.
6	10.0	6.7	3.3	3.3	6.7	3.3	3.3	10.0	10.0	10.0	3.3	00.0	3.3	3.3	3.3	20.0	00.0	100.
7	13.3	6.7	3.3	00.0	3.3	6.7	00.0	13.3	6.7	10.0	00.0	3.3	3.3	6.7	6.7	16.7	00.0	100.
8	10.0	6.7	00.0	3.3	3.3	6.7	00.0	13.3	6.7	6.7	3.3	6.7	3.3	00.0	6.7	20.0	3.3	100.
9	10.0	13.3	3.3	00.0	3.3	3.3	6.7	10.0	10.0	6.7	6.7	6.7	00.0	00.0	10.0	10.0	00.0	100.
10	6.7	10.0	3.3	3.3	3.3	00.0	6.7	6.7	16.7	10.0	6.7	3.3	00.0	00.0	3.3	20.0	00.0	100.
11	10.0	10.0	00.0	3.3	3.3	00.0	10.0	3.3	16.7	13.3	6.7	3.3	00.0	3.3	6.7	10.0	00.0	100.
12	10.0	10.0	00.0	6.7	00.0	00.0	10.0	00.0	16.7	13.3	10.0	3.3	00.0	00.0	10.0	10.0	00.0	100.
13	6.7	10.0	00.0	3.3	3.3	00.0	10.0	3.3	16.7	16.7	3.3	3.3	00.0	3.3	6.7	13.3	00.0	100.
14	6.7	10.0	00.0	6.7	00.0	00.0	10.0	3.3	16.7	10.0	6.7	6.7	3.3	6.7	3.3	10.0	00.0	100.
15	13.3	6.7	3.3	3.3	00.0	00.0	10.0	3.3	20.0	6.7	13.3	00.0	00.0	6.7	3.3	10.0	00.0	100.
16	3.3	13.3	00.0	6.7	00.0	00.0	10.0	10.0	20.0	3.3	10.0	00.0	00.0	3.3	3.3	16.7	00.0	100.
17	6.7	10.0	00.0	3.3	3.3	00.0	13.3	00.0	26.7	3.3	10.0	00.0	00.0	00.0	6.7	16.7	00.0	100.
18	00.0	13.3	3.3	3.3	3.3	3.3	10.0	10.0	10.0	13.3	6.7	3.3	00.0	3.3	00.0	16.7	00.0	100.
19	00.0	10.0	6.7	3.3	6.7	3.3	10.0	00.0	20.0	10.0	6.7	3.3	00.0	00.0	6.7	13.3	00.0	100.
20	6.7	13.3	3.3	6.7	3.3	00.0	13.3	3.3	20.0	6.7	3.3	6.7	00.0	00.0	3.3	10.0	00.0	100.
21	3.3	16.7	3.3	3.3	3.3	3.3	10.0	10.0	16.7	10.0	6.7	3.3	00.0	00.0	00.0	10.0	00.0	100.
22	00.0	13.3	10.0	3.3	6.7	3.3	6.7	6.7	16.7	16.7	3.3	00.0	3.3	00.0	00.0	10.0	00.0	100.
23	00.0	16.7	10.0	3.3	00.0	3.3	10.0	6.7	10.0	16.7	6.7	3.3	00.0	3.3	3.3	6.7	00.0	100.
24	3.3	20.0	00.0	6.7	00.0	6.7	3.3	13.3	6.7	13.3	10.0	3.3	3.3	00.0	3.3	6.7	00.0	100.
ALL	5.4	11.4	3.6	3.9	2.9	1.9	7.8	6.5	13.5	10.7	6.5	3.3	1.7	2.2	5.1	13.2	.3	100.

NUMBER OF OBS = 720

B62

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	6.5	12.9	00.0	3.2	00.0	00.0	6.5	3.2	9.7	00.0	19.4	6.5	3.2	6.5	9.7	12.9	00.0	100.
2	3.2	12.9	3.2	00.0	00.0	00.0	6.5	3.2	3.2	6.5	6.5	16.1	3.2	9.7	9.7	16.1	00.0	100.
3	12.9	3.2	3.2	00.0	3.2	6.5	3.2	00.0	3.2	6.5	12.9	6.5	6.5	9.7	6.5	16.1	00.0	100.
4	12.9	3.2	00.0	3.2	6.5	00.0	3.2	3.2	3.2	6.5	6.5	12.9	00.0	12.9	12.9	12.9	00.0	100.
5	9.7	6.5	00.0	00.0	9.7	00.0	3.2	00.0	6.5	6.5	6.5	6.5	9.7	12.9	9.7	12.9	00.0	100.
6	3.2	6.5	3.2	3.2	3.2	3.2	3.2	3.2	00.0	6.5	9.7	3.2	12.9	9.7	12.9	16.1	00.0	100.
7	9.7	3.2	00.0	6.5	00.0	6.5	00.0	6.5	3.2	3.2	6.5	3.2	12.9	12.9	9.7	16.1	00.0	100.
8	3.2	6.5	00.0	00.0	6.5	6.5	00.0	6.5	3.2	3.2	6.5	6.5	3.2	9.7	22.6	16.1	00.0	100.
9	3.2	6.5	00.0	00.0	6.5	6.5	00.0	6.5	3.2	3.2	6.5	3.2	6.5	12.9	16.1	19.4	00.0	100.
10	12.9	00.0	00.0	3.2	3.2	6.5	00.0	6.5	3.2	00.0	6.5	6.5	6.5	9.7	16.1	19.4	00.0	100.
11	12.9	9.7	00.0	3.2	00.0	3.2	6.5	3.2	6.5	00.0	3.2	9.7	3.2	00.0	22.6	16.1	00.0	100.
12	9.7	9.7	3.2	00.0	00.0	3.2	6.5	3.2	3.2	3.2	6.5	3.2	6.5	6.5	19.4	16.1	00.0	100.
13	9.7	16.1	00.0	00.0	00.0	6.5	3.2	3.2	3.2	3.2	6.5	3.2	3.2	9.7	22.6	9.7	00.0	100.
14	00.0	16.1	3.2	00.0	3.2	3.2	3.2	3.2	3.2	3.2	3.2	9.7	00.0	12.9	16.1	19.4	00.0	100.
15	9.7	6.5	6.5	00.0	3.2	3.2	3.2	3.2	3.2	3.2	6.5	3.2	6.5	6.5	19.4	16.1	00.0	100.
16	9.7	6.5	6.5	3.2	00.0	3.2	6.5	00.0	6.5	00.0	6.5	3.2	6.5	12.9	12.9	16.1	00.0	100.
17	00.0	16.1	6.5	00.0	00.0	6.5	3.2	6.5	00.0	3.2	6.5	3.2	3.2	9.7	12.9	22.6	00.0	100.
18	9.7	9.7	3.2	6.5	00.0	00.0	3.2	9.7	3.2	3.2	3.2	00.0	9.7	3.2	16.1	19.4	00.0	100.
19	6.5	6.5	9.7	00.0	00.0	6.5	6.5	6.5	00.0	6.5	3.2	3.2	6.5	3.2	19.4	16.1	00.0	100.
20	9.7	6.5	6.5	00.0	3.2	3.2	00.0	9.7	3.2	6.5	3.2	9.7	3.2	6.5	12.9	16.1	00.0	100.
21	6.5	9.7	6.5	3.2	00.0	3.2	00.0	6.5	6.5	00.0	12.9	6.5	9.7	3.2	6.5	19.4	00.0	100.
22	12.9	3.2	6.5	00.0	3.2	00.0	3.2	6.5	6.5	00.0	12.9	6.5	12.9	3.2	3.2	19.4	00.0	100.
23	12.9	9.7	3.2	00.0	3.2	00.0	6.5	3.2	3.2	3.2	12.9	6.5	9.7	3.2	6.5	16.1	00.0	100.
24	16.1	3.2	00.0	3.2	3.2	00.0	6.5	3.2	3.2	3.2	16.1	3.2	6.5	6.5	6.5	19.4	00.0	100.
ALL	8.5	7.9	3.0	1.6	2.4	3.2	3.5	4.4	3.8	3.4	7.9	5.9	6.3	8.1	13.4	16.7	00.0	100.

NUMBER OF OBS = 744

B63

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

PROGRAM: WINPER
VERSION: PC-1.0

HOURLY WIND ROSES (PERCENT)

OCT-DEC

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	11.0	2.2	3.3	1.1	00.0	7.7	7.7	9.9	12.1	8.8	3.3	3.3	5.5	7.7	11.0	00.0	100.
2	4.4	11.0	3.3	1.1	1.1	1.1	6.6	4.4	9.9	12.1	6.6	6.6	1.1	7.7	9.9	13.2	00.0	100.
3	7.7	4.4	5.5	1.1	3.3	2.2	4.4	4.4	12.1	8.8	6.6	4.4	5.5	4.4	9.9	14.3	1.1	100.
4	8.8	3.3	4.4	3.3	3.3	1.1	4.4	6.6	11.0	7.7	4.4	5.5	5.5	5.5	11.0	14.3	00.0	100.
5	5.5	6.6	2.2	1.1	4.4	2.2	7.7	4.4	12.1	6.6	5.5	3.3	6.6	7.7	8.8	15.4	00.0	100.
6	5.5	6.6	4.4	3.3	3.3	3.3	3.3	8.8	11.0	5.5	5.5	2.2	6.6	6.6	8.8	15.4	00.0	100.
7	10.9	4.3	2.2	2.2	2.2	6.5	1.1	8.7	10.9	5.4	4.3	2.2	6.5	9.8	9.8	13.0	00.0	100.
8	5.4	7.6	1.1	1.1	4.3	4.3	2.2	8.7	12.0	4.3	4.3	5.4	3.3	4.3	16.3	14.1	1.1	100.
9	6.5	8.7	2.2	1.1	3.3	4.3	3.3	7.6	12.0	7.6	4.3	3.3	2.2	6.5	14.1	13.0	00.0	100.
10	8.7	4.3	1.1	3.3	2.2	6.5	3.3	4.3	13.0	8.7	4.3	4.3	2.2	4.3	12.0	17.4	00.0	100.
11	9.8	8.7	00.0	3.3	1.1	1.1	8.7	3.3	16.3	8.7	4.3	4.3	1.1	3.3	14.1	12.0	00.0	100.
12	8.7	7.6	1.1	2.2	1.1	2.2	7.6	3.3	12.0	13.0	5.4	2.2	3.3	3.3	15.2	12.0	00.0	100.
13	5.4	9.8	1.1	1.1	2.2	2.2	6.5	4.3	14.1	10.9	5.4	2.2	2.2	5.4	15.2	12.0	00.0	100.
14	2.2	10.9	1.1	3.3	1.1	1.1	6.5	3.3	14.1	9.8	4.3	6.5	2.2	7.6	10.9	15.2	00.0	100.
15	7.6	6.5	3.3	2.2	1.1	1.1	6.5	4.3	13.0	8.7	7.6	3.3	3.3	6.5	10.9	14.1	00.0	100.
16	4.3	8.7	2.2	3.3	00.0	3.3	5.4	8.7	10.9	6.5	6.5	4.3	4.3	6.5	8.7	16.3	00.0	100.
17	3.3	10.9	2.2	1.1	1.1	3.3	6.5	5.4	14.1	6.5	7.6	2.2	2.2	5.4	9.8	18.5	00.0	100.
18	4.3	9.8	2.2	3.3	2.2	1.1	7.6	9.8	7.6	13.0	4.3	2.2	3.3	3.3	8.7	17.4	00.0	100.
19	3.3	7.7	5.5	1.1	3.3	3.3	7.7	7.7	13.2	7.7	5.5	2.2	3.3	1.1	12.1	15.4	00.0	100.
20	7.7	8.8	3.3	2.2	3.3	1.1	6.6	9.9	14.3	7.7	3.3	6.6	1.1	2.2	7.7	14.3	00.0	100.
21	4.4	12.1	3.3	2.2	1.1	3.3	4.4	12.1	15.4	5.5	7.7	4.4	3.3	1.1	6.6	13.2	00.0	100.
22	4.4	8.8	5.5	1.1	3.3	2.2	4.4	11.0	13.2	9.9	7.7	2.2	5.5	3.3	2.2	15.4	00.0	100.
23	4.4	12.1	4.4	1.1	1.1	1.1	7.7	8.8	8.8	11.0	6.6	5.5	4.4	4.4	5.5	13.2	00.0	100.
24	6.6	11.0	00.0	3.3	2.2	3.3	5.5	7.7	8.8	11.0	8.8	3.3	3.3	5.5	7.7	12.1	00.0	100.
ALL	6.1	8.4	2.6	2.1	2.2	2.6	5.6	6.9	12.1	8.7	5.8	3.8	3.6	5.1	10.2	14.3	.1	100.

NUMBER OF OBS = 2196

B64

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	7.1	7.1	4.9	3.3	2.2	2.2	6.6	10.4	14.2	13.1	7.1	3.3	1.6	3.8	6.0	7.1	00.0	100.
2	4.9	7.7	2.7	2.2	4.4	2.7	5.5	8.2	14.8	10.4	7.7	4.9	2.2	6.0	5.5	9.8	.5	100.
3	5.5	4.9	5.5	2.2	3.8	4.4	5.5	6.6	15.8	8.7	7.7	3.3	4.9	3.8	6.6	10.4	.5	100.
4	8.2	4.4	4.4	3.3	3.8	4.4	4.9	7.1	15.3	7.7	5.5	6.0	4.4	3.8	6.6	10.4	00.0	100.
5	6.6	6.0	4.4	1.1	3.3	6.0	7.7	7.7	13.1	8.2	3.8	5.5	6.0	5.5	5.5	9.8	00.0	100.
6	6.6	4.9	3.8	4.4	3.8	3.3	6.6	10.9	12.6	6.0	5.5	4.9	6.0	6.0	5.5	9.3	00.0	100.
7	9.2	4.9	2.2	2.2	3.3	4.3	7.1	7.6	15.2	5.4	5.4	3.3	7.6	7.6	6.5	8.2	00.0	100.
8	6.5	6.5	2.2	2.2	2.7	4.9	6.5	9.8	12.0	7.1	4.3	4.9	6.0	5.4	10.3	8.2	.5	100.
9	5.4	8.2	4.3	.5	2.7	4.9	6.5	8.7	12.0	8.7	6.0	3.8	3.3	6.0	10.9	8.2	00.0	100.
10	7.6	4.3	3.8	2.7	1.6	7.1	8.2	7.6	12.5	7.6	3.8	4.3	4.9	4.3	7.6	12.0	00.0	100.
11	7.1	9.2	1.1	5.4	1.1	4.3	9.2	7.1	14.1	9.2	3.8	4.3	3.3	2.2	9.8	8.7	00.0	100.
12	7.6	8.2	2.2	2.7	2.7	4.3	9.8	6.0	14.7	9.2	4.3	3.8	2.2	3.3	9.2	9.8	00.0	100.
13	7.1	8.7	2.7	2.2	2.7	4.9	8.7	9.8	14.1	8.2	3.3	1.6	3.3	3.8	9.8	9.2	00.0	100.
14	5.4	9.8	2.7	2.7	2.2	5.4	7.1	9.2	15.8	7.1	2.2	3.8	3.3	4.9	6.5	12.0	00.0	100.
15	7.6	7.6	3.8	4.3	3.3	2.7	8.2	9.8	15.2	6.0	4.3	2.7	2.7	3.8	7.6	10.3	00.0	100.
16	6.5	8.2	3.3	2.7	3.3	6.5	4.9	12.0	12.5	7.6	3.3	2.7	3.3	3.8	6.0	13.6	00.0	100.
17	7.6	9.8	3.3	2.2	3.3	5.4	8.7	8.2	16.8	4.9	4.3	2.2	1.6	3.3	5.4	13.0	00.0	100.
18	7.1	11.4	3.3	3.8	5.4	2.7	9.2	13.0	12.0	8.2	2.2	1.1	2.2	2.2	5.4	10.9	00.0	100.
19	5.5	9.3	7.1	1.6	4.4	5.5	9.3	15.8	10.9	6.0	3.3	1.1	1.6	1.6	6.6	10.4	00.0	100.
20	7.1	10.4	4.4	2.7	5.5	3.3	8.7	19.1	12.0	4.4	1.6	3.3	1.1	1.6	4.4	10.4	00.0	100.
21	3.8	12.6	4.9	1.6	2.2	5.5	8.7	20.2	13.7	3.3	3.8	2.7	2.2	1.6	3.8	9.3	00.0	100.
22	5.5	9.3	5.5	1.1	3.3	4.4	7.7	16.4	15.8	7.7	4.4	1.1	4.4	2.2	1.1	10.4	00.0	100.
23	4.9	9.8	6.0	1.1	1.1	1.6	12.0	13.1	15.3	9.8	4.4	2.7	2.2	3.3	4.4	8.2	00.0	100.
24	6.6	8.7	2.7	4.4	1.6	3.3	7.1	10.9	16.4	11.5	6.6	2.2	1.6	2.7	6.0	7.7	00.0	100.
ALL	6.5	8.0	3.8	2.6	3.1	4.3	7.7	10.6	14.0	7.7	4.5	3.3	3.4	3.9	6.5	9.9	.1	100.

NUMBER OF OBS = 4404

B65

NPPD-COOPER NUCLEAR STATION 100-M WIND DIRECTION 2017

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	7.4	7.7	4.1	4.4	2.5	3.0	7.1	8.8	12.9	9.9	5.5	3.3	3.0	3.6	8.2	8.5	00.0	100.
2	6.0	8.8	3.0	2.7	3.6	3.3	5.8	8.5	14.0	8.0	6.6	3.3	2.7	4.1	8.2	11.0	.3	100.
3	6.3	7.1	4.9	2.2	3.3	3.6	6.0	7.4	13.7	8.5	6.0	3.0	4.1	3.0	8.5	11.8	.3	100.
4	7.4	6.3	4.4	3.3	3.3	4.1	5.8	6.9	12.9	7.1	4.9	5.8	3.6	3.8	8.8	11.5	00.0	100.
5	6.6	6.6	5.8	2.5	2.7	5.2	5.8	7.4	13.5	6.0	4.4	4.1	4.4	5.2	8.2	11.5	00.0	100.
6	6.6	6.3	4.9	3.3	3.8	3.8	6.0	8.8	12.6	5.8	5.8	3.0	5.2	5.5	7.1	11.3	00.0	100.
7	6.8	6.0	4.1	3.3	3.0	3.6	6.6	7.7	13.7	5.5	5.8	2.7	4.9	6.6	9.0	10.7	00.0	100.
8	7.9	5.2	4.9	2.7	3.3	4.1	5.5	7.4	13.4	6.3	5.2	4.1	3.3	5.2	11.8	9.3	.3	100.
9	6.0	7.9	5.2	2.5	3.0	3.3	6.3	7.1	12.9	8.5	4.4	4.1	2.7	5.8	9.6	10.7	00.0	100.
10	8.8	6.3	4.4	3.3	2.5	5.2	6.6	8.2	11.5	7.7	4.4	4.4	3.3	4.9	8.2	10.4	00.0	100.
11	7.4	7.1	3.6	5.2	1.9	3.6	7.1	7.7	13.4	8.2	4.9	3.6	2.7	3.0	8.8	11.8	00.0	100.
12	9.1	6.9	4.4	3.8	3.0	3.8	6.0	8.0	11.5	10.7	4.1	3.6	2.5	3.6	8.2	10.7	00.0	100.
13	7.7	6.6	6.3	3.6	2.5	4.4	5.2	7.4	15.4	8.8	3.6	1.9	3.3	3.6	8.5	11.3	00.0	100.
14	6.0	8.2	5.5	3.8	3.0	4.1	4.1	7.7	13.7	9.9	2.7	2.7	3.0	5.2	7.4	12.9	00.0	100.
15	7.4	7.1	5.8	4.7	3.3	2.7	6.3	7.4	13.2	8.2	4.4	2.7	2.7	4.7	7.7	11.8	00.0	100.
16	7.4	7.1	6.0	2.5	2.7	5.2	4.9	8.8	12.1	9.0	3.8	2.7	2.7	3.8	7.1	14.0	00.0	100.
17	7.7	9.3	4.7	2.2	3.6	3.8	6.3	7.7	15.3	7.4	4.4	2.2	1.9	4.1	6.0	13.4	00.0	100.
18	7.7	9.6	5.2	3.8	4.1	2.7	6.6	10.2	14.3	6.3	4.4	1.9	1.6	3.0	5.5	12.9	00.0	100.
19	7.2	8.8	7.2	1.9	3.9	4.7	6.3	13.2	11.8	6.1	4.4	1.1	1.7	3.0	6.9	11.8	00.0	100.
20	7.4	10.7	5.2	2.5	4.9	3.8	5.5	15.7	13.5	3.3	3.6	3.3	1.4	1.9	5.2	12.1	00.0	100.
21	6.0	12.1	5.8	2.5	1.9	6.0	7.1	14.3	14.3	2.7	4.1	2.5	2.2	2.7	4.7	11.0	00.0	100.
22	7.4	9.9	5.2	2.2	3.3	5.2	6.6	14.0	14.0	6.0	3.0	1.4	3.8	3.3	3.6	11.0	00.0	100.
23	6.0	9.9	5.2	1.9	3.0	3.0	9.6	10.4	13.2	8.8	3.8	2.7	3.0	2.7	6.0	10.4	00.0	100.
24	5.8	9.6	3.6	3.8	2.7	4.1	6.6	9.9	13.2	10.2	4.1	2.5	2.7	4.1	6.9	10.2	00.0	100.
ALL	7.1	8.0	5.0	3.1	3.1	4.0	6.2	9.2	13.3	7.5	4.5	3.0	3.0	4.0	7.5	11.3	.0	100.

NUMBER OF OBS = 8744

B66

Precipitation

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	1	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	1	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.01 .00	.01 .00	.03
17	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
17	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
17	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
17	1	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	1	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	1	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	1	10	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.02 .00	.05 .00	.02 .00	.01 .00	.01 .00	.00 .00	.00 .00	.14
17	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
17	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
17	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
17	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
17	1	15	.00 .01	.00 .00	.00 .00	.00 .02	.00 .05	.00 .04	.00 .03	.01 .01	.01 .00	.00 .01	.02 .00	.01 .01	.23
17	1	16	.01 .00	.00 .00	.01 .00	.04 .00	.01 .01	.03 .00	.12 .00	.23 .00	.18 .00	.13 .00	.04 .00	.01 .00	.82
17	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 2017

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
17	1	18	.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
17	1	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.01
17	1	20	.00 .00	.00 .01	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .04	.00 .00	.06
17	1	21	.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
17	1	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	1	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	1	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
17	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
17	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
17	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
17	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
17	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 - 40
TOTAL DAYS WITH PRECIPITATION - 8
TOTAL AMOUNT OF PRECIPITATION - 1.31 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .23 INCHES
MAXIMUM DAILY PRECIPITATION - .82 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 8 - .23 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 6 - .73 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 1 - .81 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 15 HOUR 17 - .91 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 15 HOUR 13 - .99 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 409
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 16
TOTAL DAYS WITH PRECIPITATION - 3
TOTAL AMOUNT OF PRECIPITATION - .30 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES
MAXIMUM DAILY PRECIPITATION - .23 INCHES

MONTH OF JANUARY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	40	96	135	168	198
.02	17	58	86	112	136
.03	12	45	66	91	121
.04	10	43	62	80	98
.05	6	32	59	78	96
.07	4	25	42	57	75
.10	4	20	40	52	64
.15	2	11	28	34	40
.20	1	8	18	32	38
.25	0	7	14	23	30
.30	0	7	13	20	28
.35	0	7	13	20	26
.40	0	6	12	18	25
.45	0	5	12	18	25
.50	0	5	11	18	24
.60	0	4	11	18	24
.70	0	3	9	16	22
.80	0	0	4	13	19
.90	0	0	0	2	8
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 2017

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
17	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
17	2	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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 2017

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
17	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
17	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
17	2	20	.00 .00	.00 .00	.00 .00	.33 .00	.03 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.00 .00	.38
17	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
17	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
17	2	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .05	.00 .17	.22
17	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
17	2	25	.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
17	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
17	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
17	2	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .01	.00 .00	.02

B73

MONTH OF FEBRUARY

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 672
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 8
TOTAL DAYS WITH PRECIPITATION - 4
TOTAL AMOUNT OF PRECIPITATION - .63 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .33 INCHES
MAXIMUM DAILY PRECIPITATION - .38 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 4 - .33 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 4 - .38 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 4 - .38 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 4 - .38 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 20 HOUR 4 - .38 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 208
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 FEBRUARY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	8	27	45	63	81
.02	5	20	32	44	56
.03	4	14	26	38	50
.04	3	14	26	38	50
.05	3	14	26	38	50
.07	2	12	24	36	48
.10	2	12	24	36	48
.15	2	12	24	36	48
.20	1	11	23	35	47
.25	1	6	12	18	24
.30	1	6	12	18	24
.35	0	5	11	17	23
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

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

B75

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	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
17	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
17	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
17	3	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .32	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.32
17	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
17	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
17	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
17	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
17	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
17	3	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	3	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	3	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	3	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

B76

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	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
17	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
17	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
17	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
17	3	24	.00 .00	.00 .00	.00 .02	.00 .09	.00 .14	.00 .07	.00 .03	.00 .06	.02 .12	.05 .05	.01 .01	.00 .01	.68
17	3	25	.00 .03	.00 .03	.00 .03	.06 .01	.02 .00	.00 .00	.00 .00	.02 .00	.05 .01	.06 .00	.02 .00	.03 .00	.37
17	3	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
17	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
17	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
17	3	29	.00 .04	.00 .06	.01 .03	.23 .01	.30 .00	.03 .00	.02 .01	.08 .00	.07 .13	.09 .00	.12 .00	.09 .00	1.32
17	3	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.02 .00	.10 .00	.02 .00	.00 .00	.00 .00	.00 .00	.15
17	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 - 47
TOTAL DAYS WITH PRECIPITATION - 6
TOTAL AMOUNT OF PRECIPITATION - 2.85 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .32 INCHES
MAXIMUM DAILY PRECIPITATION - 1.32 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 6 HOUR 18 - .32 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 4 - .73 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 4 - 1.16 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 4 - 1.31 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 29 HOUR 3 - 1.32 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 139
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	47	87	111	129	147
.02	37	74	99	119	137
.03	29	71	93	112	130
.04	22	70	93	111	129
.05	21	69	93	111	129
.07	14	68	92	110	128
.10	8	56	86	104	122
.15	3	42	79	99	118
.20	3	32	64	88	106
.25	2	27	58	86	104
.30	2	24	49	75	97
.35	0	16	33	53	67
.40	0	14	30	46	60
.45	0	11	27	43	56
.50	0	7	25	41	55
.60	0	2	15	33	50
.70	0	1	8	20	39
.80	0	0	7	13	27
.90	0	0	6	12	20
1.00	0	0	4	11	17
1.10	0	0	2	8	14
1.20	0	0	0	1	7
1.30	0	0	0	1	7
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 - 2160
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 95
 TOTAL DAYS WITH PRECIPITATION - 18
 TOTAL AMOUNT OF PRECIPITATION - 4.79 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .33 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.32 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 2 DAY 20 HOUR 4 - .33 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 4 - .73 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 4 - 1.16 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 4 - 1.31 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 3 - 1.32 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 756
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 17
 TOTAL DAYS WITH PRECIPITATION - 4
 TOTAL AMOUNT OF PRECIPITATION - .31 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES
 MAXIMUM DAILY PRECIPITATION - .23 INCHES

JAN-MAR INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	95	214	301	376	448
.02	59	155	226	290	350
.03	45	130	185	241	301
.04	35	127	181	229	277
.05	30	115	178	227	275
.07	20	105	158	203	251
.10	14	88	150	192	234
.15	7	65	131	169	206
.20	5	51	105	155	191
.25	3	40	84	127	158
.30	3	37	74	113	149
.35	0	28	57	90	116
.40	0	20	42	64	85
.45	0	16	39	61	81
.50	0	12	36	59	79
.60	0	6	26	51	74
.70	0	4	17	36	61
.80	0	0	11	26	46
.90	0	0	6	14	28
1.00	0	0	4	11	17
1.10	0	0	2	8	14
1.20	0	0	0	1	7
1.30	0	0	0	1	7
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 2017

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
17	4	1	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.07 .00	.06 .00	.15
17	4	2	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.04 .00	.07 .00	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.16
17	4	3	.00 .00	.00 .01	.00 .00	.01 .00	.13 .00	.01 .00	.01 .00	.00 .00	.01 .00	.02 .00	.00 .00	.00 .00	.20
17	4	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .05	.00 .07	.00 .01	.14
17	4	5	.00 .00	.02 .00	.06 .00	.11 .00	.06 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.27
17	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
17	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
17	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
17	4	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .10	.00 .01	.11
17	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
17	4	11	.00 .00	.00 9.99	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	4	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
17	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
17	4	14	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.03 .00	.00 .00	.00 .00	.00 .00	.04
17	4	15	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.03 .06	.02 .01	.01 .00	.01 .00	.00 .00	.00 .00	.15
17	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
17	4	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	4	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
17	4	19	.00 .00	.16 .00	.03 .00	.03 .00	.03 .00	.02 .00	.01 .00	.00 .24	.00 .00	.00 .00	.00 .00	.00 .00	.52
17	4	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
17	4	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	4	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
17	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
17	4	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	4	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	4	28	.00 .00	.01 .00	.05 .00	.16 .00	.03 .00	.15 .00	.15 .00	.18 .00	.15 .00	.11 .00	.11 .00	.01 .00	1.11
17	4	29	.00 .07	.00 .06	.00 .00	.00 .00	.00 .05	.00 .01	.00 .01	.02 .05	.02 .03	.05 .01	.01 .01	.01 .00	.41
17	4	30	.00 .02	.00 .07	.00 .01	.01 .00	.01 .01	.03 .02	.27 .07	.11 .01	.00 .07	.01 .07	.08 .01	.07 .02	.97

MONTH OF APRIL

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720
NUMBER OF MISSING HOURS - 1
TOTAL HOURS OF PRECIPITATION - 88
TOTAL DAYS WITH PRECIPITATION - 13
TOTAL AMOUNT OF PRECIPITATION - 4.24 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .27 INCHES
MAXIMUM DAILY PRECIPITATION - 1.11 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 30 HOUR 7 - .27 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 6 - .85 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 2 - 1.11 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 2 - 1.11 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 2 - 1.11 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 APRIL

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	88	172	236	285	320
.02	54	139	205	251	284
.03	44	131	198	247	283
.04	35	123	192	242	281
.05	34	116	179	224	258
.07	24	108	173	219	254
.10	14	92	146	194	230
.15	8	63	113	160	198
.20	2	43	84	119	152
.25	1	31	62	91	115
.30	0	15	47	68	88
.35	0	14	40	61	81
.40	0	13	34	52	76
.45	0	9	26	37	50
.50	0	9	22	37	49
.60	0	5	17	34	41
.70	0	5	11	30	41
.80	0	2	9	20	37
.90	0	0	6	15	21
1.00	0	0	5	11	17
1.10	0	0	4	10	16
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

B85

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	5	1	.05 .00	.02 .00	.01 .00	.00 .00	.02 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.10
17	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
17	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
17	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
17	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
17	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
17	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
17	5	8	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	5	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
17	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
17	5	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	5	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .65	.00 .03	.00 .01	.69
17	5	17	.01 .00	.00 .33	.00 .01	.00 .00	.07 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.42

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	5	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .04	.00 .24	.00 .20	.00 .20	.00 .02	.70
17	5	19	.02 .00	.00 .01	.00 .02	.00 .00	.00 .02	.01 .01	.00 .02	.00 .14	.00 .32	.00 .49	.00 .10	.00 .04	1.20
17	5	20	.00 .00	.00 .00	.00 .00	.00 .00	.06 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.07
17	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
17	5	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05
17	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
17	5	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
17	5	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	5	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	5	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.25 .00	.01 .00	.00 .00	.00 .00	.00 .00	.28
17	5	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	5	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
17	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 - 35
TOTAL DAYS WITH PRECIPITATION - 8
TOTAL AMOUNT OF PRECIPITATION - 3.51 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .65 INCHES
MAXIMUM DAILY PRECIPITATION - 1.20 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 22 - .65 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 19 HOUR 19 - 1.11 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 19 HOUR 18 - 1.18 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 19 HOUR 14 - 1.24 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 23 - 1.28 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	35	80	109	133	157
.02	25	68	102	127	151
.03	17	65	98	124	148
.04	16	61	96	123	147
.05	13	57	91	120	144
.07	11	48	77	103	121
.10	10	37	68	96	116
.15	8	34	65	93	114
.20	8	34	65	93	114
.25	5	32	63	91	113
.30	4	25	49	71	88
.35	2	19	40	62	79
.40	2	19	40	62	79
.45	2	18	37	56	73
.50	1	17	35	53	71
.60	1	16	34	52	71
.70	0	10	29	48	67
.80	0	5	11	19	34
.90	0	5	11	19	33
1.00	0	4	11	19	31
1.10	0	1	9	17	30
1.20	0	0	0	6	14
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

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

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	6	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	6	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	6	14	.01 .00	.07 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.09
17	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
17	6	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .87	.00 .12	.00 .00	.00 .00	.99
17	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 2017

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
17	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
17	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
17	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
17	6	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	6	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .02	.00 .02	.04
17	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
17	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
17	6	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	6	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.02 .00	.08 .00	.11 .00	.07 .00	.01 .00	.00 .00	.31
17	6	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	6	28	.00 .00	.00 .00	.11 .00	.44 .00	.46 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .07	.00 .05	1.14
17	6	29	.00 .00	.00 .00	.00 .00	.02 .00	.08 .00	.01 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.12
17	6	30	.01 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02

B91

MONTH OF JUNE

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 720
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 25
TOTAL DAYS WITH PRECIPITATION - 7
TOTAL AMOUNT OF PRECIPITATION - 2.71 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .87 INCHES
MAXIMUM DAILY PRECIPITATION - 1.14 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 16 HOUR 21 - .87 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 3 - 1.02 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 3 - 1.02 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 3 - 1.02 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 28 HOUR 3 - 1.14 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	25	72	117	155	179
.02	17	51	87	126	163
.03	12	47	83	119	150
.04	12	47	83	119	149
.05	12	41	71	101	125
.07	11	41	71	101	125
.10	6	33	57	81	100
.15	3	20	44	68	92
.20	3	18	42	66	90
.25	3	17	35	53	71
.30	3	15	33	51	69
.35	3	13	25	37	49
.40	3	13	25	37	49
.45	2	13	25	37	49
.50	1	12	24	36	49
.60	1	11	23	35	48
.70	1	11	23	35	47
.80	1	11	23	35	47
.90	0	10	22	34	46
1.00	0	4	10	16	23
1.10	0	0	0	0	3
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 - 1
 TOTAL HOURS OF PRECIPITATION - 148
 TOTAL DAYS WITH PRECIPITATION - 28
 TOTAL AMOUNT OF PRECIPITATION - 10.46 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .87 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.20 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 6 DAY 16 HOUR 21 - .87 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 19 HOUR 19 - 1.11 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 19 HOUR 18 - 1.18 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 19 HOUR 14 - 1.24 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 18 HOUR 23 - 1.28 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

APR-JUN INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	148	329	473	590	679
.02	96	263	405	521	621
.03	73	248	390	507	604
.04	63	236	382	501	600
.05	59	219	352	462	550
.07	46	202	332	440	523
.10	30	167	282	388	469
.15	19	120	231	336	425
.20	13	97	200	293	377
.25	9	80	168	249	319
.30	7	55	135	202	263
.35	5	46	111	172	227
.40	5	45	100	158	217
.45	4	40	88	137	185
.50	2	38	81	131	180
.60	2	32	74	125	170
.70	1	26	63	114	162
.80	1	18	43	74	124
.90	0	15	39	68	106
1.00	0	8	26	46	77
1.10	0	1	13	27	49
1.20	0	0	0	6	14
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

B95

JAN-JUN INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 4344
 NUMBER OF MISSING HOURS - 1
 TOTAL HOURS OF PRECIPITATION - 243
 TOTAL DAYS WITH PRECIPITATION - 46
 TOTAL AMOUNT OF PRECIPITATION - 15.25 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .87 INCHES
 MAXIMUM DAILY PRECIPITATION - 1.32 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 6 DAY 16 HOUR 21 - .87 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 19 HOUR 19 - 1.11 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 5 DAY 19 HOUR 18 - 1.18 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 4 - 1.31 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 3 DAY 29 HOUR 3 - 1.32 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 756
 NUMBER OF MISSING HOURS - 0
 TOTAL HOURS OF PRECIPITATION - 17
 TOTAL DAYS WITH PRECIPITATION - 4
 TOTAL AMOUNT OF PRECIPITATION - .31 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES
 MAXIMUM DAILY PRECIPITATION - .23 INCHES

JAN-JUN INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	243	543	775	973	1140
.02	155	418	632	818	984
.03	118	378	576	755	918
.04	98	363	564	737	890
.05	89	334	531	696	838
.07	66	307	491	650	787
.10	44	255	432	586	715
.15	26	185	362	505	633
.20	18	148	305	448	568
.25	12	120	252	376	477
.30	10	92	209	315	412
.35	5	74	168	262	343
.40	5	65	142	222	302
.45	4	56	127	198	266
.50	2	50	117	190	259
.60	2	38	100	176	244
.70	1	30	80	150	223
.80	1	18	54	100	170
.90	0	15	45	82	134
1.00	0	8	30	57	94
1.10	0	1	15	35	63
1.20	0	0	0	7	21
1.30	0	0	0	1	7
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

B97

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	7	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
17	7	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
17	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
17	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
17	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
17	7	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
17	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
17	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
17	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
17	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
17	7	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
17	7	13	.00 .00	.00 .00	.04 .00	.30 .00	.05 .00	.04 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.46
17	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
17	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
17	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
17	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

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	7	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.08 .00	.09 .00	.03 .00	.00 .00	.00 .00	.23
17	7	19	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.23 .00	.19 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.42
17	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
17	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
17	7	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
17	7	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	7	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
17	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
17	7	26	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .06	.23 .11	.17 .03	.07 .00	.03 .00	.00 .01	.00 .00	.71
17	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
17	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
17	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
17	7	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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 - 19
 TOTAL DAYS WITH PRECIPITATION - 4
 TOTAL AMOUNT OF PRECIPITATION - 1.82 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .30 INCHES
 MAXIMUM DAILY PRECIPITATION - .71 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 13 HOUR 4 - .30 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 7 - .50 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 7 - .56 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 7 - .71 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 26 HOUR 7 - .71 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

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

MONTH OF JULY

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	19	46	72	96	116
.02	18	43	69	93	113
.03	18	43	69	93	113
.04	13	39	66	90	111
.05	11	37	64	88	109
.07	9	36	64	88	109
.10	6	35	63	87	108
.15	5	31	60	84	106
.20	3	28	58	82	104
.25	1	17	36	54	73
.30	1	16	36	54	73
.35	0	15	34	52	71
.40	0	14	33	51	70
.45	0	6	18	31	47
.50	0	3	9	15	23
.60	0	0	0	6	13
.70	0	0	0	5	11
.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

B101

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	8	1	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	3	.00 .00	.00 .00	.00 .00	.10 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.13
17	8	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	5	.00 .02	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.09 .00	.08 .00	.01 .00	.00 .00	.06 .00	.26
17	8	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.00 .00	.02
17	8	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	8	11	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	12	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	8	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.34 .00	.03 .00	.00 .00	.00 .00	.00 .00	.00 .00	.37
17	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
17	8	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.22 .00	.03 .00	.01 .00	.00 .04	.00 .00	.30
17	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 2017

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
17	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
17	8	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
17	8	20	.00 .10	.27 .00	.12 .00	.08 .00	.06 .00	.01 .00	.09 .00	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.74
17	8	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .08	.00 .45	.53
17	8	22	.02 .00	.01 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04
17	8	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
17	8	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
17	8	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
17	8	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
17	8	27	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.77 .00	.00 .00	.80
17	8	28	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	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
17	8	30	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	8	31	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00

B103

MONTH OF AUGUST

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 744
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 29
TOTAL DAYS WITH PRECIPITATION - 9
TOTAL AMOUNT OF PRECIPITATION - 3.19 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .77 INCHES
MAXIMUM DAILY PRECIPITATION - .80 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 11 - .77 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 10 - .80 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 10 - .80 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 10 - .80 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 27 HOUR 10 - .80 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	29	81	135	184	229
.02	23	77	131	181	226
.03	20	69	117	161	204
.04	16	66	114	158	201
.05	15	58	100	144	186
.07	13	58	100	143	185
.10	8	53	95	137	181
.15	5	39	77	113	149
.20	5	34	73	109	145
.25	4	31	69	105	141
.30	3	24	49	76	106
.35	2	23	48	72	96
.40	2	16	35	53	71
.45	2	16	35	53	71
.50	1	14	32	50	68
.60	1	7	19	31	43
.70	1	6	13	25	37
.80	0	5	11	17	23
.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

BIOS

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	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
17	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
17	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
17	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
17	9	7	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	9	9	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	9	13	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	9	14	.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
17	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
17	9	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.03 .00	.00 .00	.01 .00	.00 .00	.04
17	9	17	.09 .00	.06 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.15

B106

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	9	18	.00 .00	.00 .00	.00 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.32 .00	.10 .00	.43
17	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
17	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
17	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
17	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
17	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
17	9	24	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	9	25	.00 .00	.00 .01	.00 .06	.00 .25	.00 .00	.00 .00	.00 .08	.00 .16	.00 .06	.00 .01	.00 .03	.05 .00	.71
17	9	26	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02
17	9	27	.00 9.99	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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 - 1
TOTAL HOURS OF PRECIPITATION - 19
TOTAL DAYS WITH PRECIPITATION - 6
TOTAL AMOUNT OF PRECIPITATION - 1.36 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .32 INCHES
MAXIMUM DAILY PRECIPITATION - .71 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 11 - .32 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 16 - .55 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 12 - .71 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 12 - .73 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 25 HOUR 12 - .73 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	19	55	86	112	136
.02	12	40	64	86	104
.03	12	37	61	83	101
.04	10	35	59	81	99
.05	10	31	49	67	85
.07	6	25	43	61	79
.10	4	24	42	61	79
.15	3	21	39	57	75
.20	2	16	28	40	52
.25	2	16	28	40	52
.30	1	15	27	39	51
.35	0	10	26	38	50
.40	0	8	20	32	44
.45	0	2	9	15	21
.50	0	2	8	14	20
.60	0	0	8	14	20
.70	0	0	1	7	13
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

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

B109

JUL-SEP INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2208
NUMBER OF MISSING HOURS - 1
TOTAL HOURS OF PRECIPITATION - 67
TOTAL DAYS WITH PRECIPITATION - 19
TOTAL AMOUNT OF PRECIPITATION - 6.37 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .77 INCHES
MAXIMUM DAILY PRECIPITATION - .80 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 27 HOUR 11 - .77 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 27 HOUR 10 - .80 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 27 HOUR 10 - .80 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 27 HOUR 10 - .80 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 8 DAY 27 HOUR 10 - .80 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	67	182	293	392	481
.02	53	160	264	360	443
.03	50	149	247	337	418
.04	39	140	239	329	411
.05	36	126	213	299	380
.07	28	119	207	292	373
.10	18	112	200	285	368
.15	13	91	176	254	330
.20	10	78	159	231	301
.25	7	64	133	199	266
.30	5	55	112	169	230
.35	2	48	108	162	217
.40	2	38	88	136	185
.45	2	24	62	99	139
.50	1	19	49	79	111
.60	1	7	27	51	76
.70	1	6	14	37	61
.80	0	5	11	17	23
.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

B111

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	10	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.04
17	10	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .05	.00 .08	.00 .05	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.19
17	10	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.00 .00	.04 .00	.01 .00	.02 .00	.00 .00	.00 .00	.09
17	10	5	.00 .01	.00 1.13	.00 .04	.00 .05	.00 .09	.01 .51	.00 .02	.00 .10	.00 .18	.00 .03	.00 .00	.08 .00	2.25
17	10	6	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 1.05	.00 .01	.00 .02	.00 .02	.00 .53	.00 .56	.00 .08	2.27
17	10	7	.01 .00	.01 .00	.00 .00	.03 .00	.07 .00	.02 .00	.00 .00	.01 .00	.00 .00	.00 .00	.01 .00	.00 .00	.16
17	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
17	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
17	10	10	.00 .00	.03 .12	.00 .07	.06 .05	.02 .00	.00 .00	.01 .00	.01 .00	.00 .00	.00 .00	.00 .00	.00 .00	.37
17	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
17	10	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
17	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
17	10	14	.00 .11	.00 .00	.00 .00	.00 .01	.02 .00	.09 .00	.21 9.99	.65 9.99	.07 9.99	.03 9.99	.01 9.99	.00 9.99	1.20
17	10	15	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	9.99 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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 2017

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 12MDNPT	TOTAL
17	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
17	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
17	10	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
17	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
17	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
17	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
17	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
17	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
17	10	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
17	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
17	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
17	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
17	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
17	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 - 12
TOTAL HOURS OF PRECIPITATION - 52
TOTAL DAYS WITH PRECIPITATION - 8
TOTAL AMOUNT OF PRECIPITATION - 6.57 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.13 INCHES
MAXIMUM DAILY PRECIPITATION - 2.27 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 5 HOUR 14 - 1.13 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 6 HOUR 18 - 2.19 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 6 HOUR 18 - 2.39 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 6 HOUR 18 - 2.43 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 6 HOUR 18 - 2.43 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 19
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 OCTOBER

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	52	110	147	183	211
.02	39	93	135	171	203
.03	31	85	131	167	200
.04	27	81	126	163	197
.05	24	73	113	144	171
.07	19	69	111	142	169
.10	11	61	97	131	158
.15	8	43	76	108	135
.20	7	37	63	93	120
.25	6	30	53	81	109
.30	6	30	48	73	95
.35	6	27	45	67	91
.40	6	27	45	63	81
.45	6	27	45	63	81
.50	6	27	45	63	81
.60	3	27	45	63	81
.70	2	26	45	63	81
.80	2	26	44	63	81
.90	2	23	42	60	78
1.00	2	19	39	57	75
1.10	1	13	30	48	69
1.20	0	11	25	43	64
1.30	0	6	22	34	48
1.40	0	5	17	29	41
1.50	0	4	16	28	40
1.60	0	4	16	28	40
1.70	0	3	15	27	39
1.80	0	3	15	27	39
1.90	0	1	15	27	39
2.00	0	1	13	25	37

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

BIIS

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	11	2	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	11	11	.00 .01	.00 .01	.00 .00	.00 .00	.00 .01	.00 .01	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.05
17	11	12	.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
17	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
17	11	14	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .01	.00 .01	.00 .00	.03
17	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
17	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
17	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 2017

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
17	11	18	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.05
17	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
17	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
17	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
17	11	22	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	11	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
17	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
17	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
17	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 - 10
 TOTAL DAYS WITH PRECIPITATION - 4
 TOTAL AMOUNT OF PRECIPITATION - .14 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES
 MAXIMUM DAILY PRECIPITATION - .05 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 6 - .05 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 6 - .05 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 6 - .05 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 18 HOUR 6 - .05 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 11 HOUR 13 - .06 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 101
 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 NOVEMBER

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	10	35	58	76	94
.02	1	22	41	61	79
.03	1	14	33	52	70
.04	1	7	20	35	47
.05	1	6	16	28	41
.07	0	0	0	0	0
.10	0	0	0	0	0
.15	0	0	0	0	0
.20	0	0	0	0	0
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

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

B119

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	12	3	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	12	4	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	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
17	12	16	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	12	17	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.02 .00	.07 .00	.05 .00	.01 .00	.00 .00	.00 .00	.00 .00	.15

B120

NPPD-COOPER NUCLEAR STATION PRECIPITATION DATA FOR 2017

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
17	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
17	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
17	12	20	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	12	21	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .01	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.01
17	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
17	12	23	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	12	25	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00 .00	.00
17	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
17	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
17	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
17	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
17	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
17	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 - 5
 TOTAL DAYS WITH PRECIPITATION - 2
 TOTAL AMOUNT OF PRECIPITATION - .16 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - .07 INCHES
 MAXIMUM DAILY PRECIPITATION - .15 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 7 - .07 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 6 - .15 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 6 - .15 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 6 - .15 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS DAY 17 HOUR 6 - .15 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 356
 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	5	15	27	39	51
.02	3	8	14	20	26
.03	2	7	13	19	25
.04	2	7	13	19	25
.05	2	7	13	19	25
.07	1	6	12	18	24
.10	0	5	11	17	23
.15	0	3	9	15	21
.20	0	0	0	0	0
.25	0	0	0	0	0
.30	0	0	0	0	0
.35	0	0	0	0	0
.40	0	0	0	0	0
.45	0	0	0	0	0
.50	0	0	0	0	0
.60	0	0	0	0	0
.70	0	0	0	0	0
.80	0	0	0	0	0
.90	0	0	0	0	0
1.00	0	0	0	0	0
1.10	0	0	0	0	0
1.20	0	0	0	0	0
1.30	0	0	0	0	0
1.40	0	0	0	0	0
1.50	0	0	0	0	0
1.60	0	0	0	0	0
1.70	0	0	0	0	0
1.80	0	0	0	0	0
1.90	0	0	0	0	0
2.00	0	0	0	0	0

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

B123

OCT-DEC INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 2208
 NUMBER OF MISSING HOURS - 12
 TOTAL HOURS OF PRECIPITATION - 67
 TOTAL DAYS WITH PRECIPITATION - 14
 TOTAL AMOUNT OF PRECIPITATION - 6.87 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - 1.13 INCHES
 MAXIMUM DAILY PRECIPITATION - 2.27 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 5 HOUR 14 - 1.13 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.19 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.39 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 476
 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	67	160	232	298	356
.02	43	123	190	252	308
.03	34	106	177	238	295
.04	30	95	159	217	269
.05	27	86	142	191	237
.07	20	75	123	160	193
.10	11	66	108	148	181
.15	8	46	85	123	156
.20	7	37	63	93	120
.25	6	30	53	81	109
.30	6	30	48	73	95
.35	6	27	45	67	91
.40	6	27	45	63	81
.45	6	27	45	63	81
.50	6	27	45	63	81
.60	3	27	45	63	81
.70	2	26	45	63	81
.80	2	26	44	63	81
.90	2	23	42	60	78
1.00	2	19	39	57	75
1.10	1	13	30	48	69
1.20	0	11	25	43	64
1.30	0	6	22	34	48
1.40	0	5	17	29	41
1.50	0	4	16	28	40
1.60	0	4	16	28	40
1.70	0	3	15	27	39
1.80	0	3	15	27	39
1.90	0	1	15	27	39
2.00	0	1	13	25	37

B125

JUL-DEC INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 4416
 NUMBER OF MISSING HOURS - 13
 TOTAL HOURS OF PRECIPITATION - 134
 TOTAL DAYS WITH PRECIPITATION - 33
 TOTAL AMOUNT OF PRECIPITATION - 13.24 INCHES
 MAXIMUM 1-HOUR PRECIPITATION - 1.13 INCHES
 MAXIMUM DAILY PRECIPITATION - 2.27 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 5 HOUR 14 - 1.13 INCHES
 6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.19 INCHES
 12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.39 INCHES
 18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES
 24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 476
 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	134	342	525	690	837
.02	96	283	454	612	751
.03	84	255	424	575	713
.04	69	235	398	546	680
.05	63	212	355	490	617
.07	48	194	330	452	566
.10	29	178	308	433	549
.15	21	137	261	377	486
.20	17	115	222	324	421
.25	13	94	186	280	375
.30	11	85	160	242	325
.35	8	75	153	229	308
.40	8	65	133	199	266
.45	8	51	107	162	220
.50	7	46	94	142	192
.60	4	34	72	114	157
.70	3	32	59	100	142
.80	2	31	55	80	104
.90	2	23	42	60	78
1.00	2	19	39	57	75
1.10	1	13	30	48	69
1.20	0	11	25	43	64
1.30	0	6	22	34	48
1.40	0	5	17	29	41
1.50	0	4	16	28	40
1.60	0	4	16	28	40
1.70	0	3	15	27	39
1.80	0	3	15	27	39
1.90	0	1	15	27	39
2.00	0	1	13	25	37

B127

JAN-DEC INDEX

FOR ALL TEMPERATURES

TOTAL NUMBER OF HOURS - 8760
NUMBER OF MISSING HOURS - 14
TOTAL HOURS OF PRECIPITATION - 377
TOTAL DAYS WITH PRECIPITATION - 79
TOTAL AMOUNT OF PRECIPITATION - 28.49 INCHES
MAXIMUM 1-HOUR PRECIPITATION - 1.13 INCHES
MAXIMUM DAILY PRECIPITATION - 2.27 INCHES

1 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 5 HOUR 14 - 1.13 INCHES
6 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.19 INCHES
12 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.39 INCHES
18 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES
24 HOUR PERIOD IN MONTH WITH GREATEST AMOUNT PRECIPITATION STARTS MONTH 10 DAY 6 HOUR 18 - 2.43 INCHES

FOR TEMPERATURES LESS THAN OR EQUAL TO 32 DEGREES

TOTAL NUMBER OF HOURS - 1232
NUMBER OF MISSING HOURS - 0
TOTAL HOURS OF PRECIPITATION - 18
TOTAL DAYS WITH PRECIPITATION - 5
TOTAL AMOUNT OF PRECIPITATION - .32 INCHES
MAXIMUM 1-HOUR PRECIPITATION - .05 INCHES
MAXIMUM DAILY PRECIPITATION - .23 INCHES

JAN-DEC INDEX

PRECIPITATION INTENSITY - DURATION
(NUMBER OF OCCURRENCES)

AMOUNT INCHES	DURATION (HOURS)				
	1	6	12	18	24
.01	377	885	1303	1672	1992
.02	251	701	1086	1430	1735
.03	202	633	1000	1330	1631
.04	167	598	962	1283	1570
.05	152	546	886	1186	1455
.07	114	501	821	1102	1353
.10	73	433	740	1019	1264
.15	47	322	623	882	1119
.20	35	263	527	772	989
.25	25	214	438	656	852
.30	21	177	369	557	737
.35	13	149	321	491	651
.40	13	130	275	421	568
.45	12	107	234	360	486
.50	9	96	211	332	451
.60	6	72	172	290	401
.70	4	62	139	250	365
.80	3	49	109	180	274
.90	2	38	87	142	212
1.00	2	27	69	114	169
1.10	1	14	45	83	132
1.20	0	11	25	50	85
1.30	0	6	22	35	55
1.40	0	5	17	29	41
1.50	0	4	16	28	40
1.60	0	4	16	28	40
1.70	0	3	15	27	39
1.80	0	3	15	27	39
1.90	0	1	15	27	39
2.00	0	1	13	25	37

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 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
12.51-18.50	2	3	1	0	0	2	0	2	0	1	0	0	0	0	0	0	11
18.51-24.00	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	4
>24.00	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	5
TOTAL	2	5	1	0	0	4	0	5	4	3	0	0	0	0	0	0	24

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	1	0	0	0	0	0	0	0	0	0	1
7.51-12.50	0	1	2	0	0	1	0	0	0	0	0	0	0	0	0	2	6
12.51-18.50	3	5	0	0	0	1	0	7	2	3	0	0	0	0	0	1	22
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	0	2	0	0	0	0	0	0	0	2
TOTAL	3	6	2	0	0	2	1	8	5	3	0	0	0	0	0	3	33

B132

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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	0	4	2	1	0	0	0	1	0	0	0	0	0	0	0	0	8
7.51-12.50	4	4	3	1	1	0	1	0	0	1	0	0	0	1	1	6	23
12.51-18.50	9	2	1	0	0	0	2	3	3	1	1	2	0	0	2	5	31
18.51-24.00	0	0	0	0	0	0	0	5	4	0	0	0	2	0	1	0	12
>24.00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
TOTAL	13	10	6	2	1	0	3	9	8	3	1	2	2	1	4	11	76

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	4	6	6	8	3	3	1	2	2	0	0	1	2	3	8	51
3.51- 7.50	27	32	35	17	32	18	15	3	1	5	12	5	8	11	25	50	296
7.51-12.50	67	39	21	15	9	5	29	10	7	10	16	9	5	19	46	90	397
12.51-18.50	53	23	6	1	3	6	7	14	14	6	7	3	4	17	65	28	257
18.51-24.00	13	0	0	0	0	0	0	4	26	3	0	0	2	2	17	1	68
>24.00	1	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	7
TOTAL	163	98	68	39	52	32	54	32	55	27	35	17	20	51	156	177	1076

B133

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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																	3
1.01- 3.50	12	8	4	4	7	7	4	5	11	3	2	4	5	4	5	15	100
3.51- 7.50	14	25	11	1	20	9	15	19	17	9	9	3	6	20	23	26	227
7.51-12.50	21	3	4	1	2	1	22	22	20	22	14	3	3	20	27	20	205
12.51-18.50	10	0	2	0	0	0	0	11	11	2	1	0	0	7	4	8	56
18.51-24.00	1	0	0	0	0	0	0	0	0	2	0	0	0	4	2	0	9
>24.00	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	3
TOTAL	58	36	21	6	29	17	41	57	59	39	27	10	14	56	61	69	603

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																	4
1.01- 3.50	5	2	2	2	1	0	7	14	15	9	2	7	1	4	8	4	83
3.51- 7.50	9	4	0	0	1	0	3	8	28	3	2	4	0	7	4	4	77
7.51-12.50	4	0	0	0	0	0	1	1	11	3	2	8	4	6	0	0	40
12.51-18.50	0	0	0	0	0	0	0	0	2	0	0	1	1	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	1	0	0	0	0	0	0	0	1
TOTAL	18	6	2	2	2	0	11	23	57	15	6	20	6	17	12	8	209

B134

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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																	12
1.01- 3.50	9	1	2	2	0	2	3	17	18	17	10	5	5	3	5	11	110
3.51- 7.50	1	0	0	0	0	0	0	1	5	0	1	0	0	0	3	1	12
7.51-12.50	1	0	0	0	0	0	0	0	1	1	0	0	1	1	0	0	5
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	11	1	2	2	0	2	3	18	24	18	11	5	6	4	8	12	139

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																	19
1.01- 3.50	28	15	14	14	16	12	17	37	46	31	14	16	12	13	21	38	344
3.51- 7.50	51	65	48	19	53	27	34	32	51	17	24	12	14	38	55	81	621
7.51-12.50	97	49	30	17	12	9	53	33	39	37	32	20	13	47	74	118	680
12.51-18.50	77	33	10	1	3	9	9	37	32	13	9	6	5	24	71	42	381
18.51-24.00	14	0	0	0	0	0	0	12	33	5	0	0	4	6	20	1	95
>24.00	1	0	0	0	0	0	0	1	11	5	1	0	0	1	0	0	20
TOTAL	268	162	102	51	84	57	113	152	212	108	80	54	48	129	241	280	2160

B135

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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: 2160

TOTAL NUMBER OF VALID OBSERVATIONS: 2160

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

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
1.11	1.53	3.52	49.81	27.92	9.68	6.44

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	5	1	0	0	4	0	5	4	3	0	0	0	0	0	0	0
B	3	6	2	0	0	2	1	8	5	3	0	0	0	0	0	3	0
C	13	10	6	2	1	0	3	9	8	3	1	2	2	1	4	11	0
D	163	98	68	39	52	32	54	32	55	27	35	17	20	51	156	177	0
E	58	36	21	6	29	17	41	57	59	39	27	10	14	56	61	69	3
F	18	6	2	2	2	0	11	23	57	15	6	20	6	17	12	8	4
G	11	1	2	2	0	2	3	18	24	18	11	5	6	4	8	12	12
TOTAL	268	162	102	51	84	57	113	152	212	108	80	54	48	129	241	280	19

B136

JFDs of 10-Meter Wind vs. Delta T

April-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	1	1
7.51-12.50	1	9	3	0	0	3	0	0	1	1	0	0	0	0	0	4	22
12.51-18.50	0	1	1	0	0	0	0	6	5	5	0	0	0	0	0	2	20
18.51-24.00	0	0	0	0	0	0	0	2	19	4	0	0	0	0	0	0	25
>24.00	0	0	0	0	0	0	0	1	17	0	0	0	0	0	0	0	18
TOTAL	1	10	4	0	0	3	0	9	42	10	0	0	0	0	0	7	86

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	3	0	3	1	0	1	2	0	0	0	0	0	2	1	0	2	15
7.51-12.50	1	2	2	0	0	1	2	3	5	10	0	0	2	1	1	4	34
12.51-18.50	2	0	0	0	0	0	3	6	15	6	0	0	0	0	0	6	38
18.51-24.00	0	0	0	0	0	0	0	1	5	1	0	0	0	0	0	0	7
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
TOTAL	6	2	5	1	0	2	7	10	27	17	0	0	4	2	1	12	96

B138

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.01- 3.50	4	1	2	1	2	6	1	1	2	2	0	1	2	1	2	3	2
3.51- 7.50	5	2	6	2	1	1	1	2	12	7	1	1	1	1	1	7	51
7.51-12.50	6	0	0	0	0	0	3	10	9	5	1	0	0	0	3	3	40
12.51-18.50	0	0	0	0	0	0	0	2	10	2	0	0	0	0	0	0	14
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	1	1	0	0	0	0	0	0	2
TOTAL	15	3	10	3	3	7	5	15	34	17	2	2	3	2	6	13	140

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	4	6	6	4	5	4	6	2	1	1	0	0	1	0	3	6	0
1.01- 3.50	26	28	29	20	9	9	15	21	14	7	4	4	3	13	11	16	49
3.51- 7.50	44	41	26	15	4	10	13	25	23	15	12	11	14	26	31	74	229
7.51-12.50	18	10	13	2	0	1	4	37	34	17	7	6	11	12	33	29	384
12.51-18.50	3	0	1	0	0	0	0	3	24	5	0	0	0	0	10	0	46
18.51-24.00	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	6
>24.00	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	6
TOTAL	95	85	75	41	18	24	38	89	101	45	23	21	29	51	88	125	948

B139

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	10	6	3	6	3	3	3	5	7	4	2	2	2	1	2	6	65
3.51- 7.50	25	23	6	2	13	4	9	21	28	16	4	3	7	12	13	18	204
7.51-12.50	23	3	3	0	0	3	8	46	42	20	8	5	11	4	24	12	212
12.51-18.50	4	5	0	0	0	0	1	9	35	8	0	1	1	0	0	1	65
18.51-24.00	2	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	5
>24.00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	64	37	13	8	16	10	21	81	114	49	14	11	21	17	39	37	553

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																	10
1.01- 3.50	10	3	3	1	4	3	3	11	11	11	2	1	4	6	17	22	112
3.51- 7.50	7	0	1	0	0	1	1	1	19	3	3	4	4	8	3	3	58
7.51-12.50	2	0	0	0	0	0	0	0	1	1	0	0	1	1	4	0	10
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	19	3	4	1	4	4	4	12	31	15	5	5	9	15	24	25	190

B140

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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																	16
1.01- 3.50	15	0	2	0	0	0	1	8	13	12	11	5	7	16	17	33	140
3.51- 7.50	2	0	0	0	0	0	0	0	0	0	1	0	2	1	3	1	10
7.51-12.50	0	0	0	0	0	0	0	0	0	0	1	2	1	1	0	0	5
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	17	0	2	0	0	0	1	8	13	12	13	7	10	18	20	34	171

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																	27
1.01- 3.50	39	15	16	11	12	10	13	26	32	28	15	8	14	23	39	67	368
3.51- 7.50	67	52	41	24	24	21	28	44	63	28	12	12	20	36	32	44	548
7.51-12.50	76	57	40	17	5	18	24	76	84	54	22	19	30	34	61	101	718
12.51-18.50	30	16	14	2	0	1	11	68	98	41	8	7	12	12	36	41	397
18.51-24.00	5	0	1	0	0	0	0	8	60	13	0	0	0	0	10	0	97
>24.00	0	0	1	0	0	0	0	2	25	1	0	0	0	0	0	0	29
TOTAL	217	140	113	54	41	50	76	224	362	165	57	46	76	105	178	253	2184

B141

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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: 9.0 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
3.94	4.40	6.41	43.41	25.32	8.70	7.83

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	1	10	4	0	0	3	0	9	42	10	0	0	0	0	0	7	0
B	6	2	5	1	0	2	7	10	27	17	0	0	4	2	1	12	0
C	15	3	10	3	3	7	5	15	34	17	2	2	3	2	6	13	0
D	95	85	75	41	18	24	38	89	101	45	23	21	29	51	88	125	0
E	64	37	13	8	16	10	21	81	114	49	14	11	21	17	39	37	1
F	19	3	4	1	4	4	4	12	31	15	5	5	9	15	24	25	10
G	17	0	2	0	0	0	1	8	13	12	13	7	10	18	20	34	16
TOTAL	217	140	113	54	41	50	76	224	362	165	57	46	76	105	178	253	27

B142

JFDs of 10-Meter Wind vs. Delta T

January-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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	1	1
7.51-12.50	1	11	3	0	0	5	0	0	1	1	0	0	0	0	0	4	26
12.51-18.50	2	4	2	0	0	2	0	8	5	6	0	0	0	0	0	2	31
18.51-24.00	0	0	0	0	0	0	0	4	21	4	0	0	0	0	0	0	29
>24.00	0	0	0	0	0	0	0	2	19	2	0	0	0	0	0	0	23
TOTAL	3	15	5	0	0	7	0	14	46	13	0	0	0	0	0	7	110

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	3	0	3	1	0	1	3	0	0	0	0	0	2	1	0	2	16
7.51-12.50	1	3	4	0	0	2	2	3	5	10	0	0	2	1	1	6	40
12.51-18.50	5	5	0	0	0	1	3	13	17	9	0	0	0	0	0	7	60
18.51-24.00	0	0	0	0	0	0	0	2	6	1	0	0	0	0	0	0	9
>24.00	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
TOTAL	9	8	7	1	0	4	8	18	32	20	0	0	4	2	1	15	129

B144

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
3.51- 7.50	4	5	4	2	2	6	1	2	2	2	0	1	2	1	2	3	39
7.51-12.50	9	6	9	3	2	1	2	2	12	8	1	1	1	2	2	13	74
12.51-18.50	15	2	1	0	0	0	5	13	12	6	2	2	0	0	5	8	71
18.51-24.00	0	0	0	0	0	0	0	7	14	2	0	0	2	0	1	0	26
>24.00	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4
TOTAL	28	13	16	5	4	7	8	24	42	20	3	4	5	3	10	24	216

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS
 WIND MEASURED AT: 10.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	6	10	12	10	13	7	9	3	3	3	0	0	2	2	6	14	100
3.51- 7.50	53	60	64	37	41	27	30	24	15	12	16	9	11	24	36	66	525
7.51-12.50	111	80	47	30	13	15	42	35	30	25	28	20	19	45	77	164	781
12.51-18.50	71	33	19	3	3	7	11	51	48	23	14	9	15	29	98	57	491
18.51-24.00	16	0	1	0	0	0	0	7	50	8	0	0	2	2	27	1	114
>24.00	1	0	0	0	0	0	0	1	10	1	0	0	0	0	0	0	13
TOTAL	258	183	143	80	70	56	92	121	156	72	58	38	49	102	244	302	2024

B145

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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	22	14	7	10	10	10	7	10	18	7	4	6	7	5	7	21	165
3.51- 7.50	39	48	17	3	33	13	24	40	45	25	13	6	13	32	36	44	431
7.51-12.50	44	6	7	1	2	4	30	68	62	42	22	8	14	24	51	32	417
12.51-18.50	14	5	2	0	0	0	1	20	46	10	1	1	1	7	4	9	121
18.51-24.00	3	0	0	0	0	0	0	0	2	3	0	0	0	4	2	0	14
>24.00	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	4
TOTAL	122	73	34	14	45	27	62	138	173	88	41	21	35	73	100	106	1156

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																	14
1.01- 3.50	15	5	5	3	5	3	10	25	26	20	4	8	5	10	25	26	195
3.51- 7.50	16	4	1	0	1	1	4	9	47	6	5	8	4	15	7	7	135
7.51-12.50	6	0	0	0	0	0	1	1	12	4	2	8	5	7	4	0	50
12.51-18.50	0	0	0	0	0	0	0	0	2	0	0	1	1	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	1	0	0	0	0	0	0	0	1
TOTAL	37	9	6	3	6	4	15	35	88	30	11	25	15	32	36	33	399

B146

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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																	28
1.01- 3.50	24	1	4	2	0	2	4	25	31	29	21	10	12	19	22	44	250
3.51- 7.50	3	0	0	0	0	0	0	1	5	0	2	0	2	1	6	2	22
7.51-12.50	1	0	0	0	0	0	0	0	1	1	1	2	2	0	0	0	10
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	28	1	4	2	0	2	4	26	37	30	24	12	16	22	28	46	310

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																	46
1.01- 3.50	67	30	30	25	28	22	30	63	78	59	29	24	26	36	60	105	712
3.51- 7.50	118	117	89	43	77	48	62	76	114	45	36	24	34	74	87	125	1169
7.51-12.50	173	106	70	34	17	27	77	109	123	91	54	39	43	81	135	219	1398
12.51-18.50	107	49	24	3	3	10	20	105	130	54	17	13	17	36	107	83	778
18.51-24.00	19	0	1	0	0	0	0	20	93	18	0	0	4	6	30	1	192
>24.00	1	0	1	0	0	0	0	3	36	6	1	0	0	1	0	0	49
TOTAL	485	302	215	105	125	107	189	376	574	273	137	100	124	234	419	533	4344

B147

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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: 4344

TOTAL NUMBER OF VALID OBSERVATIONS: 4344

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

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
2.53	2.97	4.97	46.59	26.61	9.19	7.14

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	3	15	5	0	0	7	0	14	46	13	0	0	0	0	0	7	0
B	9	8	7	1	0	4	8	18	32	20	0	0	4	2	1	15	0
C	28	13	16	5	4	7	8	24	42	20	3	4	5	3	10	24	0
D	258	183	143	80	70	56	92	121	156	72	58	38	49	102	244	302	0
E	122	73	34	14	45	27	62	138	173	88	41	21	35	73	100	106	4
F	37	9	6	3	6	4	15	35	88	30	11	25	15	32	36	33	14
G	28	1	4	2	0	2	4	26	37	30	24	12	16	22	28	46	28
TOTAL	485	302	215	105	125	107	189	376	574	273	137	100	124	234	419	533	46

B148

Stability Classes by Hour of Day

10-Meter Wind vs. Delta T

January-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS

HOURLY STABILITIES

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

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 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	
17	2	15	E	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	E	F	F	F	F	G	F	
17	2	16	G	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	G	G	F	E	E	
17	2	17	E	E	E	E	E	F	F	F	F	D	C	B	B	D	D	D	D	E	F	F	G	G	G	G	
17	2	18	G	G	G	G	G	G	G	G	D	C	C	C	C	D	D	D	D	E	F	G	G	F	G	F	
17	2	19	F	G	G	G	G	G	G	G	F	D	D	D	C	B	C	B	D	D	E	E	E	E	E	F	
17	2	20	F	G	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F	
17	2	21	F	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	E	F	F	F	F	G	F
17	2	22	F	G	F	F	G	G	G	F	E	D	D	D	C	C	D	D	D	E	F	F	F	F	E	E	
17	2	23	F	E	E	E	E	E	D	E	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	E	
17	2	24	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	
17	2	25	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17	2	26	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G	
17	2	27	G	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	E	E	E	F	F	F	G	E
17	2	28	E	E	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17	3	1	D	D	D	D	D	D	D	D	D	D	D	C	C	C	D	D	D	D	E	E	F	G	G	G	
17	3	2	G	G	G	G	G	G	G	G	E	D	D	D	C	B	C	D	D	D	E	E	E	E	E	E	
17	3	3	E	E	E	E	E	E	F	E	D	D	C	B	B	B	C	C	D	E	E	E	E	E	E	E	
17	3	4	F	E	F	F	F	F	G	E	D	D	D	C	B	A	A	A	B	C	D	E	E	F	E	E	
17	3	5	E	E	E	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	D	
17	3	6	D	D	D	D	D	D	D	D	B	F	E	A	A	A	C	D	E	F	E	E	E	E	E	E	
17	3	7	E	E	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	D	E	E	E	F	F	F	
17	3	8	F	F	F	F	F	F	F	E	E	D	D	D	D	B	C	D	D	E	F	F	F	F	E	E	
17	3	9	E	E	E	F	F	F	E	D	D	C	C	C	C	B	A	B	D	D	D	D	D	D	D	D	
17	3	10	D	D	E	E	D	D	D	D	C	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	
17	3	11	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17	3	12	D	D	D	D	D	D	D	D	D	D	C	D	C	D	D	D	D	D	D	E	D	E	E	D	
17	3	13	D	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	
17	3	14	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17	3	15	E	E	E	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	E	E	E	E	E	E	
17	3	16	E	E	D	E	E	E	E	E	D	D	C	B	B	B	B	C	D	E	E	E	E	E	E	E	
17	3	17	F	G	G	G	F	E	E	D	D	C	C	C	B	C	D	D	D	D	E	E	E	E	E	E	
17	3	18	E	E	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E	
17	3	19	F	E	E	E	E	E	E	D	D	D	C	B	B	A	A	C	D	D	E	F	E	F	F	E	
17	3	20	E	F	E	E	E	E	E	D	D	B	A	B	A	A	A	B	C	D	E	E	F	F	E	E	
17	3	21	E	E	E	E	E	E	E	D	D	C	B	B	C	A	A	A	B	D	D	E	E	E	E	E	
17	3	22	D	D	D	D	D	D	D	D	D	C	B	A	A	A	A	B	D	D	D	D	D	D	D	D	
17	3	23	D	D	D	D	D	D	D	D	C	A	A	A	A	C	D	D	D	F	E	E	E	E	E	E	
17	3	24	E	E	E	E	E	E	F	E	E	E	D	D	C	D	D	D	D	D	D	D	D	D	D	D	
17	3	25	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17	3	26	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
17	3	27	E	E	E	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17	3	28	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D
17	3	29	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	3	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
17	3	31	D	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	D

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 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	
17	4	1	D	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	E	E	
17	4	2	E	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	D
17	4	3	D	D	D	D	E	D	D	D	D	D	D	C	A	A	D	D	D	E	E	F	E	E	E	D	
17	4	4	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
17	4	5	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17	4	6	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	E	E	F	F	F	G	
17	4	7	G	G	G	G	G	G	G	F	E	D	D	C	C	B	C	D	D	D	E	E	E	E	E	E	
17	4	8	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	E	E	F	F	F	F	E	
17	4	9	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	F	E	E	E	
17	4	10	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17	4	11	D	D	D	D	E	E	D	D	C	B	B	B	B	B	C	B	C	D	F	F	F	F	F	F	
17	4	12	F	F	E	E	E	F	F	E	D	C	D	D	D	E	E	E	D	D	E	E	E	F	F	F	
17	4	13	G	G	G	G	G	G	G	F	D	D	C	C	B	C	C	C	D	D	E	E	E	E	F	E	
17	4	14	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17	4	15	E	E	E	E	E	F	F	E	E	E	D	D	D	D	D	D	D	D	E	G	E	F	G	E	
17	4	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	
17	4	17	G	G	G	G	G	F	F	E	D	D	C	B	A	A	A	B	B	D	D	E	E	F	E	E	
17	4	18	E	E	E	E	E	E	D	D	D	D	D	B	B	C	C	D	D	D	E	E	E	E	E	E	
17	4	19	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	D	D	D	
17	4	20	D	D	D	D	D	D	D	D	D	D	D	C	C	C	B	B	D	D	E	E	E	E	E	E	
17	4	21	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	D	D	E	E	E	E	E	
17	4	22	E	E	E	E	E	E	E	D	C	B	A	A	A	A	A	B	D	D	F	F	G	G	G	G	
17	4	23	G	G	G	G	G	G	G	F	D	D	C	C	B	B	C	B	B	D	E	F	F	F	F	F	
17	4	24	F	F	E	E	E	E	E	D	C	A	A	A	A	A	A	B	D	D	E	E	E	E	E	E	
17	4	25	E	E	E	E	F	F	E	D	D	C	B	C	D	D	D	D	D	D	D	D	D	D	D	D	
17	4	26	D	D	D	D	D	D	D	D	C	B	A	A	B	C	C	D	D	D	D	D	D	D	D	D	
17	4	27	D	D	D	D	D	D	D	D	C	C	B	B	B	C	C	D	D	D	D	E	D	D	D	D	
17	4	28	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17	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	
17	4	30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	
17	5	1	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	F	
17	5	2	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	
17	5	3	F	F	F	G	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	F	
17	5	4	F	F	F	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	E	E	F	G	F	G	
17	5	5	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	
17	5	6	G	F	E	E	E	E	E	D	D	D	C	C	C	B	C	D	D	D	D	E	F	F	F	F	
17	5	7	G	G	G	G	G	F	F	D	D	C	B	B	A	A	A	B	B	D	D	E	E	E	E	E	
17	5	8	E	E	E	E	E	E	E	D	D	D	B	B	A	A	B	C	C	D	D	E	E	E	E	E	
17	5	9	E	F	F	F	E	E	E	D	C	B	B	B	B	D	D	C	D	D	E	F	F	F	G	F	
17	5	10	E	F	E	E	E	F	D	D	D	D	D	D	A	C	C	B	D	D	D	D	D	D	D	D	
17	5	11	D	D	D	D	D	D	D	C	B	D	D	C	A	A	B	C	D	D	E	E	E	E	E	E	
17	5	12	F	F	F	F	E	E	D	C	A	A	A	A	A	A	A	B	C	D	D	E	F	G	G	G	
17	5	13	G	G	G	G	G	G	E	D	C	A	A	A	A	A	A	A	B	B	E	E	E	E	E	E	
17	5	14	E	E	E	E	E	E	D	D	C	A	A	A	A	A	A	B	C	D	E	E	E	E	E	E	
17	5	15	E	E	E	E	E	E	D	D	C	B	B	A	A	A	A	B	C	B	D	E	E	E	E	E	

B152

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 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
17	5	16	E	E	E	E	E	D	D	D	B	C	A	A	A	A	A	A	C	D	D	D	D	D	D	D
17	5	17	D	D	D	D	E	E	E	D	D	D	C	D	D	E	D	D	D	D	D	E	E	D	D	D
17	5	18	D	D	D	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	E	D	D	D
17	5	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
17	5	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
17	5	21	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	G	G	G	G
17	5	22	G	G	F	E	E	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F
17	5	23	E	D	D	D	E	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	E	E	E
17	5	24	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	G	G	F	F
17	5	25	F	G	F	F	F	E	E	D	D	D	C	C	C	C	C	D	D	D	D	E	E	E	E	D
17	5	26	D	E	E	E	F	F	F	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
17	5	27	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	5	28	F	F	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	G	G	G
17	5	29	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G
17	5	30	G	G	G	G	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G
17	5	31	G	G	G	G	G	G	E	D	D	D	D	C	D	D	C	D	D	D	D	E	E	G	G	G
17	6	1	G	G	G	G	F	F	E	D	D	D	D	C	D	D	C	C	C	D	D	D	E	F	F	F
17	6	2	F	F	E	E	E	E	D	D	D	D	D	C	B	C	B	C	D	D	D	E	E	F	E	E
17	6	3	E	F	F	F	G	G	F	D	D	D	D	D	C	D	D	D	D	D	E	E	F	G	F	F
17	6	4	G	G	G	G	G	G	F	E	D	D	D	C	C	B	C	D	D	F	E	E	F	F	F	F
17	6	5	G	F	F	F	F	F	D	D	D	D	C	C	D	D	D	D	D	E	E	E	F	G	F	F
17	6	6	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	D	D	E	E	F	F	F
17	6	7	F	G	G	G	G	G	E	D	D	D	C	C	C	C	C	C	D	D	D	E	G	F	F	G
17	6	8	G	G	G	G	G	F	E	D	D	C	C	B	C	A	B	C	C	D	D	D	E	E	E	E
17	6	9	E	E	F	F	F	F	D	D	D	D	C	B	B	B	B	B	D	D	D	E	E	E	E	E
17	6	10	E	E	E	E	E	E	D	C	B	A	A	A	A	A	A	A	B	C	D	D	E	E	E	D
17	6	11	E	E	E	E	D	D	D	D	B	A	A	A	A	A	A	A	C	D	D	D	E	D	E	E
17	6	12	D	E	E	E	E	D	D	D	D	C	B	B	A	D	C	B	D	D	D	D	E	E	E	E
17	6	13	E	E	E	E	D	D	D	D	C	A	A	A	A	A	B	C	D	C	D	D	D	D	D	D
17	6	14	E	E	E	D	E	E	E	E	D	D	D	C	B	B	D	D	D	D	D	E	E	G	G	G
17	6	15	G	G	F	F	F	F	F	D	D	C	B	B	C	C	B	C	D	D	E	E	D	D	D	E
17	6	16	E	E	E	E	E	E	E	D	D	C	B	B	B	B	B	A	D	D	D	D	D	E	F	D
17	6	17	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	6	18	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	G	G	G	G
17	6	19	G	G	G	F	F	F	F	E	D	D	D	C	C	C	D	C	D	D	D	E	G	G	G	G
17	6	20	F	E	F	F	F	F	E	D	D	D	D	D	D	D	C	D	C	D	D	E	G	G	G	G
17	6	21	F	E	E	F	F	E	E	D	D	D	C	D	D	C	C	C	D	D	D	E	E	E	E	E
17	6	22	E	E	E	E	E	D	D	D	D	D	A	A	A	B	D	D	D	D	D	D	E	E	E	E
17	6	23	E	D	D	E	E	E	D	D	D	D	C	B	B	A	B	B	C	D	D	E	E	F	F	G
17	6	24	G	F	E	F	G	F	E	D	D	D	C	B	C	B	D	D	D	D	D	E	E	E	F	F
17	6	25	G	G	F	F	F	F	E	D	C	C	B	A	B	B	A	C	C	D	D	F	G	G	F	E
17	6	26	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	D	E	F	G	G	G
17	6	27	G	G	F	F	F	E	E	E	D	C	B	B	B	B	D	C	D	D	D	D	E	D	D	E
17	6	28	E	E	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E
17	6	29	F	E	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	F	E

B153

PROGRAM: JFD VERSION: PC-1.2
NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-JUN 2017
SITE IDENTIFIER: PPD
DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
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
17	6	30	E	E	E	E	E	D	D	D	D	D	D	C	D	D	D	E	E	E	D	E	E	E	E	F

B154

JFDs of 10-Meter Wind vs. Delta T

July-September 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
7.51-12.50	0	0	0	0	0	0	3	1	0	0	0	0	0	1	0	0	5
12.51-18.50	0	0	0	0	0	0	0	9	6	0	0	0	0	0	0	0	15
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	0	1	0	0	0	3	11	7	0	0	0	0	1	0	0	23

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	0	0	0	0	1	0	0	0	0	0	0	0	3
7.51-12.50	2	0	0	0	0	0	1	1	2	1	0	0	0	0	1	2	10
12.51-18.50	0	0	0	0	0	0	2	7	6	0	0	0	0	0	0	0	15
18.51-24.00	0	0	0	0	0	0	0	1	0	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	0	1	1	0	0	3	9	9	1	0	0	0	0	1	2	29

B156

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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	1	2	1	2	0	2	0	0	0	0	0	0	0	0	10
3.51- 7.50	7	2	0	8	13	8	2	2	6	2	0	2	2	1	1	2	58
7.51-12.50	4	0	0	0	0	3	4	6	5	1	0	0	0	1	0	3	27
12.51-18.50	1	0	0	0	0	0	1	6	4	0	0	0	0	0	0	0	12
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	0	0	0	0	0	0	0	0	0	0
TOTAL	12	4	1	10	14	13	7	17	16	3	0	2	2	2	1	5	109

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	16	15	17	15	12	7	6	2	6	1	3	4	1	2	7	123
3.51- 7.50	40	41	20	25	34	41	32	23	24	13	6	13	11	11	14	20	368
7.51-12.50	49	5	0	5	4	17	36	66	26	18	8	7	4	9	18	24	296
12.51-18.50	2	0	0	0	0	1	5	25	17	0	1	0	0	0	8	9	68
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	100	62	35	47	53	71	80	120	69	37	16	23	19	21	42	60	855

B157

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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																	6
1.01- 3.50	20	12	6	9	3	8	18	22	14	11	3	5	1	7	6	21	166
3.51- 7.50	34	6	1	0	6	29	30	61	55	8	7	8	9	6	5	25	290
7.51-12.50	11	1	0	2	0	1	10	49	37	13	3	1	1	5	6	7	147
12.51-18.50	0	0	0	0	0	0	0	11	8	8	1	0	0	0	0	1	29
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	0	0	0	0	0
TOTAL	65	19	7	11	9	38	58	143	114	40	14	14	12	18	17	54	639

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																	17
1.01- 3.50	19	7	5	3	5	4	4	16	38	23	10	9	7	17	31	31	229
3.51- 7.50	15	0	0	0	2	1	2	8	32	5	2	1	2	3	4	0	77
7.51-12.50	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	7
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	34	7	5	3	7	5	6	24	77	28	12	10	9	20	35	31	330

B158

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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																	34
1.01- 3.50	5	3	1	0	0	2	0	5	20	27	18	7	16	16	36	23	179
3.51- 7.50	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3	2	7
7.51-12.50	1	0	0	0	0	0	0	0	0	0	0	1	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	6	3	1	0	0	2	0	5	21	27	18	8	16	18	39	25	223

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																	57
1.01- 3.50	53	40	28	31	24	28	29	51	74	67	32	24	28	41	75	82	707
3.51- 7.50	96	49	23	34	55	79	66	95	119	28	15	24	24	22	27	49	805
7.51-12.50	67	6	0	7	4	21	54	123	77	33	11	9	5	17	25	36	495
12.51-18.50	3	0	0	0	0	1	8	58	41	8	2	0	0	0	8	10	139
18.51-24.00	0	0	0	0	0	0	0	2	2	0	0	0	1	0	0	0	5
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	219	95	51	72	83	129	157	329	313	136	60	57	58	80	135	177	2208

B159

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-SEP. 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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: 5.8 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.04	1.31	4.94	38.72	28.94	14.95	10.10

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	1	0	0	0	3	11	7	0	0	0	0	1	0	0	0
B	2	0	1	1	0	0	3	9	9	1	0	0	0	0	1	2	0
C	12	4	1	10	14	13	7	17	16	3	0	2	2	2	1	5	0
D	100	62	35	47	53	71	80	120	69	37	16	23	19	21	42	60	0
E	65	19	7	11	9	38	58	143	114	40	14	14	12	18	17	54	6
F	34	7	5	3	7	5	6	24	77	28	12	10	9	20	35	31	17
G	6	3	1	0	0	2	0	5	21	27	18	8	16	18	39	25	34
TOTAL	219	95	51	72	83	129	157	329	313	136	60	57	58	80	135	177	57

B160

JFDs of 10-Meter Wind vs. Delta T

October-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

STABILITY CLASS A

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS
 WIND MEASURED AT: 10.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

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

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	1	0	0	0	0	0	0	0	0	0	0	0	1
3.51- 7.50	0	0	0	0	0	2	2	0	0	0	0	0	0	1	0	0	5
7.51-12.50	0	2	0	0	0	0	1	0	1	4	0	0	0	0	3	0	11
12.51-18.50	4	2	0	0	0	0	0	1	3	3	2	0	0	0	0	0	15
18.51-24.00	3	0	0	0	0	0	0	1	4	0	0	0	0	0	1	3	12
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	7	4	0	0	1	2	3	2	8	7	2	0	0	1	4	3	44

B162

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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	0	1	1	2	1	1	0	1	0	0	0	0	2	3	4	0	16
7.51-12.50	1	6	1	2	2	1	2	0	4	7	0	0	0	1	5	7	39
12.51-18.50	3	1	0	0	0	0	3	0	7	1	2	2	2	2	5	8	36
18.51-24.00	2	0	0	0	0	0	0	1	0	2	0	0	0	1	3	8	17
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	6	8	2	4	3	2	5	2	11	10	2	2	4	7	17	23	108

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	1	4	3	4	4	4	2	2	2	0	2	0	7	3	4	44
3.51- 7.50	28	39	13	11	15	26	23	15	9	13	5	9	6	18	18	27	275
7.51-12.50	60	27	3	3	1	13	47	29	42	13	8	11	4	14	35	53	363
12.51-18.50	57	5	0	0	0	1	7	8	25	11	11	4	4	8	34	44	219
18.51-24.00	8	0	0	0	0	0	0	2	8	4	2	0	1	3	14	30	72
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	2	10
TOTAL	155	72	20	17	20	44	81	56	86	43	26	26	15	51	111	160	983

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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																	2
1.01- 3.50	8	10	7	4	3	6	5	7	7	4	1	1	5	5	6	10	89
3.51- 7.50	24	30	9	5	5	2	14	15	27	9	6	9	5	8	21	21	210
7.51-12.50	19	1	1	0	0	0	12	7	12	23	24	13	8	15	25	20	180
12.51-18.50	4	0	0	0	0	0	1	21	16	7	0	0	1	4	4	11	69
18.51-24.00	0	0	0	0	0	0	0	0	3	4	0	0	0	0	0	0	7
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
TOTAL	55	41	17	9	8	8	32	50	67	47	31	23	19	33	56	62	560

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																	5
1.01- 3.50	7	3	1	0	0	0	1	7	17	8	3	3	2	5	7	8	72
3.51- 7.50	8	2	0	0	0	3	0	6	43	9	9	3	1	7	9	0	100
7.51-12.50	3	0	0	0	0	0	0	0	11	5	3	4	11	4	4	1	46
12.51-18.50	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	7
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	18	5	1	0	0	3	1	13	71	24	16	10	17	16	20	12	232

B164

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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																	18
1.01- 3.50	11	8	2	4	2	7	7	18	32	23	10	4	6	6	9	10	159
3.51- 7.50	3	1	0	0	0	0	0	4	3	3	1	1	1	2	2	0	21
7.51-12.50	0	0	0	0	0	0	0	0	0	6	4	1	4	0	2	2	19
12.51-18.50	0	0	0	0	0	0	0	0	0	3	3	1	0	2	2	4	15
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	14	9	2	4	2	7	7	22	35	35	19	7	11	10	16	16	234

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	28	22	14	11	10	17	17	34	58	37	14	10	13	23	25	32	365
3.51- 7.50	63	73	23	18	21	34	40	41	82	34	21	22	15	39	54	48	628
7.51-12.50	83	36	5	5	3	14	62	37	74	64	39	29	27	34	74	84	670
12.51-18.50	69	8	0	0	0	1	13	31	53	31	20	7	10	16	45	68	372
18.51-24.00	13	0	0	0	0	0	0	4	24	10	2	0	1	4	19	42	119
>24.00	0	0	0	0	0	0	0	0	2	0	1	0	0	2	7	3	15
TOTAL	256	139	42	34	34	66	132	147	293	176	97	68	66	118	224	277	2194

B165

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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: 2194

TOTAL NUMBER OF MISSING OBSERVATIONS: 14

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.4 %

MEAN WIND SPEED FOR THIS PERIOD: 8.8 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.50	2.01	4.92	44.80	25.52	10.57	10.67

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	1	0	0	0	0	0	3	2	15	10	1	0	0	0	0	1	0
B	7	4	0	0	1	2	3	2	8	7	2	0	0	1	4	3	0
C	6	8	2	4	3	2	5	2	11	10	2	2	4	7	17	23	0
D	155	72	20	17	20	44	81	56	86	43	26	26	15	51	111	160	0
E	55	41	17	9	8	8	32	50	67	47	31	23	19	33	56	62	2
F	18	5	1	0	0	3	1	13	71	24	16	10	17	16	20	12	5
G	14	9	2	4	2	7	7	22	35	35	19	7	11	10	16	16	18
TOTAL	256	139	42	34	34	66	132	147	293	176	97	68	66	118	224	277	25

B166

JFDs of 10-Meter Wind vs. Delta T

July-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3
7.51-12.50	0	0	0	0	0	0	3	2	4	6	0	0	0	1	0	1	17
12.51-18.50	1	0	0	0	0	0	2	10	8	4	1	0	0	0	0	0	26
18.51-24.00	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	1	0	0	0	6	13	22	10	1	0	0	1	0	1	56

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	1	0	0	0	0	0	0	0	0	0	0	0	1
3.51- 7.50	0	0	1	1	0	2	2	0	1	0	0	0	0	1	0	0	8
7.51-12.50	2	2	0	0	0	0	2	1	3	5	0	0	0	0	4	2	21
12.51-18.50	4	2	0	0	0	0	2	8	9	3	2	0	0	0	0	0	30
18.51-24.00	3	0	0	0	0	0	0	2	4	0	0	0	0	0	1	3	13
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	9	4	1	1	1	2	6	11	17	8	2	0	0	1	5	5	73

B168

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	1	2	1	2	0	2	0	0	0	0	0	0	0	0	10
3.51- 7.50	7	3	1	10	14	9	2	3	6	2	0	2	4	4	5	2	74
7.51-12.50	5	6	1	2	2	4	6	6	9	8	0	0	0	2	5	10	66
12.51-18.50	4	1	0	0	0	0	4	6	11	1	2	2	2	2	5	8	48
18.51-24.00	2	0	0	0	0	0	0	2	1	2	0	0	0	1	3	8	19
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	18	12	3	14	17	15	12	19	27	13	2	4	6	9	18	28	217

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 60.0 AND 10.0 METERS
 WIND MEASURED AT: 10.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 10.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	11	17	19	20	19	16	11	8	4	8	1	5	4	8	5	11	167
3.51- 7.50	68	80	33	36	49	67	55	38	33	26	11	22	17	29	32	47	643
7.51-12.50	109	32	3	8	5	30	83	95	68	31	16	18	8	23	53	77	659
12.51-18.50	59	5	0	0	0	2	12	33	42	11	12	4	4	8	42	53	287
18.51-24.00	8	0	0	0	0	0	0	2	8	4	2	0	1	3	14	30	72
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	7	2	10
TOTAL	255	134	55	64	73	115	161	176	155	80	42	49	34	72	153	220	1838

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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																	8
1.01- 3.50	28	22	13	13	6	14	23	29	21	15	4	6	6	12	12	31	255
3.51- 7.50	58	36	10	5	11	31	44	76	82	17	13	17	14	14	26	46	500
7.51-12.50	30	2	1	2	0	1	22	56	49	36	27	14	9	20	31	27	327
12.51-18.50	4	0	0	0	0	0	1	32	24	15	1	0	1	4	4	12	98
18.51-24.00	0	0	0	0	0	0	0	0	3	4	0	0	1	0	0	0	8
>24.00	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	3
TOTAL	120	60	24	20	17	46	90	193	181	87	45	37	31	51	73	116	1199

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																	22
1.01- 3.50	26	10	6	3	5	4	5	23	55	31	13	12	9	22	38	39	301
3.51- 7.50	23	2	0	0	2	4	2	14	75	14	11	4	3	10	13	0	177
7.51-12.50	3	0	0	0	0	0	0	0	18	5	3	4	11	4	4	1	53
12.51-18.50	0	0	0	0	0	0	0	0	0	2	1	0	3	0	0	1	7
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	52	12	6	3	7	8	7	37	148	52	28	20	26	36	55	43	562

B170

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	16	11	3	4	2	9	7	23	52	50	28	11	22	22	45	33	338
3.51- 7.50	3	1	0	0	0	0	0	4	4	3	1	1	1	3	5	2	28
7.51-12.50	1	0	0	0	0	0	0	0	0	6	4	2	4	1	2	2	22
12.51-18.50	0	0	0	0	0	0	0	0	0	3	3	1	0	2	2	4	15
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	20	12	3	4	2	9	7	27	56	62	37	15	27	28	55	41	457

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																	82
1.01- 3.50	81	62	42	42	34	45	46	85	132	104	46	34	41	64	100	114	1072
3.51- 7.50	159	122	46	52	76	113	106	136	201	62	36	46	39	61	81	97	1433
7.51-12.50	150	42	5	12	7	35	116	160	151	97	50	38	32	51	99	120	1165
12.51-18.50	72	8	0	0	0	2	21	89	94	39	22	7	10	16	53	78	511
18.51-24.00	13	0	0	0	0	0	0	6	26	10	2	0	2	4	19	42	124
>24.00	0	0	0	0	0	0	0	0	2	0	1	0	0	2	7	3	15
TOTAL	475	234	93	106	117	195	289	476	606	312	157	125	124	198	359	454	4402

B171

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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: 4402

TOTAL NUMBER OF MISSING OBSERVATIONS: 14

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.7 %

MEAN WIND SPEED FOR THIS PERIOD: 7.3 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.27	1.66	4.93	41.75	27.24	12.77	10.38

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	1	0	1	0	0	0	6	13	22	10	1	0	0	1	0	1	0
B	9	4	1	1	1	2	6	11	17	8	2	0	0	1	5	5	0
C	18	12	3	14	17	15	12	19	27	13	2	4	6	9	18	28	0
D	255	134	55	64	73	115	161	176	155	80	42	49	34	72	153	220	0
E	120	60	24	20	17	46	90	193	181	87	45	37	31	51	73	116	8
F	52	12	6	3	7	8	7	37	148	52	28	20	26	36	55	43	22
G	20	12	3	4	2	9	7	27	56	62	37	15	27	28	55	41	52
TOTAL	475	234	93	106	117	195	289	476	606	312	157	125	124	198	359	454	82

B172

Stability Classes by Hour of Day

10-Meter Wind vs. Delta T

July-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17 7 1	F	E	E	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	F	E	E	F	F
17 7 2	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
17 7 3	F	F	F	F	F	E	E	D	D	C	D	C	C	C	D	E	E	D	E	E	E	E	E	F
17 7 4	F	F	F	F	F	E	D	D	D	D	C	C	A	B	B	D	C	D	D	E	F	G	G	G
17 7 5	G	G	F	G	F	E	D	D	D	C	D	C	C	D	C	D	D	D	D	E	F	F	F	F
17 7 6	F	F	G	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E	E
17 7 7	E	G	F	G	E	E	D	D	D	C	C	B	C	C	D	D	D	D	D	E	F	G	G	G
17 7 8	G	G	G	G	F	G	E	E	D	D	C	C	C	B	C	D	D	D	D	E	F	F	F	F
17 7 9	F	F	F	F	F	F	E	D	D	D	C	C	C	C	D	D	D	D	D	E	E	E	E	E
17 7 10	E	E	E	E	E	D	D	D	D	D	D	D	C	C	D	D	D	D	D	E	E	F	F	G
17 7 11	F	F	F	F	E	E	E	D	D	C	B	C	C	D	D	D	D	D	D	E	E	E	E	E
17 7 12	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D
17 7 13	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	F	F	G
17 7 14	G	G	F	F	F	E	E	D	D	D	D	C	C	C	C	D	D	D	D	E	F	G	F	F
17 7 15	F	G	G	G	F	F	F	D	D	D	D	C	D	C	D	D	D	D	D	E	F	G	G	F
17 7 16	F	F	F	G	F	F	E	D	D	D	D	C	C	D	D	D	D	D	D	E	F	F	F	F
17 7 17	F	E	F	E	F	F	E	D	D	D	D	C	D	D	D	D	D	D	D	E	E	F	F	E
17 7 18	E	E	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	E	F	E	E
17 7 19	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E
17 7 20	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E
17 7 21	E	E	E	F	E	E	E	E	D	D	E	E	E	E	E	E	E	E	E	F	F	E	E	E
17 7 22	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	D	E	F	E	E	E
17 7 23	E	E	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
17 7 24	F	E	E	E	F	E	D	D	D	C	C	C	C	C	D	D	D	D	D	E	E	E	E	E
17 7 25	E	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	D	D	D	E	E	E	E	E
17 7 26	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17 7 27	D	D	E	E	E	E	D	D	D	D	D	D	C	D	D	D	D	D	D	D	E	F	F	E
17 7 28	E	E	E	E	E	E	E	D	D	D	C	C	C	C	D	D	D	D	D	D	F	G	G	G
17 7 29	F	F	E	E	E	E	E	D	D	D	D	C	C	C	C	D	D	D	D	E	G	G	G	G
17 7 30	G	F	F	F	F	E	E	D	D	C	D	C	C	C	C	D	D	D	D	E	G	G	G	G
17 7 31	G	G	G	F	F	F	E	D	D	D	D	C	C	C	C	D	D	D	D	F	G	G	G	G
17 8 1	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	D	D	E	G	G	G	F
17 8 2	F	F	E	E	E	E	E	D	D	D	D	C	C	D	D	D	D	D	D	E	F	G	F	G
17 8 3	G	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17 8 4	E	F	F	G	E	E	E	D	D	C	C	D	D	D	D	D	D	D	D	F	F	G	F	F
17 8 5	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 8 6	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	G	G	F
17 8 7	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17 8 8	F	F	F	F	F	F	E	D	D	C	D	D	D	C	D	D	D	D	E	D	E	F	F	F
17 8 9	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F
17 8 10	E	E	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 8 11	E	E	E	E	E	E	E	D	D	C	D	C	D	D	D	D	D	D	D	E	F	G	G	G
17 8 12	G	F	F	E	F	F	E	D	D	D	D	D	C	C	D	D	D	D	E	F	F	F	F	F
17 8 13	E	E	E	E	E	E	E	D	D	D	D	C	D	D	D	D	D	D	D	E	E	E	E	E

B174

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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	
17	8	14	E	E	E	E	D	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F	
17	8	15	F	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	E	E	E	
17	8	16	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	G	F	E	E	
17	8	17	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	
17	8	18	G	G	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	E	G	G	G	G	G	
17	8	19	F	G	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E	
17	8	20	E	E	E	E	F	F	E	E	E	D	D	D	E	D	D	D	D	E	E	E	E	E	E	E	
17	8	21	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D	D	
17	8	22	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	G	G	G	G	G	
17	8	23	G	G	G	G	G	F	G	F	D	D	D	C	C	D	D	D	D	D	E	F	F	F	G	F	
17	8	24	F	F	F	F	F	F	F	E	D	D	C	C	C	D	D	D	D	D	E	E	F	E	E	F	
17	8	25	E	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
17	8	26	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	
17	8	27	E	E	E	E	E	F	F	E	E	E	E	E	D	D	D	D	D	D	E	F	G	G	G	G	
17	8	28	F	E	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G	
17	8	29	G	G	G	G	F	F	F	E	D	D	D	D	D	D	C	D	D	D	F	G	G	G	G	G	
17	8	30	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G	G	
17	8	31	G	F	F	F	G	G	G	F	E	D	D	C	C	D	D	D	D	D	F	G	G	G	G	G	
17	9	1	F	E	E	E	E	E	E	D	D	D	C	C	C	D	D	D	D	D	E	E	E	E	E	E	
17	9	2	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	F	G
17	9	3	G	G	G	G	G	G	E	E	D	A	D	D	D	D	D	D	D	E	E	F	E	E	E	F	
17	9	4	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17	9	5	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	G	G	G	F	E
17	9	6	E	F	F	E	E	F	E	E	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G	G	
17	9	7	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	F	F	F	G	G	
17	9	8	G	G	G	G	G	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	
17	9	9	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F	F	
17	9	10	F	E	E	E	F	F	F	E	D	D	C	B	D	D	D	D	D	D	E	F	F	F	F	E	
17	9	11	E	E	F	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	G	F	F	G	G
17	9	12	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	G	G	G	G	G	G
17	9	13	G	G	G	G	G	G	G	F	E	D	D	C	D	D	D	D	D	D	E	E	F	E	E	E	E
17	9	14	E	E	E	E	F	F	F	E	D	D	B	B	A	B	C	D	E	E	E	E	E	E	E	E	E
17	9	15	E	F	E	E	F	F	F	E	D	D	D	B	C	A	C	D	D	D	E	E	E	E	F	E	E
17	9	16	E	E	E	E	E	E	E	E	D	E	E	E	D	D	C	D	D	D	D	D	D	D	D	D	D
17	9	17	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	9	18	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	E	E	E	E	E	D
17	9	19	D	D	D	D	D	D	D	D	D	D	C	B	B	C	C	D	D	D	E	E	E	E	E	E	E
17	9	20	E	E	E	E	E	E	E	E	D	D	D	D	B	B	B	D	D	E	F	F	F	E	E	E	E
17	9	21	F	E	E	E	E	E	E	D	C	B	A	B	B	A	C	D	D	E	E	E	E	E	E	E	E
17	9	22	E	E	E	E	E	E	E	D	D	C	B	A	A	A	A	B	D	D	E	E	E	E	E	E	E
17	9	23	E	E	E	E	E	E	F	E	D	C	B	A	B	A	A	B	D	D	E	E	F	F	E	E	E
17	9	24	F	F	F	F	F	F	F	E	D	D	B	A	A	A	B	D	D	E	E	F	F	E	E	E	E
17	9	25	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D
17	9	26	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	E	E	E	E	E	E	E
17	9	27	E	E	E	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	E	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 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17 9 28	G	G	G	G	F	G	G	E	D	D	C	C	A	B	C	C	D	F	G	G	G	G	G	G
17 9 29	G	G	G	G	G	G	G	F	D	D	C	C	A	B	B	D	D	E	F	F	E	E	E	E
17 9 30	E	E	E	E	E	E	E	D	D	B	A	A	A	A	A	D	D	D	E	E	E	E	E	E
17 10 1	E	E	E	E	E	D	D	D	D	D	B	A	A	A	A	D	D	D	D	E	E	E	E	E
17 10 2	E	E	D	D	E	E	E	E	E	D	B	A	A	A	A	B	D	D	E	E	E	E	E	E
17 10 3	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
17 10 4	E	E	D	E	E	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
17 10 5	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	E	E
17 10 6	E	E	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	E	E	E
17 10 7	D	D	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	E	E	G	G	F	G	G
17 10 8	F	F	F	F	F	F	F	F	D	A	A	B	A	C	C	D	G	G	G	G	G	G	G	G
17 10 9	E	E	E	E	E	E	E	D	D	D	C	D	D	D	B	C	D	D	D	D	D	D	D	D
17 10 10	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D	D
17 10 11	D	D	D	D	D	D	D	D	D	D	B	C	B	B	B	C	D	E	F	F	E	F	F	E
17 10 12	E	E	E	E	E	D	D	D	D	C	B	A	A	A	B	D	D	E	E	E	E	E	E	E
17 10 13	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	E	E
17 10 14	E	E	E	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	-	-	-	-	-	-
17 10 15	-	-	-	-	-	-	D	D	D	C	B	B	A	B	C	D	E	G	G	G	G	G	G	F
17 10 16	E	G	G	G	G	G	G	G	D	D	B	B	A	B	B	C	D	E	F	F	F	F	F	F
17 10 17	F	F	F	F	F	F	F	E	C	B	B	A	A	A	A	B	D	F	F	E	E	F	F	F
17 10 18	F	F	E	F	F	F	F	E	D	B	A	A	A	A	A	C	D	E	G	G	G	G	G	G
17 10 19	G	G	G	G	F	F	F	E	D	B	A	A	A	A	A	C	D	F	F	F	F	E	E	E
17 10 20	E	E	E	E	E	E	E	E	D	C	B	A	A	B	C	D	D	E	E	E	E	E	E	E
17 10 21	E	E	D	D	D	D	D	D	D	D	D	D	C	D	E	D	D	D	D	D	D	D	D	E
17 10 22	E	E	E	E	E	E	E	E	D	C	B	C	C	C	D	D	F	F	F	F	F	F	F	F
17 10 23	F	F	F	F	E	F	F	E	D	D	D	C	B	B	D	D	D	D	D	E	E	E	E	D
17 10 24	D	E	D	D	D	D	D	D	D	C	B	B	C	C	D	D	E	E	E	E	F	F	F	F
17 10 25	G	F	F	E	F	F	E	E	D	D	D	C	C	C	D	D	D	G	G	G	G	G	G	G
17 10 26	G	F	F	F	G	G	G	G	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	D
17 10 27	D	D	D	D	D	D	D	D	D	C	C	C	C	C	C	D	D	D	D	D	D	D	E	E
17 10 28	E	E	E	E	E	E	E	E	D	D	C	C	C	D	D	D	D	F	G	G	G	G	G	F
17 10 29	F	E	F	F	E	E	E	E	D	D	B	C	D	D	D	D	E	F	E	D	D	D	D	D
17 10 30	D	D	D	D	D	D	D	D	D	C	C	C	C	D	D	D	D	D	D	D	D	D	E	D
17 10 31	D	E	F	F	F	G	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
17 11 1	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	G	G	F	F
17 11 2	E	E	E	E	D	E	D	D	C	D	A	B	B	B	D	D	E	E	E	E	E	E	E	E
17 11 3	E	E	E	E	E	D	E	D	D	D	C	C	C	D	D	D	D	E	E	D	D	D	D	D
17 11 4	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E	E	E
17 11 5	E	E	E	E	E	D	D	D	D	D	D	C	C	C	D	D	E	E	E	E	E	E	E	E
17 11 6	E	E	D	D	D	D	D	D	D	C	C	D	C	C	D	D	E	E	E	E	E	E	E	E
17 11 7	E	E	E	E	D	D	D	D	D	D	D	C	D	D	D	D	D	D	E	E	E	F	F	F
17 11 8	G	G	G	G	G	G	G	G	F	D	D	C	D	D	D	D	D	E	E	E	F	F	F	F
17 11 9	E	E	E	F	F	E	E	D	D	C	B	C	B	C	C	D	E	E	E	E	D	D	D	E
17 11 10	E	E	E	E	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D
17 11 11	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	D	D

B176

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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		
17 11 12	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G	
17 11 13	G	G	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	D	D	E	E	
17 11 14	E	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	
17 11 15	E	D	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	
17 11 16	E	F	F	G	G	F	F	F	E	D	D	C	C	D	C	D	D	E	E	E	E	E	E	E	E	
17 11 17	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D	D	D	
17 11 18	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	
17 11 19	E	E	E	E	F	E	F	F	E	D	D	D	C	D	D	E	E	E	F	F	E	E	E	E	E	
17 11 20	F	F	F	F	F	F	F	F	E	D	D	C	C	D	D	D	D	E	E	E	E	E	E	E	E	
17 11 21	F	F	G	G	F	E	D	D	D	D	C	C	C	C	C	D	D	E	E	D	E	E	E	E	E	
17 11 22	E	E	E	F	F	F	F	F	E	D	D	C	C	C	C	D	D	E	E	E	E	E	E	E	F	
17 11 23	F	F	F	F	G	G	G	G	G	E	D	D	C	D	D	D	D	E	F	F	F	F	F	E	F	
17 11 24	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	F	
17 11 25	F	F	E	E	F	E	G	G	F	D	D	D	D	D	D	D	D	E	G	G	G	G	G	G	G	
17 11 26	G	G	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G	
17 11 27	G	G	G	G	G	G	G	G	E	D	D	D	C	B	D	D	D	E	E	E	E	E	E	E	E	
17 11 28	E	E	E	F	G	G	E	D	D	D	C	B	B	B	D	D	D	E	E	E	F	F	F	F	F	
17 11 29	F	G	G	G	-	G	G	G	E	D	D	D	D	D	D	D	D	E	F	F	F	G	G	G	G	
17 11 30	G	G	G	G	F	F	E	F	E	E	D	D	C	D	D	D	D	E	G	G	G	G	G	G	G	
17 12 1	G	G	G	G	G	G	G	G	F	D	C	B	B	C	C	D	E	F	F	F	F	F	F	F	F	
17 12 2	F	F	G	-	G	G	G	G	G	E	D	E	D	D	D	D	D	E	F	G	G	G	G	G	G	
17 12 3	G	G	G	G	G	G	G	F	E	D	D	C	D	D	D	D	D	E	E	E	E	E	E	E	E	
17 12 4	E	E	E	E	E	E	E	D	D	D	D	D	C	C	D	D	D	E	D	D	D	D	D	D	D	
17 12 5	D	D	E	E	E	E	E	E	D	D	D	C	C	D	D	D	D	E	E	E	E	E	E	E	E	
17 12 6	E	E	E	E	E	E	E	D	D	D	C	D	E	G	F	G	G	D	D	E	D	D	D	D	D	
17 12 7	D	D	D	D	D	D	D	D	D	D	C	C	C	D	D	D	D	E	E	F	F	F	F	F	E	
17 12 8	E	E	E	E	D	D	D	D	D	D	C	C	C	C	D	D	D	D	D	E	E	F	F	F	F	
17 12 9	E	E	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	F	G	G	G	G	G	G	F	
17 12 10	E	E	F	F	F	E	E	E	E	D	D	D	C	D	D	D	D	E	G	G	G	G	G	G	G	
17 12 11	G	F	F	G	F	F	G	G	G	G	F	D	D	D	D	D	D	D	E	F	G	G	G	G	G	
17 12 12	E	F	F	G	F	F	E	E	E	D	D	D	D	D	D	D	D	E	F	E	F	F	E	E	E	
17 12 13	E	E	E	E	F	F	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	D	D	D	
17 12 14	D	D	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D	D	
17 12 15	D	D	D	E	E	E	E	E	F	G	G	D	D	C	D	F	G	G	G	G	G	G	G	G	G	
17 12 16	G	G	G	G	G	G	G	G	G	G	F	D	D	E	F	F	G	G	G	G	G	F	F	G	G	
17 12 17	G	G	G	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17 12 18	D	F	G	F	F	E	F	F	E	D	D	D	D	D	D	F	E	E	E	E	E	E	E	E	E	
17 12 19	E	E	G	G	G	G	G	F	G	E	D	C	B	B	C	D	E	F	F	F	F	F	F	F	E	
17 12 20	E	E	E	E	E	E	E	E	E	D	D	C	D	D	D	D	D	D	D	D	D	D	D	D	D	
17 12 21	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17 12 22	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	E	E	E	
17 12 23	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	
17 12 24	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	F	F
17 12 25	F	F	F	F	E	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	
17 12 26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	G	G	

B177

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 STABILITY BASED ON: DELTA T BETWEEN 60.0 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
17 12 27	G	G	F	G	G	G	G	G	G	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D
17 12 28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	E
17 12 29	E	E	E	D	E	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 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
17 12 31	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	E	E	E

B178

JFDs of 10-Meter Wind vs. Delta T

January-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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	1	0	0	0	1	1	0	0	0	0	0	0	0	1	4
7.51-12.50	1	11	3	0	0	5	3	2	5	7	0	0	0	1	0	5	43
12.51-18.50	3	4	2	0	0	2	2	18	13	10	1	0	0	0	0	2	57
18.51-24.00	0	0	0	0	0	0	0	4	31	4	0	0	0	0	0	0	39
>24.00	0	0	0	0	0	0	0	2	19	2	0	0	0	0	0	0	23
TOTAL	4	15	6	0	0	7	6	27	68	23	1	0	0	1	0	8	166

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	1	0	0	0	0	0	0	0	0	0	0	0	1
3.51- 7.50	3	0	4	2	0	3	5	0	1	0	0	0	2	2	0	2	24
7.51-12.50	3	5	4	0	0	2	4	4	8	15	0	0	2	1	5	8	61
12.51-18.50	9	7	0	0	0	1	5	21	26	12	2	0	0	0	0	7	90
18.51-24.00	3	0	0	0	0	0	0	4	10	1	0	0	0	0	1	3	22
>24.00	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
TOTAL	18	12	8	2	1	6	14	29	49	28	2	0	4	3	6	20	202

B180

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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	3	2	1	2	0	2	0	0	0	0	0	0	0	0	12
3.51- 7.50	11	8	5	12	16	15	3	5	8	4	0	3	6	5	7	5	113
7.51-12.50	14	12	10	5	4	5	8	8	21	16	1	1	1	4	7	23	140
12.51-18.50	19	3	1	0	0	0	9	19	23	7	4	4	2	2	10	16	119
18.51-24.00	2	0	0	0	0	0	0	9	15	4	0	0	2	1	4	8	45
>24.00	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	4
TOTAL	46	25	19	19	21	22	20	43	69	33	5	8	11	12	28	52	433

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	17	27	31	30	32	23	20	11	7	11	1	5	6	10	11	25	267
3.51- 7.50	121	140	97	73	90	94	85	62	48	38	27	31	28	53	68	113	1168
7.51-12.50	220	112	50	38	18	45	125	130	98	56	44	38	27	68	130	241	1440
12.51-18.50	130	38	19	3	3	9	23	84	90	34	26	13	19	37	140	110	778
18.51-24.00	24	0	1	0	0	0	0	9	58	12	2	0	3	5	41	31	186
>24.00	1	0	0	0	0	0	0	1	10	1	0	0	0	1	7	2	23
TOTAL	513	317	198	144	143	171	253	297	311	152	100	87	83	174	397	522	3862

B181

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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																	12
1.01- 3.50	50	36	20	23	16	24	30	39	39	22	8	12	13	17	19	52	420
3.51- 7.50	97	84	27	8	44	44	68	116	127	42	26	23	27	46	62	90	931
7.51-12.50	74	8	8	3	2	5	52	124	111	78	49	22	23	44	82	59	744
12.51-18.50	18	5	2	0	0	0	2	52	70	25	2	1	2	11	8	21	219
18.51-24.00	3	0	0	0	0	0	0	0	5	7	0	0	1	4	2	0	22
>24.00	0	0	1	0	0	0	0	0	2	1	1	0	0	2	0	0	7
TOTAL	242	133	58	34	62	73	152	331	354	175	86	58	66	124	173	222	2355

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																	36
1.01- 3.50	41	15	11	6	10	7	15	48	81	51	17	20	14	32	63	65	496
3.51- 7.50	39	6	1	0	3	5	6	23	122	20	16	12	7	25	20	7	312
7.51-12.50	9	0	0	0	0	0	1	1	30	9	5	12	16	11	8	1	103
12.51-18.50	0	0	0	0	0	0	0	0	2	2	1	1	4	0	0	1	11
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
>24.00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	2
TOTAL	89	21	12	6	13	12	22	72	236	82	39	45	41	68	91	76	961

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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																	80
1.01- 3.50	40	12	7	6	2	11	11	48	83	79	49	21	34	41	67	77	588
3.51- 7.50	6	1	0	0	0	0	0	5	9	3	3	1	3	4	11	4	50
7.51-12.50	2	0	0	0	0	0	0	0	1	7	5	4	6	3	2	2	32
12.51-18.50	0	0	0	0	0	0	0	0	0	3	3	1	0	2	2	4	15
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
>24.00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	48	13	7	6	2	11	11	53	93	92	61	27	43	50	83	87	767

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																	128
1.01- 3.50	148	92	72	67	62	67	76	148	210	163	75	58	67	100	160	219	1784
3.51- 7.50	277	239	135	95	153	161	168	212	315	107	72	70	73	135	168	222	2602
7.51-12.50	323	148	75	46	24	62	193	269	274	188	104	77	75	132	234	339	2563
12.51-18.50	179	57	24	3	3	12	41	194	224	93	39	20	27	52	160	161	1289
18.51-24.00	32	0	1	0	0	0	0	26	119	28	2	0	6	10	49	43	316
>24.00	1	0	1	0	0	0	0	3	38	6	2	0	0	3	7	3	64
TOTAL	960	536	308	211	242	302	478	852	1180	585	294	225	248	432	778	987	8746

B183

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:10M WIND VS 10M DELTA T - JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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: 8760

TOTAL NUMBER OF VALID OBSERVATIONS: 8746

TOTAL NUMBER OF MISSING OBSERVATIONS: 14

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.8 %

MEAN WIND SPEED FOR THIS PERIOD: 8.1 MPH

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 0

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
1.90	2.31	4.95	44.16	26.93	10.99	8.77

DISTRIBUTION OF WIND DIRECTION VS STABILITY

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	CALM
A	4	15	6	0	0	7	6	27	68	23	1	0	0	1	0	8	0
B	18	12	8	2	1	6	14	29	49	28	2	0	4	3	6	20	0
C	46	25	19	19	21	22	20	43	69	33	5	8	11	12	28	52	0
D	513	317	198	144	143	171	253	297	311	152	100	87	83	174	397	522	0
E	242	133	58	34	62	73	152	331	354	175	86	58	66	124	173	222	12
F	89	21	12	6	13	12	22	72	236	82	39	45	41	68	91	76	36
G	48	13	7	6	2	11	11	53	93	92	61	27	43	50	83	87	80
TOTAL	960	536	308	211	242	302	478	852	1180	585	294	225	248	432	778	987	128

B184

JFDs of 100-Meter Wind vs. Delta T

January-March 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	7
18.51-24.00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	6
TOTAL	0	5	1	0	0	0	0	3	1	5	0	0	0	0	0	0	15

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	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
12.51-18.50	2	3	2	0	0	2	0	2	0	0	0	0	0	0	0	2	13
18.51-24.00	0	1	2	0	0	0	0	7	1	0	0	0	0	0	0	0	11
>24.00	0	0	1	0	0	0	0	2	3	4	0	0	0	0	0	0	10
TOTAL	2	4	6	0	0	2	0	11	4	4	0	0	0	0	0	2	35

B186

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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	5	1	0	1	0	0	0	0	0	0	0	0	1	8
7.51-12.50	0	1	2	2	0	1	1	0	0	0	1	0	0	0	1	3	12
12.51-18.50	5	2	4	2	0	1	0	2	3	1	0	0	0	0	0	8	28
18.51-24.00	2	0	0	0	0	1	0	2	1	3	1	0	0	0	3	2	15
>24.00	0	1	0	0	0	0	0	1	9	1	0	0	0	0	0	0	12
TOTAL	7	4	6	9	1	3	2	5	13	5	2	0	0	0	4	14	75

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	2	2	2	1	0	4	0	0	2	0	0	1	1	2	4	22
3.51- 7.50	9	29	17	5	22	13	10	3	2	2	9	3	6	9	4	32	175
7.51-12.50	50	47	28	31	22	26	19	6	6	12	8	9	4	10	26	72	376
12.51-18.50	33	39	17	17	11	9	18	23	8	4	20	17	2	16	63	80	377
18.51-24.00	39	22	18	3	6	7	5	9	14	2	4	1	2	10	51	31	224
>24.00	19	0	0	1	0	0	0	1	44	5	3	0	3	10	22	1	109
TOTAL	151	139	82	59	62	55	56	42	74	27	44	30	18	56	168	220	1283

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	3	3	2	0	0	2	0	0	1	1	0	0	0	3	1	17
3.51- 7.50	3	3	2	2	2	5	5	8	3	1	1	0	1	2	2	5	45
7.51-12.50	6	7	7	4	5	11	7	12	7	3	3	3	3	1	7	28	114
12.51-18.50	11	13	4	1	2	5	16	21	15	8	9	11	2	9	19	13	159
18.51-24.00	4	4	4	0	0	0	11	7	21	6	17	4	3	7	12	8	108
>24.00	0	0	0	0	0	0	0	0	13	4	2	0	1	7	1	1	29
TOTAL	25	30	20	9	9	21	41	48	59	23	33	18	10	26	44	56	472

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	3
3.51- 7.50	4	0	1	0	2	0	2	2	3	0	0	0	0	2	2	4	22
7.51-12.50	0	0	1	1	0	0	6	11	12	9	7	3	0	2	3	5	60
12.51-18.50	1	1	2	1	0	0	6	9	9	12	3	4	5	2	7	1	63
18.51-24.00	0	0	1	0	0	0	1	1	1	7	1	2	8	2	3	1	28
>24.00	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	2
TOTAL	5	1	5	2	2	1	15	23	27	29	11	9	14	8	15	11	178

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	1	1	1	2	0	1	0	0	1	0	2	1	0	1	12
3.51- 7.50	5	2	4	0	1	2	1	4	1	0	1	3	0	1	0	3	28
7.51-12.50	8	1	0	0	0	3	2	2	6	7	7	2	1	1	1	2	43
12.51-18.50	0	0	0	0	0	0	2	4	4	0	7	0	0	0	0	0	17
18.51-24.00	0	0	1	0	0	0	0	0	0	0	1	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	13	4	6	1	2	7	5	11	11	7	17	5	3	3	1	6	102

STABILITY CLASS ALL

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	2	6	6	5	2	3	6	1	2	3	2	0	3	2	5	6	54
3.51- 7.50	21	34	24	12	28	20	19	17	9	3	11	6	7	14	8	45	278
7.51-12.50	64	56	39	38	27	41	35	31	31	31	26	17	8	14	38	110	606
12.51-18.50	52	63	30	21	13	17	42	62	39	25	39	32	9	27	89	104	664
18.51-24.00	45	27	26	3	6	8	17	28	38	18	24	7	13	19	69	42	390
>24.00	19	1	1	1	0	0	0	4	70	20	5	0	5	17	23	2	168
TOTAL	203	187	126	80	76	89	119	143	189	100	107	62	45	93	232	309	2160

B189

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-MAR 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 3/31/17

*** JAN-MAR 2017 ***

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: 2160

TOTAL NUMBER OF VALID OBSERVATIONS: 2160

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: 2

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 2

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 2

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.69	1.62	3.47	59.40	21.85	8.24	4.72

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	5	1	0	0	0	0	3	1	5	0	0	0	0	0	0	0
B	2	4	6	0	0	2	0	11	4	4	0	0	0	0	0	2	0
C	7	4	6	9	1	3	2	5	13	5	2	0	0	0	4	14	0
D	151	139	82	59	62	55	56	42	74	27	44	30	18	56	168	220	0
E	25	30	20	9	9	21	41	48	59	23	33	18	10	26	44	56	0
F	5	1	5	2	2	1	15	23	27	29	11	9	14	8	15	11	0
G	13	4	6	1	2	7	5	11	11	7	17	5	3	3	1	6	0
TOTAL	203	187	126	80	76	89	119	143	189	100	107	62	45	93	232	309	0

B190

JFDs of 100-Meter Wind vs. Delta T

April-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	2	0	1	1	1	0	0	0	0	0	1	1	0	1	8
7.51-12.50	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
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	2	0	0	0	0	0	0	4
TOTAL	0	0	2	0	1	1	2	0	2	2	0	0	1	1	0	1	13

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	2	0	0	0	0	2
7.51-12.50	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
12.51-18.50	0	1	3	0	0	0	0	0	0	2	0	0	0	0	0	0	6
18.51-24.00	0	0	0	0	0	0	0	1	1	6	0	0	0	0	0	0	8
>24.00	0	0	0	0	0	0	0	0	20	4	0	0	0	0	0	0	24
TOTAL	0	1	3	0	0	0	0	2	21	12	0	2	0	0	0	0	41

B192

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
7.51-12.50	1	0	0	0	0	1	3	0	0	1	0	0	1	0	0	4	11
12.51-18.50	2	4	6	0	0	0	1	4	9	8	0	0	0	0	0	8	42
18.51-24.00	0	0	0	0	0	0	0	0	6	8	0	0	2	0	0	1	17
>24.00	2	0	0	0	0	0	0	0	11	8	0	0	2	1	1	0	25
TOTAL	6	4	6	0	0	1	4	5	26	25	0	0	5	1	1	13	97

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	3	4	2	3	0	1	4	0	0	1	0	3	2	2	30
3.51- 7.50	12	9	7	11	11	13	11	10	12	10	3	3	4	4	9	13	142
7.51-12.50	21	33	25	24	14	9	13	16	23	29	8	4	7	20	15	61	322
12.51-18.50	34	23	31	9	3	6	7	22	35	33	8	9	11	21	41	78	371
18.51-24.00	9	15	25	3	2	0	2	26	38	18	12	6	6	4	20	11	197
>24.00	5	3	9	1	1	0	0	3	54	16	0	2	2	0	9	1	106
TOTAL	84	85	100	52	33	31	33	78	166	106	31	25	30	52	96	166	1168

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	4	0	2	0	1	3	1	0	1	0	0	1	1	1	16
3.51- 7.50	2	7	4	2	5	3	1	5	2	1	5	1	1	2	2	1	44
7.51-12.50	9	25	5	10	8	13	10	10	20	3	6	3	2	6	5	5	140
12.51-18.50	13	16	9	1	4	5	7	28	45	19	16	5	3	6	14	26	217
18.51-24.00	0	0	0	0	0	1	2	17	32	18	8	4	4	7	4	3	100
>24.00	2	0	0	0	0	0	0	2	10	3	2	1	2	2	0	0	24
TOTAL	26	49	22	13	19	22	21	65	110	44	38	14	12	24	26	36	541

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	2	0	0	1	1	2	1	1	0	0	0	0	0	2	11
3.51- 7.50	2	1	1	1	5	6	10	7	6	4	1	1	4	0	0	4	53
7.51-12.50	5	4	5	1	1	4	7	16	9	7	5	2	3	1	4	12	86
12.51-18.50	6	3	0	2	1	4	3	4	6	3	10	2	2	4	3	4	57
18.51-24.00	0	0	0	0	0	0	0	0	1	0	0	3	0	1	0	3	8
>24.00	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	3
TOTAL	13	9	8	4	7	15	21	30	23	15	16	8	11	6	7	25	218

B194

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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	1	1	0	1	0	1	1	0	0	0	0	0	0	5
3.51- 7.50	0	6	2	3	2	2	5	1	3	2	1	3	3	1	3	3	40
7.51-12.50	1	0	3	2	0	0	4	9	6	5	1	5	5	3	1	2	47
12.51-18.50	2	0	0	1	0	0	0	0	1	1	2	1	2	0	1	1	12
18.51-24.00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3	6	5	7	3	2	10	10	11	9	4	9	12	4	5	6	106

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	3	4	9	5	5	4	3	6	7	2	1	1	0	4	3	5	62
3.51- 7.50	17	23	16	17	24	25	28	24	23	17	10	10	13	8	14	22	291
7.51-12.50	37	62	38	37	23	27	38	52	58	45	20	14	18	30	25	84	608
12.51-18.50	57	47	49	13	8	15	18	58	96	66	36	17	18	31	59	117	705
18.51-24.00	9	15	25	3	2	1	4	44	78	50	20	13	14	12	24	18	332
>24.00	9	3	9	1	1	0	0	6	97	33	2	3	8	3	10	1	186
TOTAL	132	154	146	76	63	72	91	190	359	213	89	58	71	88	135	247	2184

B195

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T APR-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 4/ 1/17 - 6/30/17

*** APR-JUN 2017 ***

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: 14.3 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 2

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 2

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 2

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.60	1.88	4.44	53.48	24.77	9.98	4.85

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	2	0	1	1	2	0	2	2	0	0	1	1	0	1	0
B	0	1	3	0	0	0	0	2	21	12	0	2	0	0	0	0	0
C	6	4	6	0	0	1	4	5	26	25	0	0	5	1	1	13	0
D	84	85	100	52	33	31	33	78	166	106	31	25	30	52	96	166	0
E	26	49	22	13	19	22	21	65	110	44	38	14	12	24	26	36	0
F	13	9	8	4	7	15	21	30	23	15	16	8	11	6	7	25	0
G	3	6	5	7	3	2	10	10	11	9	4	9	12	4	5	6	0
TOTAL	132	154	146	76	63	72	91	190	359	213	89	58	71	88	135	247	0

B196

JFDs of 100-Meter Wind vs. Delta T

January-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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	2	0	1	1	1	0	0	0	0	0	1	1	0	1	8
7.51-12.50	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12.51-18.50	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	7
18.51-24.00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	3	7	0	0	0	0	0	0	10
TOTAL	0	5	3	0	1	1	2	3	3	7	0	0	1	1	0	1	28

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	2	0	0	0	0	2
7.51-12.50	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
12.51-18.50	2	4	5	0	0	2	0	2	0	2	0	0	0	0	0	2	19
18.51-24.00	0	1	2	0	0	0	0	8	2	6	0	0	0	0	0	0	19
>24.00	0	0	1	0	0	0	0	2	23	8	0	0	0	0	0	0	34
TOTAL	2	5	9	0	0	2	0	13	25	16	0	2	0	0	0	2	76

B198

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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	1	0	0	5	1	0	1	1	0	0	0	0	0	0	0	1	10
7.51-12.50	1	1	2	2	0	2	4	0	0	1	1	0	1	0	1	7	23
12.51-18.50	7	6	10	2	0	1	1	6	12	9	0	0	0	0	0	16	70
18.51-24.00	2	0	0	0	0	1	0	2	7	11	1	0	2	0	3	3	32
>24.00	2	1	0	0	0	0	0	1	20	9	0	0	2	1	1	0	37
TOTAL	13	8	12	9	1	4	6	10	39	30	2	0	5	1	5	27	172

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	4	4	5	6	3	3	4	1	4	2	0	1	1	4	4	6	52
3.51- 7.50	21	38	24	16	33	26	21	13	14	12	12	6	10	13	13	45	317
7.51-12.50	71	80	53	55	36	35	32	22	29	41	16	13	11	30	41	133	698
12.51-18.50	67	62	48	26	14	15	25	45	43	37	28	26	13	37	104	158	748
18.51-24.00	48	37	43	6	8	7	7	35	52	20	16	7	8	14	71	42	421
>24.00	24	3	9	2	1	0	0	4	98	21	3	2	5	10	31	2	215
TOTAL	235	224	182	111	95	86	89	120	240	133	75	55	48	108	264	386	2451

B199

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	4	7	2	2	0	3	3	1	1	2	0	0	1	4	2	33
3.51- 7.50	5	10	6	4	7	8	6	13	5	2	6	1	2	4	4	6	89
7.51-12.50	15	32	12	14	13	24	17	22	27	6	9	6	5	7	12	33	254
12.51-18.50	24	29	13	2	6	10	23	49	60	27	25	16	5	15	33	39	376
18.51-24.00	4	4	4	0	0	1	13	24	53	24	25	8	7	14	16	11	208
>24.00	2	0	0	0	0	0	0	2	23	7	4	1	3	9	1	1	53
TOTAL	51	79	42	22	28	43	62	113	169	67	71	32	22	50	70	92	1013

STABILITY CLASS F

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	2	0	0	2	1	2	3	1	0	0	0	0	0	2	14
3.51- 7.50	6	1	2	1	7	6	12	9	9	4	1	1	4	2	2	8	75
7.51-12.50	5	4	6	2	1	4	13	27	21	16	12	5	3	3	7	17	146
12.51-18.50	7	4	2	3	1	4	9	13	15	15	13	6	7	6	10	5	120
18.51-24.00	0	0	1	0	0	0	1	1	2	7	1	5	8	3	3	4	36
>24.00	0	0	0	0	0	0	0	1	0	1	0	0	3	0	0	0	5
TOTAL	18	10	13	6	9	16	36	53	50	44	27	17	25	14	22	36	396

B200

PROGRAM: JFD . VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

STABILITY CLASS G

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	0	1	1	2	2	2	1	1	1	1	1	0	2	1	0	1	17
3.51- 7.50	5	8	6	3	3	4	6	5	4	2	2	6	3	2	3	6	68
7.51-12.50	9	1	3	2	0	3	6	11	12	12	8	7	6	4	2	4	90
12.51-18.50	2	0	0	1	0	0	2	4	5	1	9	1	2	0	1	1	29
18.51-24.00	0	0	1	0	0	0	0	0	0	0	1	0	2	0	0	0	4
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	16	10	11	8	5	9	15	21	22	16	21	14	15	7	6	12	208

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	5	10	15	10	7	7	9	7	9	5	3	1	3	6	8	11	116
3.51- 7.50	38	57	40	29	52	45	47	41	32	20	21	16	20	22	22	67	569
7.51-12.50	101	118	77	75	50	68	73	83	89	76	46	31	26	44	63	194	1214
12.51-18.50	109	110	79	34	21	32	60	120	135	91	75	49	27	58	148	221	1369
18.51-24.00	54	42	51	6	8	9	21	72	116	68	44	20	27	31	93	60	722
>24.00	28	4	10	2	1	0	0	10	167	53	7	3	13	20	33	3	354
TOTAL	335	341	272	156	139	161	210	333	548	313	196	120	116	181	367	556	4344

B201

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17

*** JAN-JUN 2017 ***

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: 4344

TOTAL NUMBER OF VALID OBSERVATIONS: 4344

TOTAL NUMBER OF MISSING OBSERVATIONS: 0

PERCENT DATA RECOVERY FOR THIS PERIOD: 100.0 %

MEAN WIND SPEED FOR THIS PERIOD: 14.4 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 4

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 4

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 4

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.64	1.75	3.96	56.42	23.32	9.12	4.79

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	5	3	0	1	1	2	3	3	7	0	0	1	1	0	1	0
B	2	5	9	0	0	2	0	13	25	16	0	2	0	0	0	2	0
C	13	8	12	9	1	4	6	10	39	30	2	0	5	1	5	27	0
D	235	224	182	111	95	86	89	120	240	133	75	55	48	108	264	386	0
E	51	79	42	22	28	43	62	113	169	67	71	32	22	50	70	92	0
F	18	10	13	6	9	16	36	53	50	44	27	17	25	14	22	36	0
G	16	10	11	8	5	9	15	21	22	16	21	14	15	7	6	12	0
TOTAL	335	341	272	156	139	161	210	333	548	313	196	120	116	181	367	556	0

B202

Stability Classes by Hour of Day

100-Meter Wind vs. Delta T

January-June 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 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	
17	1	1	G	G	G	G	E	E	F	F	E	D	D	D	D	D	D	D	D	E	E	D	D	D	D	D	
17	1	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D	D
17	1	3	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	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	D
17	1	5	D	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	F	F	F
17	1	6	F	F	F	F	F	E	E	F	F	E	E	D	D	D	D	D	D	E	F	F	F	G	G	F	F
17	1	7	F	F	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	E	E	F	G	G	G	G	G
17	1	8	G	G	G	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	G	F	F	E
17	1	9	E	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F	F	F	F
17	1	10	E	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F	F	E
17	1	11	F	F	F	E	E	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	1	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	D
17	1	13	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	1	14	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
17	1	15	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	1	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
17	1	17	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	F	E	F
17	1	18	F	F	F	F	F	F	F	F	F	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E	E
17	1	19	E	E	F	F	F	F	F	F	E	F	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E
17	1	20	E	E	E	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	E	E	E	E	E	E	E
17	1	21	E	E	E	E	E	E	E	E	D	D	D	D	D	C	D	D	D	D	E	F	G	G	G	G	G
17	1	22	G	G	G	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	1	23	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	E	E	D
17	1	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
17	1	25	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
17	1	26	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
17	1	27	E	D	D	D	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	1	28	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D
17	1	29	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	F	F
17	1	30	G	G	F	E	F	F	F	F	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17	1	31	E	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	2	1	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	2	2	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D
17	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	E
17	2	4	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E	E
17	2	5	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17	2	6	F	F	G	G	G	F	F	F	F	E	E	E	D	D	D	D	D	D	E	E	E	F	F	F	F
17	2	7	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	D	D	D	D
17	2	8	D	D	D	D	D	D	D	D	D	D	D	D	D	C	C	D	D	D	D	D	D	D	D	D	D
17	2	9	D	D	D	D	D	D	D	D	D	D	D	D	D	C	D	D	D	D	D	E	E	E	E	D	E
17	2	10	E	E	E	E	E	F	F	F	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G
17	2	11	G	G	G	G	G	G	G	F	F	D	D	C	B	C	C	D	D	D	D	D	D	D	D	D	E
17	2	12	D	D	D	D	D	D	D	D	D	D	C	C	B	C	C	D	D	D	D	E	F	G	G	G	G
17	2	13	G	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	E	E	E	F	E	E
17	2	14	E	E	E	E	E	E	E	E	E	D	D	C	C	C	C	D	D	D	D	E	E	D	D	E	E

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

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

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 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
 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
17	5	16	D	E	E	E	E	D	D	D	D	D	C	B	B	B	A	B	D	D	D	D	D	D	D	D
17	5	17	D	D	D	D	E	E	D	D	D	D	D	D	D	E	D	D	D	D	D	E	E	D	D	D
17	5	18	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D
17	5	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
17	5	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
17	5	21	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G
17	5	22	F	F	F	E	E	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	5	23	E	D	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	5	24	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F
17	5	25	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	5	26	E	E	E	E	E	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17	5	27	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F
17	5	28	E	F	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G
17	5	29	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	5	30	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	F	F	F	G
17	5	31	G	G	F	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	6	1	G	G	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	6	2	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	6	3	F	F	F	F	F	G	F	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F
17	6	4	G	G	G	G	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F
17	6	5	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	6	6	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	6	7	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17	6	8	F	G	G	G	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	6	9	E	E	F	F	F	E	E	D	D	D	C	D	C	D	C	D	D	D	D	D	D	E	E	E
17	6	10	E	E	E	E	E	D	D	D	D	C	B	A	B	B	C	C	C	D	D	D	D	E	D	D
17	6	11	D	D	D	D	D	D	D	D	D	C	C	B	A	B	C	C	D	D	D	D	D	D	D	D
17	6	12	D	D	E	E	E	D	D	D	D	D	C	D	C	D	D	D	D	D	D	D	D	E	E	E
17	6	13	E	E	E	D	D	D	D	D	D	C	C	B	B	B	C	D	D	D	D	D	D	D	D	D
17	6	14	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	G
17	6	15	G	G	G	F	F	F	F	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	E
17	6	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F
17	6	17	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	6	18	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	F	G	G	G
17	6	19	G	G	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G
17	6	20	F	F	F	F	F	F	F	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G
17	6	21	F	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	6	22	E	E	E	E	E	D	D	D	D	D	C	C	C	C	D	D	D	D	D	D	D	E	E	E
17	6	23	E	D	E	E	E	D	D	D	D	D	D	C	C	C	D	D	D	D	D	D	D	E	E	F
17	6	24	F	F	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F
17	6	25	F	F	F	E	F	F	F	D	D	D	C	D	C	C	D	D	D	D	D	D	E	F	G	F
17	6	26	E	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17	6	27	F	F	F	F	F	F	F	E	D	D	C	C	C	D	D	D	D	D	D	D	D	D	D	D
17	6	28	E	D	E	E	E	E	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E	E	E	E
17	6	29	E	E	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F

B207

PROGRAM: JFD VERSION: PC-1.2
NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-JUN 2017
SITE IDENTIFIER: PPD
DATA PERIOD EXAMINED: 1/ 1/17 - 6/30/17
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
17	6	30	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	D	E	E	E	E	F

B208

JFDs of 100-Meter Wind vs. Delta T

July-September 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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

B210

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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	0	0	0	0	0	0	0	0	0	0	0
7.51-12.50	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
12.51-18.50	0	0	0	0	0	0	2	2	3	0	0	0	0	0	0	0	7
18.51-24.00	0	0	0	0	0	0	0	7	8	1	0	0	0	0	0	0	16
>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	3	9	13	1	0	0	0	1	0	0	27

STABILITY CLASS D

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	5	8	11	10	7	9	8	2	3	3	0	1	4	2	0	4	77
3.51- 7.50	16	36	24	19	29	44	23	17	14	8	6	9	17	11	10	9	292
7.51-12.50	37	35	10	7	10	15	57	30	43	22	10	11	8	9	14	25	343
12.51-18.50	17	9	0	5	3	2	19	48	38	15	6	4	2	3	11	24	206
18.51-24.00	3	0	0	0	0	1	2	10	17	4	1	0	0	0	4	7	49
>24.00	0	0	0	0	0	0	0	4	9	0	0	0	0	0	0	0	13
TOTAL	78	88	45	41	49	71	109	111	124	52	23	25	31	25	39	69	980

B211

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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	3	4	3	0	3	2	0	0	0	0	0	1	0	2	1	19
3.51- 7.50	3	10	7	2	12	11	12	5	8	4	3	3	3	2	2	4	91
7.51-12.50	30	24	18	5	5	18	27	45	34	14	6	3	6	5	4	16	260
12.51-18.50	14	2	2	0	2	6	23	71	76	27	8	6	5	4	2	8	256
18.51-24.00	1	0	0	0	0	0	4	7	25	15	6	0	1	3	3	3	68
>24.00	0	0	0	1	0	0	0	3	6	1	1	0	1	0	0	1	14
TOTAL	48	39	31	11	19	38	68	131	149	61	24	12	17	14	13	33	708

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	4	2	4	3	0	1	0	1	1	0	0	1	1	2	23
3.51- 7.50	6	16	7	10	10	14	9	9	7	6	3	3	3	2	1	4	110
7.51-12.50	14	4	7	3	4	5	13	31	45	12	11	8	6	3	2	5	173
12.51-18.50	0	0	1	1	0	0	1	13	6	11	3	4	3	2	3	2	50
18.51-24.00	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	1	4
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	20	23	19	16	18	22	23	54	59	31	19	15	12	8	7	14	360

B212

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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																	1
1.01- 3.50	4	6	2	2	1	1	3	3	3	1	1	2	3	1	1	2	36
3.51- 7.50	4	10	8	1	1	1	6	5	2	2	0	3	2	2	2	3	52
7.51-12.50	1	1	1	0	0	0	1	1	4	3	5	5	5	7	3	0	37
12.51-18.50	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	2	6
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	17	11	3	2	2	10	10	9	6	6	11	12	10	6	7	132

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	9	20	21	17	12	16	13	6	6	5	2	3	8	4	4	9	155
3.51- 7.50	29	72	46	32	52	70	50	36	31	20	12	18	25	17	15	20	545
7.51-12.50	82	64	36	15	19	38	99	107	126	51	32	27	25	25	23	46	815
12.51-18.50	31	11	3	6	5	8	45	135	123	53	17	15	12	9	16	36	525
18.51-24.00	4	0	0	0	0	1	6	24	51	21	8	0	1	3	7	11	137
>24.00	0	0	0	1	0	0	0	8	17	1	1	0	1	0	0	1	30
TOTAL	155	167	106	71	88	133	213	316	354	151	72	63	72	58	65	123	2208

B213

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-SEP 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 9/30/17

*** JUL-SEP 2017 ***

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: 10.5 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	1.22	44.38	32.07	16.30	5.98

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	1	0	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	3	9	13	1	0	0	0	1	0	0	0
D	78	88	45	41	49	71	109	111	124	52	23	25	31	25	39	69	0
E	48	39	31	11	19	38	68	131	149	61	24	12	17	14	13	33	0
F	20	23	19	16	18	22	23	54	59	31	19	15	12	8	7	14	0
G	9	17	11	3	2	2	10	10	9	6	6	11	12	10	6	7	1
TOTAL	155	167	106	71	88	133	213	316	354	151	72	63	72	58	65	123	1

B214

JFDs of 100-Meter Wind vs. Delta T

October-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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	1	0	0	0	0	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	4	0	0	0	0	0	0	0	4
TOTAL	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	5

B216

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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	0	1	0	0	0	0	0	0	0	0	1
7.51-12.50	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	3
12.51-18.50	0	0	0	0	0	0	2	1	2	11	2	0	0	0	0	0	18
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	5	0	0	0	0	0	0	1	6
TOTAL	0	0	0	0	0	0	2	3	7	12	2	0	0	0	0	2	28

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	1	2	0	0	2	1	1	0	0	0	2	2	0	1	0	13
3.51- 7.50	11	8	4	5	7	9	17	10	7	9	3	2	9	15	14	16	146
7.51-12.50	31	66	12	14	4	20	27	17	22	19	10	10	3	11	16	49	331
12.51-18.50	26	34	3	1	3	5	40	14	52	20	12	12	4	5	49	74	354
18.51-24.00	29	12	0	0	0	0	0	12	13	7	13	2	5	16	29	43	181
>24.00	13	3	0	0	0	0	0	5	28	4	3	1	2	6	35	35	135
TOTAL	111	124	21	20	14	36	85	59	122	59	41	29	25	53	144	217	1160

B217

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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	3	2	1	1	2	1	0	1	0	0	1	1	0	1	0	14
3.51- 7.50	3	9	2	1	3	1	3	5	2	2	4	0	1	4	5	4	49
7.51-12.50	3	15	12	7	15	9	7	17	16	3	6	3	4	6	9	29	161
12.51-18.50	7	23	7	9	2	0	11	22	30	25	19	8	7	5	22	29	226
18.51-24.00	3	0	0	0	0	0	2	10	10	15	25	5	10	9	15	12	116
>24.00	1	0	0	0	0	0	1	10	9	6	2	1	4	5	1	1	41
TOTAL	17	50	23	18	21	12	25	64	68	51	56	18	27	29	53	75	607

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																	1
1.01- 3.50	0	0	2	1	0	0	3	0	0	1	0	1	0	0	1	2	11
3.51- 7.50	2	1	1	3	4	2	0	1	3	2	0	2	0	1	2	2	26
7.51-12.50	2	3	1	0	3	5	5	4	5	4	5	6	4	2	3	7	59
12.51-18.50	0	4	4	0	0	0	1	6	23	21	10	5	2	1	6	8	91
18.51-24.00	0	0	1	0	0	0	0	0	2	15	2	6	5	12	2	1	46
>24.00	0	0	1	0	0	0	0	0	0	0	1	0	7	7	1	0	17
TOTAL	4	8	10	4	7	7	9	11	33	43	18	20	18	23	15	20	251

B218

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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																	1
1.01- 3.50	0	0	1	0	0	0	0	0	1	3	0	1	1	0	0	0	7
3.51- 7.50	0	0	1	3	4	1	2	5	3	3	4	3	2	0	3	0	34
7.51-12.50	2	0	1	1	3	0	1	6	12	8	6	10	5	3	3	1	62
12.51-18.50	0	1	1	0	0	0	0	3	15	8	4	1	0	1	2	0	36
18.51-24.00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
TOTAL	2	1	4	4	7	1	3	14	31	22	15	16	9	6	8	1	145

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																	2
1.01- 3.50	1	4	7	2	1	4	5	1	2	4	0	5	4	0	3	2	45
3.51- 7.50	16	18	8	12	18	13	22	22	15	16	11	7	12	20	24	22	256
7.51-12.50	38	84	26	22	25	34	40	45	55	35	27	29	16	22	31	87	616
12.51-18.50	33	63	15	10	5	5	54	46	122	85	47	26	13	12	79	111	726
18.51-24.00	32	12	1	0	0	0	2	22	25	37	41	14	21	37	46	56	346
>24.00	14	3	1	0	0	0	1	15	46	10	6	2	13	20	37	37	205
TOTAL	134	184	58	46	49	56	124	151	265	187	132	83	79	111	220	315	2196

B219

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T OCT-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 10/ 1/17 - 12/31/17

*** OCT-DEC 2017 ***

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: 2196

TOTAL NUMBER OF MISSING OBSERVATIONS: 12

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.5 %

MEAN WIND SPEED FOR THIS PERIOD: 14.6 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
.00	.23	1.28	52.82	27.64	11.43	6.60

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	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	2	3	7	12	2	0	0	0	0	2	0
D	111	124	21	20	14	36	85	59	122	59	41	29	25	53	144	217	0
E	17	50	23	18	21	12	25	64	68	51	56	18	27	29	53	75	0
F	4	8	10	4	7	7	9	11	33	43	18	20	18	23	15	20	1
G	2	1	4	4	7	1	3	14	31	22	15	16	9	6	8	1	1
TOTAL	134	184	58	46	49	56	124	151	265	187	132	83	79	111	220	315	2

B220

JFDs of 100-Meter Wind vs. Delta T

July-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	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	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	1	0	0	0	0	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	1	4	0	0	0	0	0	0	0	5
TOTAL	0	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	6

B222

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	0	1	0	0	0	0	0	0	0	0	1
7.51-12.50	0	0	0	0	0	0	1	1	0	1	0	0	0	1	0	1	5
12.51-18.50	0	0	0	0	0	0	4	3	5	11	2	0	0	0	0	0	25
18.51-24.00	0	0	0	0	0	0	0	7	8	1	0	0	0	0	0	0	16
>24.00	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	1	8
TOTAL	0	0	0	0	0	0	5	12	20	13	2	0	0	1	0	2	55

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	9	13	10	7	11	9	3	3	3	0	3	6	2	1	4	90
3.51- 7.50	27	44	28	24	36	53	40	27	21	17	9	11	26	26	24	25	438
7.51-12.50	68	101	22	21	14	35	84	47	65	41	20	21	11	20	30	74	674
12.51-18.50	43	43	3	6	6	7	59	62	90	35	18	16	6	8	60	98	560
18.51-24.00	32	12	0	0	0	1	2	22	30	11	14	2	5	16	33	50	230
>24.00	13	3	0	0	0	0	0	9	37	4	3	1	2	6	35	35	148
TOTAL	189	212	66	61	63	107	194	170	246	111	64	54	56	78	183	286	2140

B223

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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	6	6	4	1	5	3	0	1	0	0	1	2	0	3	1	33
3.51- 7.50	6	19	9	3	15	12	15	10	10	6	7	3	4	6	7	8	140
7.51-12.50	33	39	30	12	20	27	34	62	50	17	12	6	10	11	13	45	421
12.51-18.50	21	25	9	9	4	6	34	93	106	52	27	14	12	9	24	37	482
18.51-24.00	4	0	0	0	0	0	6	17	35	30	31	5	11	12	18	15	184
>24.00	1	0	0	1	0	0	1	13	15	7	3	1	5	5	1	2	55
TOTAL	65	89	54	29	40	50	93	195	217	112	80	30	44	43	66	108	1315

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																	1
1.01- 3.50	0	3	6	3	4	3	3	1	0	2	1	1	0	1	2	4	34
3.51- 7.50	8	17	8	13	14	16	9	10	10	8	3	5	3	3	3	6	136
7.51-12.50	16	7	8	3	7	10	18	35	50	16	16	14	10	5	5	12	232
12.51-18.50	0	4	5	1	0	0	2	19	29	32	13	9	5	3	9	10	141
18.51-24.00	0	0	1	0	0	0	0	0	3	16	3	6	5	12	2	2	50
>24.00	0	0	1	0	0	0	0	0	0	0	1	0	7	7	1	0	17
TOTAL	24	31	29	20	25	29	32	65	92	74	37	35	30	31	22	34	611

B224

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PFD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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																	2
1.01- 3.50	4	6	3	2	1	1	3	3	4	4	1	3	4	1	1	2	43
3.51- 7.50	4	10	9	4	5	2	8	10	5	5	4	6	4	2	5	3	86
7.51-12.50	3	1	2	1	3	0	2	7	16	11	11	15	10	10	6	1	99
12.51-18.50	0	1	1	0	0	0	0	4	15	8	4	2	2	1	2	2	42
18.51-24.00	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	3
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
TOTAL	11	18	15	7	9	3	13	24	40	28	21	27	21	16	14	8	277

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																	3
1.01- 3.50	10	24	28	19	13	20	18	7	8	9	2	8	12	4	7	11	200
3.51- 7.50	45	90	54	44	70	83	72	58	46	36	23	25	37	37	39	42	801
7.51-12.50	120	148	62	37	44	72	139	152	181	86	59	56	41	47	54	133	1431
12.51-18.50	64	74	18	16	10	13	99	181	245	138	64	41	25	21	95	147	1251
18.51-24.00	36	12	1	0	0	1	8	46	76	58	49	14	22	40	53	67	483
>24.00	14	3	1	1	0	0	1	23	63	11	7	2	14	20	37	38	235
TOTAL	289	351	164	117	137	189	337	467	619	338	204	146	151	169	285	438	4404

B225

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17

*** JUL-DEC 2017 ***

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: 4404

TOTAL NUMBER OF MISSING OBSERVATIONS: 12

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.7 %

MEAN WIND SPEED FOR THIS PERIOD: 12.6 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
.00	.14	1.25	48.59	29.86	13.87	6.29

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	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
C	0	0	0	0	0	0	5	12	20	13	2	0	0	1	0	2	0
D	189	212	66	61	63	107	194	170	246	111	64	54	56	78	183	286	0
E	65	89	54	29	40	50	93	195	217	112	80	30	44	43	66	108	0
F	24	31	29	20	25	29	32	65	92	74	37	35	30	31	22	34	1
G	11	18	15	7	9	3	13	24	40	28	21	27	21	16	14	8	2
TOTAL	289	351	164	117	137	189	337	467	619	338	204	146	151	169	285	438	3

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Stability Classes by Hour of Day

100-Meter Wind vs. Delta T

July-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17	7	1	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
17	7	2	E	E	E	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17	7	3	F	F	F	F	E	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E	F	F
17	7	4	F	F	F	F	F	E	E	D	D	D	D	D	C	D	D	D	D	D	D	D	E	F	F	F
17	7	5	F	G	F	F	G	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	7	6	F	F	G	F	G	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	7	E	G	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	G
17	7	8	G	G	G	G	G	G	F	F	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	7	9	F	E	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	10	E	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	7	11	F	E	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	12	E	E	E	E	E	E	F	E	D	D	D	D	D	D	D	E	D	D	D	D	E	E	E	D
17	7	13	E	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	7	14	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	7	15	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F
17	7	16	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F
17	7	17	E	E	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	18	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	7	19	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	20	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	21	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	22	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	7	23	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	7	24	F	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	7	25	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	7	26	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	7	27	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	7	28	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	7	29	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	7	30	G	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	7	31	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	1	F	F	G	G	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	2	F	F	E	E	E	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	3	G	F	F	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17	8	4	E	E	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	5	F	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	8	6	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	7	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	8	8	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	8	9	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	8	10	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17	8	11	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	F
17	8	12	F	F	F	E	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F
17	8	13	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E

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PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17	8	14	E	E	E	E	D	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F
17	8	15	F	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	8	16	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	E	E
17	8	17	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
17	8	18	G	G	G	G	G	F	F	F	F	E	D	D	D	D	D	D	D	D	E	F	G	G	F	G
17	8	19	G	G	F	E	F	F	F	F	E	D	D	D	D	D	D	D	D	D	E	E	F	F	E	E
17	8	20	E	E	E	E	F	F	F	E	E	D	D	D	E	D	D	D	D	E	E	E	E	E	E	E
17	8	21	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	D
17	8	22	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	G	G
17	8	23	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	D	D	E	E	F	F	G	F
17	8	24	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
17	8	25	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	E
17	8	26	E	E	E	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	8	27	E	E	E	E	E	F	E	E	E	E	E	E	D	D	D	D	D	D	E	F	F	F	G	G
17	8	28	F	E	F	F	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
17	8	29	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G
17	8	30	G	G	G	G	G	G	G	F	F	D	D	D	D	D	D	D	D	D	E	F	F	G	F	F
17	8	31	F	F	F	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	F	F	G	G	G
17	9	1	F	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	9	2	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	G
17	9	3	G	G	G	G	G	G	G	F	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	9	4	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17	9	5	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	F	G	F	G	F
17	9	6	F	F	F	F	E	F	E	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G
17	9	7	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
17	9	8	G	G	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	F	F	F	E	F
17	9	9	F	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F
17	9	10	E	E	E	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	E
17	9	11	E	E	E	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	G
17	9	12	G	G	G	G	G	G	G	F	F	E	D	D	D	D	D	D	D	D	E	F	F	G	G	G
17	9	13	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	D	D	E	F	E	E	E	E
17	9	14	E	E	E	E	F	F	F	E	D	D	D	C	D	D	D	D	D	E	E	E	E	E	E	E
17	9	15	E	E	E	E	E	F	F	E	D	D	D	C	D	C	D	D	D	D	E	E	E	E	E	E
17	9	16	E	E	E	E	E	E	E	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D
17	9	17	D	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17	9	18	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17	9	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
17	9	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
17	9	21	E	E	E	E	E	E	E	D	D	C	C	C	C	C	D	D	D	D	E	E	E	E	E	E
17	9	22	E	E	E	E	E	E	E	D	D	D	C	C	C	B	C	D	D	D	E	E	E	E	E	E
17	9	23	E	E	E	E	E	E	E	E	D	D	C	C	C	C	C	D	D	D	E	E	F	E	E	E
17	9	24	F	F	F	F	F	F	F	E	D	D	C	C	C	C	D	D	D	D	E	E	E	F	E	E
17	9	25	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17	9	26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17	9	27	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	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 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17 9 28	G	G	G	G	G	G	G	F	D	D	D	D	C	D	D	D	D	E	F	G	G	G	G	G
17 9 29	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	D	E	F	F	E	E	E	E
17 9 30	E	E	E	E	E	E	E	D	D	D	C	C	C	C	C	D	D	D	E	E	E	E	E	E
17 10 1	E	E	E	E	E	D	D	D	D	D	D	C	B	C	C	D	D	D	D	E	E	D	E	E
17 10 2	E	E	D	D	E	E	E	E	E	D	D	D	B	B	C	D	D	D	E	E	E	E	E	E
17 10 3	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E
17 10 4	E	E	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
17 10 5	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	E	E	E	E
17 10 6	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D	D
17 10 7	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F
17 10 8	F	F	F	F	F	F	F	E	D	C	C	C	C	C	D	D	D	F	G	G	F	F	G	G
17 10 9	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 10 10	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D
17 10 11	D	D	D	D	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	F	E	E	F	E
17 10 12	E	E	E	E	E	E	D	D	D	D	D	C	C	C	D	D	D	D	E	E	E	E	E	E
17 10 13	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	E
17 10 14	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	-	-	-	-	-	-
17 10 15	-	-	-	-	-	-	D	D	D	D	D	D	C	D	D	D	D	E	G	G	G	G	G	G
17 10 16	F	G	G	G	G	G	G	G	F	E	D	D	C	D	D	D	D	E	E	F	F	F	F	F
17 10 17	F	F	F	F	F	E	E	E	D	D	D	C	C	C	C	D	D	E	F	E	E	F	E	E
17 10 18	E	E	E	E	E	F	F	E	D	D	C	C	C	C	C	D	D	E	F	G	G	G	G	G
17 10 19	G	G	G	G	G	F	F	F	F	E	D	D	C	C	C	D	D	D	E	F	F	F	E	E
17 10 20	E	E	E	E	E	E	E	E	D	D	D	B	C	D	D	D	D	D	E	E	E	E	D	D
17 10 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
17 10 22	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
17 10 23	F	F	F	F	E	F	F	E	D	D	D	C	D	D	D	D	D	D	D	E	E	D	D	D
17 10 24	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F
17 10 25	G	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	F	G	G	G	G	G
17 10 26	G	F	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 10 27	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
17 10 28	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	F	F	G	G	G	F
17 10 29	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D	D
17 10 30	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
17 10 31	D	E	E	F	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 11 1	D	D	E	D	D	D	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F	F
17 11 2	F	E	E	E	E	E	E	E	D	D	D	B	D	D	D	D	D	D	E	E	E	E	E	E
17 11 3	E	E	E	E	E	D	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	D	D	D
17 11 4	D	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	E	E
17 11 5	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17 11 6	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 11 7	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	F	F
17 11 8	F	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	E	E	E	F	F	F
17 11 9	E	E	E	F	F	G	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D
17 11 10	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 11 11	D	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E

B230

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17 11 12	D	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	G
17 11 13	G	F	F	F	E	E	F	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 11 14	E	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E
17 11 15	E	D	D	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 11 16	E	E	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 11 17	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	D	D
17 11 18	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 11 19	E	E	E	F	F	F	F	F	F	E	D	D	D	D	D	D	D	D	E	F	F	E	E	E
17 11 20	E	E	E	F	E	F	F	F	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 11 21	E	F	G	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E
17 11 22	E	E	E	F	F	F	F	F	F	D	D	D	D	D	D	D	D	D	E	E	E	E	E	F
17 11 23	F	F	F	F	G	G	G	G	F	F	D	D	D	D	D	D	D	E	E	F	F	E	F	F
17 11 24	F	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	F
17 11 25	F	F	F	E	F	E	F	G	F	E	D	D	D	D	D	D	D	F	G	G	G	G	G	G
17 11 26	G	G	G	G	G	G	G	G	G	E	D	D	D	D	D	D	D	E	E	G	G	G	G	G
17 11 27	G	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 11 28	E	E	E	F	F	F	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F	F
17 11 29	F	G	G	G	G	G	G	F	E	D	D	D	D	D	D	D	D	D	E	F	F	F	F	F
17 11 30	F	E	E	F	E	F	F	F	F	E	D	D	D	D	D	D	D	E	F	G	G	G	G	G
17 12 1	G	G	G	G	G	G	G	G	F	D	D	D	D	D	D	D	D	E	E	F	F	F	F	E
17 12 2	F	F	G	G	G	G	F	G	G	F	D	D	D	D	D	D	D	E	F	F	G	G	G	G
17 12 3	G	G	G	G	F	G	G	G	F	E	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 12 4	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 5	D	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 12 6	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 7	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
17 12 8	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F
17 12 9	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	F	G	G	G	G	F
17 12 10	E	E	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	D	E	G	G	G	G	G
17 12 11	E	F	G	G	F	F	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 12	D	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	E	E	F	F	F	F
17 12 13	E	E	E	E	F	F	E	E	D	D	D	D	D	D	D	D	D	D	E	E	E	D	D	D
17 12 14	D	D	D	D	D	D	D	E	D	D	D	D	D	D	D	D	D	D	E	E	E	E	D	E
17 12 15	D	D	D	D	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	E	E	E	E	E
17 12 16	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	E	F	G	G	G	F	F
17 12 17	F	G	F	F	G	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E
17 12 18	E	F	F	F	F	F	F	E	E	D	D	D	D	D	D	D	D	E	E	E	E	E	E	E
17 12 19	E	E	F	E	F	F	F	F	F	E	D	D	D	D	D	D	D	E	E	F	F	F	F	E
17 12 20	E	E	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 21	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 22	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E
17 12 23	E	D	E	E	E	E	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 24	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	F
17 12 25	F	F	F	F	E	E	F	F	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 26	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	F	F

B231

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JUL-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 7/ 1/17 - 12/31/17
 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
17 12 27	F	F	F	F	F	G	G	G	F	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 28	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	E	E	E	E	D	E
17 12 29	E	E	E	D	E	D	E	E	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
17 12 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
17 12 31	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	E	D	D	D	D	D	E

B232

JFDs of 100-Meter Wind vs. Delta T

January-December 2017

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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	2	0	1	1	1	0	0	0	0	0	1	1	0	1	8
7.51-12.50	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12.51-18.50	0	5	1	0	0	0	0	1	0	0	0	0	0	0	0	0	7
18.51-24.00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
>24.00	0	0	0	0	0	0	0	0	3	7	0	0	0	0	0	0	10
TOTAL	0	5	3	0	1	1	2	3	3	7	0	0	1	1	0	1	28

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	2	0	0	0	0	2
7.51-12.50	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	2
12.51-18.50	2	5	5	0	0	2	0	2	0	2	0	0	0	0	0	2	20
18.51-24.00	0	1	2	0	0	0	0	8	2	6	0	0	0	0	0	0	19
>24.00	0	0	1	0	0	0	0	3	27	8	0	0	0	0	0	0	39
TOTAL	2	6	9	0	0	2	0	14	29	16	0	2	0	0	0	2	82

B234

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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	1	0	0	5	1	0	1	2	0	0	0	0	0	0	0	1	11
7.51-12.50	1	1	2	2	0	2	5	1	0	2	1	0	1	1	1	8	28
12.51-18.50	7	6	10	2	0	1	5	9	17	20	2	0	0	0	0	16	95
18.51-24.00	2	0	0	0	0	1	0	9	15	12	1	0	2	0	3	3	48
>24.00	2	1	0	0	0	0	0	1	27	9	0	0	2	1	1	1	45
TOTAL	13	8	12	9	1	4	11	22	59	43	4	0	5	2	5	29	227

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	10	13	18	16	10	14	13	4	7	5	0	4	7	6	5	10	142
3.51- 7.50	48	82	52	40	69	79	61	40	35	29	21	17	36	39	37	70	755
7.51-12.50	139	181	75	76	50	70	116	69	94	82	36	34	22	50	71	207	1372
12.51-18.50	110	105	51	32	20	22	84	107	133	72	46	42	19	45	164	256	1308
18.51-24.00	80	49	43	6	8	8	9	57	82	31	30	9	13	30	104	92	651
>24.00	37	6	9	2	1	0	0	13	135	25	6	3	7	16	66	37	363
TOTAL	424	436	248	172	158	193	283	290	486	244	139	109	104	186	447	672	4591

B235

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

STABILITY CLASS E

STABILITY BASED ON: DELTA T BETWEEN 100.0 AND 10.0 METERS
 WIND MEASURED AT: 100.0 METERS
 WIND THRESHOLD AT: 1.00 MPH
 JOINT FREQUENCY DISTRIBUTION OF WIND SPEED AND DIRECTION IN HOURS AT 100.00 METERS

SPEED (MPH)	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL
CALM																	0
1.01- 3.50	1	10	13	6	3	5	6	3	2	1	2	1	2	1	7	3	66
3.51- 7.50	11	29	15	7	22	20	21	23	15	8	13	4	6	10	11	14	229
7.51-12.50	48	71	42	26	33	51	51	84	77	23	21	12	15	18	25	78	675
12.51-18.50	45	54	22	11	10	16	57	142	166	79	52	30	17	24	57	76	858
18.51-24.00	8	4	4	0	0	1	19	41	88	54	56	13	18	26	34	26	392
>24.00	3	0	0	1	0	0	1	15	38	14	7	2	8	14	2	3	108
TOTAL	116	168	96	51	68	93	155	308	386	179	151	62	66	93	136	200	2328

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																	1
1.01- 3.50	0	4	8	3	4	5	4	3	3	3	1	1	0	1	2	6	48
3.51- 7.50	14	18	10	14	21	22	21	19	19	12	4	6	7	5	5	14	211
7.51-12.50	21	11	14	5	8	14	31	62	71	32	28	19	13	8	12	29	378
12.51-18.50	7	8	7	4	1	4	11	32	44	47	26	15	12	9	19	15	261
18.51-24.00	0	0	2	0	0	0	1	1	5	23	4	11	13	15	5	6	86
>24.00	0	0	1	0	0	0	0	1	0	1	1	0	10	7	1	0	22
TOTAL	42	41	42	26	34	45	68	118	142	118	64	52	55	45	44	70	1007

B236

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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																	2
1.01- 3.50	4	7	4	4	3	3	4	4	5	5	2	3	6	2	1	3	60
3.51- 7.50	9	18	15	7	8	6	14	15	9	7	6	12	7	4	8	9	154
7.51-12.50	12	2	5	3	3	3	8	18	28	23	19	22	16	14	8	5	189
12.51-18.50	2	1	1	1	0	0	2	8	20	9	13	3	4	1	3	3	71
18.51-24.00	0	0	1	0	0	0	0	0	0	0	2	1	3	0	0	0	7
>24.00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
TOTAL	27	28	26	15	14	12	28	45	62	44	42	41	36	23	20	20	485

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																	3
1.01- 3.50	15	34	43	29	20	27	27	14	17	14	5	9	15	10	15	22	316
3.51- 7.50	83	147	94	73	122	128	119	99	78	56	44	41	57	59	61	109	1370
7.51-12.50	221	266	139	112	94	140	212	235	270	162	105	87	67	91	117	327	2645
12.51-18.50	173	184	97	50	31	45	159	301	380	229	139	90	52	79	243	368	2620
18.51-24.00	90	54	52	6	8	10	29	118	192	126	93	34	49	71	146	127	1205
>24.00	42	7	11	3	1	0	1	33	230	64	14	5	27	40	70	41	589
TOTAL	624	692	436	273	276	350	547	800	1167	651	400	266	267	350	652	994	8748

B237

PROGRAM: JFD VERSION: PC-1.2
 NPPD-COOPER NUCLEAR STATION JFD:100M WIND VS 10M DELTA T JAN-DEC 2017
 SITE IDENTIFIER: PPD
 DATA PERIOD EXAMINED: 1/ 1/17 - 12/31/17

*** JAN-DEC 2017 ***

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: 8760

TOTAL NUMBER OF VALID OBSERVATIONS: 8748

TOTAL NUMBER OF MISSING OBSERVATIONS: 12

PERCENT DATA RECOVERY FOR THIS PERIOD: 99.9 %

MEAN WIND SPEED FOR THIS PERIOD: 13.5 MPH

NUMBER OF OBSERVATIONS WITH BACKUP WIND SPEED: 4

NUMBER OF OBSERVATIONS WITH BACKUP WIND DIRECTION: 4

TOTAL NUMBER OF OBSERVATIONS WITH BACKUP DATA: 4

PERCENTAGE OCCURRENCE OF STABILITY CLASSES

A	B	C	D	E	F	G
.32	.94	2.59	52.48	26.61	11.51	5.54

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	5	3	0	1	1	2	3	3	7	0	0	1	1	0	1	0
B	2	6	9	0	0	2	0	14	29	16	0	2	0	0	0	2	0
C	13	8	12	9	1	4	11	22	59	43	4	0	5	2	5	29	0
D	424	436	248	172	158	193	283	290	486	244	139	109	104	186	447	672	0
E	116	168	96	51	68	93	155	308	386	179	151	62	66	93	136	200	0
F	42	41	42	26	34	45	68	118	142	118	64	52	55	45	44	70	1
G	27	28	26	15	14	12	28	45	62	44	42	41	36	23	20	20	2
TOTAL	624	692	436	273	276	350	547	800	1167	651	400	266	267	350	652	994	3

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 2017: 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 2017 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 2017

VENTS GROUND LEVEL RELEASES - JAN-MAR 2017
 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	5.347E-05	1.765E-05	9.325E-06	4.651E-06	1.884E-06	1.026E-06	6.530E-07	4.574E-07	3.416E-07	2.671E-07	2.162E-07
SSW	2.731E-05	9.602E-06	5.199E-06	2.599E-06	1.019E-06	5.425E-07	3.393E-07	2.342E-07	1.728E-07	1.337E-07	1.072E-07
SW	2.130E-05	7.377E-06	3.931E-06	1.954E-06	7.707E-07	4.118E-07	2.583E-07	1.788E-07	1.322E-07	1.025E-07	8.228E-08
WSW	1.473E-05	4.984E-06	2.637E-06	1.312E-06	5.235E-07	2.820E-07	1.780E-07	1.239E-07	9.198E-08	7.156E-08	5.766E-08
W	1.865E-05	6.794E-06	3.718E-06	1.862E-06	7.255E-07	3.841E-07	2.392E-07	1.645E-07	1.210E-07	9.331E-08	7.460E-08
WNW	1.446E-05	5.019E-06	2.673E-06	1.328E-06	5.293E-07	2.850E-07	1.799E-07	1.252E-07	9.295E-08	7.233E-08	5.828E-08
NW	2.764E-05	9.158E-06	4.941E-06	2.492E-06	1.007E-06	5.472E-07	3.477E-07	2.432E-07	1.814E-07	1.417E-07	1.145E-07
NNW	6.081E-05	1.861E-05	9.642E-06	4.825E-06	2.028E-06	1.132E-06	7.345E-07	5.222E-07	3.948E-07	3.120E-07	2.548E-07
N	7.759E-05	2.379E-05	1.246E-05	6.271E-06	2.630E-06	1.466E-06	9.495E-07	6.743E-07	5.093E-07	4.021E-07	3.281E-07
NNE	5.085E-05	1.543E-05	7.869E-06	3.910E-06	1.655E-06	9.286E-07	6.044E-07	4.308E-07	3.265E-07	2.585E-07	2.114E-07
NE	3.007E-05	9.349E-06	4.753E-06	2.347E-06	9.850E-07	5.496E-07	3.563E-07	2.532E-07	1.914E-07	1.512E-07	1.235E-07
ENE	2.356E-05	7.236E-06	3.828E-06	1.937E-06	8.088E-07	4.494E-07	2.904E-07	2.058E-07	1.552E-07	1.224E-07	9.972E-08
E	1.800E-05	5.743E-06	2.969E-06	1.473E-06	6.107E-07	3.380E-07	2.178E-07	1.541E-07	1.161E-07	9.140E-08	7.442E-08
ESE	2.731E-05	9.087E-06	4.913E-06	2.479E-06	1.004E-06	5.464E-07	3.476E-07	2.434E-07	1.817E-07	1.420E-07	1.149E-07
SE	4.406E-05	1.472E-05	7.867E-06	3.943E-06	1.588E-06	8.614E-07	5.465E-07	3.818E-07	2.845E-07	2.220E-07	1.793E-07
SSE	6.347E-05	2.132E-05	1.124E-05	5.581E-06	2.247E-06	1.219E-06	7.732E-07	5.402E-07	4.027E-07	3.143E-07	2.540E-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	1.796E-07	9.372E-08	6.140E-08	3.577E-08	2.449E-08	1.830E-08	1.444E-08	1.183E-08	9.959E-09	8.561E-09	7.482E-09
SSW	8.830E-08	4.461E-08	2.855E-08	1.610E-08	1.077E-08	7.904E-09	6.145E-09	4.971E-09	4.140E-09	3.525E-09	3.054E-09
SW	6.790E-08	3.450E-08	2.219E-08	1.259E-08	8.468E-09	6.238E-09	4.867E-09	3.950E-09	3.299E-09	2.815E-09	2.445E-09
WSW	4.772E-08	2.452E-08	1.590E-08	9.127E-09	6.185E-09	4.585E-09	3.595E-09	2.930E-09	2.456E-09	2.103E-09	1.832E-09
W	6.132E-08	3.064E-08	1.945E-08	1.082E-08	7.163E-09	5.208E-09	4.019E-09	3.230E-09	2.674E-09	2.264E-09	1.952E-09
WNW	4.825E-08	2.481E-08	1.609E-08	9.239E-09	6.258E-09	4.636E-09	3.633E-09	2.960E-09	2.480E-09	2.123E-09	1.848E-09
NW	9.507E-08	4.941E-08	3.227E-08	1.871E-08	1.276E-08	9.502E-09	7.477E-09	6.111E-09	5.135E-09	4.406E-09	3.843E-09
NNW	2.134E-07	1.147E-07	7.672E-08	4.594E-08	3.204E-08	2.427E-08	1.936E-08	1.601E-08	1.358E-08	1.175E-08	1.033E-08
N	2.747E-07	1.473E-07	9.828E-08	5.869E-08	4.084E-08	3.088E-08	2.461E-08	2.032E-08	1.722E-08	1.489E-08	1.308E-08
NNE	1.774E-07	9.585E-08	6.432E-08	3.871E-08	2.708E-08	2.056E-08	1.644E-08	1.361E-08	1.157E-08	1.002E-08	8.822E-09
NE	1.034E-07	5.560E-08	3.718E-08	2.227E-08	1.554E-08	1.177E-08	9.396E-09	7.771E-09	6.597E-09	5.712E-09	5.023E-09
ENE	8.338E-08	4.451E-08	2.962E-08	1.762E-08	1.222E-08	9.224E-09	7.336E-09	6.049E-09	5.122E-09	4.424E-09	3.882E-09
E	6.218E-08	3.312E-08	2.201E-08	1.307E-08	9.067E-09	6.840E-09	5.440E-09	4.487E-09	3.799E-09	3.282E-09	2.881E-09
ESE	9.541E-08	4.968E-08	3.249E-08	1.887E-08	1.288E-08	9.598E-09	7.557E-09	6.179E-09	5.193E-09	4.457E-09	3.889E-09
SE	1.488E-07	7.711E-08	5.028E-08	2.909E-08	1.981E-08	1.474E-08	1.159E-08	9.467E-09	7.951E-09	6.820E-09	5.948E-09
SSE	2.108E-07	1.094E-07	7.142E-08	4.141E-08	2.826E-08	2.106E-08	1.658E-08	1.356E-08	1.140E-08	9.791E-09	8.547E-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	9.098E-06	2.117E-06	6.742E-07	3.463E-07	2.177E-07	9.845E-08	3.646E-08	1.841E-08	1.186E-08	8.576E-09
SSW	5.022E-06	1.158E-06	3.514E-07	1.754E-07	1.080E-07	4.718E-08	1.650E-08	7.965E-09	4.990E-09	3.533E-09
SW	3.818E-06	8.742E-07	2.674E-07	1.342E-07	8.293E-08	3.645E-08	1.289E-08	6.284E-09	3.964E-09	2.821E-09
WSW	2.570E-06	5.914E-07	1.841E-07	9.331E-08	5.810E-08	2.585E-08	9.324E-09	4.615E-09	2.939E-09	2.107E-09
W	3.577E-06	8.264E-07	2.480E-07	1.229E-07	7.522E-08	3.249E-08	1.111E-08	5.254E-09	3.243E-09	2.270E-09
WNW	2.597E-06	5.982E-07	1.860E-07	9.430E-08	5.873E-08	2.614E-08	9.437E-09	4.668E-09	2.969E-09	2.127E-09
NW	4.790E-06	1.133E-06	3.591E-07	1.839E-07	1.154E-07	5.194E-08	1.908E-08	9.562E-09	6.130E-09	4.413E-09
NNW	9.493E-06	2.252E-06	7.557E-07	3.996E-07	2.564E-07	1.198E-07	4.660E-08	2.438E-08	1.604E-08	1.177E-08
N	1.223E-05	2.922E-06	9.772E-07	5.156E-07	3.303E-07	1.538E-07	5.955E-08	3.103E-08	2.036E-08	1.491E-08
NNE	7.790E-06	1.833E-06	6.214E-07	3.304E-07	2.127E-07	9.995E-08	3.923E-08	2.065E-08	1.364E-08	1.004E-08
NE	4.705E-06	1.094E-06	3.666E-07	1.938E-07	1.243E-07	5.804E-08	2.259E-08	1.183E-08	7.788E-09	5.719E-09
ENE	3.745E-06	8.997E-07	2.990E-07	1.571E-07	1.004E-07	4.653E-08	1.789E-08	9.269E-09	6.064E-09	4.430E-09
E	2.920E-06	6.811E-07	2.244E-07	1.175E-07	7.492E-08	3.464E-08	1.328E-08	6.874E-09	4.497E-09	3.287E-09
ESE	4.759E-06	1.128E-06	3.589E-07	1.842E-07	1.157E-07	5.220E-08	1.924E-08	9.657E-09	6.197E-09	4.465E-09
SE	7.646E-06	1.788E-06	5.646E-07	2.885E-07	1.806E-07	8.111E-08	2.968E-08	1.483E-08	9.496E-09	6.832E-09
SSE	1.096E-05	2.531E-06	7.988E-07	4.083E-07	2.558E-07	1.150E-07	4.223E-08	2.119E-08	1.360E-08	9.808E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2017
 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	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	5.338E-05	1.760E-05	9.284E-06	4.624E-06	1.867E-06	1.013E-06	6.428E-07	4.488E-07	3.340E-07	2.603E-07	2.099E-07	2.728E-05	9.582E-06	5.183E-06	2.588E-06	1.013E-06	5.378E-07	3.355E-07	2.311E-07	1.701E-07	1.313E-07	1.050E-07
SSW	2.127E-05	7.358E-06	3.916E-06	1.944E-06	7.648E-07	4.075E-07	2.549E-07	1.759E-07	1.297E-07	1.002E-07	8.022E-08	1.471E-05	4.967E-06	2.625E-06	1.304E-06	5.183E-07	2.782E-07	1.750E-07	1.213E-07	8.974E-08	6.956E-08	5.583E-08
SW	1.863E-05	6.779E-06	3.706E-06	1.854E-06	7.207E-07	3.808E-07	2.366E-07	1.623E-07	1.191E-07	9.167E-08	7.312E-08	1.796E-05	5.719E-06	2.952E-06	1.461E-06	6.034E-07	3.326E-07	2.134E-07	1.503E-07	1.127E-07	8.838E-08	7.165E-08
WSW	1.444E-05	5.003E-06	2.661E-06	1.320E-06	5.243E-07	2.814E-07	1.770E-07	1.227E-07	9.084E-08	7.044E-08	5.656E-08	7.744E-05	2.370E-05	1.239E-05	6.224E-06	2.600E-06	1.443E-06	9.311E-07	6.585E-07	4.954E-07	3.896E-07	3.166E-07
W	2.759E-05	9.131E-06	4.919E-06	2.478E-06	9.980E-07	5.406E-07	3.424E-07	2.387E-07	1.775E-07	1.381E-07	1.113E-07	5.073E-05	1.536E-05	7.816E-06	3.875E-06	1.633E-06	9.116E-07	5.904E-07	4.189E-07	3.159E-07	2.489E-07	2.026E-07
WNW	6.067E-05	1.852E-05	9.581E-06	4.784E-06	2.002E-06	1.113E-06	7.186E-07	5.086E-07	3.828E-07	3.011E-07	2.448E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
NW	7.744E-05	2.370E-05	1.239E-05	6.224E-06	2.600E-06	1.443E-06	9.311E-07	6.585E-07	4.954E-07	3.896E-07	3.166E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
NNW	6.067E-05	1.852E-05	9.581E-06	4.784E-06	2.002E-06	1.113E-06	7.186E-07	5.086E-07	3.828E-07	3.011E-07	2.448E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
N	7.744E-05	2.370E-05	1.239E-05	6.224E-06	2.600E-06	1.443E-06	9.311E-07	6.585E-07	4.954E-07	3.896E-07	3.166E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
NNE	5.073E-05	1.536E-05	7.816E-06	3.875E-06	1.633E-06	9.116E-07	5.904E-07	4.189E-07	3.159E-07	2.489E-07	2.026E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
NE	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07	3.001E-05	9.310E-06	4.724E-06	2.328E-06	9.729E-07	5.404E-07	3.488E-07	2.468E-07	1.857E-07	1.461E-07	1.187E-07
ENE	2.351E-05	7.206E-06	3.805E-06	1.921E-06	7.990E-07	4.421E-07	2.844E-07	2.007E-07	1.507E-07	1.183E-07	9.603E-08	2.351E-05	7.206E-06	3.805E-06	1.921E-06	7.990E-07	4.421E-07	2.844E-07	2.007E-07	1.507E-07	1.183E-07	9.603E-08
E	1.796E-05	5.719E-06	2.952E-06	1.461E-06	6.034E-07	3.326E-07	2.134E-07	1.503E-07	1.127E-07	8.838E-08	7.165E-08	1.796E-05	5.719E-06	2.952E-06	1.461E-06	6.034E-07	3.326E-07	2.134E-07	1.503E-07	1.127E-07	8.838E-08	7.165E-08
ESE	2.728E-05	9.063E-06	4.894E-06	2.467E-06	9.963E-07	5.407E-07	3.431E-07	2.395E-07	1.783E-07	1.390E-07	1.121E-07	2.728E-05	9.063E-06	4.894E-06	2.467E-06	9.963E-07	5.407E-07	3.431E-07	2.395E-07	1.783E-07	1.390E-07	1.121E-07
SE	4.399E-05	1.468E-05	7.836E-06	3.923E-06	1.576E-06	8.521E-07	5.390E-07	3.754E-07	2.789E-07	2.170E-07	1.747E-07	4.399E-05	1.468E-05	7.836E-06	3.923E-06	1.576E-06	8.521E-07	5.390E-07	3.754E-07	2.789E-07	2.170E-07	1.747E-07
SSE	6.337E-05	2.126E-05	1.119E-05	5.548E-06	2.226E-06	1.203E-06	7.610E-07	5.299E-07	3.936E-07	3.061E-07	2.465E-07	6.337E-05	2.126E-05	1.119E-05	5.548E-06	2.226E-06	1.203E-06	7.610E-07	5.299E-07	3.936E-07	3.061E-07	2.465E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE											
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.738E-07	8.915E-08	5.741E-08	3.232E-08	2.139E-08	1.547E-08	1.182E-08	9.387E-09	7.667E-09	6.400E-09	5.434E-09	8.632E-08	4.309E-08	2.726E-08	1.501E-08	9.810E-09	7.034E-09	5.346E-09	4.230E-09	3.447E-09	2.873E-09	2.437E-09
SSW	6.601E-08	3.304E-08	2.092E-08	1.152E-08	7.514E-09	5.374E-09	4.072E-09	3.211E-09	2.608E-09	2.165E-09	1.830E-09	4.604E-08	2.321E-08	1.476E-08	8.157E-09	5.324E-09	3.803E-09	2.876E-09	2.262E-09	1.832E-09	1.516E-09	1.277E-09
SW	5.997E-08	2.963E-08	1.860E-08	1.013E-08	6.556E-09	4.666E-09	3.524E-09	2.774E-09	2.249E-09	1.867E-09	1.577E-09	4.666E-08	2.358E-08	1.503E-08	8.331E-09	5.451E-09	3.904E-09	2.960E-09	2.334E-09	1.895E-09	1.572E-09	1.328E-09
WSW	9.210E-08	4.708E-08	3.024E-08	1.697E-08	1.121E-08	8.085E-09	6.169E-09	4.893E-09	3.993E-09	3.329E-09	2.824E-09	2.041E-07	1.073E-07	7.016E-08	4.021E-08	2.688E-08	1.954E-08	1.497E-08	1.191E-08	9.733E-09	8.121E-09	6.890E-09
W	2.640E-07	1.387E-07	9.075E-08	5.212E-08	3.493E-08	2.547E-08	1.958E-08	1.563E-08	1.281E-08	1.073E-08	9.132E-09	2.640E-07	1.387E-07	9.075E-08	5.212E-08	3.493E-08	2.547E-08	1.958E-08	1.563E-08	1.281E-08	1.073E-08	9.132E-09
WNW	1.691E-07	8.924E-08	5.849E-08	3.359E-08	2.247E-08	1.633E-08	1.251E-08	9.947E-09	8.123E-09	6.772E-09	5.741E-09	1.691E-07	8.924E-08	5.849E-08	3.359E-08	2.247E-08	1.633E-08	1.251E-08	9.947E-09	8.123E-09	6.772E-09	5.741E-09
NW	9.901E-08	5.203E-08	3.402E-08	1.950E-08	1.304E-08	9.476E-09	7.265E-09	5.779E-09	4.723E-09	3.942E-09	3.345E-09	9.901E-08	5.203E-08	3.402E-08	1.950E-08	1.304E-08	9.476E-09	7.265E-09	5.779E-09	4.723E-09	3.942E-09	3.345E-09
NNW	7.996E-08	4.179E-08	2.723E-08	1.554E-08	1.036E-08	7.523E-09	5.762E-09	4.581E-09	3.743E-09	3.124E-09	2.651E-09	7.996E-08	4.179E-08	2.723E-08	1.554E-08	1.036E-08	7.523E-09	5.762E-09	4.581E-09	3.743E-09	3.124E-09	2.651E-09
N	5.961E-08	3.106E-08	2.020E-08	1.150E-08	7.655E-09	5.548E-09	4.244E-09	3.370E-09	2.751E-09	2.294E-09	1.945E-09	5.961E-08	3.106E-08	2.020E-08	1.150E-08	7.655E-09	5.548E-09	4.244E-09	3.370E-09	2.751E-09	2.294E-09	1.945E-09
NNE	9.284E-08	4.765E-08	3.073E-08	1.735E-08	1.152E-08	8.355E-09	6.408E-09	5.107E-09	4.186E-09	3.507E-09	2.988E-09	9.284E-08	4.765E-08	3.073E-08	1.735E-08	1.152E-08	8.355E-09	6.408E-09	5.107E-09	4.186E-09	3.507E-09	2.988E-09
NE	1.445E-07	7.378E-08	4.738E-08	2.659E-08	1.757E-08	1.270E-08	9.702E-09	7.707E-09	6.299E-09	5.261E-09	4.471E-09	1.445E-07	7.378E-08	4.738E-08	2.659E-08	1.757E-08	1.270E-08	9.702E-09	7.707E-09	6.299E-09	5.261E-09	4.471E-09
ENE	2.038E-07	1.039E-07	6.665E-08	3.730E-08	2.457E-08	1.770E-08	1.348E-08	1.067E-08	8.690E-09	7.234E-09	6.127E-09	2.038E-07	1.039E-07	6.665E-08	3.730E-08	2.457E-08	1.770E-08	1.348E-08	1.067E-08	8.690E-09	7.234E-09	6.127E-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	9.061E-06	2.100E-06	6.640E-07	3.387E-07	2.115E-07	9.386E-08	3.304E-08	1.559E-08	9.427E-09	6.418E-09
SSW	5.007E-06	1.152E-06	3.477E-07	1.727E-07	1.059E-07	4.566E-08	1.542E-08	7.099E-09	4.251E-09	2.881E-09
SW	3.805E-06	8.681E-07	2.640E-07	1.316E-07	8.088E-08	3.498E-08	1.183E-08	5.424E-09	3.227E-09	2.172E-09
WSW	2.558E-06	5.861E-07	1.810E-07	9.107E-08	5.627E-08	2.453E-08	8.365E-09	3.838E-09	2.274E-09	1.521E-09
W	3.566E-06	8.215E-07	2.453E-07	1.210E-07	7.375E-08	3.147E-08	1.042E-08	4.713E-09	2.788E-09	1.873E-09
WNW	2.585E-06	5.932E-07	1.832E-07	9.219E-08	5.701E-08	2.491E-08	8.539E-09	3.939E-09	2.346E-09	1.577E-09
NW	4.770E-06	1.124E-06	3.538E-07	1.800E-07	1.121E-07	4.960E-08	1.736E-08	8.151E-09	4.915E-09	3.339E-09
NNW	9.437E-06	2.225E-06	7.398E-07	3.876E-07	2.464E-07	1.123E-07	4.094E-08	1.967E-08	1.196E-08	8.143E-09
N	1.216E-05	2.891E-06	9.587E-07	5.017E-07	3.187E-07	1.452E-07	5.307E-08	2.564E-08	1.569E-08	1.076E-08
NNE	7.741E-06	1.810E-06	6.074E-07	3.198E-07	2.039E-07	9.333E-08	3.418E-08	1.644E-08	9.985E-09	6.790E-09
NE	4.678E-06	1.082E-06	3.591E-07	1.881E-07	1.195E-07	5.447E-08	1.986E-08	9.541E-09	5.801E-09	3.953E-09
ENE	3.723E-06	8.898E-07	2.930E-07	1.527E-07	9.669E-08	4.380E-08	1.584E-08	7.576E-09	4.599E-09	3.132E-09
E	2.904E-06	6.737E-07	2.199E-07	1.142E-07	7.215E-08	3.258E-08	1.173E-08	5.588E-09	3.384E-09	2.300E-09
ESE	4.742E-06	1.121E-06	3.544E-07	1.808E-07	1.129E-07	5.017E-08	1.773E-08	8.420E-09	5.128E-09	3.516E-09
SE	7.619E-06	1.776E-06	5.571E-07	2.829E-07	1.761E-07	7.777E-08	2.720E-08	1.280E-08	7.740E-09	5.276E-09
SSE	1.092E-05	2.510E-06	7.865E-07	3.992E-07	2.484E-07	1.096E-07	3.817E-08	1.784E-08	1.072E-08	7.256E-09

VENTS GROUND LEVEL RELEASES - JAN-MAR 2017
 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	5.058E-05	1.611E-05	8.299E-06	4.065E-06	1.596E-06	8.465E-07	5.266E-07	3.613E-07	2.648E-07	2.035E-07	1.621E-07
SSW	2.584E-05	8.764E-06	4.629E-06	2.272E-06	8.641E-07	4.481E-07	2.740E-07	1.853E-07	1.342E-07	1.021E-07	8.055E-08
SW	2.015E-05	6.732E-06	3.499E-06	1.708E-06	6.531E-07	3.400E-07	2.085E-07	1.414E-07	1.026E-07	7.816E-08	6.176E-08
WSW	1.394E-05	4.547E-06	2.347E-06	1.146E-06	4.434E-07	2.327E-07	1.435E-07	9.780E-08	7.127E-08	5.449E-08	4.319E-08
W	1.765E-05	6.200E-06	3.310E-06	1.628E-06	6.150E-07	3.173E-07	1.931E-07	1.302E-07	9.398E-08	7.127E-08	5.608E-08
WNW	1.368E-05	4.579E-06	2.379E-06	1.160E-06	4.483E-07	2.352E-07	1.451E-07	9.887E-08	7.206E-08	5.511E-08	4.369E-08
NW	2.615E-05	8.356E-06	4.397E-06	2.178E-06	8.530E-07	4.515E-07	2.804E-07	1.921E-07	1.407E-07	1.080E-07	8.588E-08
MNW	5.752E-05	1.697E-05	8.577E-06	4.213E-06	1.716E-06	9.331E-07	5.913E-07	4.117E-07	3.054E-07	2.371E-07	1.904E-07
N	7.339E-05	2.170E-05	1.109E-05	5.477E-06	2.227E-06	1.209E-06	7.649E-07	5.320E-07	3.943E-07	3.059E-07	2.456E-07
NNE	4.809E-05	1.407E-05	6.999E-06	3.414E-06	1.400E-06	7.649E-07	4.863E-07	3.395E-07	2.524E-07	1.963E-07	1.579E-07
NE	2.844E-05	8.528E-06	4.228E-06	2.049E-06	8.336E-07	4.529E-07	2.869E-07	1.997E-07	1.481E-07	1.150E-07	9.233E-08
ENE	2.228E-05	6.600E-06	3.405E-06	1.691E-06	6.845E-07	3.704E-07	2.338E-07	1.623E-07	1.201E-07	9.303E-08	7.459E-08
E	1.702E-05	5.238E-06	2.642E-06	1.286E-06	5.169E-07	2.786E-07	1.754E-07	1.215E-07	8.981E-08	6.949E-08	5.566E-08
ESE	2.584E-05	8.292E-06	4.373E-06	2.167E-06	8.508E-07	4.511E-07	2.805E-07	1.924E-07	1.410E-07	1.083E-07	8.624E-08
SE	4.168E-05	1.343E-05	7.003E-06	3.446E-06	1.346E-06	7.111E-07	4.410E-07	3.018E-07	2.207E-07	1.693E-07	1.346E-07
SSE	6.004E-05	1.945E-05	1.000E-05	4.877E-06	1.903E-06	1.005E-06	6.235E-07	4.268E-07	3.122E-07	2.395E-07	1.904E-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	1.326E-07	6.512E-08	4.045E-08	2.159E-08	1.374E-08	9.620E-09	7.159E-09	5.556E-09	4.446E-09	3.642E-09	3.040E-09
SSW	6.540E-08	3.113E-08	1.893E-08	9.807E-09	6.119E-09	4.224E-09	3.108E-09	2.390E-09	1.898E-09	1.545E-09	1.282E-09
SW	5.021E-08	2.402E-08	1.465E-08	7.628E-09	4.772E-09	3.300E-09	2.431E-09	1.871E-09	1.486E-09	1.210E-09	1.005E-09
WSW	3.521E-08	1.702E-08	1.045E-08	5.491E-09	3.455E-09	2.398E-09	1.772E-09	1.366E-09	1.087E-09	8.863E-10	7.363E-10
W	4.542E-08	2.140E-08	1.290E-08	6.602E-09	4.077E-09	2.790E-09	2.039E-09	1.558E-09	1.231E-09	9.977E-10	8.247E-10
WNW	3.562E-08	1.724E-08	1.060E-08	5.573E-09	3.508E-09	2.436E-09	1.800E-09	1.389E-09	1.106E-09	9.019E-10	7.496E-10
NW	7.022E-08	3.435E-08	2.128E-08	1.131E-08	7.169E-09	5.007E-09	3.718E-09	2.880E-09	2.301E-09	1.883E-09	1.569E-09
MNW	1.571E-07	7.933E-08	5.022E-08	2.747E-08	1.775E-08	1.257E-08	9.438E-09	7.373E-09	5.932E-09	4.881E-09	4.088E-09
N	2.024E-07	1.020E-07	6.452E-08	3.524E-08	2.276E-08	1.612E-08	1.210E-08	9.454E-09	7.609E-09	6.265E-09	5.251E-09
NNE	1.304E-07	6.619E-08	4.204E-08	2.308E-08	1.496E-08	1.061E-08	7.974E-09	6.236E-09	5.020E-09	4.133E-09	3.463E-09
NE	7.614E-08	3.845E-08	2.434E-08	1.332E-08	8.608E-09	6.098E-09	4.578E-09	3.577E-09	2.879E-09	2.369E-09	1.985E-09
ENE	6.141E-08	3.082E-08	1.942E-08	1.056E-08	6.796E-09	4.799E-09	3.593E-09	2.802E-09	2.251E-09	1.850E-09	1.548E-09
E	4.579E-08	2.292E-08	1.442E-08	7.827E-09	5.034E-09	3.552E-09	2.659E-09	2.072E-09	1.664E-09	1.367E-09	1.144E-09
ESE	7.057E-08	3.460E-08	2.148E-08	1.145E-08	7.275E-09	5.092E-09	3.788E-09	2.940E-09	2.353E-09	1.928E-09	1.610E-09
SE	1.100E-07	5.367E-08	3.320E-08	1.762E-08	1.116E-08	7.794E-09	5.787E-09	4.483E-09	3.583E-09	2.932E-09	2.445E-09
SSE	1.556E-07	7.599E-08	4.703E-08	2.497E-08	1.583E-08	1.105E-08	8.205E-09	6.354E-09	5.076E-09	4.152E-09	3.460E-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	8.152E-06	1.811E-06	5.458E-07	2.691E-07	1.635E-07	6.916E-08	2.229E-08	9.733E-09	5.591E-09	3.657E-09
SSW	4.500E-06	9.922E-07	2.849E-07	1.366E-07	8.132E-08	3.332E-08	1.019E-08	4.283E-09	2.407E-09	1.552E-09
SW	3.422E-06	7.484E-07	2.167E-07	1.044E-07	6.234E-08	2.568E-08	7.920E-09	3.345E-09	1.884E-09	1.216E-09
WSW	2.302E-06	5.060E-07	1.490E-07	7.246E-08	4.358E-08	1.814E-08	5.689E-09	2.429E-09	1.376E-09	8.903E-10
W	3.205E-06	7.078E-07	2.011E-07	9.567E-08	5.663E-08	2.296E-08	6.880E-09	2.833E-09	1.571E-09	1.003E-09
WNW	2.326E-06	5.118E-07	1.506E-07	7.326E-08	4.409E-08	1.837E-08	5.772E-09	2.467E-09	1.399E-09	9.059E-10
NW	4.291E-06	9.690E-07	2.907E-07	1.429E-07	8.663E-08	3.651E-08	1.168E-08	5.068E-09	2.899E-09	1.891E-09
MNW	8.502E-06	1.923E-06	6.106E-07	3.097E-07	1.919E-07	8.367E-08	2.821E-08	1.270E-08	7.414E-09	4.899E-09
N	1.095E-05	2.497E-06	7.901E-07	4.000E-07	2.475E-07	1.077E-07	3.620E-08	1.628E-08	9.507E-09	6.288E-09
NNE	6.978E-06	1.565E-06	5.019E-07	2.559E-07	1.591E-07	6.973E-08	2.368E-08	1.072E-08	6.269E-09	4.148E-09
NE	4.215E-06	9.346E-07	2.963E-07	1.502E-07	9.304E-08	4.056E-08	1.367E-08	6.159E-09	3.597E-09	2.378E-09
ENE	3.354E-06	7.687E-07	2.416E-07	1.218E-07	7.517E-08	3.255E-08	1.085E-08	4.849E-09	2.818E-09	1.857E-09
E	2.616E-06	5.820E-07	1.814E-07	9.113E-08	5.610E-08	2.423E-08	8.051E-09	3.590E-09	2.084E-09	1.373E-09
ESE	4.264E-06	9.657E-07	2.908E-07	1.433E-07	8.698E-08	3.676E-08	1.182E-08	5.153E-09	2.959E-09	1.936E-09
SE	6.851E-06	1.531E-06	4.573E-07	2.243E-07	1.358E-07	5.709E-08	1.821E-08	7.889E-09	4.513E-09	2.944E-09
SSE	9.825E-06	2.165E-06	6.466E-07	3.172E-07	1.920E-07	8.081E-08	2.581E-08	1.119E-08	6.396E-09	4.169E-09

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2017
 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	2.891E-07	9.775E-08	5.019E-08	2.386E-08	8.571E-09	4.250E-09	2.503E-09	1.639E-09	1.153E-09	8.545E-10	6.585E-10	
SSW	1.742E-07	5.890E-08	3.024E-08	1.438E-08	5.164E-09	2.561E-09	1.508E-09	9.875E-10	6.948E-10	5.149E-10	3.968E-10	
SW	1.098E-07	3.714E-08	1.907E-08	9.066E-09	3.257E-09	1.615E-09	9.509E-10	6.227E-10	4.381E-10	3.247E-10	2.502E-10	
WSW	5.515E-08	1.865E-08	9.575E-09	4.552E-09	1.635E-09	8.109E-10	4.775E-10	3.127E-10	2.200E-10	1.630E-10	1.256E-10	
W	9.034E-08	3.055E-08	1.569E-08	7.457E-09	2.679E-09	1.328E-09	7.822E-10	5.122E-10	3.604E-10	2.671E-10	2.058E-10	
WNV	6.158E-08	2.082E-08	1.069E-08	5.083E-09	1.826E-09	9.054E-10	5.331E-10	3.491E-10	2.456E-10	1.820E-10	1.403E-10	
NW	1.220E-07	4.126E-08	2.118E-08	1.007E-08	3.617E-09	1.794E-09	1.056E-09	6.917E-10	4.867E-10	3.607E-10	2.779E-10	
NNW	1.659E-07	5.608E-08	2.880E-08	1.369E-08	4.918E-09	2.439E-09	1.436E-09	9.403E-10	6.616E-10	4.903E-10	3.778E-10	
N	2.305E-07	7.796E-08	4.003E-08	1.903E-08	6.836E-09	3.390E-09	1.996E-09	1.307E-09	9.197E-10	6.816E-10	5.252E-10	
NNE	1.184E-07	4.002E-08	2.055E-08	9.769E-09	3.509E-09	1.740E-09	1.025E-09	6.710E-10	4.721E-10	3.499E-10	2.696E-10	
NE	8.712E-08	2.946E-08	1.513E-08	7.191E-09	2.583E-09	1.281E-09	7.543E-10	4.939E-10	3.475E-10	2.575E-10	1.985E-10	
ENE	5.898E-08	1.994E-08	1.024E-08	4.868E-09	1.749E-09	8.672E-10	5.106E-10	3.343E-10	2.353E-10	1.744E-10	1.344E-10	
E	5.226E-08	1.767E-08	9.075E-09	4.314E-09	1.550E-09	7.685E-10	4.525E-10	2.963E-10	2.085E-10	1.545E-10	1.191E-10	
ESE	1.390E-07	4.701E-08	2.413E-08	1.147E-08	4.121E-09	2.044E-09	1.204E-09	7.880E-10	5.545E-10	4.109E-10	3.167E-10	
SE	2.596E-07	8.778E-08	4.507E-08	2.143E-08	7.696E-09	3.817E-09	2.247E-09	1.472E-09	1.035E-09	7.674E-10	5.913E-10	
SSE	3.022E-07	1.022E-07	5.247E-08	2.495E-08	8.960E-09	4.444E-09	2.616E-09	1.713E-09	1.206E-09	8.934E-10	6.885E-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	5.232E-10	2.324E-10	1.408E-10	7.116E-11	4.307E-11	2.888E-11	2.069E-11	1.554E-11	1.208E-11	9.650E-12	7.877E-12	
SSW	3.152E-10	1.400E-10	8.483E-11	4.288E-11	2.595E-11	1.740E-11	1.247E-11	9.362E-12	7.279E-12	5.815E-12	4.746E-12	
SW	1.988E-10	8.831E-11	5.349E-11	2.704E-11	1.636E-11	1.097E-11	7.862E-12	5.904E-12	4.590E-12	3.667E-12	2.993E-12	
WSW	9.982E-11	4.434E-11	2.686E-11	1.358E-11	8.217E-12	5.509E-12	3.948E-12	2.964E-12	2.305E-12	1.841E-12	1.503E-12	
W	1.635E-10	7.264E-11	4.400E-11	2.224E-11	1.346E-11	9.025E-12	6.467E-12	4.856E-12	3.776E-12	3.016E-12	2.462E-12	
WNV	1.114E-10	4.951E-11	2.999E-11	1.516E-11	9.175E-12	6.151E-12	4.408E-12	3.310E-12	2.573E-12	2.056E-12	1.678E-12	
NW	2.208E-10	9.809E-11	5.942E-11	3.003E-11	1.818E-11	1.219E-11	8.733E-12	6.558E-12	5.099E-12	4.073E-12	3.324E-12	
NNW	3.002E-10	1.333E-10	8.078E-11	4.083E-11	2.471E-11	1.657E-11	1.187E-11	8.915E-12	6.931E-12	5.537E-12	4.519E-12	
N	4.173E-10	1.854E-10	1.123E-10	5.676E-11	3.435E-11	2.303E-11	1.650E-11	1.239E-11	9.635E-12	7.697E-12	6.282E-12	
NNE	2.142E-10	9.516E-11	5.764E-11	2.914E-11	1.736E-11	1.182E-11	8.472E-12	6.361E-12	4.946E-12	3.951E-12	3.225E-12	
NE	1.577E-10	7.004E-11	4.243E-11	2.145E-11	1.298E-11	8.703E-12	6.236E-12	4.683E-12	3.641E-12	2.908E-12	2.374E-12	
ENE	1.067E-10	4.742E-11	2.872E-11	1.452E-11	8.787E-12	5.892E-12	4.222E-12	3.170E-12	2.465E-12	1.969E-12	1.607E-12	
E	9.459E-11	4.202E-11	2.545E-11	1.287E-11	7.787E-12	5.221E-12	3.741E-12	2.809E-12	2.184E-12	1.745E-12	1.424E-12	
ESE	2.516E-10	1.118E-10	6.770E-11	3.422E-11	2.071E-11	1.389E-11	9.950E-12	7.472E-12	5.809E-12	4.641E-12	3.788E-12	
SE	4.698E-10	2.087E-10	1.264E-10	6.390E-11	3.867E-11	2.593E-11	1.858E-11	1.395E-11	1.085E-11	8.665E-12	7.073E-12	
SSE	5.470E-10	2.430E-10	1.472E-10	7.439E-11	4.503E-11	3.019E-11	2.163E-11	1.624E-11	1.263E-11	1.009E-11	8.235E-12	

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.906E-08	1.005E-08	2.623E-09	1.178E-09	6.665E-10	2.563E-10	7.415E-11	2.939E-11	1.569E-11	9.713E-12
SSW	2.956E-08	6.055E-09	1.581E-09	7.099E-10	4.016E-10	1.544E-10	4.468E-11	1.771E-11	9.456E-12	5.853E-12
SW	1.864E-08	3.818E-09	9.967E-10	4.477E-10	2.532E-10	9.739E-11	2.817E-11	1.117E-11	5.963E-12	3.691E-12
WSW	9.359E-09	1.917E-09	5.005E-10	2.248E-10	1.272E-10	4.890E-11	1.415E-11	5.607E-12	2.994E-12	1.853E-12
W	1.533E-08	3.141E-09	8.199E-10	3.682E-10	2.083E-10	8.011E-11	2.317E-11	9.185E-12	4.905E-12	3.036E-12
WNV	1.045E-08	2.141E-09	5.588E-10	2.510E-10	1.420E-10	5.460E-11	1.579E-11	6.260E-12	3.343E-12	2.069E-12
NW	2.071E-08	4.241E-09	1.107E-09	4.973E-10	2.813E-10	1.082E-10	3.130E-11	1.240E-11	6.624E-12	4.100E-12
NNW	2.815E-08	5.765E-09	1.505E-09	6.760E-10	3.824E-10	1.471E-10	4.254E-11	1.686E-11	9.004E-12	5.573E-12
N	3.913E-08	8.014E-09	2.092E-09	9.396E-10	5.316E-10	2.044E-10	5.914E-11	2.344E-11	1.252E-11	7.747E-12
NNE	2.009E-08	4.114E-09	1.074E-09	4.824E-10	2.729E-10	1.049E-10	3.036E-11	1.203E-11	6.425E-12	3.977E-12
NE	1.478E-08	3.028E-09	7.906E-10	3.551E-10	2.009E-10	7.724E-11	2.235E-11	8.857E-12	4.730E-12	2.927E-12
ENE	1.001E-08	2.050E-09	5.352E-10	2.404E-10	1.360E-10	5.229E-11	1.513E-11	5.996E-12	3.202E-12	1.982E-12
E	8.870E-09	1.817E-09	4.743E-10	2.130E-10	1.205E-10	4.634E-11	1.341E-11	5.313E-12	2.837E-12	1.756E-12
ESE	2.359E-08	4.832E-09	1.261E-09	5.665E-10	3.205E-10	1.233E-10	3.566E-11	1.413E-11	7.547E-12	4.671E-12
SE	4.405E-08	9.023E-09	2.356E-09	1.058E-09	5.985E-10	2.302E-10	6.658E-11	2.639E-11	1.409E-11	8.722E-12
SSE	5.129E-08	1.051E-08	2.742E-09	1.232E-09	6.968E-10	2.680E-10	7.752E-11	3.072E-11	1.641E-11	1.015E-11

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VENTS GROUND LEVEL RELEASES - JAN-MAR 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DIST. (MI)	X/Q	X/Q	X/Q	D/Q
				(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	4.3E-08
A	Site Boundary	SSW	.82	4.1E-06	4.1E-06	3.7E-06	2.4E-08
A	Site Boundary	SW	.97	2.1E-06	2.1E-06	1.8E-06	9.7E-09
A	Site Boundary	WSW	.93	1.6E-06	1.6E-06	1.4E-06	5.6E-09
A	Site Boundary	W	.91	2.3E-06	2.3E-06	2.0E-06	9.4E-09
A	Site Boundary	WNW	.94	1.6E-06	1.5E-06	1.4E-06	6.0E-09
A	Site Boundary	NW	.81	4.1E-06	4.1E-06	3.6E-06	1.7E-08
A	Site Boundary	NNW	.69	1.1E-05	1.1E-05	9.9E-06	3.3E-08
A	Site Boundary	N	.67	1.5E-05	1.5E-05	1.3E-05	4.8E-08
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	1.0E-05	3.0E-08
A	Site Boundary	NE	.62	6.4E-06	6.4E-06	5.8E-06	2.1E-08
A	Site Boundary	ENE	.59	5.6E-06	5.6E-06	5.0E-06	1.5E-08
A	Site Boundary	E	.53	5.3E-06	5.3E-06	4.8E-06	1.6E-08
A	Site Boundary	ESE	.54	8.1E-06	8.1E-06	7.4E-06	4.2E-08
A	Site Boundary	SE	.65	9.8E-06	9.8E-06	8.8E-06	5.7E-08
A	Site Boundary	SSE	.81	9.3E-06	9.2E-06	8.2E-06	4.3E-08
A	Nearest Res	SSW	3.00	2.3E-07	2.3E-07	1.9E-07	9.9E-10
A	Nearest Res	SW	1.00	2.0E-06	1.9E-06	1.7E-06	9.1E-09
A	Nearest Res	WSW	2.50	1.8E-07	1.7E-07	1.4E-07	4.8E-10
A	Nearest Res	W	1.00	1.9E-06	1.9E-06	1.6E-06	7.5E-09
A	Nearest Res	WNW	1.70	4.0E-07	4.0E-07	3.4E-07	1.3E-09
A	Nearest Res	NW	.90	3.2E-06	3.2E-06	2.8E-06	1.3E-08
A	Nearest Res	NNW	1.90	1.3E-06	1.2E-06	1.0E-06	2.8E-09
A	Nearest Res	N	2.90	7.2E-07	7.0E-07	5.7E-07	1.4E-09
A	Nearest Res	NNE	1.70	1.3E-06	1.3E-06	1.1E-06	2.6E-09
A	Nearest Res	ENE	1.70	6.2E-07	6.2E-07	5.2E-07	1.3E-09
A	Nearest Res	E	2.20	2.8E-07	2.7E-07	2.3E-07	6.1E-10
A	Nearest Res	SE	2.80	4.4E-07	4.3E-07	3.5E-07	1.7E-09
A	Nearest Cow	NNW	3.50	3.9E-07	3.8E-07	3.1E-07	6.6E-10
A	Nearest Garde	SSW	3.00	2.3E-07	2.3E-07	1.9E-07	9.9E-10
A	Nearest Garde	SW	2.20	3.4E-07	3.3E-07	2.8E-07	1.3E-09
A	Nearest Garde	WSW	2.50	1.8E-07	1.7E-07	1.4E-07	4.8E-10
A	Nearest Garde	WNW	1.70	4.0E-07	4.0E-07	3.4E-07	1.3E-09
A	Nearest Garde	NW	2.00	5.5E-07	5.4E-07	4.5E-07	1.8E-09
A	Nearest Garde	NNW	2.80	5.9E-07	5.8E-07	4.7E-07	1.1E-09
A	Nearest Garde	ESE	2.30	4.1E-07	4.1E-07	3.3E-07	1.5E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

April-June 2017

VENTS GROUND LEVEL RELEASES - APR-JUN 2017
 NO 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	6.701E-05	2.129E-05	1.112E-05	5.547E-06	2.285E-06	1.259E-06	8.086E-07	5.705E-07	4.286E-07	3.369E-07	2.739E-07
SSW	2.302E-05	8.182E-06	4.465E-06	2.239E-06	8.753E-07	4.645E-07	2.898E-07	1.996E-07	1.470E-07	1.135E-07	9.086E-08
SW	2.193E-05	7.385E-06	3.908E-06	1.941E-06	7.651E-07	4.088E-07	2.565E-07	1.776E-07	1.313E-07	1.018E-07	8.178E-08
WSW	1.104E-05	3.971E-06	2.157E-06	1.077E-06	4.179E-07	2.206E-07	1.371E-07	9.409E-08	6.908E-08	5.321E-08	4.249E-08
W	1.243E-05	4.247E-06	2.342E-06	1.189E-06	4.721E-07	2.533E-07	1.594E-07	1.106E-07	8.195E-08	6.363E-08	5.116E-08
WNW	1.108E-05	3.741E-06	2.036E-06	1.026E-06	4.034E-07	2.151E-07	1.347E-07	9.314E-08	6.880E-08	5.328E-08	4.276E-08
NW	1.637E-05	5.567E-06	3.001E-06	1.505E-06	5.962E-07	3.196E-07	2.010E-07	1.394E-07	1.033E-07	8.019E-08	6.448E-08
NNW	4.896E-05	1.585E-05	8.431E-06	4.233E-06	1.726E-06	9.441E-07	6.030E-07	4.236E-07	3.171E-07	2.484E-07	2.014E-07
N	6.888E-05	2.182E-05	1.152E-05	5.775E-06	2.371E-06	1.303E-06	8.357E-07	5.888E-07	4.419E-07	3.471E-07	2.819E-07
NNE	4.884E-05	1.508E-05	7.847E-06	3.924E-06	1.632E-06	9.047E-07	5.838E-07	4.134E-07	3.116E-07	2.456E-07	2.001E-07
NE	2.903E-05	8.763E-06	4.385E-06	2.158E-06	9.196E-07	5.181E-07	3.383E-07	2.418E-07	1.836E-07	1.456E-07	1.193E-07
ENE	1.645E-05	5.092E-06	2.598E-06	1.286E-06	5.392E-07	3.006E-07	1.947E-07	1.383E-07	1.045E-07	8.254E-08	6.738E-08
E	2.685E-05	8.278E-06	4.264E-06	2.122E-06	8.871E-07	4.935E-07	3.192E-07	2.265E-07	1.710E-07	1.350E-07	1.101E-07
ESE	4.806E-05	1.456E-05	7.383E-06	3.658E-06	1.547E-06	8.674E-07	5.642E-07	4.020E-07	3.045E-07	2.410E-07	1.971E-07
SE	6.732E-05	2.064E-05	1.071E-05	5.365E-06	2.246E-06	1.250E-06	8.089E-07	5.740E-07	4.333E-07	3.419E-07	2.789E-07
SSE	1.086E-04	3.306E-05	1.691E-05	8.406E-06	3.532E-06	1.972E-06	1.279E-06	9.089E-07	6.872E-07	5.430E-07	4.434E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.285E-07	1.211E-07	8.018E-08	4.740E-08	3.279E-08	2.469E-08	1.960E-08	1.614E-08	1.365E-08	1.178E-08	1.033E-08
SSW	7.477E-08	3.753E-08	2.391E-08	1.338E-08	8.891E-09	6.489E-09	5.022E-09	4.047E-09	3.358E-09	2.850E-09	2.462E-09
SW	6.752E-08	3.440E-08	2.217E-08	1.264E-08	8.536E-09	6.312E-09	4.940E-09	4.019E-09	3.364E-09	2.878E-09	2.503E-09
WSW	3.489E-08	1.737E-08	1.100E-08	6.104E-09	4.035E-09	2.932E-09	2.261E-09	1.817E-09	1.504E-09	1.273E-09	1.097E-09
W	4.228E-08	2.157E-08	1.390E-08	7.911E-09	5.325E-09	3.925E-09	3.062E-09	2.485E-09	2.074E-09	1.770E-09	1.536E-09
WNW	3.527E-08	1.789E-08	1.148E-08	6.510E-09	4.381E-09	3.228E-09	2.519E-09	2.044E-09	1.706E-09	1.456E-09	1.264E-09
NW	5.330E-08	2.725E-08	1.760E-08	1.005E-08	6.780E-09	5.008E-09	3.915E-09	3.183E-09	2.662E-09	2.275E-09	1.977E-09
NNW	1.676E-07	8.800E-08	5.790E-08	3.392E-08	2.331E-08	1.746E-08	1.381E-08	1.133E-08	9.555E-09	8.224E-09	7.194E-09
N	2.351E-07	1.243E-07	8.220E-08	4.851E-08	3.352E-08	2.521E-08	2.000E-08	1.646E-08	1.391E-08	1.200E-08	1.051E-08
NNE	1.673E-07	8.940E-08	5.953E-08	3.547E-08	2.466E-08	1.864E-08	1.484E-08	1.225E-08	1.039E-08	8.979E-09	7.886E-09
NE	1.002E-07	5.443E-08	3.665E-08	2.216E-08	1.556E-08	1.184E-08	9.487E-09	7.870E-09	6.698E-09	5.812E-09	5.121E-09
ENE	5.642E-08	3.030E-08	2.025E-08	1.212E-08	8.452E-09	6.403E-09	5.110E-09	4.226E-09	3.587E-09	3.105E-09	2.730E-09
E	9.214E-08	4.940E-08	3.297E-08	1.970E-08	1.373E-08	1.039E-08	8.283E-09	6.845E-09	5.807E-09	5.024E-09	4.415E-09
ESE	1.653E-07	8.929E-08	5.990E-08	3.603E-08	2.521E-08	1.914E-08	1.530E-08	1.267E-08	1.077E-08	9.333E-09	8.214E-09
SE	2.334E-07	1.250E-07	8.333E-08	4.972E-08	3.459E-08	2.616E-08	2.084E-08	1.721E-08	1.459E-08	1.262E-08	1.108E-08
SSE	3.714E-07	1.997E-07	1.336E-07	8.006E-08	5.587E-08	4.235E-08	3.380E-08	2.796E-08	2.374E-08	2.056E-08	1.808E-08

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.090E-05	2.554E-06	8.334E-07	4.342E-07	2.757E-07	1.268E-07	4.819E-08	2.481E-08	1.618E-08	1.180E-08
SSW	4.302E-06	9.959E-07	3.003E-07	1.493E-07	9.162E-08	3.975E-08	1.372E-08	6.543E-09	4.063E-09	2.857E-09
SW	3.806E-06	8.681E-07	2.655E-07	1.333E-07	8.244E-08	3.633E-08	1.293E-08	6.356E-09	4.033E-09	2.883E-09
WSW	2.080E-06	4.767E-07	1.422E-07	7.018E-08	4.285E-08	1.843E-08	6.273E-09	2.958E-09	1.824E-09	1.276E-09
W	2.253E-06	5.342E-07	1.649E-07	8.316E-08	5.156E-08	2.276E-08	8.093E-09	3.953E-09	2.493E-09	1.773E-09
WNW	1.966E-06	4.580E-07	1.395E-07	6.985E-08	4.310E-08	1.890E-08	6.669E-09	3.252E-09	2.051E-09	1.459E-09
NW	2.906E-06	6.752E-07	2.080E-07	1.048E-07	6.499E-08	2.875E-08	1.027E-08	5.043E-09	3.194E-09	2.279E-09
NNW	8.214E-06	1.936E-06	6.222E-07	3.214E-07	2.028E-07	9.232E-08	3.453E-08	1.756E-08	1.136E-08	8.237E-09
N	1.125E-05	2.653E-06	8.616E-07	4.478E-07	2.839E-07	1.302E-07	4.933E-08	2.534E-08	1.650E-08	1.201E-08
NNE	7.711E-06	1.818E-06	6.012E-07	3.156E-07	2.014E-07	9.344E-08	3.601E-08	1.873E-08	1.228E-08	8.991E-09
NE	4.368E-06	1.016E-06	3.476E-07	1.858E-07	1.200E-07	5.670E-08	2.244E-08	1.189E-08	7.886E-09	5.819E-09
ENE	2.569E-06	5.991E-07	2.004E-07	1.058E-07	6.781E-08	3.163E-08	1.229E-08	6.432E-09	4.235E-09	3.109E-09
E	4.204E-06	9.866E-07	3.286E-07	1.731E-07	1.108E-07	5.159E-08	2.000E-08	1.044E-08	6.860E-09	5.031E-09
ESE	7.322E-06	1.714E-06	5.802E-07	3.082E-07	1.983E-07	9.312E-08	3.652E-08	1.922E-08	1.270E-08	9.344E-09
SE	1.054E-05	2.496E-06	8.326E-07	4.387E-07	2.807E-07	1.305E-07	5.047E-08	2.628E-08	1.725E-08	1.263E-08
SSE	1.672E-05	3.922E-06	1.316E-06	6.956E-07	4.463E-07	2.085E-07	8.121E-08	4.254E-08	2.802E-08	2.058E-08

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VENTS GROUND LEVEL RELEASES - APR-JUN 2017
 2.260 DAY DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.687E-05	2.121E-05	1.106E-05	5.505E-06	2.259E-06	1.239E-06	7.926E-07	5.568E-07	4.166E-07	3.260E-07	2.639E-07
SSW	2.299E-05	8.165E-06	4.451E-06	2.230E-06	8.696E-07	4.605E-07	2.866E-07	1.970E-07	1.447E-07	1.115E-07	8.905E-08
SW	2.190E-05	7.364E-06	3.892E-06	1.930E-06	7.586E-07	4.041E-07	2.527E-07	1.744E-07	1.285E-07	9.932E-08	7.952E-08
WSW	1.103E-05	3.962E-06	2.149E-06	1.072E-06	4.149E-07	2.185E-07	1.354E-07	9.268E-08	6.786E-08	5.214E-08	4.152E-08
W	1.241E-05	4.234E-06	2.331E-06	1.182E-06	4.676E-07	2.501E-07	1.568E-07	1.084E-07	8.007E-08	6.196E-08	4.966E-08
WNW	1.106E-05	3.731E-06	2.027E-06	1.020E-06	3.998E-07	2.125E-07	1.327E-07	9.142E-08	6.731E-08	5.196E-08	4.156E-08
NW	1.635E-05	5.552E-06	2.989E-06	1.496E-06	5.911E-07	3.159E-07	1.981E-07	1.369E-07	1.011E-07	7.824E-08	6.271E-08
NNW	4.887E-05	1.580E-05	8.387E-06	4.204E-06	1.708E-06	9.305E-07	5.920E-07	4.142E-07	3.089E-07	2.410E-07	1.946E-07
N	6.875E-05	2.174E-05	1.146E-05	5.737E-06	2.346E-06	1.285E-06	8.208E-07	5.761E-07	4.308E-07	3.370E-07	2.727E-07
NNE	4.873E-05	1.501E-05	7.797E-06	3.891E-06	1.610E-06	8.887E-07	5.708E-07	4.024E-07	3.019E-07	2.368E-07	1.920E-07
NE	2.896E-05	8.720E-06	4.354E-06	2.138E-06	9.064E-07	5.081E-07	3.301E-07	2.347E-07	1.773E-07	1.399E-07	1.141E-07
ENE	1.642E-05	5.071E-06	2.583E-06	1.276E-06	5.326E-07	2.956E-07	1.907E-07	1.348E-07	1.014E-07	7.976E-08	6.482E-08
E	2.680E-05	8.244E-06	4.238E-06	2.105E-06	8.761E-07	4.853E-07	3.126E-07	2.208E-07	1.659E-07	1.304E-07	1.059E-07
ESE	4.795E-05	1.449E-05	7.333E-06	3.626E-06	1.526E-06	8.513E-07	5.510E-07	3.907E-07	2.945E-07	2.320E-07	1.888E-07
SE	6.716E-05	2.055E-05	1.064E-05	5.317E-06	2.215E-06	1.227E-06	7.904E-07	5.582E-07	4.194E-07	3.293E-07	2.673E-07
SSE	1.083E-04	3.290E-05	1.679E-05	8.326E-06	3.481E-06	1.933E-06	1.247E-06	8.822E-07	6.636E-07	5.216E-07	4.238E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.192E-07	1.137E-07	7.372E-08	4.180E-08	2.776E-08	2.009E-08	1.535E-08	1.218E-08	9.935E-09	8.279E-09	7.016E-09
SSW	7.310E-08	3.627E-08	2.284E-08	1.249E-08	8.114E-09	5.790E-09	4.384E-09	3.458E-09	2.809E-09	2.335E-09	1.976E-09
SW	6.544E-08	3.278E-08	2.077E-08	1.145E-08	7.479E-09	5.353E-09	4.058E-09	3.201E-09	2.599E-09	2.158E-09	1.824E-09
WSW	3.400E-08	1.671E-08	1.044E-08	5.641E-09	3.632E-09	2.571E-09	1.933E-09	1.514E-09	1.222E-09	1.009E-09	8.489E-10
W	4.089E-08	2.051E-08	1.300E-08	7.151E-09	4.659E-09	3.326E-09	2.515E-09	1.980E-09	1.604E-09	1.329E-09	1.121E-09
WNW	3.417E-08	1.705E-08	1.077E-08	5.911E-09	3.855E-09	2.755E-09	2.086E-09	1.644E-09	1.335E-09	1.108E-09	9.359E-10
NW	5.167E-08	2.599E-08	1.652E-08	9.129E-09	5.970E-09	4.276E-09	3.244E-09	2.561E-09	2.081E-09	1.729E-09	1.462E-09
NNW	1.613E-07	8.302E-08	5.355E-08	3.017E-08	1.996E-08	1.440E-08	1.099E-08	8.708E-09	7.099E-09	5.913E-09	5.010E-09
N	2.265E-07	1.175E-07	7.622E-08	4.332E-08	2.885E-08	2.095E-08	1.606E-08	1.278E-08	1.046E-08	8.747E-09	7.438E-09
NNE	1.598E-07	8.340E-08	5.426E-08	3.089E-08	2.055E-08	1.488E-08	1.137E-08	9.023E-09	7.357E-09	6.126E-09	5.188E-09
NE	9.533E-08	5.049E-08	3.317E-08	1.910E-08	1.279E-08	9.306E-09	7.134E-09	5.672E-09	4.633E-09	3.863E-09	3.274E-09
ENE	5.404E-08	2.838E-08	1.855E-08	1.064E-08	7.116E-09	5.177E-09	3.973E-09	3.164E-09	2.589E-09	2.163E-09	1.837E-09
E	8.823E-08	4.627E-08	3.022E-08	1.730E-08	1.156E-08	8.407E-09	6.449E-09	5.134E-09	4.199E-09	3.508E-09	2.980E-09
ESE	1.575E-07	8.304E-08	5.438E-08	3.120E-08	2.085E-08	1.514E-08	1.160E-08	9.215E-09	7.523E-09	6.271E-09	5.315E-09
SE	2.226E-07	1.164E-07	7.581E-08	4.318E-08	2.873E-08	2.080E-08	1.589E-08	1.260E-08	1.026E-08	8.544E-09	7.233E-09
SSE	3.532E-07	1.851E-07	1.207E-07	6.886E-08	4.580E-08	3.313E-08	2.528E-08	2.002E-08	1.629E-08	1.354E-08	1.144E-08

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.085E-05	2.527E-06	8.174E-07	4.221E-07	2.658E-07	1.194E-07	4.265E-08	2.024E-08	1.223E-08	8.302E-09
SSW	4.289E-06	9.901E-07	2.971E-07	1.470E-07	8.980E-08	3.849E-08	1.284E-08	5.847E-09	3.475E-09	2.343E-09
SW	3.792E-06	8.614E-07	2.617E-07	1.305E-07	8.017E-08	3.470E-08	1.175E-08	5.402E-09	3.217E-09	2.165E-09
WSW	2.073E-06	4.736E-07	1.404E-07	6.896E-08	4.188E-08	1.777E-08	5.815E-09	2.599E-09	1.522E-09	1.013E-09
W	2.243E-06	5.296E-07	1.623E-07	8.128E-08	5.005E-08	2.170E-08	7.343E-09	3.357E-09	1.990E-09	1.334E-09
WNW	1.958E-06	4.543E-07	1.375E-07	6.835E-08	4.190E-08	1.806E-08	6.077E-09	2.781E-09	1.653E-09	1.111E-09
NW	2.895E-06	6.700E-07	2.050E-07	1.026E-07	6.322E-08	2.749E-08	9.367E-09	4.315E-09	2.573E-09	1.735E-09
NNW	8.174E-06	1.917E-06	6.111E-07	3.131E-07	1.960E-07	8.733E-08	3.082E-08	1.452E-08	8.746E-09	5.930E-09
N	1.120E-05	2.628E-06	8.467E-07	4.366E-07	2.746E-07	1.234E-07	4.420E-08	2.110E-08	1.284E-08	8.771E-09
NNE	7.665E-06	1.796E-06	5.882E-07	3.058E-07	1.933E-07	8.743E-08	3.149E-08	1.499E-08	9.060E-09	6.144E-09
NE	4.339E-06	1.003E-06	3.394E-07	1.795E-07	1.148E-07	5.276E-08	1.942E-08	9.367E-09	5.694E-09	3.873E-09
ENE	2.555E-06	5.925E-07	1.963E-07	1.027E-07	6.526E-08	2.972E-08	1.083E-08	5.213E-09	3.176E-09	2.168E-09
E	4.180E-06	9.755E-07	3.219E-07	1.681E-07	1.066E-07	4.846E-08	1.762E-08	8.465E-09	5.154E-09	3.517E-09
ESE	7.276E-06	1.693E-06	5.670E-07	2.982E-07	1.900E-07	8.686E-08	3.175E-08	1.525E-08	9.252E-09	6.288E-09
SE	1.048E-05	2.466E-06	8.140E-07	4.247E-07	2.691E-07	1.220E-07	4.401E-08	2.095E-08	1.265E-08	8.568E-09
SSE	1.661E-05	3.870E-06	1.284E-06	6.720E-07	4.266E-07	1.939E-07	7.014E-08	3.337E-08	2.010E-08	1.358E-08

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VENTS GROUND LEVEL RELEASES - APR-JUN 2017
 8.000 DAY DECAY, DEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE SECTOR	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	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.338E-05	1.942E-05	9.894E-06	4.845E-06	1.934E-06	1.038E-06	6.513E-07	4.500E-07	3.317E-07	2.562E-07	2.049E-07	2.178E-05	7.467E-06	3.975E-06	1.958E-06	7.420E-07	3.837E-07	2.340E-07	1.580E-07	1.142E-07	8.671E-08	6.831E-08
SSW	2.178E-05	7.467E-06	3.975E-06	1.958E-06	7.420E-07	3.837E-07	2.340E-07	1.580E-07	1.142E-07	8.671E-08	6.831E-08	2.074E-05	6.739E-06	3.479E-06	1.696E-06	6.482E-07	3.374E-07	2.069E-07	1.403E-07	1.018E-07	7.761E-08	6.134E-08
SW	2.074E-05	6.739E-06	3.479E-06	1.696E-06	6.482E-07	3.374E-07	2.069E-07	1.403E-07	1.018E-07	7.761E-08	6.134E-08	1.045E-05	3.624E-06	1.920E-06	9.416E-07	3.542E-07	1.822E-07	1.106E-07	7.441E-08	5.363E-08	4.061E-08	3.191E-08
WSW	1.045E-05	3.624E-06	1.920E-06	9.416E-07	3.542E-07	1.822E-07	1.106E-07	7.441E-08	5.363E-08	4.061E-08	3.191E-08	1.176E-05	3.875E-06	2.085E-06	1.039E-06	3.998E-07	2.090E-07	1.285E-07	8.737E-08	6.352E-08	4.847E-08	3.835E-08
W	1.176E-05	3.875E-06	2.085E-06	1.039E-06	3.998E-07	2.090E-07	1.285E-07	8.737E-08	6.352E-08	4.847E-08	3.835E-08	1.048E-05	3.414E-06	1.812E-06	8.963E-07	3.417E-07	1.775E-07	1.087E-07	7.359E-08	5.335E-08	4.061E-08	3.207E-08
WNW	1.048E-05	3.414E-06	1.812E-06	8.963E-07	3.417E-07	1.775E-07	1.087E-07	7.359E-08	5.335E-08	4.061E-08	3.207E-08	1.549E-05	5.080E-06	2.671E-06	1.315E-06	5.051E-07	2.638E-07	1.622E-07	1.102E-07	8.011E-08	6.113E-08	4.837E-08
NW	1.549E-05	5.080E-06	2.671E-06	1.315E-06	5.051E-07	2.638E-07	1.622E-07	1.102E-07	8.011E-08	6.113E-08	4.837E-08	4.631E-05	1.446E-05	7.502E-06	3.698E-06	1.461E-06	7.785E-07	4.859E-07	3.343E-07	2.456E-07	1.891E-07	1.508E-07
NNW	4.631E-05	1.446E-05	7.502E-06	3.698E-06	1.461E-06	7.785E-07	4.859E-07	3.343E-07	2.456E-07	1.891E-07	1.508E-07	6.515E-05	1.991E-05	1.025E-05	5.046E-06	2.008E-06	1.075E-06	6.735E-07	4.648E-07	3.423E-07	2.642E-07	2.111E-07
N	6.515E-05	1.991E-05	1.025E-05	5.046E-06	2.008E-06	1.075E-06	6.735E-07	4.648E-07	3.423E-07	2.642E-07	2.111E-07	4.619E-05	1.375E-05	6.980E-06	3.427E-06	1.381E-06	7.454E-07	4.699E-07	3.259E-07	2.410E-07	1.866E-07	1.495E-07
NNE	4.619E-05	1.375E-05	6.980E-06	3.427E-06	1.381E-06	7.454E-07	4.699E-07	3.259E-07	2.410E-07	1.866E-07	1.495E-07	2.745E-05	7.991E-06	3.900E-06	1.884E-06	7.778E-07	4.267E-07	2.721E-07	1.904E-07	1.419E-07	1.105E-07	8.904E-08
NE	2.745E-05	7.991E-06	3.900E-06	1.884E-06	7.778E-07	4.267E-07	2.721E-07	1.904E-07	1.419E-07	1.105E-07	8.904E-08	1.556E-05	4.644E-06	2.311E-06	1.123E-06	4.563E-07	2.477E-07	1.568E-07	1.091E-07	8.086E-08	6.275E-08	5.038E-08
ENE	1.556E-05	4.644E-06	2.311E-06	1.123E-06	4.563E-07	2.477E-07	1.568E-07	1.091E-07	8.086E-08	6.275E-08	5.038E-08	2.540E-05	7.551E-06	3.793E-06	1.853E-06	7.507E-07	4.067E-07	2.570E-07	1.786E-07	1.323E-07	1.026E-07	8.231E-08
E	2.540E-05	7.551E-06	3.793E-06	1.853E-06	7.507E-07	4.067E-07	2.570E-07	1.786E-07	1.323E-07	1.026E-07	8.231E-08	4.546E-05	1.328E-05	6.566E-06	3.194E-06	1.309E-06	7.144E-07	4.539E-07	3.167E-07	2.354E-07	1.830E-07	1.472E-07
ESE	4.546E-05	1.328E-05	6.566E-06	3.194E-06	1.309E-06	7.144E-07	4.539E-07	3.167E-07	2.354E-07	1.830E-07	1.472E-07	6.367E-05	1.882E-05	9.526E-06	4.684E-06	1.900E-06	1.030E-06	6.509E-07	4.523E-07	3.350E-07	2.597E-07	2.083E-07
SE	6.367E-05	1.882E-05	9.526E-06	4.684E-06	1.900E-06	1.030E-06	6.509E-07	4.523E-07	3.350E-07	2.597E-07	2.083E-07	1.027E-04	3.015E-05	1.504E-05	7.338E-06	2.988E-06	1.624E-06	1.028E-06	7.158E-07	5.309E-07	4.121E-07	3.309E-07
SSE	1.027E-04	3.015E-05	1.504E-05	7.338E-06	2.988E-06	1.624E-06	1.028E-06	7.158E-07	5.309E-07	4.121E-07	3.309E-07											

ANNUAL AVERAGE SECTOR	CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE											
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.683E-07	8.382E-08	5.256E-08	2.840E-08	1.822E-08	1.283E-08	9.588E-09	7.464E-09	5.987E-09	4.914E-09	4.107E-09	5.537E-08	2.620E-08	1.585E-08	8.152E-09	5.054E-09	3.471E-09	2.543E-09	1.948E-09	1.542E-09	1.251E-09	1.036E-09
SSW	5.537E-08	2.620E-08	1.585E-08	8.152E-09	5.054E-09	3.471E-09	2.543E-09	1.948E-09	1.542E-09	1.251E-09	1.036E-09	4.988E-08	2.392E-08	1.461E-08	7.631E-09	4.792E-09	3.322E-09	2.453E-09	1.891E-09	1.504E-09	1.226E-09	1.019E-09
SW	4.988E-08	2.392E-08	1.461E-08	7.631E-09	4.792E-09	3.322E-09	2.453E-09	1.891E-09	1.504E-09	1.226E-09	1.019E-09	2.582E-08	1.211E-08	7.281E-09	3.710E-09	2.285E-09	1.561E-09	1.138E-09	8.684E-10	6.849E-10	5.540E-10	4.572E-10
WSW	2.582E-08	1.211E-08	7.281E-09	3.710E-09	2.285E-09	1.561E-09	1.138E-09	8.684E-10	6.849E-10	5.540E-10	4.572E-10	3.121E-08	1.499E-08	9.159E-09	4.776E-09	2.989E-09	2.067E-09	1.522E-09	1.170E-09	9.289E-10	7.556E-10	6.267E-10
W	3.121E-08	1.499E-08	9.159E-09	4.776E-09	2.989E-09	2.067E-09	1.522E-09	1.170E-09	9.289E-10	7.556E-10	6.267E-10	2.605E-08	1.244E-08	7.573E-09	3.935E-09	2.463E-09	1.703E-09	1.255E-09	9.652E-10	7.667E-10	6.241E-10	5.179E-10
WNW	2.605E-08	1.244E-08	7.573E-09	3.935E-09	2.463E-09	1.703E-09	1.255E-09	9.652E-10	7.667E-10	6.241E-10	5.179E-10	3.938E-08	1.895E-08	1.161E-08	6.073E-09	3.812E-09	2.642E-09	1.950E-09	1.502E-09	1.195E-09	9.739E-10	8.091E-10
NW	3.938E-08	1.895E-08	1.161E-08	6.073E-09	3.812E-09	2.642E-09	1.950E-09	1.502E-09	1.195E-09	9.739E-10	8.091E-10	1.236E-07	6.100E-08	3.802E-08	2.037E-08	1.299E-08	9.111E-09	6.786E-09	5.268E-09	4.216E-09	3.454E-09	2.882E-09
NNW	1.236E-07	6.100E-08	3.802E-08	2.037E-08	1.299E-08	9.111E-09	6.786E-09	5.268E-09	4.216E-09	3.454E-09	2.882E-09	1.734E-07	8.621E-08	5.402E-08	2.917E-08	1.871E-08	1.318E-08	9.855E-09	7.676E-09	6.161E-09	5.060E-09	4.232E-09
N	1.734E-07	8.621E-08	5.402E-08	2.917E-08	1.871E-08	1.318E-08	9.855E-09	7.676E-09	6.161E-09	5.060E-09	4.232E-09	1.231E-07	6.177E-08	3.893E-08	2.117E-08	1.364E-08	9.632E-09	7.213E-09	5.624E-09	4.517E-09	3.711E-09	3.104E-09
NNE	1.231E-07	6.177E-08	3.893E-08	2.117E-08	1.364E-08	9.632E-09	7.213E-09	5.624E-09	4.517E-09	3.711E-09	3.104E-09	7.363E-08	3.755E-08	2.392E-08	1.319E-08	8.569E-09	6.091E-09	4.584E-09	3.589E-09	2.892E-09	2.383E-09	1.998E-09
NE	7.363E-08	3.755E-08	2.392E-08	1.319E-08	8.569E-09	6.091E-09	4.584E-09	3.589E-09	2.892E-09	2.383E-09	1.998E-09	4.154E-08	2.096E-08	1.326E-08	7.250E-09	4.687E-09	3.321E-09	2.494E-09	1.949E-09	1.568E-09	1.291E-09	1.082E-09
ENE	4.154E-08	2.096E-08	1.326E-08	7.250E-09	4.687E-09	3.321E-09	2.494E-09	1.949E-09	1.568E-09	1.291E-09	1.082E-09	6.783E-08	3.417E-08	2.160E-08	1.179E-08	7.614E-09	5.390E-09	4.044E-09	3.159E-09	2.541E-09	2.091E-09	1.751E-09
E	6.783E-08	3.417E-08	2.160E-08	1.179E-08	7.614E-09	5.390E-09	4.044E-09	3.159E-09	2.541E-09	2.091E-09	1.751E-09	1.215E-07	6.164E-08	3.912E-08	2.147E-08	1.391E-08	9.864E-09	7.411E-09	5.794E-09	4.664E-09	3.839E-09	3.216E-09
ESE	1.215E-07	6.164E-08	3.912E-08	2.147E-08	1.391E-08	9.864E-09	7.411E-09	5.794E-09	4.664E-09	3.839E-09	3.216E-09	1.716E-07	8.630E-08	5.446E-08	2.966E-08	1.911E-08	1.350E-08	1.011E-08	7.884E-09	6.333E-09	5.203E-09	4.352E-09
SE	1.716E-07	8.630E-08	5.446E-08	2.966E-08	1.911E-08	1.350E-08	1.011E-08	7.884E-09	6.333E-09	5.203E-09	4.352E-09	2.729E-07	1.378E-07	8.716E-08	4.762E-08	3.075E-08	2.176E-08	1.631E-08	1.273E-08	1.023E-08	8.407E-09	7.034E-09
SSE	2.729E-07	1.378E-07	8.716E-08	4.762E-08	3.075E-08	2.176E-08	1.631E-08	1.273E-08	1.023E-08	8.407E-09	7.034E-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	9.768E-06	2.183E-06	6.738E-07	3.368E-07	2.065E-07	8.871E-08	2.924E-08	1.297E-08	7.508E-09	4.933E-09
SSW	3.855E-06	8.530E-07	2.435E-07	1.162E-07	6.897E-08	2.808E-08	8.486E-09	3.522E-09	1.963E-09	1.258E-09
SW	3.411E-06	7.430E-07	2.151E-07	1.036E-07	6.192E-08	2.555E-08	7.921E-09	3.366E-09	1.904E-09	1.232E-09
WSW	1.864E-06	4.083E-07	1.152E-07	5.461E-08	3.223E-08	1.301E-08	3.870E-09	1.585E-09	8.756E-10	5.569E-10
W	2.018E-06	4.571E-07	1.335E-07	6.460E-08	3.871E-08	1.600E-08	4.956E-09	2.095E-09	1.179E-09	7.592E-10
WNW	1.761E-06	3.920E-07	1.130E-07	5.428E-08	3.237E-08	1.330E-08	4.089E-09	1.726E-09	9.723E-10	6.271E-10
NW	2.604E-06	5.779E-07	1.685E-07	8.147E-08	4.882E-08	2.023E-08	6.298E-09	2.677E-09	1.513E-09	9.784E-10
NNW	7.358E-06	1.655E-06	5.033E-07	2.494E-07	1.521E-07	6.470E-08	2.101E-08	9.216E-09	5.301E-09	3.468E-09
N	1.008E-05	2.268E-06	6.970E-07	3.476E-07	2.129E-07	9.127E-08	3.004E-08	1.333E-08	7.721E-09	5.079E-09
NNE	6.906E-06	1.553E-06	4.857E-07	2.445E-07	1.507E-07	6.525E-08	2.177E			

VENTS GROUND LEVEL RELEASES - APR-JUN 2017
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	2.330E-07	7.881E-08	4.046E-08	1.924E-08	6.910E-09	3.427E-09	2.018E-09	1.321E-09	9.297E-10	6.890E-10	5.309E-10
SSW	1.488E-07	5.033E-08	2.584E-08	1.229E-08	4.413E-09	2.189E-09	1.289E-09	8.438E-10	5.938E-10	4.400E-10	3.391E-10
SW	1.204E-07	4.072E-08	2.091E-08	9.939E-09	3.570E-09	1.770E-09	1.042E-09	6.826E-10	4.803E-10	3.560E-10	2.743E-10
WSW	5.746E-08	1.943E-08	9.976E-09	4.743E-09	1.704E-09	8.449E-10	4.975E-10	3.257E-10	2.292E-10	1.699E-10	1.309E-10
W	4.391E-08	1.485E-08	7.623E-09	3.624E-09	1.302E-09	6.456E-10	3.801E-10	2.489E-10	1.751E-10	1.298E-10	1.000E-10
WNV	5.336E-08	1.804E-08	9.264E-09	4.404E-09	1.582E-09	7.845E-10	4.620E-10	3.025E-10	2.128E-10	1.577E-10	1.216E-10
NW	8.105E-08	2.741E-08	1.407E-08	6.690E-09	2.403E-09	1.192E-09	7.017E-10	4.595E-10	3.233E-10	2.396E-10	1.846E-10
NNW	2.396E-07	8.103E-08	4.161E-08	1.978E-08	7.105E-09	3.524E-09	2.075E-09	1.359E-09	9.559E-10	7.084E-10	5.459E-10
N	3.866E-07	1.307E-07	6.713E-08	3.191E-08	1.146E-08	5.685E-09	3.347E-09	2.192E-09	1.542E-09	1.143E-09	8.808E-10
NNE	1.775E-07	6.004E-08	3.082E-08	1.465E-08	5.264E-09	2.611E-09	1.537E-09	1.006E-09	7.082E-10	5.249E-10	4.045E-10
NE	6.200E-08	2.097E-08	1.076E-08	5.118E-09	1.838E-09	9.117E-10	5.368E-10	3.515E-10	2.473E-10	1.833E-10	1.413E-10
ENE	4.951E-08	1.674E-08	8.597E-09	4.087E-09	1.468E-09	7.281E-10	4.287E-10	2.807E-10	1.975E-10	1.464E-10	1.128E-10
E	8.185E-08	2.768E-08	1.421E-08	6.757E-09	2.427E-09	1.204E-09	7.087E-10	4.640E-10	3.265E-10	2.420E-10	1.865E-10
ESE	1.139E-07	3.851E-08	1.977E-08	9.399E-09	3.376E-09	1.674E-09	9.859E-10	6.456E-10	4.542E-10	3.366E-10	2.594E-10
SE	1.925E-07	6.508E-08	3.342E-08	1.589E-08	5.707E-09	2.830E-09	1.666E-09	1.091E-09	7.678E-10	5.690E-10	4.385E-10
SSE	2.745E-07	9.282E-08	4.766E-08	2.266E-08	8.138E-09	4.036E-09	2.376E-09	1.556E-09	1.095E-09	8.114E-10	6.253E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.218E-10	1.874E-10	1.135E-10	5.737E-11	3.472E-11	2.328E-11	1.668E-11	1.253E-11	9.740E-12	7.780E-12	6.350E-12
SSW	2.694E-10	1.197E-10	7.249E-11	3.664E-11	2.218E-11	1.487E-11	1.065E-11	8.001E-12	6.221E-12	4.969E-12	4.056E-12
SW	2.179E-10	9.681E-11	5.864E-11	2.964E-11	1.794E-11	1.203E-11	8.619E-12	6.472E-12	5.032E-12	4.020E-12	3.281E-12
WSW	1.040E-10	4.620E-11	2.798E-11	1.414E-11	8.561E-12	5.740E-12	4.113E-12	3.088E-12	2.401E-12	1.918E-12	1.566E-12
W	7.947E-11	3.530E-11	2.138E-11	1.081E-11	6.542E-12	4.386E-12	3.143E-12	2.360E-12	1.835E-12	1.466E-12	1.196E-12
WNV	9.657E-11	4.290E-11	2.599E-11	1.313E-11	7.950E-12	5.330E-12	3.819E-12	2.868E-12	2.230E-12	1.781E-12	1.454E-12
NW	1.467E-10	6.516E-11	3.947E-11	1.995E-11	1.208E-11	8.097E-12	5.802E-12	4.356E-12	3.387E-12	2.706E-12	2.208E-12
NNW	4.337E-10	1.927E-10	1.167E-10	5.899E-11	3.570E-11	2.394E-11	1.715E-11	1.288E-11	1.001E-11	8.000E-12	6.530E-12
N	6.997E-10	3.108E-10	1.883E-10	9.517E-11	5.760E-11	3.862E-11	2.767E-11	2.078E-11	1.616E-11	1.291E-11	1.053E-11
NNE	3.213E-10	1.427E-10	8.647E-11	4.370E-11	2.645E-11	1.774E-11	1.271E-11	9.543E-12	7.420E-12	5.927E-12	4.838E-12
NE	1.122E-10	4.985E-11	3.020E-11	1.526E-11	9.238E-12	6.194E-12	4.438E-12	3.333E-12	2.591E-12	2.070E-12	1.689E-12
ENE	8.962E-11	3.981E-11	2.412E-11	1.219E-11	7.377E-12	4.946E-12	3.544E-12	2.661E-12	2.069E-12	1.653E-12	1.349E-12
E	1.481E-10	6.581E-11	3.987E-11	2.015E-11	1.220E-11	8.177E-12	5.859E-12	4.400E-12	3.421E-12	2.733E-12	2.230E-12
ESE	2.061E-10	9.155E-11	5.546E-11	2.803E-11	1.697E-11	1.138E-11	8.151E-12	6.121E-12	4.759E-12	3.802E-12	3.103E-12
SE	3.483E-10	1.547E-10	9.374E-11	4.738E-11	2.868E-11	1.923E-11	1.378E-11	1.035E-11	8.044E-12	6.425E-12	5.244E-12
SSE	4.968E-10	2.207E-10	1.337E-10	6.757E-11	4.090E-11	2.742E-11	1.965E-11	1.475E-11	1.147E-11	9.163E-12	7.479E-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	3.955E-08	8.101E-09	2.115E-09	9.498E-10	5.373E-10	2.066E-10	5.978E-11	2.369E-11	1.265E-11	7.831E-12
SSW	2.526E-08	5.174E-09	1.351E-09	6.067E-10	3.432E-10	1.320E-10	3.818E-11	1.513E-11	8.081E-12	5.002E-12
SW	2.043E-08	4.186E-09	1.093E-09	4.907E-10	2.776E-10	1.068E-10	3.089E-11	1.224E-11	6.537E-12	4.046E-12
WSW	9.751E-09	1.997E-09	5.214E-10	2.342E-10	1.325E-10	5.095E-11	1.474E-11	5.841E-12	3.119E-12	1.931E-12
W	7.451E-09	1.526E-09	3.984E-10	1.789E-10	1.012E-10	3.893E-11	1.126E-11	4.464E-12	2.384E-12	1.475E-12
WNV	9.055E-09	1.855E-09	4.842E-10	2.175E-10	1.230E-10	4.731E-11	1.369E-11	5.424E-12	2.897E-12	1.793E-12
NW	1.375E-08	2.817E-09	7.355E-10	3.303E-10	1.869E-10	7.186E-11	2.079E-11	8.240E-12	4.400E-12	2.724E-12
NNW	4.067E-08	8.330E-09	2.175E-09	9.767E-10	5.525E-10	2.125E-10	6.147E-11	2.436E-11	1.301E-11	8.053E-12
N	6.561E-08	1.344E-08	3.508E-09	1.576E-09	8.914E-10	3.428E-10	9.917E-11	3.931E-11	2.099E-11	1.299E-11
NNE	3.013E-08	6.171E-09	1.611E-09	7.236E-10	4.093E-10	1.574E-10	4.554E-11	1.805E-11	9.638E-12	5.966E-12
NE	1.052E-08	2.155E-09	5.626E-10	2.527E-10	1.430E-10	5.497E-11	1.590E-11	6.303E-12	3.366E-12	2.083E-12
ENE	8.403E-09	1.721E-09	4.493E-10	2.018E-10	1.142E-10	4.390E-11	1.270E-11	5.034E-12	2.688E-12	1.664E-12
E	1.389E-08	2.845E-09	7.428E-10	3.336E-10	1.887E-10	7.258E-11	2.100E-11	8.322E-12	4.444E-12	2.751E-12
ESE	1.932E-08	3.958E-09	1.033E-09	4.641E-10	2.626E-10	1.010E-10	2.921E-11	1.158E-11	6.182E-12	3.826E-12
SE	3.266E-08	6.690E-09	1.747E-09	7.844E-10	4.438E-10	1.707E-10	4.937E-11	1.957E-11	1.045E-11	6.467E-12
SSE	4.658E-08	9.541E-09	2.491E-09	1.119E-09	6.329E-10	2.434E-10	7.041E-11	2.790E-11	1.490E-11	9.223E-12

B250

VENTS GROUND LEVEL RELEASES - APR-JUN 2017
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	9.5E-06	9.5E-06	8.5E-06	3.4E-08
A	Site Boundary	SSW	.82	3.6E-06	3.6E-06	3.2E-06	2.0E-08
A	Site Boundary	SW	.97	2.1E-06	2.1E-06	1.8E-06	1.1E-08
A	Site Boundary	WSW	.93	1.3E-06	1.3E-06	1.1E-06	5.8E-09
A	Site Boundary	W	.91	1.5E-06	1.5E-06	1.3E-06	4.6E-09
A	Site Boundary	WNW	.94	1.2E-06	1.2E-06	1.0E-06	5.2E-09
A	Site Boundary	NW	.81	2.5E-06	2.5E-06	2.2E-06	1.1E-08
A	Site Boundary	NNW	.69	9.6E-06	9.6E-06	8.6E-06	4.8E-08
A	Site Boundary	N	.67	1.4E-05	1.3E-05	1.2E-05	8.0E-08
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	1.0E-05	4.5E-08
A	Site Boundary	NE	.62	5.9E-06	5.9E-06	5.3E-06	1.5E-08
A	Site Boundary	ENE	.59	3.9E-06	3.9E-06	3.5E-06	1.3E-08
A	Site Boundary	E	.53	7.6E-06	7.6E-06	6.9E-06	2.6E-08
A	Site Boundary	ESE	.54	1.3E-05	1.3E-05	1.2E-05	3.4E-08
A	Site Boundary	SE	.65	1.3E-05	1.3E-05	1.2E-05	4.3E-08
A	Site Boundary	SSE	.81	1.4E-05	1.4E-05	1.2E-05	3.9E-08
A	Nearest Res	SSW	3.00	2.0E-07	2.0E-07	1.6E-07	8.4E-10
A	Nearest Res	SW	1.00	1.9E-06	1.9E-06	1.7E-06	9.9E-09
A	Nearest Res	WSW	2.50	1.4E-07	1.4E-07	1.1E-07	5.0E-10
A	Nearest Res	W	1.00	1.2E-06	1.2E-06	1.0E-06	3.6E-09
A	Nearest Res	WNW	1.70	3.1E-07	3.0E-07	2.6E-07	1.2E-09
A	Nearest Res	NW	.90	1.9E-06	1.9E-06	1.7E-06	8.8E-09
A	Nearest Res	NNW	1.90	1.0E-06	1.0E-06	8.7E-07	4.0E-09
A	Nearest Res	N	2.90	6.3E-07	6.1E-07	5.0E-07	2.4E-09
A	Nearest Res	NNE	1.70	1.3E-06	1.2E-06	1.1E-06	3.9E-09
A	Nearest Res	ENE	1.70	4.2E-07	4.1E-07	3.5E-07	1.1E-09
A	Nearest Res	E	2.20	4.1E-07	4.0E-07	3.3E-07	9.6E-10
A	Nearest Res	SE	2.80	6.5E-07	6.4E-07	5.2E-07	1.3E-09
A	Nearest Cow	NNW	3.50	3.2E-07	3.1E-07	2.5E-07	9.6E-10
A	Nearest Garde	SSW	3.00	2.0E-07	2.0E-07	1.6E-07	8.4E-10
A	Nearest Garde	SW	2.20	3.3E-07	3.3E-07	2.7E-07	1.4E-09
A	Nearest Garde	WSW	2.50	1.4E-07	1.4E-07	1.1E-07	5.0E-10
A	Nearest Garde	WNW	1.70	3.1E-07	3.0E-07	2.6E-07	1.2E-09
A	Nearest Garde	NW	2.00	3.2E-07	3.2E-07	2.6E-07	1.2E-09
A	Nearest Garde	NNW	2.80	4.8E-07	4.7E-07	3.8E-07	1.6E-09
A	Nearest Garde	ESE	2.30	6.6E-07	6.5E-07	5.4E-07	1.2E-09

B251

Atmospheric Diffusion Estimates

Ground Level Releases

January-June 2017

VENTS GROUND LEVEL RELEASES - JAN-JUN 2017
 NO DECAY, UNDELETED
 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	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE																																																																																																																																																																					
	S	6.018E-05	1.946E-05	1.021E-05	5.094E-06	2.082E-06	1.141E-06	7.300E-07	5.133E-07	3.847E-07	3.017E-07	2.447E-07	S	SSW	2.516E-05	8.891E-06	4.831E-06	2.419E-06	9.471E-07	5.034E-07	3.145E-07	2.169E-07	1.599E-07	1.236E-07	9.899E-08	SW	2.161E-05	7.381E-06	3.919E-06	1.947E-06	7.678E-07	4.103E-07	2.574E-07	1.781E-07	1.317E-07	1.021E-07	8.202E-08	WSW	1.298E-05	4.507E-06	2.413E-06	1.203E-06	4.742E-07	2.532E-07	1.588E-07	1.098E-07	8.116E-08	6.288E-08	5.047E-08	W	1.543E-05	5.484E-06	3.010E-06	1.515E-06	5.945E-07	3.164E-07	1.978E-07	1.365E-07	1.007E-07	7.786E-08	6.239E-08	WNW	1.267E-05	4.349E-06	2.337E-06	1.167E-06	4.625E-07	2.480E-07	1.560E-07	1.082E-07	8.017E-08	6.225E-08	5.007E-08	NW	2.219E-05	7.416E-06	4.001E-06	2.015E-06	8.083E-07	4.371E-07	2.768E-07	1.930E-07	1.436E-07	1.119E-07	9.032E-08	NNW	5.520E-05	1.732E-05	9.088E-06	4.556E-06	1.888E-06	1.044E-06	6.727E-07	4.757E-07	3.581E-07	2.819E-07	2.294E-07	N	7.355E-05	2.290E-05	1.204E-05	6.050E-06	2.512E-06	1.391E-06	8.966E-07	6.344E-07	4.778E-07	3.763E-07	3.064E-07	NNE	4.995E-05	1.529E-05	7.876E-06	3.926E-06	1.647E-06	9.188E-07	5.955E-07	4.231E-07	3.198E-07	2.526E-07	2.062E-07	NE	2.959E-05	9.066E-06	4.575E-06	2.255E-06	9.535E-07	5.345E-07	3.477E-07	2.478E-07	1.878E-07	1.486E-07	1.215E-07	ENE	2.024E-05	6.234E-06	3.252E-06	1.632E-06	6.826E-07	3.798E-07	2.456E-07	1.742E-07	1.315E-07	1.037E-07	8.461E-08	E	2.235E-05	6.988E-06	3.604E-06	1.791E-06	7.461E-07	4.142E-07	2.676E-07	1.896E-07	1.430E-07	1.128E-07	9.192E-08	ESE	3.763E-05	1.180E-05	6.138E-06	3.064E-06	1.274E-06	7.058E-07	4.552E-07	3.222E-07	2.427E-07	1.912E-07	1.557E-07	SE	5.548E-05	1.762E-05	9.254E-06	4.636E-06	1.910E-06	1.052E-06	6.750E-07	4.760E-07	3.575E-07	2.809E-07	2.282E-07	SSE	8.549E-05	2.703E-05	1.398E-05	6.945E-06	2.870E-06	1.584E-06	1.019E-06	7.196E-07	5.412E-07	4.257E-07	3.463E-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	SSW	SW	WSW	W	WNW	NW	NNW	N	NNE	NE	ENE	E	ESE	SE	SSE																																																																																																																																																																					
	S	2.038E-07	1.073E-07	7.071E-08	4.154E-08	2.861E-08	2.147E-08	1.700E-08	1.397E-08	1.179E-08	1.016E-08	8.895E-09	S	SSW	8.152E-08	4.106E-08	2.623E-08	1.473E-08	9.830E-09	7.195E-09	5.582E-09	4.508E-09	3.749E-09	3.187E-09	2.757E-09	SW	6.770E-08	3.445E-08	2.217E-08	1.261E-08	8.501E-09	6.274E-09	4.903E-09	3.984E-09	3.331E-09	2.846E-09	2.474E-09	WSW	4.164E-08	2.112E-08	1.357E-08	7.683E-09	5.156E-09	3.793E-09	2.955E-09	2.395E-09	1.998E-09	1.704E-09	1.478E-09	W	5.139E-08	2.589E-08	1.654E-08	9.287E-09	6.189E-09	4.526E-09	3.508E-09	2.831E-09	2.352E-09	1.998E-09	1.727E-09	WNW	4.138E-08	2.115E-08	1.366E-08	7.800E-09	5.268E-09	3.894E-09	3.046E-09	2.477E-09	2.072E-09	1.772E-09	1.540E-09	NW	7.487E-08	3.870E-08	2.518E-08	1.452E-08	9.870E-09	7.330E-09	5.756E-09	4.696E-09	3.939E-09	3.376E-09	2.941E-09	NNW	1.916E-07	1.020E-07	6.770E-08	4.016E-08	2.783E-08	2.098E-08	1.668E-08	1.375E-08	1.163E-08	1.005E-08	8.813E-09	N	2.560E-07	1.364E-07	9.064E-08	5.383E-08	3.734E-08	2.817E-08	2.240E-08	1.847E-08	1.563E-08	1.350E-08	1.185E-08	NNE	1.727E-07	9.283E-08	6.206E-08	3.717E-08	2.593E-08	1.964E-08	1.567E-08	1.296E-08	1.100E-08	9.522E-09	8.371E-09	NE	1.020E-07	5.508E-08	3.696E-08	2.224E-08	1.557E-08	1.182E-08	9.454E-09	7.831E-09	6.656E-09	5.770E-09	5.079E-09	ENE	7.079E-08	3.788E-08	2.525E-08	1.505E-08	1.047E-08	7.909E-09	6.299E-09	5.200E-09	4.407E-09	3.810E-09	3.346E-09	E	7.688E-08	4.111E-08	2.740E-08	1.633E-08	1.136E-08	8.586E-09	6.840E-09	5.648E-09	4.788E-09	4.140E-09	3.637E-09	ESE	1.302E-07	6.938E-08	4.613E-08	2.741E-08	1.902E-08	1.435E-08	1.141E-08	9.413E-09	7.971E-09	6.886E-09	6.044E-09	SE	1.903E-07	1.006E-07	6.655E-08	3.926E-08	2.710E-08	2.037E-08	1.615E-08	1.329E-08	1.123E-08	9.683E-09	8.485E-09	SSE	2.891E-07	1.535E-07	1.018E-07	6.033E-08	4.179E-08	3.149E-08	2.503E-08	2.063E-08	1.746E-08	1.508E-08	1.323E-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	9.991E-06	2.333E-06	7.530E-07	3.898E-07	2.465E-07	1.125E-07	4.228E-08	2.158E-08	1.401E-08	1.017E-08
SSW	4.661E-06	1.077E-06	3.258E-07	1.623E-07	9.981E-08	4.346E-08	1.511E-08	7.253E-09	4.526E-09	3.194E-09
SW	3.812E-06	8.710E-07	2.665E-07	1.337E-07	8.267E-08	3.638E-08	1.291E-08	6.319E-09	3.998E-09	2.852E-09
WSW	2.341E-06	5.379E-07	1.644E-07	8.239E-08	5.088E-08	2.232E-08	7.867E-09	3.821E-09	2.404E-09	1.708E-09
W	2.895E-06	6.755E-07	2.049E-07	1.022E-07	6.290E-08	2.740E-08	9.522E-09	4.562E-09	2.842E-09	2.003E-09
WNW	2.264E-06	5.238E-07	1.614E-07	8.136E-08	5.046E-08	2.232E-08	7.977E-09	3.921E-09	2.485E-09	1.775E-09
NW	3.877E-06	9.114E-07	2.860E-07	1.457E-07	9.100E-08	4.073E-08	1.482E-08	7.378E-09	4.710E-09	3.382E-09
NNW	8.903E-06	2.106E-06	6.930E-07	3.626E-07	2.310E-07	1.067E-07	4.080E-08	2.109E-08	1.378E-08	1.006E-08
N	1.179E-05	2.800E-06	9.235E-07	4.839E-07	3.084E-07	1.426E-07	5.468E-08	2.831E-08	1.851E-08	1.352E-08
NNE	7.768E-06	1.830E-06	6.127E-07	3.237E-07	2.076E-07	9.691E-08	3.770E-08	1.973E-08	1.299E-08	9.534E-09
NE	4.542E-06	1.057E-06	3.576E-07	1.900E-07	1.223E-07	5.745E-08	2.255E-08	1.187E-08	7.847E-09	5.777E-09
ENE	3.195E-06	7.590E-07	2.528E-07	1.331E-07	8.516E-08	3.958E-08	1.528E-08	7.947E-09	5.212E-09	3.815E-09
E	3.550E-06	8.307E-07	2.755E-07	1.448E-07	9.253E-08	4.297E-08	1.658E-08	8.627E-09	5.661E-09	4.145E-09
ESE	6.031E-06	1.419E-06	4.688E-07	2.458E-07	1.568E-07	7.255E-08	2.784E-08	1.442E-08	9.435E-09	6.895E-09
SE	9.060E-06	2.134E-06	6.958E-07	3.622E-07	2.298E-07	1.054E-07	3.992E-08	2.048E-08	1.332E-08	9.697E-09
SSE	1.375E-05	3.204E-06	1.050E-06	5.482E-07	3.487E-07	1.607E-07	6.131E-08	3.165E-08	2.068E-08	1.510E-08

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2017
 2,260 DAY DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.006E-05	1.939E-05	1.016E-05	5.059E-06	2.061E-06	1.125E-06	7.170E-07	5.022E-07	3.749E-07	2.929E-07	2.367E-07
SSW	2.513E-05	8.872E-06	4.816E-06	2.409E-06	9.410E-07	4.991E-07	3.110E-07	2.140E-07	1.574E-07	1.214E-07	9.701E-08
SW	2.158E-05	7.361E-06	3.904E-06	1.937E-06	7.616E-07	4.057E-07	2.537E-07	1.751E-07	1.291E-07	9.975E-08	7.986E-08
WSW	1.296E-05	4.493E-06	2.403E-06	1.196E-06	4.699E-07	2.501E-07	1.563E-07	1.078E-07	7.937E-08	6.129E-08	4.903E-08
W	1.541E-05	5.471E-06	2.999E-06	1.508E-06	5.900E-07	3.132E-07	1.953E-07	1.344E-07	9.887E-08	7.626E-08	6.095E-08
WNW	1.265E-05	4.336E-06	2.327E-06	1.161E-06	4.584E-07	2.450E-07	1.536E-07	1.062E-07	7.843E-08	6.070E-08	4.866E-08
NW	2.216E-05	7.394E-06	3.984E-06	2.003E-06	8.009E-07	4.317E-07	2.725E-07	1.894E-07	1.404E-07	1.091E-07	8.773E-08
NNW	5.508E-05	1.725E-05	9.035E-06	4.520E-06	1.866E-06	1.028E-06	6.590E-07	4.640E-07	3.477E-07	2.726E-07	2.209E-07
N	7.341E-05	2.281E-05	1.197E-05	6.007E-06	2.484E-06	1.370E-06	8.797E-07	6.200E-07	4.651E-07	3.648E-07	2.959E-07
NNE	4.984E-05	1.522E-05	7.824E-06	3.892E-06	1.625E-06	9.022E-07	5.819E-07	4.115E-07	3.095E-07	2.433E-07	1.977E-07
NE	2.952E-05	9.025E-06	4.544E-06	2.235E-06	9.408E-07	5.249E-07	3.399E-07	2.410E-07	1.818E-07	1.432E-07	1.165E-07
ENE	2.020E-05	6.207E-06	3.232E-06	1.619E-06	6.741E-07	3.734E-07	2.404E-07	1.698E-07	1.276E-07	1.002E-07	8.136E-08
E	2.231E-05	6.960E-06	3.582E-06	1.777E-06	7.371E-07	4.075E-07	2.621E-07	1.849E-07	1.389E-07	1.090E-07	8.848E-08
ESE	3.756E-05	1.176E-05	6.104E-06	3.041E-06	1.259E-06	6.950E-07	4.464E-07	3.147E-07	2.361E-07	1.852E-07	1.502E-07
SE	5.537E-05	1.755E-05	9.204E-06	4.602E-06	1.888E-06	1.036E-06	6.622E-07	4.651E-07	3.479E-07	2.722E-07	2.203E-07
SSE	8.531E-05	2.692E-05	1.390E-05	6.890E-06	2.835E-06	1.558E-06	9.976E-07	7.015E-07	5.252E-07	4.113E-07	3.330E-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	1.964E-07	1.013E-07	6.551E-08	3.703E-08	2.456E-08	1.777E-08	1.358E-08	1.078E-08	8.799E-09	7.338E-09	6.225E-09
SSW	7.970E-08	3.967E-08	2.504E-08	1.374E-08	8.959E-09	6.410E-09	4.864E-09	3.843E-09	3.127E-09	2.603E-09	2.206E-09
SW	6.571E-08	3.291E-08	2.084E-08	1.148E-08	7.496E-09	5.363E-09	4.065E-09	3.206E-09	2.603E-09	2.162E-09	1.827E-09
WSW	4.031E-08	2.010E-08	1.269E-08	6.944E-09	4.505E-09	3.204E-09	2.416E-09	1.896E-09	1.533E-09	1.267E-09	1.066E-09
W	5.006E-08	2.489E-08	1.569E-08	8.581E-09	5.572E-09	3.972E-09	3.003E-09	2.365E-09	1.918E-09	1.591E-09	1.344E-09
WNW	4.008E-08	2.015E-08	1.280E-08	7.068E-09	4.621E-09	3.308E-09	2.508E-09	1.978E-09	1.606E-09	1.334E-09	1.127E-09
NW	7.248E-08	3.683E-08	2.356E-08	1.314E-08	8.643E-09	6.216E-09	4.731E-09	3.744E-09	3.049E-09	2.538E-09	2.150E-09
NNW	1.837E-07	9.564E-08	6.215E-08	3.534E-08	2.351E-08	1.703E-08	1.302E-08	1.034E-08	8.436E-09	7.032E-09	5.961E-09
N	2.462E-07	1.286E-07	8.379E-08	4.788E-08	3.199E-08	2.327E-08	1.786E-08	1.423E-08	1.166E-08	9.758E-09	8.297E-09
NNE	1.648E-07	8.649E-08	5.648E-08	3.230E-08	2.154E-08	1.563E-08	1.196E-08	9.495E-09	7.747E-09	6.455E-09	5.469E-09
NE	9.728E-08	5.132E-08	3.363E-08	1.932E-08	1.293E-08	9.399E-09	7.205E-09	5.729E-09	4.681E-09	3.905E-09	3.311E-09
ENE	6.777E-08	3.547E-08	2.313E-08	1.321E-08	8.814E-09	6.398E-09	4.901E-09	3.896E-09	3.183E-09	2.656E-09	2.254E-09
E	7.368E-08	3.855E-08	2.514E-08	1.437E-08	9.589E-09	6.966E-09	5.339E-09	4.247E-09	3.472E-09	2.899E-09	2.461E-09
ESE	1.250E-07	6.527E-08	4.251E-08	2.425E-08	1.617E-08	1.174E-08	9.000E-09	7.160E-09	5.854E-09	4.889E-09	4.152E-09
SE	1.829E-07	9.477E-08	6.140E-08	3.479E-08	2.309E-08	1.671E-08	1.277E-08	1.014E-08	8.271E-09	6.895E-09	5.847E-09
SSE	2.768E-07	1.437E-07	9.318E-08	5.282E-08	3.503E-08	2.532E-08	1.932E-08	1.530E-08	1.246E-08	1.036E-08	8.769E-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	9.944E-06	2.311E-06	7.399E-07	3.800E-07	2.384E-07	1.065E-07	3.782E-08	1.790E-08	1.082E-08	7.359E-09
SSW	4.647E-06	1.071E-06	3.224E-07	1.598E-07	9.782E-08	4.206E-08	1.413E-08	6.471E-09	3.862E-09	2.611E-09
SW	3.798E-06	8.647E-07	2.628E-07	1.311E-07	8.051E-08	3.484E-08	1.179E-08	5.412E-09	3.222E-09	2.169E-09
WSW	2.331E-06	5.336E-07	1.619E-07	8.060E-08	4.943E-08	2.130E-08	7.136E-09	3.236E-09	1.906E-09	1.271E-09
W	2.885E-06	6.709E-07	2.024E-07	1.004E-07	6.145E-08	2.640E-08	8.823E-09	4.011E-09	2.377E-09	1.596E-09
WNW	2.255E-06	5.196E-07	1.590E-07	7.961E-08	4.905E-08	2.131E-08	7.253E-09	3.338E-09	1.988E-09	1.338E-09
NW	3.861E-06	9.039E-07	2.817E-07	1.425E-07	8.841E-08	3.885E-08	1.346E-08	6.269E-09	3.761E-09	2.545E-09
NNW	8.855E-06	2.083E-06	6.793E-07	3.523E-07	2.224E-07	1.003E-07	3.604E-08	1.715E-08	1.038E-08	7.051E-09
N	1.173E-05	2.772E-06	9.066E-07	4.711E-07	2.979E-07	1.348E-07	4.879E-08	2.343E-08	1.429E-08	9.779E-09
NNE	7.720E-06	1.808E-06	5.991E-07	3.134E-07	1.990E-07	9.055E-08	3.289E-08	1.574E-08	9.533E-09	6.472E-09
NE	4.514E-06	1.044E-06	3.497E-07	1.840E-07	1.173E-07	5.367E-08	1.966E-08	9.462E-09	5.751E-09	3.915E-09
ENE	3.176E-06	7.504E-07	2.476E-07	1.292E-07	8.192E-08	3.717E-08	1.346E-08	6.443E-09	3.912E-09	2.663E-09
E	3.530E-06	8.216E-07	2.700E-07	1.407E-07	8.908E-08	4.040E-08	1.464E-08	7.014E-09	4.263E-09	2.906E-09
ESE	5.999E-06	1.404E-06	4.600E-07	2.392E-07	1.513E-07	6.843E-08	2.472E-08	1.183E-08	7.188E-09	4.902E-09
SE	9.014E-06	2.113E-06	6.830E-07	3.525E-07	2.218E-07	9.953E-08	3.551E-08	1.684E-08	1.018E-08	6.915E-09
SSE	1.368E-05	3.169E-06	1.029E-06	5.322E-07	3.354E-07	1.508E-07	5.388E-08	2.551E-08	1.537E-08	1.039E-08

B254

VENTS GROUND LEVEL RELEASES - JAN-JUN 2017
 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	5.692E-05	1.775E-05	9.087E-06	4.450E-06	1.763E-06	9.411E-07	5.883E-07	4.052E-07	2.980E-07	2.296E-07	1.833E-07
SSW	2.380E-05	8.114E-06	4.301E-06	2.115E-06	8.029E-07	4.158E-07	2.539E-07	1.716E-07	1.242E-07	9.438E-08	7.442E-08
SW	2.045E-05	6.735E-06	3.489E-06	1.702E-06	6.506E-07	3.387E-07	2.076E-07	1.408E-07	1.022E-07	7.787E-08	6.154E-08
WSW	1.228E-05	4.112E-06	2.148E-06	1.051E-06	4.017E-07	2.089E-07	1.280E-07	8.676E-08	6.293E-08	4.792E-08	3.785E-08
W	1.460E-05	5.005E-06	2.679E-06	1.324E-06	5.038E-07	2.612E-07	1.597E-07	1.080E-07	7.816E-08	5.942E-08	4.686E-08
WNW	1.199E-05	3.968E-06	2.080E-06	1.020E-06	3.918E-07	2.046E-07	1.258E-07	8.550E-08	6.217E-08	4.744E-08	3.755E-08
NW	2.099E-05	6.767E-06	3.561E-06	1.760E-06	6.847E-07	3.607E-07	2.232E-07	1.525E-07	1.113E-07	8.530E-08	6.772E-08
NNW	5.221E-05	1.580E-05	8.085E-06	3.979E-06	1.598E-06	8.609E-07	5.417E-07	3.751E-07	2.771E-07	2.143E-07	1.716E-07
N	6.957E-05	2.089E-05	1.071E-05	5.285E-06	2.127E-06	1.147E-06	7.224E-07	5.006E-07	3.700E-07	2.863E-07	2.293E-07
NNE	4.725E-05	1.395E-05	7.006E-06	3.428E-06	1.394E-06	7.569E-07	4.792E-07	3.334E-07	2.472E-07	1.918E-07	1.541E-07
NE	2.798E-05	8.269E-06	4.069E-06	1.969E-06	8.067E-07	4.403E-07	2.798E-07	1.953E-07	1.452E-07	1.129E-07	9.080E-08
ENE	1.915E-05	5.686E-06	2.893E-06	1.425E-06	5.777E-07	3.130E-07	1.978E-07	1.374E-07	1.017E-07	7.886E-08	6.326E-08
E	2.114E-05	6.374E-06	3.206E-06	1.564E-06	6.315E-07	3.414E-07	2.155E-07	1.495E-07	1.107E-07	8.573E-08	6.874E-08
ESE	3.560E-05	1.077E-05	5.461E-06	2.676E-06	1.078E-06	5.818E-07	3.667E-07	2.542E-07	1.879E-07	1.455E-07	1.165E-07
SE	5.248E-05	1.607E-05	8.233E-06	4.049E-06	1.617E-06	8.670E-07	5.438E-07	3.756E-07	2.768E-07	2.137E-07	1.708E-07
SSE	8.086E-05	2.465E-05	1.244E-05	6.066E-06	2.429E-06	1.306E-06	8.204E-07	5.675E-07	4.187E-07	3.236E-07	2.589E-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	1.503E-07	7.439E-08	4.646E-08	2.497E-08	1.596E-08	1.121E-08	8.366E-09	6.504E-09	5.212E-09	4.275E-09	3.571E-09
SSW	6.037E-08	2.866E-08	1.739E-08	8.977E-09	5.585E-09	3.846E-09	2.824E-09	2.168E-09	1.719E-09	1.398E-09	1.159E-09
SW	5.004E-08	2.397E-08	1.463E-08	7.629E-09	4.782E-09	3.311E-09	2.442E-09	1.881E-09	1.495E-09	1.218E-09	1.012E-09
WSW	3.075E-08	1.468E-08	8.939E-09	4.638E-09	2.893E-09	1.995E-09	1.466E-09	1.126E-09	8.927E-10	7.254E-10	6.010E-10
W	3.802E-08	1.805E-08	1.094E-08	5.643E-09	3.505E-09	2.409E-09	1.766E-09	1.354E-09	1.072E-09	8.701E-10	7.204E-10
WNW	3.057E-08	1.471E-08	9.005E-09	4.712E-09	2.959E-09	2.052E-09	1.514E-09	1.167E-09	9.286E-10	7.569E-10	6.288E-10
NW	5.529E-08	2.689E-08	1.659E-08	8.768E-09	5.540E-09	3.858E-09	2.858E-09	2.210E-09	1.762E-09	1.440E-09	1.198E-09
NNW	1.411E-07	7.056E-08	4.437E-08	2.405E-08	1.545E-08	1.090E-08	8.151E-09	6.350E-09	5.097E-09	4.186E-09	3.500E-09
N	1.887E-07	9.453E-08	5.952E-08	3.233E-08	2.082E-08	1.471E-08	1.102E-08	8.596E-09	6.909E-09	5.681E-09	4.757E-09
NNE	1.270E-07	6.412E-08	4.057E-08	2.217E-08	1.433E-08	1.014E-08	7.608E-09	5.940E-09	4.777E-09	3.929E-09	3.289E-09
NE	7.498E-08	3.805E-08	2.416E-08	1.327E-08	8.599E-09	6.102E-09	4.586E-09	3.587E-09	2.888E-09	2.378E-09	1.993E-09
ENE	5.211E-08	2.620E-08	1.653E-08	9.006E-09	5.806E-09	4.104E-09	3.075E-09	2.400E-09	1.929E-09	1.586E-09	1.327E-09
E	5.662E-08	2.845E-08	1.795E-08	9.778E-09	6.305E-09	4.459E-09	3.342E-09	2.609E-09	2.098E-09	1.725E-09	1.444E-09
ESE	9.591E-08	4.805E-08	3.026E-08	1.644E-08	1.058E-08	7.470E-09	5.594E-09	4.363E-09	3.505E-09	2.881E-09	2.411E-09
SE	1.403E-07	6.973E-08	4.367E-08	2.355E-08	1.509E-08	1.061E-08	7.924E-09	6.165E-09	4.943E-09	4.056E-09	3.389E-09
SSE	2.128E-07	1.062E-07	6.667E-08	3.607E-08	2.315E-08	1.631E-08	1.219E-08	9.491E-09	7.613E-09	6.248E-09	5.222E-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	8.951E-06	1.995E-06	6.092E-07	3.026E-07	1.848E-07	7.885E-08	2.574E-08	1.134E-08	6.544E-09	4.292E-09
SSW	4.177E-06	9.224E-07	2.642E-07	1.264E-07	7.513E-08	3.070E-08	9.338E-09	3.901E-09	2.185E-09	1.404E-09
SW	3.416E-06	7.456E-07	2.158E-07	1.040E-07	6.212E-08	2.561E-08	7.920E-09	3.355E-09	1.894E-09	1.224E-09
WSW	2.097E-06	4.604E-07	1.331E-07	6.402E-08	3.820E-08	1.570E-08	4.818E-09	2.023E-09	1.134E-09	7.289E-10
W	2.594E-06	5.784E-07	1.661E-07	7.953E-08	4.731E-08	1.933E-08	5.871E-09	2.444E-09	1.364E-09	8.744E-10
WNW	2.029E-06	4.483E-07	1.307E-07	6.322E-08	3.789E-08	1.570E-08	4.887E-09	2.079E-09	1.176E-09	7.603E-10
NW	3.473E-06	7.797E-07	2.316E-07	1.132E-07	6.833E-08	2.863E-08	9.072E-09	3.907E-09	2.225E-09	1.446E-09
NNW	7.975E-06	1.800E-06	5.602E-07	2.812E-07	1.730E-07	7.460E-08	2.474E-08	1.101E-08	6.388E-09	4.202E-09
N	1.056E-05	2.393E-06	7.469E-07	3.754E-07	2.312E-07	9.990E-08	3.326E-08	1.486E-08	8.645E-09	5.703E-09
NNE	6.958E-06	1.563E-06	4.949E-07	2.508E-07	1.552E-07	6.763E-08	2.277E-08	1.024E-08	5.974E-09	3.943E-09
NE	4.069E-06	9.022E-07	2.888E-07	1.472E-07	9.148E-08	4.008E-08	1.361E-08	6.162E-09	3.606E-09	2.387E-09
ENE	2.861E-06	6.484E-07	2.043E-07	1.032E-07	6.375E-08	2.766E-08	9.257E-09	4.146E-09	2.413E-09	1.592E-09
E	3.180E-06	7.098E-07	2.227E-07	1.123E-07	6.929E-08	3.004E-08	1.005E-08	4.505E-09	2.624E-09	1.732E-09
ESE	5.403E-06	1.213E-06	3.791E-07	1.907E-07	1.175E-07	5.078E-08	1.691E-08	7.549E-09	4.388E-09	2.892E-09
SE	8.116E-06	1.824E-06	5.627E-07	2.810E-07	1.722E-07	7.382E-08	2.426E-08	1.073E-08	6.202E-09	4.072E-09
SSE	1.232E-05	2.738E-06	8.486E-07	4.250E-07	2.610E-07	1.123E-07	3.713E-08	1.649E-08	9.547E-09	6.273E-09

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2017
 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	2.609E-07	8.822E-08	4.529E-08	2.153E-08	7.735E-09	3.836E-09	2.259E-09	1.479E-09	1.041E-09	7.712E-10	5.943E-10
SSW	1.614E-07	5.459E-08	2.803E-08	1.333E-08	4.787E-09	2.374E-09	1.398E-09	9.153E-10	6.440E-10	4.773E-10	3.678E-10
SW	1.151E-07	3.894E-08	1.999E-08	9.505E-09	3.414E-09	1.693E-09	9.970E-10	6.528E-10	4.593E-10	3.404E-10	2.623E-10
WSW	5.635E-08	1.905E-08	9.783E-09	4.651E-09	1.671E-09	8.285E-10	4.878E-10	3.194E-10	2.248E-10	1.666E-10	1.284E-10
W	6.697E-08	2.264E-08	1.163E-08	5.528E-09	1.986E-09	9.847E-10	5.798E-10	3.796E-10	2.671E-10	1.980E-10	1.526E-10
WNV	5.741E-08	1.941E-08	9.968E-09	4.739E-09	1.702E-09	8.442E-10	4.971E-10	3.255E-10	2.290E-10	1.697E-10	1.308E-10
NW	1.015E-07	3.432E-08	1.762E-08	8.376E-09	3.009E-09	1.492E-09	8.786E-10	5.753E-10	4.048E-10	3.000E-10	2.312E-10
NNW	2.030E-07	6.866E-08	3.525E-08	1.676E-08	6.020E-09	2.986E-09	1.758E-09	1.151E-09	8.100E-10	6.003E-10	4.626E-10
N	3.091E-07	1.045E-07	5.367E-08	2.552E-08	9.165E-09	4.545E-09	2.676E-09	1.752E-09	1.233E-09	9.138E-10	7.042E-10
NNE	1.481E-07	5.009E-08	2.572E-08	1.223E-08	4.392E-09	2.178E-09	1.283E-09	8.398E-10	5.909E-10	4.379E-10	3.375E-10
NE	7.450E-08	2.519E-08	1.294E-08	6.150E-09	2.209E-09	1.095E-09	6.450E-10	4.224E-10	2.972E-10	2.202E-10	1.697E-10
ENE	5.430E-08	1.836E-08	9.427E-09	4.482E-09	1.610E-09	7.984E-10	4.701E-10	3.078E-10	2.166E-10	1.605E-10	1.237E-10
E	6.711E-08	2.269E-08	1.165E-08	5.540E-09	1.990E-09	9.868E-10	5.810E-10	3.805E-10	2.677E-10	1.984E-10	1.529E-10
ESE	1.263E-07	4.272E-08	2.194E-08	1.043E-08	3.746E-09	1.858E-09	1.094E-09	7.163E-10	5.040E-10	3.735E-10	2.878E-10
SE	2.258E-07	7.634E-08	3.920E-08	1.863E-08	6.694E-09	3.320E-09	1.955E-09	1.280E-09	9.006E-10	6.674E-10	5.143E-10
SSE	2.881E-07	9.741E-08	5.002E-08	2.378E-08	8.541E-09	4.236E-09	2.494E-09	1.638E-09	1.149E-09	8.516E-10	6.563E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.722E-10	2.097E-10	1.271E-10	6.422E-11	3.887E-11	2.606E-11	1.867E-11	1.402E-11	1.090E-11	8.709E-12	7.109E-12
SSW	2.922E-10	1.298E-10	7.863E-11	3.974E-11	2.405E-11	1.613E-11	1.156E-11	8.678E-12	6.747E-12	5.390E-12	4.399E-12
SW	2.084E-10	9.258E-11	5.608E-11	2.835E-11	1.716E-11	1.150E-11	8.243E-12	6.189E-12	4.812E-12	3.844E-12	3.138E-12
WSW	1.020E-10	4.530E-11	2.744E-11	1.387E-11	8.395E-12	5.629E-12	4.033E-12	3.029E-12	2.355E-12	1.881E-12	1.535E-12
W	1.212E-10	5.384E-11	3.261E-11	1.649E-11	9.978E-12	6.690E-12	4.794E-12	3.599E-12	2.799E-12	2.236E-12	1.825E-12
WNV	1.039E-10	4.616E-11	2.796E-11	1.413E-11	8.554E-12	5.735E-12	4.110E-12	3.086E-12	2.399E-12	1.917E-12	1.564E-12
NW	1.837E-10	8.159E-11	4.942E-11	2.498E-11	1.512E-11	1.014E-11	7.264E-12	5.455E-12	4.241E-12	3.388E-12	2.765E-12
NNW	3.675E-10	1.633E-10	9.889E-11	4.998E-11	3.025E-11	2.028E-11	1.453E-11	1.091E-11	8.486E-12	6.779E-12	5.533E-12
N	5.595E-10	2.485E-10	1.505E-10	7.609E-11	4.606E-11	3.088E-11	2.213E-11	1.661E-11	1.292E-11	1.032E-11	8.423E-12
NNE	2.681E-10	1.191E-10	7.215E-11	3.647E-11	2.207E-11	1.480E-11	1.060E-11	7.963E-12	6.191E-12	4.946E-12	4.037E-12
NE	1.348E-10	5.990E-11	3.629E-11	1.834E-11	1.110E-11	7.443E-12	5.333E-12	4.005E-12	3.114E-12	2.487E-12	2.030E-12
ENE	9.827E-11	4.366E-11	2.644E-11	1.337E-11	8.090E-12	5.424E-12	3.887E-12	2.918E-12	2.269E-12	1.813E-12	1.480E-12
E	1.215E-10	5.396E-11	3.269E-11	1.652E-11	9.999E-12	6.704E-12	4.804E-12	3.607E-12	2.805E-12	2.240E-12	1.829E-12
ESE	2.287E-10	1.016E-10	6.153E-11	3.110E-11	1.882E-11	1.262E-11	9.044E-12	6.791E-12	5.280E-12	4.218E-12	3.443E-12
SE	4.086E-10	1.815E-10	1.100E-10	5.557E-11	3.364E-11	2.255E-11	1.616E-11	1.213E-11	9.435E-12	7.537E-12	6.152E-12
SSE	5.214E-10	2.316E-10	1.403E-10	7.091E-11	4.292E-11	2.878E-11	2.062E-11	1.548E-11	1.204E-11	9.617E-12	7.850E-12

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.427E-08	9.068E-09	2.367E-09	1.063E-09	6.015E-10	2.313E-10	6.692E-11	2.652E-11	1.416E-11	8.766E-12
SSW	2.740E-08	5.612E-09	1.465E-09	6.580E-10	3.722E-10	1.431E-10	4.141E-11	1.641E-11	8.765E-12	5.425E-12
SW	1.954E-08	4.003E-09	1.045E-09	4.693E-10	2.655E-10	1.021E-10	2.954E-11	1.171E-11	6.251E-12	3.869E-12
WSW	9.562E-09	1.959E-09	5.113E-10	2.296E-10	1.299E-10	4.996E-11	1.445E-11	5.728E-12	3.059E-12	1.893E-12
W	1.136E-08	2.328E-09	6.077E-10	2.729E-10	1.544E-10	5.938E-11	1.718E-11	6.808E-12	3.636E-12	2.250E-12
WNV	9.743E-09	1.996E-09	5.210E-10	2.340E-10	1.324E-10	5.090E-11	1.473E-11	5.837E-12	3.117E-12	1.929E-12
NW	1.722E-08	3.528E-09	9.209E-10	4.136E-10	2.340E-10	8.998E-11	2.603E-11	1.032E-11	5.509E-12	3.410E-12
NNW	3.446E-08	7.058E-09	1.843E-09	8.276E-10	4.682E-10	1.800E-10	5.208E-11	2.064E-11	1.102E-11	6.823E-12
N	5.246E-08	1.075E-08	2.805E-09	1.260E-09	7.127E-10	2.741E-10	7.929E-11	3.143E-11	1.678E-11	1.039E-11
NNE	2.514E-08	5.150E-09	1.344E-09	6.038E-10	3.416E-10	1.314E-10	3.800E-11	1.506E-11	8.043E-12	4.978E-12
NE	1.264E-08	2.590E-09	6.761E-10	3.036E-10	1.718E-10	6.606E-11	1.911E-11	7.574E-12	4.045E-12	2.503E-12
ENE	9.215E-09	1.887E-09	4.927E-10	2.213E-10	1.252E-10	4.814E-11	1.393E-11	5.520E-12	2.948E-12	1.825E-12
E	1.139E-08	2.333E-09	6.090E-10	2.735E-10	1.547E-10	5.950E-11	1.721E-11	6.823E-12	3.643E-12	2.255E-12
ESE	2.144E-08	4.392E-09	1.147E-09	5.149E-10	2.913E-10	1.120E-10	3.241E-11	1.284E-11	6.859E-12	4.245E-12
SE	3.831E-08	7.848E-09	2.049E-09	9.201E-10	5.205E-10	2.002E-10	5.791E-11	2.295E-11	1.226E-11	7.586E-12
SSE	4.889E-08	1.001E-08	2.614E-09	1.174E-09	6.642E-10	2.554E-10	7.389E-11	2.929E-11	1.564E-11	9.680E-12

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VENTS GROUND LEVEL RELEASES - JAN-JUN 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

ID	RELEASE TYPE OF LOCATION FROM SITE (MI)	DIRECTION	DIST.	X/Q			D/Q
				(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	8.8E-06	8.7E-06	7.8E-06	3.9E-08
A	Site Boundary	SSW	.82	3.9E-06	3.8E-06	3.4E-06	2.2E-08
A	Site Boundary	SW	.97	2.1E-06	2.1E-06	1.8E-06	1.0E-08
A	Site Boundary	WSW	.93	1.5E-06	1.4E-06	1.3E-06	5.7E-09
A	Site Boundary	W	.91	1.9E-06	1.9E-06	1.7E-06	7.0E-09
A	Site Boundary	WNW	.94	1.4E-06	1.4E-06	1.2E-06	5.6E-09
A	Site Boundary	NW	.81	3.3E-06	3.3E-06	2.9E-06	1.4E-08
A	Site Boundary	NNW	.69	1.0E-05	1.0E-05	9.3E-06	4.1E-08
A	Site Boundary	N	.67	1.4E-05	1.4E-05	1.3E-05	6.4E-08
A	Site Boundary	NNE	.60	1.1E-05	1.1E-05	1.0E-05	3.7E-08
A	Site Boundary	NE	.62	6.2E-06	6.1E-06	5.6E-06	1.8E-08
A	Site Boundary	ENE	.59	4.8E-06	4.8E-06	4.3E-06	1.4E-08
A	Site Boundary	E	.53	6.4E-06	6.4E-06	5.9E-06	2.1E-08
A	Site Boundary	ESE	.54	1.0E-05	1.0E-05	9.5E-06	3.8E-08
A	Site Boundary	SE	.65	1.2E-05	1.1E-05	1.0E-05	5.0E-08
A	Site Boundary	SSE	.81	1.2E-05	1.1E-05	1.0E-05	4.1E-08
A	Nearest Res	SSW	3.00	2.2E-07	2.1E-07	1.7E-07	9.2E-10
A	Nearest Res	SW	1.00	1.9E-06	1.9E-06	1.7E-06	9.5E-09
A	Nearest Res	WSW	2.50	1.6E-07	1.6E-07	1.3E-07	4.9E-10
A	Nearest Res	W	1.00	1.5E-06	1.5E-06	1.3E-06	5.5E-09
A	Nearest Res	WNW	1.70	3.5E-07	3.5E-07	2.9E-07	1.3E-09
A	Nearest Res	NW	.90	2.6E-06	2.6E-06	2.3E-06	1.1E-08
A	Nearest Res	NNW	1.90	1.2E-06	1.1E-06	9.6E-07	3.4E-09
A	Nearest Res	N	2.90	6.8E-07	6.6E-07	5.4E-07	1.9E-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	5.3E-07	5.2E-07	4.4E-07	1.2E-09
A	Nearest Res	E	2.20	3.4E-07	3.4E-07	2.8E-07	7.9E-10
A	Nearest Res	SE	2.80	5.4E-07	5.3E-07	4.3E-07	1.5E-09
A	Nearest Cow	NNW	3.50	3.6E-07	3.5E-07	2.8E-07	8.1E-10
A	Nearest Garde	SSW	3.00	2.2E-07	2.1E-07	1.7E-07	9.2E-10
A	Nearest Garde	SW	2.20	3.4E-07	3.3E-07	2.7E-07	1.3E-09
A	Nearest Garde	WSW	2.50	1.6E-07	1.6E-07	1.3E-07	4.9E-10
A	Nearest Garde	WNW	1.70	3.5E-07	3.5E-07	2.9E-07	1.3E-09
A	Nearest Garde	NW	2.00	4.4E-07	4.3E-07	3.6E-07	1.5E-09
A	Nearest Garde	NNW	2.80	5.4E-07	5.3E-07	4.3E-07	1.3E-09
A	Nearest Garde	ESE	2.30	5.4E-07	5.3E-07	4.3E-07	1.3E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

July-September 2017

VENTS GROUND LEVEL RELEASES - JUL-SEP 2017
 NO 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	6.951E-05	2.286E-05	1.240E-05	6.280E-06	2.540E-06	1.381E-06	8.778E-07	6.141E-07	4.582E-07	3.579E-07	2.894E-07
SSW	3.553E-05	1.199E-05	6.416E-06	3.212E-06	1.282E-06	6.910E-07	4.363E-07	3.036E-07	2.255E-07	1.755E-07	1.414E-07
SW	2.012E-05	6.826E-06	3.677E-06	1.846E-06	7.323E-07	3.928E-07	2.470E-07	1.713E-07	1.269E-07	9.851E-08	7.920E-08
WSW	2.070E-05	7.304E-06	3.947E-06	1.969E-06	7.625E-07	4.021E-07	2.496E-07	1.713E-07	1.257E-07	9.683E-08	7.731E-08
W	2.174E-05	7.474E-06	4.033E-06	2.019E-06	7.856E-07	4.156E-07	2.587E-07	1.779E-07	1.308E-07	1.009E-07	8.064E-08
WNW	3.328E-05	1.149E-05	6.171E-06	3.080E-06	1.215E-06	6.498E-07	4.079E-07	2.824E-07	2.089E-07	1.620E-07	1.302E-07
NW	3.338E-05	1.193E-05	6.570E-06	3.308E-06	1.299E-06	6.923E-07	4.333E-07	2.993E-07	2.209E-07	1.709E-07	1.371E-07
NNW	7.492E-05	2.520E-05	1.371E-05	6.923E-06	2.783E-06	1.508E-06	9.559E-07	6.674E-07	4.971E-07	3.878E-07	3.131E-07
N	1.272E-04	3.940E-05	2.095E-05	1.060E-05	4.409E-06	2.443E-06	1.575E-06	1.115E-06	8.395E-07	6.611E-07	5.383E-07
NNE	1.010E-04	3.048E-05	1.560E-05	7.776E-06	3.295E-06	1.849E-06	1.204E-06	8.583E-07	6.505E-07	5.150E-07	4.212E-07
NE	5.647E-05	1.676E-05	8.418E-06	4.167E-06	1.787E-06	1.011E-06	6.616E-07	4.738E-07	3.603E-07	2.861E-07	2.347E-07
ENE	3.380E-05	1.046E-05	5.448E-06	2.729E-06	1.139E-06	6.329E-07	4.090E-07	2.899E-07	2.187E-07	1.724E-07	1.405E-07
E	4.978E-05	1.486E-05	7.438E-06	3.668E-06	1.587E-06	8.844E-07	5.780E-07	4.134E-07	3.142E-07	2.493E-07	2.043E-07
ESE	6.334E-05	1.902E-05	9.773E-06	4.887E-06	2.073E-06	1.164E-06	7.580E-07	5.405E-07	4.097E-07	3.244E-07	2.654E-07
SE	1.246E-04	3.685E-05	1.867E-05	9.293E-06	3.977E-06	2.246E-06	1.469E-06	1.051E-06	7.985E-07	6.337E-07	5.193E-07
SSE	1.100E-04	3.396E-05	1.772E-05	8.890E-06	3.721E-06	2.071E-06	1.340E-06	9.507E-07	7.177E-07	5.663E-07	4.619E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.403E-07	1.249E-07	8.163E-08	4.736E-08	3.232E-08	2.407E-08	1.895E-08	1.549E-08	1.302E-08	1.117E-08	9.746E-09
SSW	1.171E-07	6.017E-08	3.901E-08	2.240E-08	1.518E-08	1.126E-08	8.825E-09	7.192E-09	6.028E-09	5.161E-09	4.494E-09
SW	6.544E-08	3.339E-08	2.153E-08	1.226E-08	8.258E-09	6.091E-09	4.757E-09	3.863E-09	3.228E-09	2.757E-09	2.395E-09
WSW	6.347E-08	3.166E-08	2.002E-08	1.113E-08	7.385E-09	5.384E-09	4.163E-09	3.353E-09	2.781E-09	2.360E-09	2.038E-09
W	6.629E-08	3.315E-08	2.107E-08	1.178E-08	7.855E-09	5.747E-09	4.459E-09	3.600E-09	2.994E-09	2.545E-09	2.202E-09
WNW	1.075E-07	5.467E-08	3.519E-08	2.001E-08	1.349E-08	9.953E-09	7.776E-09	6.317E-09	5.280E-09	4.510E-09	3.918E-09
NW	1.130E-07	5.708E-08	3.653E-08	2.057E-08	1.374E-08	1.006E-08	7.812E-09	6.310E-09	5.248E-09	4.462E-09	3.860E-09
NNW	2.597E-07	1.345E-07	8.764E-08	5.065E-08	3.447E-08	2.563E-08	2.014E-08	1.644E-08	1.380E-08	1.183E-08	1.031E-08
N	4.498E-07	2.395E-07	1.591E-07	9.437E-08	6.540E-08	4.929E-08	3.917E-08	3.227E-08	2.730E-08	2.357E-08	2.067E-08
NNE	3.534E-07	1.910E-07	1.281E-07	7.709E-08	5.392E-08	4.094E-08	3.272E-08	2.710E-08	2.302E-08	1.995E-08	1.755E-08
NE	1.973E-07	1.075E-07	7.253E-08	4.396E-08	3.090E-08	2.354E-08	1.887E-08	1.567E-08	1.334E-08	1.158E-08	1.020E-08
ENE	1.175E-07	6.281E-08	4.182E-08	2.491E-08	1.731E-08	1.307E-08	1.041E-08	8.589E-09	7.277E-09	6.290E-09	5.523E-09
E	1.717E-07	9.337E-08	6.293E-08	3.809E-08	2.676E-08	2.038E-08	1.633E-08	1.355E-08	1.154E-08	1.001E-08	8.825E-09
ESE	2.226E-07	1.203E-07	8.076E-08	4.858E-08	3.398E-08	2.580E-08	2.062E-08	1.707E-08	1.451E-08	1.257E-08	1.106E-08
SE	4.364E-07	2.373E-07	1.599E-07	9.674E-08	6.791E-08	5.170E-08	4.141E-08	3.435E-08	2.923E-08	2.536E-08	2.234E-08
SSE	3.865E-07	2.069E-07	1.380E-07	8.230E-08	5.723E-08	4.326E-08	3.445E-08	2.845E-08	2.411E-08	2.084E-08	1.831E-08

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.200E-05	2.856E-06	9.065E-07	4.645E-07	2.915E-07	1.313E-07	4.829E-08	2.422E-08	1.554E-08	1.119E-08
SSW	6.229E-06	1.448E-06	4.512E-07	2.288E-07	1.425E-07	6.341E-08	2.288E-08	1.133E-08	7.215E-09	5.170E-09
SW	3.563E-06	8.289E-07	2.556E-07	1.288E-07	7.982E-08	3.524E-08	1.254E-08	6.135E-09	3.877E-09	2.763E-09
WSW	3.814E-06	8.704E-07	2.590E-07	1.277E-07	7.797E-08	3.353E-08	1.144E-08	5.429E-09	3.367E-09	2.365E-09
W	3.902E-06	8.952E-07	2.682E-07	1.328E-07	8.132E-08	3.515E-08	1.210E-08	5.794E-09	3.614E-09	2.551E-09
WNW	5.979E-06	1.378E-06	4.222E-07	2.121E-07	1.312E-07	5.774E-08	2.048E-08	1.002E-08	6.338E-09	4.519E-09
NW	6.311E-06	1.476E-06	4.487E-07	2.243E-07	1.382E-07	6.036E-08	2.108E-08	1.014E-08	6.335E-09	4.472E-09
NNW	1.325E-05	3.136E-06	9.877E-07	5.041E-07	3.155E-07	1.415E-07	5.168E-08	2.579E-08	1.649E-08	1.185E-08
N	2.045E-05	4.911E-06	1.622E-06	8.501E-07	5.419E-07	2.505E-07	9.587E-08	4.954E-08	3.235E-08	2.360E-08
NNE	1.543E-05	3.648E-06	1.238E-06	6.582E-07	4.239E-07	1.991E-07	7.814E-08	4.112E-08	2.715E-08	1.997E-08
NE	8.382E-06	1.971E-06	6.795E-07	3.645E-07	2.361E-07	1.119E-07	4.450E-08	2.364E-08	1.570E-08	1.159E-08
ENE	5.353E-06	1.268E-06	4.211E-07	2.214E-07	1.415E-07	6.564E-08	2.529E-08	1.314E-08	8.609E-09	6.299E-09
E	7.413E-06	1.731E-06	5.939E-07	3.178E-07	2.055E-07	9.724E-08	3.857E-08	2.046E-08	1.358E-08	1.003E-08
ESE	9.657E-06	2.294E-06	7.793E-07	4.146E-07	2.670E-07	1.255E-07	4.924E-08	2.591E-08	1.711E-08	1.258E-08
SE	1.854E-05	4.389E-06	1.509E-06	8.078E-07	5.225E-07	2.472E-07	9.797E-08	5.191E-08	3.442E-08	2.539E-08
SSE	1.740E-05	4.136E-06	1.379E-06	7.266E-07	4.649E-07	2.162E-07	8.353E-08	4.346E-08	2.851E-08	2.087E-08

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VENTS GROUND LEVEL RELEASES - JUL-SEP 2017
 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	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	
S	6.938E-05	2.277E-05	1.233E-05	6.235E-06	2.512E-06	1.360E-06	8.613E-07	6.002E-07	4.460E-07	3.471E-07	2.795E-07	3.546E-05	1.194E-05	6.379E-06	3.187E-06	1.267E-06	6.801E-07	4.276E-07	2.963E-07	2.191E-07	1.698E-07	1.362E-07	
SSW	2.009E-05	6.800E-06	3.656E-06	1.832E-06	7.239E-07	3.867E-07	2.422E-07	1.673E-07	1.234E-07	9.540E-08	7.638E-08	2.067E-05	7.282E-06	3.929E-06	1.956E-06	7.554E-07	3.971E-07	2.457E-07	1.680E-07	1.229E-07	9.436E-08	7.508E-08	
SW	2.171E-05	7.454E-06	4.017E-06	2.007E-06	7.789E-07	4.109E-07	2.549E-07	1.747E-07	1.281E-07	9.849E-08	7.850E-08	W	3.323E-05	1.146E-05	6.144E-06	3.062E-06	1.204E-06	6.419E-07	4.015E-07	2.771E-07	2.043E-07	1.579E-07	1.264E-07
WSW	3.334E-05	1.190E-05	6.544E-06	3.291E-06	1.289E-06	6.849E-07	4.275E-07	2.944E-07	2.167E-07	1.673E-07	1.337E-07	WNW	7.479E-05	2.512E-05	1.365E-05	6.879E-06	2.756E-06	1.488E-06	9.400E-07	6.539E-07	4.853E-07	3.772E-07	3.035E-07
W	1.269E-04	3.922E-05	2.081E-05	1.051E-05	4.349E-06	2.398E-06	1.539E-06	1.084E-06	8.126E-07	6.369E-07	5.161E-07	NW	1.007E-04	3.031E-05	1.547E-05	7.688E-06	3.238E-06	1.807E-06	1.169E-06	8.284E-07	6.240E-07	4.911E-07	3.993E-07
WNW	5.628E-05	1.665E-05	8.340E-06	4.116E-06	1.754E-06	9.856E-07	6.411E-07	4.562E-07	3.448E-07	2.720E-07	2.217E-07	N	3.371E-05	1.040E-05	5.406E-06	2.702E-06	1.122E-06	6.197E-07	3.982E-07	2.807E-07	2.106E-07	1.651E-07	1.339E-07
NW	4.962E-05	1.477E-05	7.371E-06	3.625E-06	1.539E-06	8.629E-07	5.605E-07	3.983E-07	3.008E-07	2.372E-07	1.931E-07	ENE	4.962E-05	1.477E-05	7.371E-06	3.625E-06	1.539E-06	8.629E-07	5.605E-07	3.983E-07	3.008E-07	2.372E-07	1.931E-07
NNW	6.315E-05	1.891E-05	9.689E-06	4.832E-06	2.037E-06	1.137E-06	7.361E-07	5.218E-07	3.932E-07	3.095E-07	2.517E-07	E	1.242E-04	3.663E-05	1.850E-05	9.181E-06	3.905E-06	2.191E-06	1.424E-06	1.012E-06	7.646E-07	6.029E-07	4.911E-07
N	1.097E-04	3.377E-05	1.758E-05	8.797E-06	3.661E-06	2.026E-06	1.304E-06	9.199E-07	6.905E-07	5.418E-07	4.395E-07	ESE	1.097E-04	3.377E-05	1.758E-05	8.797E-06	3.661E-06	2.026E-06	1.304E-06	9.199E-07	6.905E-07	5.418E-07	4.395E-07
NE												SE											
ENE												SSE											

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	2.311E-07	1.178E-07	7.546E-08	4.210E-08	2.765E-08	1.985E-08	1.507E-08	1.190E-08	9.666E-09	8.026E-09	6.781E-09	SSW	1.123E-07	5.648E-08	3.583E-08	1.970E-08	1.280E-08	9.101E-09	6.853E-09	5.367E-09	4.328E-09	3.588E-09	2.994E-09
SSW	6.285E-08	3.140E-08	1.982E-08	1.083E-08	7.002E-09	4.961E-09	3.725E-09	2.911E-09	2.342E-09	1.928E-09	1.615E-09	SW	6.144E-08	3.008E-08	1.874E-08	1.008E-08	6.474E-09	4.571E-09	3.425E-09	2.674E-09	2.152E-09	1.772E-09	1.486E-09
SW	6.433E-08	3.168E-08	1.982E-08	1.074E-08	6.951E-09	4.937E-09	3.721E-09	2.920E-09	2.361E-09	1.953E-09	1.645E-09	WSW	1.040E-07	5.203E-08	3.292E-08	1.809E-08	1.179E-08	8.420E-09	6.370E-09	5.016E-09	4.066E-09	3.371E-09	2.845E-09
W	1.099E-07	5.478E-08	3.458E-08	1.895E-08	1.233E-08	8.797E-09	6.57E-09	5.246E-09	4.258E-09	3.535E-09	2.987E-09	W	2.509E-07	1.276E-07	8.167E-08	4.556E-08	2.996E-08	2.154E-08	1.639E-08	1.296E-08	1.055E-08	8.779E-09	7.433E-09
WNW	4.292E-07	2.231E-07	1.447E-07	8.200E-08	5.433E-08	3.921E-08	2.988E-08	2.365E-08	1.924E-08	1.599E-08	1.352E-08	WNW	3.329E-07	1.746E-07	1.138E-07	6.458E-08	4.271E-08	3.071E-08	2.329E-08	1.833E-08	1.483E-08	1.225E-08	1.030E-08
NW	1.852E-07	9.777E-08	6.395E-08	3.646E-08	2.416E-08	1.739E-08	1.319E-08	1.038E-08	8.398E-09	6.937E-09	5.827E-09	NW	1.113E-07	5.787E-08	3.750E-08	2.117E-08	1.396E-08	1.003E-08	7.601E-09	5.983E-09	4.842E-09	4.004E-09	3.367E-09
NNW	1.613E-07	8.501E-08	5.554E-08	3.164E-08	2.096E-08	1.508E-08	1.144E-08	9.004E-09	7.282E-09	6.015E-09	5.053E-09	N	2.099E-07	1.101E-07	7.179E-08	4.079E-08	2.700E-08	1.943E-08	1.475E-08	1.162E-08	9.405E-09	7.777E-09	6.541E-09
N	4.101E-07	2.162E-07	1.413E-07	8.054E-08	5.337E-08	3.842E-08	2.916E-08	2.296E-08	1.858E-08	1.535E-08	1.290E-08	ENE	1.613E-07	8.501E-08	5.554E-08	3.164E-08	2.096E-08	1.508E-08	1.144E-08	9.004E-09	7.282E-09	6.015E-09	5.053E-09
NNE	3.657E-07	1.904E-07	1.235E-07	6.975E-08	4.601E-08	3.305E-08	2.505E-08	1.971E-08	1.595E-08	1.318E-08	1.108E-08	E	2.099E-07	1.101E-07	7.179E-08	4.079E-08	2.700E-08	1.943E-08	1.475E-08	1.162E-08	9.405E-09	7.777E-09	6.541E-09
NE												ESE											
ENE												SE											
E												SSE											

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.194E-05	2.827E-06	8.900E-07	4.524E-07	2.816E-07	1.242E-07	4.309E-08	2.002E-08	1.196E-08	8.051E-09
SSW	6.196E-06	1.433E-06	4.424E-07	2.224E-07	1.373E-07	5.970E-08	2.022E-08	9.188E-09	5.396E-09	3.581E-09
SW	3.544E-06	8.203E-07	2.508E-07	1.253E-07	7.700E-08	3.324E-08	1.113E-08	5.011E-09	2.927E-09	1.935E-09
WSW	3.797E-06	8.630E-07	2.550E-07	1.249E-07	7.574E-08	3.201E-08	1.040E-08	4.620E-09	2.690E-09	1.778E-09
W	3.887E-06	8.883E-07	2.644E-07	1.301E-07	7.917E-08	3.366E-08	1.108E-08	4.988E-09	2.936E-09	1.960E-09
WNW	5.955E-06	1.367E-06	4.159E-07	2.075E-07	1.275E-07	5.509E-08	1.858E-08	8.499E-09	5.041E-09	3.382E-09
NW	6.288E-06	1.465E-06	4.429E-07	2.201E-07	1.349E-07	5.805E-08	1.948E-08	8.882E-09	5.273E-09	3.546E-09
NNW	1.319E-05	3.109E-06	9.717E-07	4.923E-07	3.059E-07	1.346E-07	4.666E-08	2.173E-08	1.302E-08	8.805E-09
N	2.032E-05	4.851E-06	1.586E-06	8.232E-07	5.197E-07	2.341E-07	8.364E-08	3.951E-08	2.375E-08	1.604E-08
NNE	1.531E-05	3.591E-06	1.203E-06	6.318E-07	4.019E-07	1.827E-07	6.579E-08	3.094E-08	1.841E-08	1.229E-08
NE	8.310E-06	1.937E-06	6.590E-07	3.489E-07	2.231E-07	1.022E-07	3.710E-08	1.752E-08	1.043E-08	6.959E-09
ENE	5.315E-06	1.250E-06	4.103E-07	2.133E-07	1.348E-07	6.070E-08	2.159E-08	1.011E-08	6.011E-09	4.016E-09
E	7.351E-06	1.702E-06	5.763E-07	3.044E-07	1.944E-07	8.886E-08	3.220E-08	1.519E-08	9.044E-09	6.034E-09
ESE	9.580E-06	2.258E-06	7.574E-07	3.980E-07	2.533E-07	1.153E-07	4.155E-08	1.958E-08	1.167E-08	7.802E-09
SE	1.839E-05	4.316E-06	1.464E-06	7.738E-07	4.942E-07	2.260E-07	8.197E-08	3.870E-08	2.306E-08	1.540E-08
SSE	1.727E-05	4.076E-06	1.343E-06	6.994E-07	4.425E-07	1.996E-07	7.114E-08	3.330E-08	1.980E-08	1.323E-08

B260

VENTS GROUND LEVEL RELEASES - JUL-SEP 2017
 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	6.575E-05	2.085E-05	1.103E-05	5.486E-06	2.150E-06	1.139E-06	7.072E-07	4.846E-07	3.548E-07	2.724E-07	2.166E-07
SSW	3.361E-05	1.093E-05	5.708E-06	2.805E-06	1.085E-06	5.696E-07	3.514E-07	2.395E-07	1.745E-07	1.334E-07	1.058E-07
SW	1.904E-05	6.227E-06	3.271E-06	1.613E-06	6.199E-07	3.238E-07	1.990E-07	1.352E-07	9.824E-08	7.493E-08	5.927E-08
WSW	1.958E-05	6.664E-06	3.513E-06	1.720E-06	6.459E-07	3.318E-07	2.013E-07	1.353E-07	9.748E-08	7.378E-08	5.797E-08
W	2.057E-05	6.820E-06	3.590E-06	1.764E-06	6.656E-07	3.430E-07	2.087E-07	1.406E-07	1.014E-07	7.691E-08	6.050E-08
WNW	3.149E-05	1.048E-05	5.493E-06	2.691E-06	1.030E-06	5.362E-07	3.289E-07	2.231E-07	1.620E-07	1.235E-07	9.760E-08
NW	3.158E-05	1.089E-05	5.848E-06	2.891E-06	1.101E-06	5.715E-07	3.496E-07	2.366E-07	1.714E-07	1.304E-07	1.029E-07
NNW	7.087E-05	2.299E-05	1.220E-05	6.049E-06	2.357E-06	1.244E-06	7.706E-07	5.270E-07	3.852E-07	2.953E-07	2.346E-07
N	1.203E-04	3.594E-05	1.863E-05	9.258E-06	3.730E-06	2.012E-06	1.267E-06	8.783E-07	6.490E-07	5.021E-07	4.021E-07
NNE	9.553E-05	2.779E-05	1.387E-05	6.785E-06	2.785E-06	1.521E-06	9.670E-07	6.749E-07	5.016E-07	3.900E-07	3.137E-07
NE	5.339E-05	1.528E-05	7.482E-06	3.635E-06	1.510E-06	8.309E-07	5.311E-07	3.723E-07	2.777E-07	2.165E-07	1.746E-07
ENE	3.197E-05	9.537E-06	4.844E-06	2.382E-06	9.632E-07	5.210E-07	3.288E-07	2.282E-07	1.688E-07	1.307E-07	1.048E-07
E	4.707E-05	1.355E-05	6.611E-06	3.200E-06	1.324E-06	7.272E-07	4.641E-07	3.249E-07	2.421E-07	1.887E-07	1.520E-07
ESE	5.989E-05	1.734E-05	8.688E-06	4.264E-06	1.752E-06	9.575E-07	6.089E-07	4.250E-07	3.160E-07	2.457E-07	1.976E-07
SE	1.178E-04	3.360E-05	1.659E-05	8.107E-06	3.360E-06	1.847E-06	1.179E-06	8.258E-07	6.154E-07	4.796E-07	3.864E-07
SSE	1.040E-04	3.096E-05	1.576E-05	7.759E-06	3.145E-06	1.704E-06	1.077E-06	7.481E-07	5.539E-07	4.293E-07	3.443E-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	1.771E-07	8.659E-08	5.360E-08	2.844E-08	1.801E-08	1.256E-08	9.316E-09	7.205E-09	5.747E-09	4.695E-09	3.907E-09
SSW	8.622E-08	4.165E-08	2.557E-08	1.341E-08	8.428E-09	5.842E-09	4.309E-09	3.318E-09	2.636E-09	2.145E-09	1.779E-09
SW	4.822E-08	2.312E-08	1.412E-08	7.351E-09	4.593E-09	3.170E-09	2.330E-09	1.789E-09	1.418E-09	1.151E-09	9.533E-10
WSW	4.687E-08	2.196E-08	1.319E-08	6.723E-09	4.150E-09	2.838E-09	2.072E-09	1.582E-09	1.248E-09	1.010E-09	8.333E-10
W	4.899E-08	2.307E-08	1.391E-08	7.131E-09	4.425E-09	3.040E-09	2.227E-09	1.706E-09	1.350E-09	1.095E-09	9.063E-10
WNW	7.936E-08	3.799E-08	2.319E-08	1.208E-08	7.567E-09	5.236E-09	3.858E-09	2.969E-09	2.359E-09	1.920E-09	1.593E-09
NW	8.355E-08	3.976E-08	2.415E-08	1.249E-08	7.771E-09	5.350E-09	3.926E-09	3.012E-09	2.387E-09	1.939E-09	1.606E-09
NNW	1.917E-07	9.339E-08	5.768E-08	3.052E-08	1.930E-08	1.345E-08	9.967E-09	7.706E-09	6.146E-09	5.020E-09	4.178E-09
N	3.308E-07	1.654E-07	1.040E-07	5.629E-08	3.612E-08	2.544E-08	1.967E-08	1.478E-08	1.185E-08	9.716E-09	8.113E-09
NNE	2.590E-07	1.312E-07	8.316E-08	4.550E-08	2.938E-08	2.077E-08	1.555E-08	1.212E-08	9.724E-09	7.979E-09	6.664E-09
NE	1.444E-07	7.374E-08	4.698E-08	2.587E-08	1.677E-08	1.189E-08	8.923E-09	6.964E-09	5.595E-09	4.595E-09	3.841E-09
ENE	8.626E-08	4.324E-08	2.722E-08	1.476E-08	9.479E-09	6.676E-09	4.985E-09	3.876E-09	3.105E-09	2.544E-09	2.122E-09
E	1.257E-07	6.406E-08	4.077E-08	2.243E-08	1.453E-08	1.030E-08	7.725E-09	6.029E-09	4.843E-09	3.977E-09	3.324E-09
ESE	1.632E-07	8.270E-08	5.243E-08	2.870E-08	1.853E-08	1.310E-08	9.815E-09	7.650E-09	6.140E-09	5.039E-09	4.209E-09
SE	3.196E-07	1.629E-07	1.037E-07	5.700E-08	3.692E-08	2.616E-08	1.962E-08	1.531E-08	1.230E-08	1.010E-08	8.441E-09
SSE	2.836E-07	1.424E-07	8.975E-08	4.874E-08	3.132E-08	2.207E-08	1.648E-08	1.282E-08	1.027E-08	8.415E-09	7.021E-09

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.075E-05	2.442E-06	7.332E-07	3.605E-07	2.185E-07	9.205E-08	2.940E-08	1.272E-08	7.253E-09	4.715E-09
SSW	5.579E-06	1.238E-06	3.648E-07	1.774E-07	1.067E-07	4.441E-08	1.390E-08	5.918E-09	3.341E-09	2.155E-09
SW	3.191E-06	7.089E-07	2.067E-07	9.991E-08	5.982E-08	2.470E-08	7.629E-09	3.213E-09	1.802E-09	1.157E-09
WSW	3.416E-06	7.450E-07	2.097E-07	9.927E-08	5.855E-08	2.360E-08	7.017E-09	2.881E-09	1.595E-09	1.015E-09
W	3.496E-06	7.663E-07	2.173E-07	1.033E-07	6.110E-08	2.476E-08	7.435E-09	3.084E-09	1.719E-09	1.101E-09
WNW	5.357E-06	1.180E-06	3.419E-07	1.648E-07	9.851E-08	4.060E-08	1.254E-08	5.306E-09	2.990E-09	1.929E-09
NW	5.653E-06	1.264E-06	3.636E-07	1.744E-07	1.039E-07	4.256E-08	1.298E-08	5.426E-09	3.035E-09	1.948E-09
NNW	1.187E-05	2.683E-06	7.994E-07	3.915E-07	2.367E-07	9.936E-08	3.157E-08	1.362E-08	7.758E-09	5.041E-09
N	1.831E-05	4.195E-06	1.310E-06	6.585E-07	4.053E-07	1.749E-07	5.792E-08	2.571E-08	1.487E-08	9.754E-09
NNE	1.381E-05	3.112E-06	9.980E-07	5.086E-07	3.160E-07	1.382E-07	4.670E-08	2.098E-08	1.219E-08	8.009E-09
NE	7.504E-06	1.680E-06	5.475E-07	2.814E-07	1.758E-07	7.756E-08	2.652E-08	1.200E-08	7.002E-09	4.612E-09
ENE	4.793E-06	1.082E-06	3.398E-07	1.713E-07	1.056E-07	4.568E-08	1.518E-08	6.747E-09	3.899E-09	2.554E-09
E	6.637E-06	1.476E-06	4.786E-07	2.454E-07	1.531E-07	6.741E-08	2.299E-08	1.040E-08	6.062E-09	3.992E-09
ESE	8.645E-06	1.957E-06	6.283E-07	3.204E-07	1.991E-07	8.713E-08	2.945E-08	1.324E-08	7.693E-09	5.058E-09
SE	1.660E-05	3.742E-06	1.216E-06	6.238E-07	3.893E-07	1.714E-07	5.844E-08	2.641E-08	1.539E-08	1.014E-08
SSE	1.558E-05	3.530E-06	1.113E-06	5.619E-07	3.470E-07	1.504E-07	5.011E-08	2.230E-08	1.289E-08	8.448E-09

B261

VENTS GROUND LEVEL RELEASES - JUL-SEP 2017
 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	2.329E-07	7.877E-08	4.045E-08	1.923E-08	6.907E-09	3.425E-09	2.017E-09	1.321E-09	9.293E-10	6.887E-10	5.307E-10
SSW	1.012E-07	3.424E-08	1.758E-08	8.357E-09	3.002E-09	1.489E-09	8.766E-10	5.740E-10	4.039E-10	2.993E-10	2.307E-10
SW	5.431E-08	1.837E-08	9.430E-09	4.483E-09	1.610E-09	7.986E-10	4.702E-10	3.079E-10	2.167E-10	1.606E-10	1.237E-10
WSW	7.610E-08	2.573E-08	1.321E-08	6.281E-09	2.256E-09	1.119E-09	6.589E-10	4.314E-10	3.036E-10	2.250E-10	1.734E-10
W	8.756E-08	2.961E-08	1.520E-08	7.228E-09	2.596E-09	1.288E-09	7.581E-10	4.964E-10	3.493E-10	2.589E-10	1.995E-10
WNW	1.363E-07	4.610E-08	2.367E-08	1.125E-08	4.042E-09	2.005E-09	1.180E-09	7.729E-10	5.438E-10	4.030E-10	3.106E-10
NW	1.657E-07	5.602E-08	2.877E-08	1.368E-08	4.912E-09	2.436E-09	1.434E-09	9.393E-10	6.609E-10	4.898E-10	3.774E-10
NNW	3.482E-07	1.177E-07	6.045E-08	2.874E-08	1.032E-08	5.120E-09	3.014E-09	1.974E-09	1.389E-09	1.029E-09	7.932E-10
N	3.358E-07	1.135E-07	5.830E-08	2.772E-08	9.956E-09	4.937E-09	2.907E-09	1.904E-09	1.340E-09	9.927E-10	7.650E-10
NNE	1.502E-07	5.081E-08	2.609E-08	1.240E-08	4.455E-09	2.209E-09	1.301E-09	8.518E-10	5.993E-10	4.442E-10	3.423E-10
NE	6.741E-08	2.280E-08	1.170E-08	5.565E-09	1.999E-09	9.913E-10	5.837E-10	3.822E-10	2.689E-10	1.993E-10	1.536E-10
ENE	6.207E-08	2.099E-08	1.078E-08	5.124E-09	1.840E-09	9.127E-10	5.374E-10	3.519E-10	2.476E-10	1.835E-10	1.414E-10
E	6.461E-08	2.185E-08	1.122E-08	5.333E-09	1.916E-09	9.500E-10	5.594E-10	3.663E-10	2.577E-10	1.910E-10	1.472E-10
ESE	8.869E-08	2.999E-08	1.540E-08	7.321E-09	2.630E-09	1.304E-09	7.679E-10	5.028E-10	3.538E-10	2.622E-10	2.021E-10
SE	1.514E-07	5.120E-08	2.629E-08	1.250E-08	4.490E-09	2.226E-09	1.311E-09	8.584E-10	6.040E-10	4.476E-10	3.450E-10
SSE	1.935E-07	6.542E-08	3.359E-08	1.597E-08	5.736E-09	2.845E-09	1.675E-09	1.097E-09	7.717E-10	5.719E-10	4.407E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.216E-10	1.873E-10	1.135E-10	5.735E-11	3.471E-11	2.327E-11	1.668E-11	1.252E-11	9.736E-12	7.777E-12	6.348E-12
SSW	1.832E-10	8.140E-11	4.931E-11	2.492E-11	1.509E-11	1.011E-11	7.247E-12	5.442E-12	4.231E-12	3.380E-12	2.759E-12
SW	9.830E-11	4.367E-11	2.645E-11	1.337E-11	8.092E-12	5.426E-12	3.888E-12	2.919E-12	2.270E-12	1.813E-12	1.480E-12
WSW	1.377E-10	6.118E-11	3.706E-11	1.873E-11	1.134E-11	7.602E-12	5.447E-12	4.090E-12	3.180E-12	2.540E-12	2.074E-12
W	1.585E-10	7.040E-11	4.265E-11	2.156E-11	1.305E-11	8.748E-12	6.268E-12	4.707E-12	3.660E-12	2.923E-12	2.386E-12
WNW	2.467E-10	1.096E-10	6.640E-11	3.356E-11	2.031E-11	1.362E-11	9.758E-12	7.328E-12	5.697E-12	4.551E-12	3.715E-12
NW	2.999E-10	1.332E-10	8.069E-11	4.078E-11	2.469E-11	1.655E-11	1.186E-11	8.905E-12	6.924E-12	5.531E-12	4.514E-12
NNW	6.302E-10	2.799E-10	1.696E-10	8.571E-11	5.188E-11	3.478E-11	2.492E-11	1.871E-11	1.455E-11	1.162E-11	9.487E-12
N	6.077E-10	2.700E-10	1.635E-10	8.266E-11	5.003E-11	3.354E-11	2.404E-11	1.805E-11	1.403E-11	1.121E-11	9.150E-12
NNE	2.719E-10	1.208E-10	7.317E-11	3.699E-11	2.239E-11	1.501E-11	1.075E-11	8.076E-12	6.279E-12	5.016E-12	4.094E-12
NE	1.220E-10	5.420E-11	3.283E-11	1.660E-11	1.004E-11	6.735E-12	4.826E-12	3.624E-12	2.817E-12	2.251E-12	1.837E-12
ENE	1.123E-10	4.991E-11	3.023E-11	1.528E-11	9.249E-12	6.201E-12	4.443E-12	3.337E-12	2.594E-12	2.072E-12	1.691E-12
E	1.169E-10	5.195E-11	3.147E-11	1.590E-11	9.626E-12	6.454E-12	4.625E-12	3.473E-12	2.700E-12	2.157E-12	1.761E-12
ESE	1.605E-10	7.131E-11	4.320E-11	2.183E-11	1.321E-11	8.860E-12	6.349E-12	4.767E-12	3.707E-12	2.961E-12	2.417E-12
SE	2.741E-10	1.217E-10	7.375E-11	3.728E-11	2.256E-11	1.513E-11	1.084E-11	8.139E-12	6.328E-12	5.055E-12	4.126E-12
SSE	3.501E-10	1.555E-10	9.422E-11	4.762E-11	2.882E-11	1.933E-11	1.385E-11	1.040E-11	8.085E-12	6.458E-12	5.271E-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	3.953E-08	8.098E-09	2.114E-09	9.494E-10	5.371E-10	2.065E-10	5.975E-11	2.368E-11	1.265E-11	7.828E-12
SSW	1.718E-08	3.519E-09	9.188E-10	4.126E-10	2.334E-10	8.977E-11	2.597E-11	1.029E-11	5.497E-12	3.402E-12
SW	9.217E-09	1.888E-09	4.929E-10	2.214E-10	1.252E-10	4.816E-11	1.393E-11	5.522E-12	2.949E-12	1.825E-12
WSW	1.291E-08	2.645E-09	6.906E-10	3.102E-10	1.755E-10	6.747E-11	1.952E-11	7.736E-12	4.131E-12	2.557E-12
W	1.486E-08	3.044E-09	7.946E-10	3.569E-10	2.019E-10	7.764E-11	2.246E-11	8.902E-12	4.754E-12	2.942E-12
WNW	2.314E-08	4.739E-09	1.237E-09	5.556E-10	3.143E-10	1.209E-10	3.497E-11	1.386E-11	7.401E-12	4.581E-12
NW	2.812E-08	5.759E-09	1.503E-09	6.752E-10	3.820E-10	1.469E-10	4.250E-11	1.684E-11	8.995E-12	5.567E-12
NNW	5.909E-08	1.210E-08	3.160E-09	1.419E-09	8.028E-10	3.087E-10	8.931E-11	3.540E-11	1.890E-11	1.170E-11
N	5.699E-08	1.167E-08	3.047E-09	1.369E-09	7.742E-10	2.977E-10	8.613E-11	3.414E-11	1.823E-11	1.128E-11
NNE	2.550E-08	5.223E-09	1.363E-09	6.123E-10	3.464E-10	1.332E-10	3.854E-11	1.527E-11	8.157E-12	5.049E-12
NE	1.144E-08	2.343E-09	6.118E-10	2.748E-10	1.554E-10	5.977E-11	1.729E-11	6.854E-12	3.660E-12	2.265E-12
ENE	1.053E-08	2.158E-09	5.633E-10	2.530E-10	1.431E-10	5.504E-11	1.592E-11	6.311E-12	3.370E-12	2.086E-12
E	1.096E-08	2.246E-09	5.863E-10	2.633E-10	1.490E-10	5.729E-11	1.657E-11	6.568E-12	3.508E-12	2.171E-12
ESE	1.505E-08	3.083E-09	8.049E-10	3.615E-10	2.045E-10	7.864E-11	2.275E-11	9.017E-12	4.815E-12	2.980E-12
SE	2.570E-08	5.264E-09	1.374E-09	6.171E-10	3.491E-10	1.343E-10	3.884E-11	1.539E-11	8.221E-12	5.088E-12
SSE	3.283E-08	6.725E-09	1.756E-09	7.885E-10	4.460E-10	1.715E-10	4.962E-11	1.967E-11	1.050E-11	6.501E-12

VENTS GROUND LEVEL RELEASES - JUL-SEP 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS
SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DIST. (MI)	X/Q	X/Q	X/Q	D/Q
				(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	1.1E-05	1.1E-05	9.5E-06	3.4E-08
A	Site Boundary	SSW	.82	5.1E-06	5.1E-06	4.5E-06	1.4E-08
A	Site Boundary	SW	.97	2.0E-06	1.9E-06	1.7E-06	4.8E-09
A	Site Boundary	WSW	.93	2.4E-06	2.4E-06	2.1E-06	7.7E-09
A	Site Boundary	W	.91	2.5E-06	2.5E-06	2.2E-06	9.2E-09
A	Site Boundary	WNW	.94	3.6E-06	3.6E-06	3.2E-06	1.3E-08
A	Site Boundary	NW	.81	5.5E-06	5.4E-06	4.8E-06	2.4E-08
A	Site Boundary	NNW	.69	1.6E-05	1.6E-05	1.4E-05	7.0E-08
A	Site Boundary	N	.67	2.5E-05	2.4E-05	2.2E-05	7.0E-08
A	Site Boundary	NNE	.60	2.3E-05	2.2E-05	2.0E-05	3.8E-08
A	Site Boundary	NE	.62	1.1E-05	1.1E-05	1.0E-05	1.6E-08
A	Site Boundary	ENE	.59	8.0E-06	8.0E-06	7.3E-06	1.6E-08
A	Site Boundary	E	.53	1.4E-05	1.4E-05	1.2E-05	2.0E-08
A	Site Boundary	ESE	.54	1.7E-05	1.7E-05	1.5E-05	2.7E-08
A	Site Boundary	SE	.65	2.3E-05	2.3E-05	2.1E-05	3.3E-08
A	Site Boundary	SSE	.81	1.5E-05	1.5E-05	1.3E-05	2.7E-08
A	Nearest Res	SSW	3.00	3.0E-07	3.0E-07	2.4E-07	5.7E-10
A	Nearest Res	SW	1.00	1.8E-06	1.8E-06	1.6E-06	4.5E-09
A	Nearest Res	WSW	2.50	2.5E-07	2.5E-07	2.0E-07	6.6E-10
A	Nearest Res	W	1.00	2.0E-06	2.0E-06	1.8E-06	7.2E-09
A	Nearest Res	WNW	1.70	9.2E-07	9.1E-07	7.7E-07	3.0E-09
A	Nearest Res	NW	.90	4.3E-06	4.2E-06	3.7E-06	1.8E-08
A	Nearest Res	NNW	1.90	1.7E-06	1.7E-06	1.4E-06	5.8E-09
A	Nearest Res	N	2.90	1.2E-06	1.2E-06	9.4E-07	2.1E-09
A	Nearest Res	NNE	1.70	2.6E-06	2.5E-06	2.1E-06	3.3E-09
A	Nearest Res	ENE	1.70	8.8E-07	8.6E-07	7.4E-07	1.4E-09
A	Nearest Res	E	2.20	7.4E-07	7.2E-07	6.0E-07	7.6E-10
A	Nearest Res	SE	2.80	1.2E-06	1.2E-06	9.4E-07	1.0E-09
A	Nearest Cow	NNW	3.50	5.0E-07	4.9E-07	3.9E-07	1.4E-09
A	Nearest Garde	SSW	3.00	3.0E-07	3.0E-07	2.4E-07	5.7E-10
A	Nearest Garde	SW	2.20	3.2E-07	3.2E-07	2.6E-07	6.4E-10
A	Nearest Garde	WSW	2.50	2.5E-07	2.5E-07	2.0E-07	6.6E-10
A	Nearest Garde	WNW	1.70	9.2E-07	9.1E-07	7.7E-07	3.0E-09
A	Nearest Garde	NW	2.00	6.9E-07	6.8E-07	5.7E-07	2.4E-09
A	Nearest Garde	NNW	2.80	7.6E-07	7.5E-07	6.1E-07	2.3E-09
A	Nearest Garde	ESE	2.30	8.9E-07	8.6E-07	7.2E-07	9.3E-10

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Atmospheric Diffusion Estimates

Ground Level Releases

October-December 2017

VENTS GROUND LEVEL RELEASES - OCT-DEC 2017
 NO DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE											
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	5.731E-05	1.860E-05	9.770E-06	4.873E-06	1.990E-06	1.090E-06	6.967E-07	4.896E-07	3.667E-07	2.874E-07	2.331E-07	3.993E-05	1.319E-05	6.928E-06	3.443E-06	1.399E-06	7.633E-07	4.868E-07	3.415E-07	2.554E-07	2.000E-07	1.620E-07
SSW	1.428E-05	4.893E-06	2.615E-06	1.304E-06	5.227E-07	2.826E-07	1.789E-07	1.248E-07	9.283E-08	7.236E-08	5.839E-08	1.394E-05	4.528E-06	2.322E-06	1.141E-06	4.676E-07	2.568E-07	1.645E-07	1.159E-07	8.696E-08	6.828E-08	5.545E-08
SW	1.068E-05	3.607E-06	1.881E-06	9.265E-07	3.700E-07	1.996E-07	1.262E-07	8.789E-08	6.535E-08	5.091E-08	4.106E-08	1.394E-05	4.528E-06	2.322E-06	1.141E-06	4.676E-07	2.568E-07	1.645E-07	1.159E-07	8.696E-08	6.828E-08	5.545E-08
WSW	2.451E-05	7.901E-06	4.043E-06	1.989E-06	8.158E-07	4.483E-07	2.873E-07	2.024E-07	1.519E-07	1.193E-07	9.688E-08	3.077E-05	1.019E-05	5.292E-06	2.613E-06	1.058E-06	5.765E-07	3.671E-07	2.572E-07	1.922E-07	1.504E-07	1.217E-07
W	5.912E-05	1.829E-05	9.358E-06	4.640E-06	1.948E-06	1.087E-06	7.046E-07	5.008E-07	3.785E-07	2.991E-07	2.442E-07	1.126E-04	3.414E-05	1.763E-05	8.821E-06	3.718E-06	2.079E-06	1.350E-06	9.606E-07	7.268E-07	5.746E-07	4.695E-07
WNW	7.049E-05	2.129E-05	1.077E-05	5.329E-06	2.259E-06	1.268E-06	8.259E-07	5.891E-07	4.467E-07	3.538E-07	2.895E-07	1.126E-04	3.414E-05	1.763E-05	8.821E-06	3.718E-06	2.079E-06	1.350E-06	9.606E-07	7.268E-07	5.746E-07	4.695E-07
NW	3.361E-05	1.024E-05	5.227E-06	2.597E-06	1.098E-06	6.152E-07	4.001E-07	2.850E-07	2.159E-07	1.708E-07	1.397E-07	2.006E-05	6.378E-06	3.347E-06	1.675E-06	6.912E-07	3.811E-07	2.449E-07	1.728E-07	1.299E-07	1.021E-07	8.299E-08
NNW	2.354E-05	7.310E-06	3.779E-06	1.883E-06	7.879E-07	4.387E-07	2.839E-07	2.015E-07	1.522E-07	1.201E-07	9.803E-08	2.354E-05	7.310E-06	3.779E-06	1.883E-06	7.879E-07	4.387E-07	2.839E-07	2.015E-07	1.522E-07	1.201E-07	9.803E-08
N	3.435E-05	1.104E-05	5.811E-06	2.907E-06	1.189E-06	6.518E-07	4.170E-07	2.932E-07	2.198E-07	1.723E-07	1.398E-07	3.435E-05	1.104E-05	5.811E-06	2.907E-06	1.189E-06	6.518E-07	4.170E-07	2.932E-07	2.198E-07	1.723E-07	1.398E-07
NNE	5.028E-05	1.618E-05	8.509E-06	4.251E-06	1.739E-06	9.530E-07	6.097E-07	4.288E-07	3.214E-07	2.521E-07	2.045E-07	5.028E-05	1.618E-05	8.509E-06	4.251E-06	1.739E-06	9.530E-07	6.097E-07	4.288E-07	3.214E-07	2.521E-07	2.045E-07
NE	5.563E-05	1.823E-05	9.592E-06	4.779E-06	1.941E-06	1.059E-06	6.749E-07	4.733E-07	3.539E-07	2.770E-07	2.243E-07	5.563E-05	1.823E-05	9.592E-06	4.779E-06	1.941E-06	1.059E-06	6.749E-07	4.733E-07	3.539E-07	2.770E-07	2.243E-07
E																						
ESE																						
SE																						
SSE																						

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE											
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	1.941E-07	1.020E-07	6.715E-08	3.939E-08	2.708E-08	2.030E-08	1.606E-08	1.319E-08	1.113E-08	9.581E-09	8.385E-09	1.348E-07	7.059E-08	4.638E-08	2.713E-08	1.863E-08	1.395E-08	1.102E-08	9.045E-09	7.625E-09	6.563E-09	5.741E-09
SSW	4.840E-08	2.501E-08	1.628E-08	9.391E-09	6.385E-09	4.744E-09	3.727E-09	3.042E-09	2.553E-09	2.188E-09	1.907E-09	4.840E-08	2.501E-08	1.628E-08	9.391E-09	6.385E-09	4.744E-09	3.727E-09	3.042E-09	2.553E-09	2.188E-09	1.907E-09
SW	4.623E-08	2.443E-08	1.615E-08	9.536E-09	6.594E-09	4.964E-09	3.942E-09	3.247E-09	2.747E-09	2.371E-09	2.080E-09	4.623E-08	2.443E-08	1.615E-08	9.536E-09	6.594E-09	4.964E-09	3.942E-09	3.247E-09	2.747E-09	2.371E-09	2.080E-09
WSW	3.403E-08	1.760E-08	1.146E-08	6.627E-09	4.516E-09	3.363E-09	2.647E-09	2.164E-09	1.819E-09	1.562E-09	1.363E-09	3.403E-08	1.760E-08	1.146E-08	6.627E-09	4.516E-09	3.363E-09	2.647E-09	2.164E-09	1.819E-09	1.562E-09	1.363E-09
W	8.078E-08	4.271E-08	2.825E-08	1.668E-08	1.153E-08	8.674E-09	6.885E-09	5.670E-09	4.796E-09	4.139E-09	3.630E-09	8.078E-08	4.271E-08	2.825E-08	1.668E-08	1.153E-08	8.674E-09	6.885E-09	5.670E-09	4.796E-09	4.139E-09	3.630E-09
WNW	1.012E-07	5.291E-08	3.473E-08	2.028E-08	1.391E-08	1.041E-08	8.227E-09	6.749E-09	5.689E-09	4.896E-09	4.283E-09	1.012E-07	5.291E-08	3.473E-08	2.028E-08	1.391E-08	1.041E-08	8.227E-09	6.749E-09	5.689E-09	4.896E-09	4.283E-09
NW	2.045E-07	1.099E-07	7.347E-08	4.399E-08	3.068E-08	2.324E-08	1.854E-08	1.533E-08	1.301E-08	1.126E-08	9.904E-09	2.045E-07	1.099E-07	7.347E-08	4.399E-08	3.068E-08	2.324E-08	1.854E-08	1.533E-08	1.301E-08	1.126E-08	9.904E-09
NNW	3.934E-07	2.118E-07	1.418E-07	8.499E-08	5.931E-08	4.495E-08	3.588E-08	2.968E-08	2.519E-08	2.181E-08	1.918E-08	3.934E-07	2.118E-07	1.418E-07	8.499E-08	5.931E-08	4.495E-08	3.588E-08	2.968E-08	2.519E-08	2.181E-08	1.918E-08
N	2.429E-07	1.315E-07	8.834E-08	5.325E-08	3.731E-08	2.836E-08	2.269E-08	1.881E-08	1.599E-08	1.386E-08	1.221E-08	2.429E-07	1.315E-07	8.834E-08	5.325E-08	3.731E-08	2.836E-08	2.269E-08	1.881E-08	1.599E-08	1.386E-08	1.221E-08
NNE	1.172E-07	6.324E-08	4.241E-08	2.549E-08	1.782E-08	1.353E-08	1.081E-08	8.949E-09	7.603E-09	6.587E-09	5.795E-09	1.172E-07	6.324E-08	4.241E-08	2.549E-08	1.782E-08	1.353E-08	1.081E-08	8.949E-09	7.603E-09	6.587E-09	5.795E-09
NE	6.925E-08	3.668E-08	2.428E-08	1.434E-08	9.910E-09	7.454E-09	5.914E-09	4.868E-09	4.115E-09	3.549E-09	3.111E-09	6.925E-08	3.668E-08	2.428E-08	1.434E-08	9.910E-09	7.454E-09	5.914E-09	4.868E-09	4.115E-09	3.549E-09	3.111E-09
E	8.205E-08	4.399E-08	2.936E-08	1.754E-08	1.222E-08	9.247E-09	7.373E-09	6.092E-09	5.167E-09	4.470E-09	3.928E-09	8.205E-08	4.399E-08	2.936E-08	1.754E-08	1.222E-08	9.247E-09	7.373E-09	6.092E-09	5.167E-09	4.470E-09	3.928E-09
ESE	1.164E-07	6.127E-08	4.038E-08	2.371E-08	1.633E-08	1.225E-08	9.699E-09	7.968E-09	6.726E-09	5.794E-09	5.073E-09	1.164E-07	6.127E-08	4.038E-08	2.371E-08	1.633E-08	1.225E-08	9.699E-09	7.968E-09	6.726E-09	5.794E-09	5.073E-09
SE	1.703E-07	8.968E-08	5.912E-08	3.475E-08	2.394E-08	1.797E-08	1.424E-08	1.170E-08	9.878E-09	8.512E-09	7.454E-09	1.703E-07	8.968E-08	5.912E-08	3.475E-08	2.394E-08	1.797E-08	1.424E-08	1.170E-08	9.878E-09	8.512E-09	7.454E-09
SSE	1.865E-07	9.760E-08	6.408E-08	3.744E-08	2.570E-08	1.923E-08	1.520E-08	1.247E-08	1.051E-08	9.041E-09	7.907E-09	1.865E-07	9.760E-08	6.408E-08	3.744E-08	2.570E-08	1.923E-08	1.520E-08	1.247E-08	1.051E-08	9.041E-09	7.907E-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	9.557E-06	2.231E-06	7.187E-07	3.716E-07	2.347E-07	1.070E-07	4.009E-08	2.041E-08	1.322E-08	9.596E-09
SSW	6.771E-06	1.571E-06	5.024E-07	2.589E-07	1.632E-07	7.409E-08	2.763E-08	1.403E-08	9.069E-09	6.573E-09
SW	2.539E-06	5.897E-07	1.849E-07	9.415E-08	5.883E-08	2.633E-08	9.585E-09	4.775E-09	3.051E-09	2.192E-09
WSW	2.888E-06	5.236E-07	1.697E-07	8.810E-08	5.584E-08	2.559E-08	9.699E-09	4.990E-09	3.255E-09	2.374E-09
W	1.840E-06	4.179E-07	1.304E-07	6.629E-08	4.138E-08	1.852E-08	6.763E-09	3.384E-09	2.171E-09	1.564E-09
WNW	3.988E-06	9.131E-07	2.963E-07	1.539E-07	9.756E-08	4.474E-08	1.696E-08	8.719E-09	5.684E-09	4.145E-09
NW	5.189E-06	1.190E-06	3.790E-07	1.949E-07	1.226E-07	5.556E-08	2.066E-08	1.047E-08	6.768E-09	4.904E-09
NNW	9.247E-06	2.164E-06	7.250E-07	3.832E-07	2.457E-07	1.147E-07	4.463E-08	2.334E-08	1.537E-08	1.128E-08
N	1.738E-05	4.124E-06	1.389E-06	7.357E-07	4.725E-07	2.210E-07	8.619E-08	4.515E-08	2.974E-08	2.183E-08
NNE	1.069E-05	2.501E-06	8.491E-07	4.520E-07	2.913E-07	1.371E-07	5.396E-08	2.848E-08	1.884E-08	1.388E-08
NE	5.172E-06	1.217E-06	4.114E-07	2.185E-07	1.406E-07	6.596E-08	2.584E-08	1.359E-08	8.968E-09	6.595E-09
ENE	3.278E-06	7.721E-07	2.524E-07	1.316E-07	8.356E-08	3.840E-08	1.458E-08	7.493E-09	4.880E-09	3.554E-09
E	3.721E-06	8.760E-07	2.922E-07	1.541E-07	9.866E-08	4.594E-08	1.780E-08	9.290E-09	6.106E-09	4.476E-09
ESE	5.682E-06	1.332E-06	4.301E-07	2.227E-07	1.408E-07	6.424E-08	2.413E-08	1.232E-08	7.989E-09	5.803E-09
SE	8.321E-06	1.948E-06	6.289E-07	3.257E-07	2.059E-07	9.403E-08	3.536E-08	1.807E-08	1.173E-08	8.525E-09
SSE	9.373E-06	2.179E-06	6.966E-07	3.587E-07	2.259E-07	1.025E-07	3.814E-08	1.934E-08	1.250E-08	9.055E-09

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VENTS GROUND LEVEL RELEASES - OCT-DEC 2017
 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	5.721E-05	1.854E-05	9.724E-06	4.843E-06	1.971E-06	1.075E-06	6.849E-07	4.796E-07	3.579E-07	2.795E-07	2.258E-07
SSW	3.986E-05	1.315E-05	6.894E-06	3.420E-06	1.384E-06	7.528E-07	4.783E-07	3.343E-07	2.491E-07	1.943E-07	1.568E-07
SW	1.426E-05	4.876E-06	2.602E-06	1.296E-06	5.174E-07	2.787E-07	1.758E-07	1.221E-07	9.056E-08	7.033E-08	5.654E-08
WSW	1.391E-05	4.510E-06	2.308E-06	1.132E-06	4.619E-07	2.525E-07	1.611E-07	1.130E-07	8.438E-08	6.595E-08	5.332E-08
W	1.066E-05	3.595E-06	1.872E-06	9.206E-07	3.663E-07	1.969E-07	1.240E-07	8.606E-08	6.375E-08	4.947E-08	3.975E-08
WNW	2.445E-05	7.870E-06	4.020E-06	1.974E-06	8.062E-07	4.411E-07	2.815E-07	1.974E-07	1.475E-07	1.153E-07	9.325E-08
NW	3.072E-05	1.015E-05	5.266E-06	2.596E-06	1.048E-06	5.687E-07	3.608E-07	2.519E-07	1.875E-07	1.461E-07	1.178E-07
NNW	5.899E-05	1.821E-05	9.298E-06	4.601E-06	1.923E-06	1.068E-06	6.892E-07	4.876E-07	3.669E-07	2.885E-07	2.345E-07
N	1.124E-04	3.399E-05	1.752E-05	8.749E-06	3.672E-06	2.044E-06	1.322E-06	9.362E-07	7.052E-07	5.551E-07	4.515E-07
NNE	7.033E-05	2.119E-05	1.070E-05	5.283E-06	2.229E-06	1.246E-06	8.074E-07	5.733E-07	4.326E-07	3.410E-07	2.778E-07
NE	3.354E-05	1.020E-05	5.197E-06	2.577E-06	1.085E-06	6.055E-07	3.921E-07	2.782E-07	2.099E-07	1.654E-07	1.347E-07
ENE	2.002E-05	6.356E-06	3.330E-06	1.664E-06	6.843E-07	3.759E-07	2.407E-07	1.692E-07	1.267E-07	9.922E-08	8.036E-08
E	2.350E-05	7.281E-06	3.758E-06	1.869E-06	7.790E-07	4.320E-07	2.785E-07	1.969E-07	1.481E-07	1.164E-07	9.461E-08
ESE	3.428E-05	1.100E-05	5.782E-06	2.888E-06	1.177E-06	6.428E-07	4.097E-07	2.871E-07	2.143E-07	1.675E-07	1.353E-07
SE	5.020E-05	1.613E-05	8.469E-06	4.225E-06	1.722E-06	9.405E-07	5.996E-07	4.202E-07	3.138E-07	2.452E-07	1.983E-07
SSE	5.553E-05	1.817E-05	9.546E-06	4.748E-06	1.921E-06	1.044E-06	6.634E-07	4.635E-07	3.453E-07	2.692E-07	2.172E-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	1.873E-07	9.662E-08	6.244E-08	3.530E-08	2.342E-08	1.695E-08	1.296E-08	1.029E-08	8.408E-09	7.017E-09	5.957E-09
SSW	1.299E-07	6.675E-08	4.302E-08	2.422E-08	1.602E-08	1.156E-08	8.819E-09	6.989E-09	5.696E-09	4.744E-09	4.019E-09
SW	4.669E-08	2.368E-08	1.512E-08	8.405E-09	5.509E-09	3.949E-09	2.995E-09	2.362E-09	1.916E-09	1.589E-09	1.341E-09
WSW	4.425E-08	2.285E-08	1.477E-08	8.335E-09	5.515E-09	3.977E-09	3.029E-09	2.395E-09	1.947E-09	1.617E-09	1.366E-09
W	3.282E-08	1.665E-08	1.063E-08	5.914E-09	3.880E-09	2.783E-09	2.112E-09	1.666E-09	1.352E-09	1.122E-09	9.470E-10
WNW	7.740E-08	4.001E-08	2.588E-08	1.462E-08	9.672E-09	6.977E-09	5.315E-09	4.205E-09	3.420E-09	2.842E-09	2.402E-09
NW	9.757E-08	5.003E-08	3.219E-08	1.808E-08	1.194E-08	8.605E-09	6.556E-09	5.190E-09	4.226E-09	3.516E-09	2.976E-09
NNW	1.955E-07	1.027E-07	6.708E-08	3.841E-08	2.565E-08	1.863E-08	1.427E-08	1.134E-08	9.265E-09	7.728E-09	6.554E-09
N	3.767E-07	1.984E-07	1.299E-07	7.463E-08	4.997E-08	3.639E-08	2.794E-08	2.226E-08	1.822E-08	1.523E-08	1.294E-08
NNE	2.320E-07	1.227E-07	8.059E-08	4.646E-08	3.117E-08	2.273E-08	1.747E-08	1.393E-08	1.141E-08	9.537E-09	8.107E-09
NE	1.125E-07	5.946E-08	3.906E-08	2.255E-08	1.517E-08	1.109E-08	8.544E-09	6.830E-09	5.610E-09	4.704E-09	4.011E-09
ENE	6.680E-08	3.473E-08	2.257E-08	1.286E-08	8.576E-09	6.233E-09	4.784E-09	3.813E-09	3.124E-09	2.614E-09	2.225E-09
E	7.887E-08	4.144E-08	2.712E-08	1.559E-08	1.046E-08	7.632E-09	5.875E-09	4.694E-09	3.853E-09	3.230E-09	2.753E-09
ESE	1.123E-07	5.800E-08	3.752E-08	2.124E-08	1.411E-08	1.023E-08	7.831E-09	6.227E-09	5.092E-09	4.254E-09	3.615E-09
SE	1.645E-07	8.507E-08	5.508E-08	3.124E-08	2.079E-08	1.509E-08	1.157E-08	9.215E-09	7.545E-09	6.311E-09	5.369E-09
SSE	1.799E-07	9.238E-08	5.951E-08	3.349E-08	2.216E-08	1.600E-08	1.221E-08	9.686E-09	7.901E-09	6.586E-09	5.585E-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	9.514E-06	2.211E-06	7.069E-07	3.628E-07	2.275E-07	1.016E-07	3.605E-08	1.708E-08	1.034E-08	7.036E-09
SSW	6.740E-06	1.556E-06	4.939E-07	2.526E-07	1.579E-07	7.023E-08	2.475E-08	1.165E-08	7.019E-09	4.758E-09
SW	2.527E-06	5.843E-07	1.818E-07	9.188E-08	5.698E-08	2.499E-08	8.611E-09	3.983E-09	2.373E-09	1.594E-09
WSW	2.275E-06	5.178E-07	1.662E-07	8.552E-08	5.370E-08	2.402E-08	8.511E-09	4.008E-09	2.405E-09	1.622E-09
W	1.832E-06	4.142E-07	1.283E-07	6.468E-08	4.007E-08	1.757E-08	6.059E-09	2.807E-09	1.674E-09	1.125E-09
WNW	3.966E-06	9.034E-07	2.904E-07	1.495E-07	9.392E-08	4.204E-08	1.492E-08	7.031E-09	4.223E-09	2.850E-09
NW	5.166E-06	1.179E-06	3.727E-07	1.901E-07	1.187E-07	5.267E-08	1.849E-08	8.674E-09	5.213E-09	3.526E-09
NNW	9.192E-06	2.138E-06	7.096E-07	3.715E-07	2.360E-07	1.075E-07	3.911E-08	1.876E-08	1.139E-08	7.748E-09
N	1.728E-05	4.077E-06	1.360E-06	7.140E-07	4.545E-07	2.076E-07	7.595E-08	3.663E-08	2.234E-08	1.527E-08
NNE	1.062E-05	2.470E-06	8.306E-07	4.379E-07	2.796E-07	1.283E-07	4.725E-08	2.288E-08	1.398E-08	9.561E-09
NE	5.144E-06	1.204E-06	4.035E-07	2.124E-07	1.355E-07	6.217E-08	2.294E-08	1.116E-08	6.855E-09	4.716E-09
ENE	3.262E-06	7.650E-07	2.482E-07	1.284E-07	8.093E-08	3.645E-08	1.311E-08	6.278E-09	3.828E-09	2.621E-09
E	3.701E-06	8.669E-07	2.868E-07	1.500E-07	9.524E-08	4.339E-08	1.587E-08	7.683E-09	4.711E-09	3.238E-09
ESE	5.655E-06	1.320E-06	4.228E-07	2.173E-07	1.363E-07	6.096E-08	2.169E-08	1.031E-08	6.253E-09	4.265E-09
SE	8.285E-06	1.931E-06	6.188E-07	3.181E-07	1.997E-07	8.940E-08	3.190E-08	1.521E-08	9.252E-09	6.328E-09
SSE	9.331E-06	2.160E-06	6.851E-07	3.501E-07	2.188E-07	9.723E-08	3.424E-08	1.613E-08	9.728E-09	6.605E-09

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VENTS GROUND LEVEL RELEASES - OCT-DEC 2017
 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	5.421E-05	1.697E-05	8.695E-06	4.258E-06	1.686E-06	8.990E-07	5.616E-07	3.866E-07	2.842E-07	2.189E-07	1.746E-07
SSW	3.777E-05	1.203E-05	6.165E-06	3.008E-06	1.184E-06	6.296E-07	3.924E-07	2.696E-07	1.979E-07	1.522E-07	1.213E-07
SW	1.351E-05	4.464E-06	2.327E-06	1.140E-06	4.426E-07	2.331E-07	1.442E-07	9.850E-08	7.193E-08	5.510E-08	4.375E-08
WSW	1.318E-05	4.130E-06	2.066E-06	9.968E-07	3.957E-07	2.116E-07	1.325E-07	9.138E-08	6.727E-08	5.190E-08	4.146E-08
W	1.010E-05	3.290E-06	1.674E-06	8.096E-07	3.133E-07	1.646E-07	1.017E-07	6.939E-08	5.063E-08	3.876E-08	3.076E-08
WNW	2.318E-05	7.207E-06	3.597E-06	1.737E-06	6.905E-07	3.695E-07	2.314E-07	1.596E-07	1.175E-07	9.069E-08	7.245E-08
NW	2.911E-05	9.295E-06	4.709E-06	2.283E-06	8.962E-07	4.755E-07	2.959E-07	2.031E-07	1.489E-07	1.145E-07	9.118E-08
NNW	5.592E-05	1.668E-05	8.324E-06	4.052E-06	1.648E-06	8.956E-07	5.672E-07	3.947E-07	2.927E-07	2.272E-07	1.825E-07
N	1.065E-04	3.114E-05	1.568E-05	7.703E-06	3.147E-06	1.714E-06	1.087E-06	7.575E-07	5.623E-07	4.368E-07	3.510E-07
NNE	6.667E-05	1.941E-05	9.578E-06	4.653E-06	1.911E-06	1.045E-06	6.647E-07	4.643E-07	3.454E-07	2.687E-07	2.163E-07
NE	3.179E-05	9.338E-06	4.651E-06	2.269E-06	9.293E-07	5.071E-07	3.222E-07	2.248E-07	1.671E-07	1.299E-07	1.045E-07
ENE	1.897E-05	5.819E-06	2.978E-06	1.464E-06	5.854E-07	3.144E-07	1.974E-07	1.364E-07	1.006E-07	7.773E-08	6.217E-08
E	2.227E-05	6.668E-06	3.362E-06	1.645E-06	6.670E-07	3.616E-07	2.287E-07	1.590E-07	1.178E-07	9.140E-08	7.337E-08
ESE	3.249E-05	1.007E-05	5.171E-06	2.540E-06	1.007E-06	5.376E-07	3.361E-07	2.315E-07	1.703E-07	1.312E-07	1.047E-07
SE	4.756E-05	1.476E-05	7.573E-06	3.715E-06	1.472E-06	7.862E-07	4.916E-07	3.387E-07	2.491E-07	1.920E-07	1.533E-07
SSE	5.262E-05	1.664E-05	8.536E-06	4.175E-06	1.643E-06	8.733E-07	5.440E-07	3.737E-07	2.742E-07	2.109E-07	1.680E-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	1.432E-07	7.078E-08	4.417E-08	2.371E-08	1.514E-08	1.063E-08	7.927E-09	6.161E-09	4.937E-09	4.048E-09	3.381E-09
SSW	9.940E-08	4.896E-08	3.048E-08	1.631E-08	1.040E-08	7.290E-09	5.429E-09	4.215E-09	3.373E-09	2.764E-09	2.306E-09
SW	3.571E-08	1.736E-08	1.070E-08	5.653E-09	3.569E-09	2.484E-09	1.839E-09	1.421E-09	1.132E-09	9.243E-10	7.688E-10
WSW	3.403E-08	1.689E-08	1.057E-08	5.695E-09	3.651E-09	2.569E-09	1.918E-09	1.492E-09	1.196E-09	9.810E-10	8.193E-10
W	2.511E-08	1.221E-08	7.534E-09	3.985E-09	2.521E-09	1.758E-09	1.303E-09	1.008E-09	8.042E-10	6.570E-10	5.470E-10
WNW	5.948E-08	2.955E-08	1.850E-08	9.975E-09	6.388E-09	4.494E-09	3.355E-09	2.609E-09	2.092E-09	1.715E-09	1.433E-09
NW	7.465E-08	3.670E-08	2.282E-08	1.219E-08	7.761E-09	5.437E-09	4.046E-09	3.139E-09	2.511E-09	2.056E-09	1.715E-09
NNW	1.505E-07	7.596E-08	4.807E-08	2.628E-08	1.698E-08	1.202E-08	9.023E-09	7.048E-09	5.670E-09	4.665E-09	3.907E-09
N	2.896E-07	1.465E-07	9.284E-08	5.085E-08	3.290E-08	2.333E-08	1.752E-08	1.370E-08	1.103E-08	9.079E-09	7.608E-09
NNE	1.787E-07	9.086E-08	5.778E-08	3.180E-08	2.065E-08	1.467E-08	1.104E-08	8.645E-09	6.968E-09	5.743E-09	4.818E-09
NE	8.630E-08	4.379E-08	2.782E-08	1.529E-08	9.916E-09	7.044E-09	5.300E-09	4.150E-09	3.346E-09	2.759E-09	2.315E-09
ENE	5.109E-08	2.545E-08	1.597E-08	8.634E-09	5.541E-09	3.906E-09	2.921E-09	2.276E-09	1.828E-09	1.502E-09	1.257E-09
E	6.047E-08	3.048E-08	1.927E-08	1.053E-08	6.810E-09	4.826E-09	3.625E-09	2.834E-09	2.283E-09	1.880E-09	1.577E-09
ESE	8.590E-08	4.251E-08	2.655E-08	1.427E-08	9.128E-09	6.417E-09	4.789E-09	3.726E-09	2.987E-09	2.451E-09	2.049E-09
SE	1.257E-07	6.226E-08	3.891E-08	2.094E-08	1.340E-08	9.429E-09	7.042E-09	5.481E-09	4.398E-09	3.611E-09	3.019E-09
SSE	1.376E-07	6.772E-08	4.213E-08	2.253E-08	1.435E-08	1.006E-08	7.492E-09	5.816E-09	4.655E-09	3.814E-09	3.183E-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	8.563E-06	1.908E-06	5.816E-07	2.886E-07	1.761E-07	7.505E-08	2.445E-08	1.075E-08	6.199E-09	4.065E-09
SSW	6.066E-06	1.343E-06	4.065E-07	2.010E-07	1.224E-07	5.196E-08	1.683E-08	7.374E-09	4.241E-09	2.775E-09
SW	2.274E-06	5.044E-07	1.496E-07	7.311E-08	4.413E-08	1.848E-08	5.849E-09	2.516E-09	1.431E-09	9.284E-10
WSW	2.049E-06	4.475E-07	1.371E-07	6.830E-08	4.180E-08	1.789E-08	5.872E-09	2.597E-09	1.501E-09	9.848E-10
W	1.649E-06	3.575E-07	1.056E-07	5.147E-08	3.104E-08	1.300E-08	4.123E-09	1.779E-09	1.015E-09	6.599E-10
WNW	3.573E-06	7.804E-07	2.395E-07	1.193E-07	7.305E-08	3.129E-08	1.028E-08	4.543E-09	2.625E-09	1.722E-09
NW	4.650E-06	1.017E-06	3.067E-07	1.513E-07	9.196E-08	3.897E-08	1.258E-08	5.500E-09	3.159E-09	2.065E-09
NNW	8.283E-06	1.848E-06	5.858E-07	2.969E-07	1.839E-07	8.013E-08	2.699E-08	1.215E-08	7.087E-09	4.682E-09
N	1.557E-05	3.522E-06	1.122E-06	5.702E-07	3.537E-07	1.545E-07	5.221E-08	2.356E-08	1.377E-08	9.111E-09
NNE	9.575E-06	2.135E-06	6.859E-07	3.502E-07	2.179E-07	9.568E-08	3.262E-08	1.481E-08	8.691E-09	5.763E-09
NE	4.634E-06	1.039E-06	3.326E-07	1.694E-07	1.053E-07	4.614E-08	1.568E-08	7.112E-09	4.173E-09	2.769E-09
ENE	2.936E-06	6.601E-07	2.042E-07	1.021E-07	6.268E-08	2.693E-08	8.889E-09	3.948E-09	2.290E-09	1.508E-09
E	3.333E-06	7.485E-07	2.363E-07	1.195E-07	7.393E-08	3.216E-08	1.082E-08	4.875E-09	2.850E-09	1.887E-09
ESE	5.090E-06	1.139E-06	3.480E-07	1.729E-07	1.056E-07	4.506E-08	1.472E-08	6.489E-09	3.748E-09	2.461E-09
SE	7.456E-06	1.666E-06	5.090E-07	2.529E-07	1.545E-07	6.599E-08	2.158E-08	9.534E-09	5.515E-09	3.625E-09
SSE	8.398E-06	1.864E-06	5.637E-07	2.785E-07	1.695E-07	7.188E-08	2.325E-08	1.018E-08	5.852E-09	3.829E-09

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VENTS GROUND LEVEL RELEASES - OCT-DEC 2017
 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	2.723E-07	9.207E-08	4.727E-08	2.247E-08	8.072E-09	4.003E-09	2.357E-09	1.543E-09	1.086E-09	8.049E-10	6.203E-10
SSW	1.481E-07	5.010E-08	2.572E-08	1.223E-08	4.392E-09	2.178E-09	1.283E-09	8.399E-10	5.910E-10	4.380E-10	3.375E-10
SW	4.481E-08	1.515E-08	7.781E-09	3.699E-09	1.329E-09	6.590E-10	3.880E-10	2.541E-10	1.788E-10	1.325E-10	1.021E-10
WSW	3.646E-08	1.233E-08	6.331E-09	3.010E-09	1.081E-09	5.362E-10	3.157E-10	2.067E-10	1.455E-10	1.078E-10	8.307E-11
W	3.620E-08	1.224E-08	6.285E-09	2.988E-09	1.073E-09	5.323E-10	3.134E-10	2.052E-10	1.444E-10	1.070E-10	8.247E-11
WNV	7.065E-08	2.389E-08	1.227E-08	5.832E-09	2.095E-09	1.039E-09	6.117E-10	4.005E-10	2.818E-10	2.089E-10	1.610E-10
NW	1.404E-07	4.747E-08	2.437E-08	1.159E-08	4.162E-09	2.064E-09	1.215E-09	7.958E-10	5.600E-10	4.150E-10	3.198E-10
NNW	1.580E-07	5.343E-08	2.743E-08	1.304E-08	4.685E-09	2.323E-09	1.368E-09	8.958E-10	6.303E-10	4.671E-10	3.600E-10
N	3.145E-07	1.064E-07	5.461E-08	2.596E-08	9.326E-09	4.625E-09	2.723E-09	1.783E-09	1.255E-09	9.299E-10	7.166E-10
NNE	1.892E-07	6.399E-08	3.285E-08	1.562E-08	5.610E-09	2.782E-09	1.638E-09	1.073E-09	7.548E-10	5.594E-10	4.311E-10
NE	1.038E-07	3.511E-08	1.803E-08	8.571E-09	3.079E-09	1.527E-09	8.990E-10	5.887E-10	4.142E-10	3.070E-10	2.366E-10
ENE	7.250E-08	2.452E-08	1.259E-08	5.985E-09	2.150E-09	1.066E-09	6.277E-10	4.110E-10	2.892E-10	2.143E-10	1.652E-10
E	7.065E-08	2.389E-08	1.227E-08	5.832E-09	2.095E-09	1.039E-09	6.117E-10	4.005E-10	2.818E-10	2.089E-10	1.610E-10
ESE	1.258E-07	4.253E-08	2.184E-08	1.038E-08	3.729E-09	1.849E-09	1.089E-09	7.130E-10	5.017E-10	3.718E-10	2.865E-10
SE	2.382E-07	8.055E-08	4.136E-08	1.966E-08	7.062E-09	3.502E-09	2.062E-09	1.350E-09	9.502E-10	7.042E-10	5.426E-10
SSE	2.944E-07	9.956E-08	5.112E-08	2.430E-08	8.730E-09	4.329E-09	2.549E-09	1.669E-09	1.175E-09	8.704E-10	6.708E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.928E-10	2.189E-10	1.326E-10	6.702E-11	4.057E-11	2.720E-11	1.949E-11	1.463E-11	1.138E-11	9.089E-12	7.419E-12
SSW	2.681E-10	1.191E-10	7.215E-11	3.647E-11	2.207E-11	1.480E-11	1.060E-11	7.963E-12	6.191E-12	4.946E-12	4.037E-12
SW	8.111E-11	3.603E-11	2.183E-11	1.103E-11	6.677E-12	4.477E-12	3.208E-12	2.409E-12	1.873E-12	1.496E-12	1.221E-12
WSW	6.600E-11	2.932E-11	1.776E-11	8.976E-12	5.433E-12	3.643E-12	2.610E-12	1.960E-12	1.524E-12	1.217E-12	9.936E-13
W	6.552E-11	2.911E-11	1.763E-11	8.912E-12	5.394E-12	3.616E-12	2.591E-12	1.946E-12	1.513E-12	1.209E-12	9.864E-13
WNV	1.279E-10	5.680E-11	3.441E-11	1.739E-11	1.053E-11	7.058E-12	5.057E-12	3.797E-12	2.953E-12	2.359E-12	1.925E-12
NW	2.541E-10	1.129E-10	6.837E-11	3.456E-11	2.091E-11	1.402E-11	1.005E-11	7.545E-12	5.866E-12	4.686E-12	3.825E-12
NNW	2.860E-10	1.270E-10	7.696E-11	3.890E-11	2.354E-11	1.578E-11	1.131E-11	8.493E-12	6.604E-12	5.275E-12	4.306E-12
N	5.693E-10	2.529E-10	1.532E-10	7.743E-11	4.686E-11	3.142E-11	2.252E-11	1.691E-11	1.315E-11	1.050E-11	8.571E-12
NNE	3.425E-10	1.521E-10	9.216E-11	4.658E-11	2.819E-11	1.890E-11	1.354E-11	1.017E-11	7.908E-12	6.317E-12	5.156E-12
NE	1.879E-10	8.348E-11	5.057E-11	2.556E-11	1.547E-11	1.037E-11	7.433E-12	5.581E-12	4.339E-12	3.466E-12	2.829E-12
ENE	1.312E-10	5.829E-11	3.531E-11	1.785E-11	1.080E-11	7.243E-12	5.190E-12	3.897E-12	3.030E-12	2.420E-12	1.976E-12
E	1.279E-10	5.681E-11	3.441E-11	1.739E-11	1.053E-11	7.058E-12	5.058E-12	3.798E-12	2.953E-12	2.359E-12	1.925E-12
ESE	2.276E-10	1.011E-10	6.125E-11	3.096E-11	1.874E-11	1.256E-11	9.003E-12	6.760E-12	5.256E-12	4.199E-12	3.427E-12
SE	4.311E-10	1.915E-10	1.160E-10	5.864E-11	3.549E-11	2.379E-11	1.705E-11	1.280E-11	9.955E-12	7.952E-12	6.490E-12
SSE	5.329E-10	2.367E-10	1.434E-10	7.248E-11	4.387E-11	2.941E-11	2.108E-11	1.583E-11	1.230E-11	9.829E-12	8.023E-12

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.620E-08	9.464E-09	2.471E-09	1.110E-09	6.277E-10	2.414E-10	6.984E-11	2.768E-11	1.478E-11	9.149E-12
SSW	2.514E-08	5.150E-09	1.344E-09	6.038E-10	3.416E-10	1.314E-10	3.800E-11	1.506E-11	8.043E-12	4.978E-12
SW	7.605E-09	1.558E-09	4.067E-10	1.827E-10	1.033E-10	3.974E-11	1.150E-11	4.556E-12	2.433E-12	1.506E-12
WSW	6.188E-09	1.268E-09	3.309E-10	1.486E-10	8.407E-11	3.233E-11	9.353E-12	3.707E-12	1.980E-12	1.225E-12
W	6.144E-09	1.258E-09	3.285E-10	1.475E-10	8.347E-11	3.210E-11	9.286E-12	3.680E-12	1.965E-12	1.216E-12
WNV	1.199E-08	2.456E-09	6.411E-10	2.879E-10	1.629E-10	6.264E-11	1.812E-11	7.183E-12	3.836E-12	2.374E-12
NW	2.382E-08	4.880E-09	1.274E-09	5.721E-10	3.236E-10	1.245E-10	3.601E-11	1.427E-11	7.621E-12	4.717E-12
NNW	2.681E-08	5.493E-09	1.434E-09	6.440E-10	3.643E-10	1.401E-10	4.053E-11	1.606E-11	8.578E-12	5.310E-12
N	5.338E-08	1.093E-08	2.854E-09	1.282E-09	7.252E-10	2.789E-10	8.068E-11	3.198E-11	1.708E-11	1.057E-11
NNE	3.211E-08	6.578E-09	1.717E-09	7.712E-10	4.363E-10	1.678E-10	4.854E-11	1.924E-11	1.027E-11	6.358E-12
NE	1.762E-08	3.609E-09	9.423E-10	4.232E-10	2.394E-10	9.207E-11	2.663E-11	1.056E-11	5.637E-12	3.489E-12
ENE	1.230E-08	2.520E-09	6.580E-10	2.955E-10	1.672E-10	6.429E-11	1.860E-11	7.371E-12	3.936E-12	2.436E-12
E	1.199E-08	2.456E-09	6.412E-10	2.880E-10	1.629E-10	6.265E-11	1.812E-11	7.183E-12	3.836E-12	2.374E-12
ESE	2.134E-08	4.372E-09	1.141E-09	5.126E-10	2.900E-10	1.115E-10	3.226E-11	1.279E-11	6.828E-12	4.226E-12
SE	4.042E-08	8.280E-09	2.162E-09	9.708E-10	5.492E-10	2.112E-10	6.110E-11	2.422E-11	1.293E-11	8.004E-12
SSE	4.997E-08	1.023E-08	2.672E-09	1.200E-09	6.789E-10	2.611E-10	7.552E-11	2.993E-11	1.598E-11	9.894E-12

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VENTS GROUND LEVEL RELEASES - OCT-DEC 2017
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	8.4E-06	8.3E-06	7.4E-06	4.0E-08
A	Site Boundary	SSW	.82	5.5E-06	5.5E-06	4.9E-06	2.0E-08
A	Site Boundary	SW	.97	1.4E-06	1.4E-06	1.2E-06	3.9E-09
A	Site Boundary	WSW	.93	1.4E-06	1.4E-06	1.2E-06	3.7E-09
A	Site Boundary	W	.91	1.2E-06	1.2E-06	1.0E-06	3.8E-09
A	Site Boundary	WNW	.94	2.3E-06	2.3E-06	2.0E-06	6.9E-09
A	Site Boundary	NW	.81	4.4E-06	4.3E-06	3.9E-06	2.0E-08
A	Site Boundary	NNW	.69	1.1E-05	1.1E-05	9.6E-06	3.2E-08
A	Site Boundary	N	.67	2.1E-05	2.1E-05	1.9E-05	6.5E-08
A	Site Boundary	NNE	.60	1.6E-05	1.6E-05	1.4E-05	4.8E-08
A	Site Boundary	NE	.62	7.0E-06	7.0E-06	6.3E-06	2.5E-08
A	Site Boundary	ENE	.59	4.9E-06	4.9E-06	4.4E-06	1.9E-08
A	Site Boundary	E	.53	6.7E-06	6.7E-06	6.1E-06	2.2E-08
A	Site Boundary	ESE	.54	9.8E-06	9.8E-06	8.9E-06	3.8E-08
A	Site Boundary	SE	.65	1.1E-05	1.1E-05	9.5E-06	5.3E-08
A	Site Boundary	SSE	.81	7.9E-06	7.9E-06	7.0E-06	4.2E-08
A	Nearest Res	SSW	3.00	3.4E-07	3.3E-07	2.7E-07	8.4E-10
A	Nearest Res	SW	1.00	1.3E-06	1.3E-06	1.1E-06	3.7E-09
A	Nearest Res	WSW	2.50	1.6E-07	1.6E-07	1.3E-07	3.2E-10
A	Nearest Res	W	1.00	9.3E-07	9.2E-07	8.1E-07	3.0E-09
A	Nearest Res	WNW	1.70	6.3E-07	6.2E-07	5.2E-07	1.5E-09
A	Nearest Res	NW	.90	3.4E-06	3.4E-06	3.0E-06	1.5E-08
A	Nearest Res	NNW	1.90	1.2E-06	1.2E-06	1.0E-06	2.6E-09
A	Nearest Res	N	2.90	1.0E-06	1.0E-06	8.1E-07	1.9E-09
A	Nearest Res	NNE	1.70	1.8E-06	1.7E-06	1.5E-06	4.1E-09
A	Nearest Res	ENE	1.70	5.3E-07	5.3E-07	4.5E-07	1.6E-09
A	Nearest Res	E	2.20	3.6E-07	3.6E-07	3.0E-07	8.3E-10
A	Nearest Res	SE	2.80	4.9E-07	4.8E-07	3.9E-07	1.6E-09
A	Nearest Cow	NNW	3.50	3.8E-07	3.7E-07	2.9E-07	6.3E-10
A	Nearest Garde	SSW	3.00	3.4E-07	3.3E-07	2.7E-07	8.4E-10
A	Nearest Garde	SW	2.20	2.3E-07	2.3E-07	1.9E-07	5.2E-10
A	Nearest Garde	WSW	2.50	1.6E-07	1.6E-07	1.3E-07	3.2E-10
A	Nearest Garde	WNW	1.70	6.3E-07	6.2E-07	5.2E-07	1.5E-09
A	Nearest Garde	NW	2.00	5.8E-07	5.7E-07	4.8E-07	2.1E-09
A	Nearest Garde	NNW	2.80	5.7E-07	5.6E-07	4.5E-07	1.1E-09
A	Nearest Garde	ESE	2.30	4.9E-07	4.8E-07	4.0E-07	1.3E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

July-December 2017

VENTS GROUND LEVEL RELEASES - JUL-DEC 2017
 NO DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.413E-05	2.094E-05	1.118E-05	5.625E-06	2.286E-06	1.248E-06	7.953E-07	5.577E-07	4.169E-07	3.263E-07	2.642E-07
SSW	3.835E-05	1.277E-05	6.760E-06	3.370E-06	1.359E-06	7.378E-07	4.686E-07	3.276E-07	2.443E-07	1.908E-07	1.542E-07
SW	1.737E-05	5.910E-06	3.171E-06	1.588E-06	6.328E-07	3.407E-07	2.149E-07	1.494E-07	1.109E-07	8.627E-08	6.948E-08
WSW	1.776E-05	6.043E-06	3.195E-06	1.584E-06	6.279E-07	3.368E-07	2.120E-07	1.471E-07	1.090E-07	8.471E-08	6.816E-08
W	1.646E-05	5.612E-06	2.992E-06	1.489E-06	5.851E-07	3.118E-07	1.952E-07	1.348E-07	9.956E-08	7.708E-08	6.183E-08
WNW	2.949E-05	9.871E-06	5.192E-06	2.575E-06	1.033E-06	5.593E-07	3.544E-07	2.473E-07	1.841E-07	1.436E-07	1.160E-07
NW	3.281E-05	1.127E-05	6.029E-06	3.008E-06	1.200E-06	6.466E-07	4.083E-07	2.841E-07	2.110E-07	1.643E-07	1.324E-07
NNW	6.851E-05	2.218E-05	1.174E-05	5.881E-06	2.409E-06	1.322E-06	8.469E-07	5.961E-07	4.470E-07	3.508E-07	2.847E-07
N	1.215E-04	3.724E-05	1.951E-05	9.821E-06	4.111E-06	2.289E-06	1.481E-06	1.051E-06	7.932E-07	6.259E-07	5.105E-07
NNE	8.568E-05	2.586E-05	1.317E-05	6.548E-06	2.775E-06	1.558E-06	1.014E-06	7.231E-07	5.481E-07	4.340E-07	3.551E-07
NE	4.441E-05	1.332E-05	6.735E-06	3.340E-06	1.424E-06	8.023E-07	5.238E-07	3.743E-07	2.842E-07	2.254E-07	1.846E-07
ENE	2.669E-05	8.349E-06	4.364E-06	2.186E-06	9.081E-07	5.030E-07	3.242E-07	2.294E-07	1.728E-07	1.361E-07	1.108E-07
E	3.584E-05	1.085E-05	5.498E-06	2.723E-06	1.154E-06	6.479E-07	4.219E-07	3.009E-07	2.281E-07	1.807E-07	1.478E-07
ESE	4.799E-05	1.479E-05	7.676E-06	3.841E-06	1.606E-06	8.937E-07	5.780E-07	4.100E-07	3.095E-07	2.442E-07	1.991E-07
SE	8.504E-05	2.582E-05	1.326E-05	6.613E-06	2.788E-06	1.559E-06	1.012E-06	7.204E-07	5.451E-07	4.310E-07	3.521E-07
SSE	8.174E-05	2.578E-05	1.351E-05	6.762E-06	2.799E-06	1.546E-06	9.952E-07	7.032E-07	5.291E-07	4.163E-07	3.387E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.197E-07	1.148E-07	7.534E-08	4.395E-08	3.011E-08	2.250E-08	1.776E-08	1.455E-08	1.225E-08	1.054E-08	9.206E-09
SSW	1.281E-07	6.657E-08	4.350E-08	2.526E-08	1.726E-08	1.287E-08	1.014E-08	8.298E-09	6.980E-09	5.996E-09	5.235E-09
SW	5.749E-08	2.951E-08	1.911E-08	1.095E-08	7.410E-09	5.485E-09	4.296E-09	3.497E-09	2.928E-09	2.505E-09	2.180E-09
WSW	5.635E-08	2.884E-08	1.865E-08	1.068E-08	7.237E-09	5.364E-09	4.206E-09	3.428E-09	2.873E-09	2.460E-09	2.143E-09
W	5.099E-08	2.583E-08	1.657E-08	9.391E-09	6.318E-09	4.657E-09	3.634E-09	2.950E-09	2.464E-09	2.104E-09	1.827E-09
WNW	9.618E-08	4.983E-08	3.249E-08	1.882E-08	1.284E-08	9.571E-09	7.538E-09	6.166E-09	5.185E-09	4.453E-09	3.888E-09
NW	1.096E-07	5.639E-08	3.658E-08	2.102E-08	1.425E-08	1.056E-08	8.280E-09	6.747E-09	5.655E-09	4.841E-09	4.215E-09
NNW	2.372E-07	1.250E-07	8.250E-08	4.851E-08	3.342E-08	2.508E-08	1.987E-08	1.632E-08	1.378E-08	1.187E-08	1.039E-08
N	4.272E-07	2.287E-07	1.525E-07	9.098E-08	6.328E-08	4.783E-08	3.809E-08	3.145E-08	2.665E-08	2.304E-08	2.024E-08
NNE	2.979E-07	1.611E-07	1.081E-07	6.511E-08	4.557E-08	3.462E-08	2.768E-08	2.293E-08	1.949E-08	1.689E-08	1.487E-08
NE	1.550E-07	8.416E-08	5.665E-08	3.422E-08	2.400E-08	1.826E-08	1.462E-08	1.212E-08	1.031E-08	8.943E-09	7.877E-09
ENE	9.257E-08	4.929E-08	3.274E-08	1.943E-08	1.347E-08	1.016E-08	8.077E-09	6.659E-09	5.636E-09	4.868E-09	4.271E-09
E	1.240E-07	6.710E-08	4.506E-08	2.715E-08	1.901E-08	1.445E-08	1.156E-08	9.576E-09	8.141E-09	7.058E-09	6.213E-09
ESE	1.666E-07	8.918E-08	5.946E-08	3.547E-08	2.467E-08	1.865E-08	1.486E-08	1.227E-08	1.040E-08	8.993E-09	7.900E-09
SE	2.951E-07	1.589E-07	1.064E-07	6.380E-08	4.455E-08	3.378E-08	2.697E-08	2.231E-08	1.894E-08	1.640E-08	1.443E-08
SSE	2.828E-07	1.502E-07	9.961E-08	5.900E-08	4.084E-08	3.077E-08	2.444E-08	2.014E-08	1.703E-08	1.470E-08	1.290E-08

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.088E-05	2.566E-06	8.209E-07	4.226E-07	2.661E-07	1.206E-07	4.478E-08	2.264E-08	1.459E-08	1.055E-08
SSW	6.589E-06	1.530E-06	4.840E-07	2.478E-07	1.554E-07	6.998E-08	2.576E-08	1.295E-08	8.322E-09	6.006E-09
SW	3.076E-06	7.152E-07	2.222E-07	1.125E-07	7.001E-08	3.111E-08	1.119E-08	5.523E-09	3.509E-09	2.510E-09
WSW	3.112E-06	7.110E-07	2.193E-07	1.107E-07	6.869E-08	3.043E-08	1.092E-08	5.400E-09	3.439E-09	2.465E-09
W	2.906E-06	6.646E-07	2.021E-07	1.011E-07	6.233E-08	2.731E-08	9.622E-09	4.691E-09	2.961E-09	2.108E-09
WNW	5.069E-06	1.165E-06	3.662E-07	1.868E-07	1.168E-07	5.243E-08	1.920E-08	9.631E-09	6.185E-09	4.461E-09
NW	5.850E-06	1.356E-06	4.222E-07	2.141E-07	1.334E-07	5.941E-08	2.147E-08	1.063E-08	6.769E-09	4.851E-09
NNW	1.145E-05	2.698E-06	8.734E-07	4.529E-07	2.867E-07	1.311E-07	4.936E-08	2.522E-08	1.637E-08	1.189E-08
N	1.914E-05	4.570E-06	1.524E-06	8.031E-07	5.139E-07	2.390E-07	9.234E-08	4.805E-08	3.152E-08	2.307E-08
NNE	1.305E-05	3.072E-06	1.043E-06	5.546E-07	3.573E-07	1.680E-07	6.599E-08	3.476E-08	2.298E-08	1.691E-08
NE	6.689E-06	1.573E-06	5.382E-07	2.875E-07	1.857E-07	8.768E-08	3.466E-08	1.833E-08	1.214E-08	8.954E-09
ENE	4.282E-06	1.012E-06	3.340E-07	1.750E-07	1.115E-07	5.155E-08	1.974E-08	1.021E-08	6.675E-09	4.875E-09
E	5.455E-06	1.278E-06	4.338E-07	2.308E-07	1.487E-07	6.996E-08	2.751E-08	1.451E-08	9.595E-09	7.066E-09
ESE	7.552E-06	1.786E-06	5.950E-07	3.133E-07	2.004E-07	9.318E-08	3.600E-08	1.874E-08	1.230E-08	9.005E-09
SE	1.310E-05	3.092E-06	1.041E-06	5.517E-07	3.544E-07	1.658E-07	6.471E-08	3.393E-08	2.236E-08	1.642E-08
SSE	1.324E-05	3.123E-06	1.025E-06	5.358E-07	3.410E-07	1.572E-07	5.995E-08	3.092E-08	2.018E-08	1.472E-08

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2017
 2,260 DAY DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.401E-05	2.086E-05	1.113E-05	5.586E-06	2.262E-06	1.229E-06	7.807E-07	5.453E-07	4.061E-07	3.165E-07	2.553E-07
SSW	3.828E-05	1.272E-05	6.723E-06	3.346E-06	1.344E-06	7.266E-07	4.596E-07	3.200E-07	2.377E-07	1.848E-07	1.488E-07
SW	1.733E-05	5.889E-06	3.154E-06	1.576E-06	6.258E-07	3.355E-07	2.108E-07	1.460E-07	1.080E-07	8.362E-08	6.707E-08
WSW	1.773E-05	6.021E-06	3.178E-06	1.573E-06	6.210E-07	3.318E-07	2.080E-07	1.438E-07	1.061E-07	8.210E-08	6.579E-08
W	1.643E-05	5.595E-06	2.979E-06	1.480E-06	5.796E-07	3.078E-07	1.920E-07	1.322E-07	9.730E-08	7.507E-08	6.001E-08
WNW	2.944E-05	9.836E-06	5.165E-06	2.558E-06	1.023E-06	5.512E-07	3.479E-07	2.418E-07	1.793E-07	1.393E-07	1.120E-07
NW	3.276E-05	1.123E-05	6.002E-06	2.990E-06	1.189E-06	6.384E-07	4.017E-07	2.786E-07	2.062E-07	1.599E-07	1.284E-07
NNW	6.837E-05	2.209E-05	1.167E-05	5.837E-06	2.382E-06	1.302E-06	8.302E-07	5.819E-07	4.345E-07	3.395E-07	2.744E-07
N	1.212E-04	3.707E-05	1.938E-05	9.736E-06	4.057E-06	2.248E-06	1.448E-06	1.022E-06	7.681E-07	6.033E-07	4.897E-07
NNE	8.545E-05	2.573E-05	1.307E-05	6.480E-06	2.732E-06	1.525E-06	9.874E-07	7.003E-07	5.279E-07	4.157E-07	3.383E-07
NE	4.428E-05	1.324E-05	6.683E-06	3.306E-06	1.402E-06	7.855E-07	5.100E-07	3.625E-07	2.737E-07	2.159E-07	1.759E-07
ENE	2.663E-05	8.311E-06	4.335E-06	2.167E-06	8.961E-07	4.940E-07	3.169E-07	2.232E-07	1.673E-07	1.311E-07	1.062E-07
E	3.574E-05	1.080E-05	5.456E-06	2.695E-06	1.136E-06	6.345E-07	4.110E-07	2.915E-07	2.198E-07	1.731E-07	1.409E-07
ESE	4.787E-05	1.471E-05	7.622E-06	3.805E-06	1.583E-06	8.765E-07	5.641E-07	3.981E-07	2.990E-07	2.347E-07	1.904E-07
SE	8.482E-05	2.569E-05	1.316E-05	6.548E-06	2.746E-06	1.528E-06	9.866E-07	6.983E-07	5.256E-07	4.134E-07	3.359E-07
SSE	8.154E-05	2.566E-05	1.342E-05	6.702E-06	2.761E-06	1.518E-06	9.722E-07	6.836E-07	5.118E-07	4.007E-07	3.244E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.114E-07	1.084E-07	6.969E-08	3.910E-08	2.578E-08	1.857E-08	1.414E-08	1.118E-08	9.103E-09	7.573E-09	6.409E-09
SSW	1.230E-07	6.259E-08	4.004E-08	2.229E-08	1.462E-08	1.047E-08	7.934E-09	6.250E-09	5.066E-09	4.197E-09	3.538E-09
SW	5.528E-08	2.780E-08	1.764E-08	9.704E-09	6.309E-09	4.491E-09	3.385E-09	2.655E-09	2.143E-09	1.769E-09	1.486E-09
WSW	5.417E-08	2.715E-08	1.719E-08	9.444E-09	6.143E-09	4.375E-09	3.298E-09	2.587E-09	2.089E-09	1.725E-09	1.449E-09
W	4.931E-08	2.454E-08	1.547E-08	8.459E-09	5.497E-09	3.915E-09	2.955E-09	2.322E-09	1.878E-09	1.554E-09	1.309E-09
WNW	9.254E-08	4.697E-08	3.000E-08	1.668E-08	1.093E-08	7.836E-09	5.940E-09	4.682E-09	3.797E-09	3.148E-09	2.656E-09
NW	1.060E-07	5.356E-08	3.413E-08	1.892E-08	1.239E-08	8.872E-09	6.728E-09	5.307E-09	4.309E-09	3.577E-09	3.022E-09
NNW	2.277E-07	1.175E-07	7.589E-08	4.280E-08	2.832E-08	2.043E-08	1.557E-08	1.233E-08	1.004E-08	8.358E-09	7.075E-09
N	4.079E-07	2.133E-07	1.390E-07	7.920E-08	5.271E-08	3.817E-08	2.918E-08	2.315E-08	1.888E-08	1.572E-08	1.332E-08
NNE	2.823E-07	1.486E-07	9.710E-08	5.548E-08	3.692E-08	2.671E-08	2.037E-08	1.612E-08	1.311E-08	1.089E-08	9.199E-09
NE	1.469E-07	7.762E-08	5.087E-08	2.916E-08	1.945E-08	1.409E-08	1.077E-08	8.533E-09	6.948E-09	5.777E-09	4.885E-09
ENE	8.835E-08	4.593E-08	2.980E-08	1.688E-08	1.119E-08	8.076E-09	6.155E-09	4.870E-09	3.962E-09	3.293E-09	2.784E-09
E	1.176E-07	6.192E-08	4.050E-08	2.316E-08	1.542E-08	1.117E-08	8.523E-09	6.750E-09	5.493E-09	4.566E-09	3.859E-09
ESE	1.585E-07	8.273E-08	5.380E-08	3.056E-08	2.027E-08	1.464E-08	1.115E-08	8.822E-09	7.174E-09	5.958E-09	5.034E-09
SE	2.800E-07	1.469E-07	9.578E-08	5.458E-08	3.627E-08	2.621E-08	1.998E-08	1.580E-08	1.285E-08	1.067E-08	9.011E-09
SSE	2.695E-07	1.397E-07	9.040E-08	5.103E-08	3.372E-08	2.428E-08	1.846E-08	1.457E-08	1.183E-08	9.813E-09	8.280E-09

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.083E-05	2.542E-06	8.062E-07	4.118E-07	2.572E-07	1.141E-07	3.998E-08	1.872E-08	1.124E-08	7.595E-09
SSW	6.555E-06	1.514E-06	4.750E-07	2.411E-07	1.499E-07	6.599E-08	2.283E-08	1.056E-08	6.280E-09	4.211E-09
SW	3.061E-06	7.080E-07	2.182E-07	1.096E-07	6.761E-08	2.939E-08	9.958E-09	4.534E-09	2.669E-09	1.775E-09
WSW	3.097E-06	7.040E-07	2.153E-07	1.077E-07	6.632E-08	2.873E-08	9.699E-09	4.416E-09	2.601E-09	1.731E-09
W	2.894E-06	6.590E-07	1.990E-07	9.881E-08	6.051E-08	2.601E-08	8.700E-09	3.953E-09	2.334E-09	1.560E-09
WNW	5.044E-06	1.154E-06	3.597E-07	1.819E-07	1.129E-07	4.955E-08	1.709E-08	7.904E-09	4.704E-09	3.158E-09
NW	5.825E-06	1.344E-06	4.156E-07	2.093E-07	1.294E-07	5.657E-08	1.940E-08	8.951E-09	5.333E-09	3.588E-09
NNW	1.139E-05	2.670E-06	8.567E-07	4.405E-07	2.764E-07	1.235E-07	4.372E-08	2.059E-08	1.239E-08	8.382E-09
N	1.903E-05	4.515E-06	1.491E-06	7.780E-07	4.931E-07	2.235E-07	8.071E-08	3.845E-08	2.324E-08	1.577E-08
NNE	1.295E-05	3.028E-06	1.016E-06	5.344E-07	3.405E-07	1.554E-07	5.648E-08	2.689E-08	1.619E-08	1.092E-08
NE	6.640E-06	1.551E-06	5.244E-07	2.770E-07	1.770E-07	8.113E-08	2.967E-08	1.419E-08	8.567E-09	5.794E-09
ENE	4.255E-06	9.998E-07	3.266E-07	1.695E-07	1.070E-07	4.818E-08	1.722E-08	8.138E-09	4.891E-09	3.303E-09
E	5.416E-06	1.260E-06	4.228E-07	2.225E-07	1.418E-07	6.477E-08	2.357E-08	1.124E-08	6.778E-09	4.579E-09
ESE	7.502E-06	1.763E-06	5.810E-07	3.028E-07	1.917E-07	8.672E-08	3.115E-08	1.475E-08	8.860E-09	5.976E-09
SE	1.301E-05	3.049E-06	1.016E-06	5.322E-07	3.382E-07	1.538E-07	5.560E-08	2.640E-08	1.587E-08	1.070E-08
SSE	1.315E-05	3.084E-06	1.002E-06	5.186E-07	3.267E-07	1.466E-07	5.209E-08	2.447E-08	1.464E-08	9.843E-09

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2017
 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	6.066E-05	1.910E-05	9.952E-06	4.914E-06	1.936E-06	1.029E-06	6.408E-07	4.402E-07	3.229E-07	2.483E-07	1.978E-07
SSW	3.628E-05	1.165E-05	6.015E-06	2.944E-06	1.151E-06	6.083E-07	3.775E-07	2.585E-07	1.892E-07	1.452E-07	1.154E-07
SW	1.643E-05	5.392E-06	2.822E-06	1.387E-06	5.357E-07	2.809E-07	1.731E-07	1.179E-07	8.588E-08	6.564E-08	5.201E-08
WSW	1.680E-05	5.513E-06	2.843E-06	1.384E-06	5.316E-07	2.777E-07	1.708E-07	1.161E-07	8.443E-08	6.445E-08	5.101E-08
W	1.557E-05	5.121E-06	2.663E-06	1.302E-06	4.956E-07	2.572E-07	1.574E-07	1.065E-07	7.718E-08	5.873E-08	4.635E-08
WNW	2.790E-05	9.005E-06	4.620E-06	2.250E-06	8.751E-07	4.612E-07	2.855E-07	1.952E-07	1.426E-07	1.093E-07	8.682E-08
NW	3.104E-05	1.028E-05	5.366E-06	2.628E-06	1.016E-06	5.335E-07	3.292E-07	2.244E-07	1.636E-07	1.251E-07	9.922E-08
NNW	6.480E-05	2.023E-05	1.044E-05	5.137E-06	2.040E-06	1.090E-06	6.822E-07	4.702E-07	3.460E-07	2.668E-07	2.130E-07
N	1.149E-04	3.396E-05	1.735E-05	8.576E-06	3.479E-06	1.885E-06	1.192E-06	8.281E-07	6.133E-07	4.755E-07	3.814E-07
NNE	8.103E-05	2.358E-05	1.171E-05	5.715E-06	2.346E-06	1.282E-06	8.152E-07	5.691E-07	4.231E-07	3.291E-07	2.648E-07
NE	4.199E-05	1.214E-05	5.989E-06	2.915E-06	1.204E-06	6.603E-07	4.211E-07	2.946E-07	2.194E-07	1.709E-07	1.376E-07
ENE	2.524E-05	7.614E-06	3.882E-06	1.909E-06	7.683E-07	4.144E-07	2.610E-07	1.808E-07	1.336E-07	1.033E-07	8.277E-08
E	3.389E-05	9.896E-06	4.889E-06	2.376E-06	9.758E-07	5.333E-07	3.392E-07	2.369E-07	1.761E-07	1.370E-07	1.102E-07
ESE	4.539E-05	1.348E-05	6.827E-06	3.353E-06	1.359E-06	7.359E-07	4.650E-07	3.230E-07	2.391E-07	1.853E-07	1.486E-07
SE	8.042E-05	2.355E-05	1.179E-05	5.773E-06	2.357E-06	1.284E-06	8.141E-07	5.671E-07	4.209E-07	3.269E-07	2.627E-07
SSE	7.730E-05	2.351E-05	1.201E-05	5.904E-06	2.368E-06	1.274E-06	8.008E-07	5.541E-07	4.089E-07	3.161E-07	2.529E-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	1.620E-07	7.961E-08	4.948E-08	2.640E-08	1.679E-08	1.174E-08	8.731E-09	6.767E-09	5.409E-09	4.425E-09	3.689E-09
SSW	9.435E-08	4.610E-08	2.853E-08	1.514E-08	9.589E-09	6.689E-09	4.960E-09	3.836E-09	3.060E-09	2.499E-09	2.080E-09
SW	4.238E-08	2.045E-08	1.254E-08	6.572E-09	4.126E-09	2.858E-09	2.108E-09	1.622E-09	1.289E-09	1.049E-09	8.702E-10
WSW	4.153E-08	1.998E-08	1.224E-08	6.405E-09	4.025E-09	2.791E-09	2.060E-09	1.587E-09	1.262E-09	1.027E-09	8.527E-10
W	3.764E-08	1.794E-08	1.091E-08	5.663E-09	3.540E-09	2.446E-09	1.800E-09	1.384E-09	1.098E-09	8.934E-10	7.408E-10
WNW	7.091E-08	3.453E-08	2.133E-08	1.129E-08	7.148E-09	4.984E-09	3.695E-09	2.857E-09	2.279E-09	1.861E-09	1.549E-09
NW	8.091E-08	3.917E-08	2.409E-08	1.267E-08	7.979E-09	5.542E-09	4.097E-09	3.161E-09	2.517E-09	2.052E-09	1.706E-09
NNW	1.748E-07	8.657E-08	5.409E-08	2.907E-08	1.857E-08	1.304E-08	9.719E-09	7.549E-09	6.044E-09	4.952E-09	4.133E-09
N	3.142E-07	1.580E-07	9.973E-08	5.430E-08	3.498E-08	2.471E-08	1.850E-08	1.443E-08	1.159E-08	9.517E-09	7.959E-09
NNE	2.186E-07	1.109E-07	7.041E-08	3.862E-08	2.499E-08	1.771E-08	1.329E-08	1.037E-08	8.340E-09	6.856E-09	5.736E-09
NE	1.138E-07	5.796E-08	3.688E-08	2.030E-08	1.316E-08	9.339E-09	7.017E-09	5.485E-09	4.413E-09	3.631E-09	3.040E-09
ENE	6.808E-08	3.404E-08	2.140E-08	1.159E-08	7.442E-09	5.243E-09	3.918E-09	3.049E-09	2.445E-09	2.006E-09	1.675E-09
E	9.105E-08	4.622E-08	2.935E-08	1.611E-08	1.043E-08	7.393E-09	5.550E-09	4.335E-09	3.486E-09	2.867E-09	2.399E-09
ESE	1.224E-07	6.152E-08	3.880E-08	2.110E-08	1.358E-08	9.589E-09	7.175E-09	5.590E-09	4.486E-09	3.682E-09	3.077E-09
SE	2.167E-07	1.095E-07	6.932E-08	3.789E-08	2.446E-08	1.731E-08	1.297E-08	1.012E-08	8.128E-09	6.677E-09	5.584E-09
SSE	2.079E-07	1.037E-07	6.506E-08	3.515E-08	2.252E-08	1.585E-08	1.183E-08	9.193E-09	7.363E-09	6.035E-09	5.036E-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	9.746E-06	2.194E-06	6.640E-07	3.280E-07	1.995E-07	8.452E-08	2.726E-08	1.188E-08	6.811E-09	4.444E-09	
SSW	5.902E-06	1.308E-06	3.915E-07	1.922E-07	1.164E-07	4.901E-08	1.565E-08	6.771E-09	3.862E-09	2.510E-09	
SW	2.755E-06	6.116E-07	1.798E-07	8.732E-08	5.248E-08	2.181E-08	6.812E-09	2.896E-09	1.634E-09	1.054E-09	
WSW	2.788E-06	6.082E-07	1.774E-07	8.587E-08	5.148E-08	2.133E-08	6.644E-09	2.828E-09	1.598E-09	1.032E-09	
W	2.604E-06	5.688E-07	1.637E-07	7.853E-08	4.679E-08	1.920E-08	5.887E-09	2.479E-09	1.394E-09	8.976E-10	
WNW	4.541E-06	9.967E-07	2.962E-07	1.449E-07	8.759E-08	3.675E-08	1.168E-08	5.045E-09	2.876E-09	1.869E-09	
NW	5.241E-06	1.160E-06	3.418E-07	1.663E-07	1.001E-07	4.174E-08	1.312E-08	5.614E-09	3.183E-09	2.062E-09	
NNW	1.026E-05	2.306E-06	7.062E-07	3.513E-07	2.148E-07	9.174E-08	2.996E-08	1.319E-08	7.596E-09	4.972E-09	
N	1.714E-05	3.903E-06	1.231E-06	6.222E-07	3.844E-07	1.668E-07	5.581E-08	2.497E-08	1.451E-08	9.553E-09	
NNE	1.169E-05	2.622E-06	8.413E-07	4.290E-07	2.667E-07	1.169E-07	3.963E-08	1.788E-08	1.043E-08	6.881E-09	
NE	5.990E-06	1.343E-06	4.343E-07	2.224E-07	1.387E-07	6.100E-08	2.081E-08	9.429E-09	5.514E-09	3.644E-09	
ENE	3.834E-06	8.645E-07	2.698E-07	1.356E-07	8.343E-08	3.599E-08	1.193E-08	5.299E-09	3.067E-09	2.013E-09	
E	4.885E-06	1.090E-06	3.500E-07	1.786E-07	1.111E-07	4.868E-08	1.653E-08	7.465E-09	4.359E-09	2.877E-09	
ESE	6.762E-06	1.525E-06	4.804E-07	2.426E-07	1.498E-07	6.496E-08	2.169E-08	9.689E-09	5.622E-09	3.696E-09	
SE	1.173E-05	2.639E-06	8.405E-07	4.269E-07	2.647E-07	1.155E-07	3.891E-08	1.748E-08	1.017E-08	6.702E-09	
SSE	1.185E-05	2.667E-06	8.283E-07	4.150E-07	2.550E-07	1.097E-07	3.618E-08	1.602E-08	9.248E-09	6.059E-09	

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VENTS GROUND LEVEL RELEASES - JUL-DEC 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

***** RELATIVE DEPOSITION PER UNIT AREA (M**2) AT FIXED POINTS BY DOWNWIND SECTORS *****											
DIRECTIONS FROM SITE											
DIRECTION FROM SITE	.25	.50	.75	1.00	1.50	2.00	2.50	3.00	3.50	4.00	4.50
S	2.527E-07	8.544E-08	4.387E-08	2.086E-08	7.492E-09	3.715E-09	2.188E-09	1.432E-09	1.008E-09	7.470E-10	5.756E-10
SSW	1.248E-07	4.219E-08	2.166E-08	1.030E-08	3.699E-09	1.834E-09	1.080E-09	7.073E-10	4.977E-10	3.688E-10	2.842E-10
SW	4.962E-08	1.678E-08	8.615E-09	4.096E-09	1.471E-09	7.296E-10	4.296E-10	2.813E-10	1.979E-10	1.467E-10	1.130E-10
WSW	5.642E-08	1.908E-08	9.797E-09	4.657E-09	1.673E-09	8.297E-10	4.885E-10	3.199E-10	2.251E-10	1.668E-10	1.285E-10
W	6.201E-08	2.097E-08	1.077E-08	5.119E-09	1.839E-09	9.118E-10	5.369E-10	3.516E-10	2.474E-10	1.833E-10	1.413E-10
WNW	1.037E-07	3.507E-08	1.801E-08	8.561E-09	3.075E-09	1.525E-09	8.979E-10	5.879E-10	4.137E-10	3.066E-10	2.363E-10
NW	1.532E-07	5.180E-08	2.660E-08	1.265E-08	4.542E-09	2.253E-09	1.326E-09	8.685E-10	6.111E-10	4.529E-10	3.490E-10
NNW	2.537E-07	8.578E-08	4.404E-08	2.094E-08	7.521E-09	3.730E-09	2.196E-09	1.438E-09	1.012E-09	7.499E-10	5.779E-10
N	3.255E-07	1.101E-07	5.652E-08	2.687E-08	9.651E-09	4.786E-09	2.818E-09	1.845E-09	1.298E-09	9.623E-10	7.416E-10
NNE	1.696E-07	5.737E-08	2.945E-08	1.400E-08	5.030E-09	2.494E-09	1.469E-09	9.617E-10	6.767E-10	5.015E-10	3.865E-10
NE	8.544E-08	2.889E-08	1.483E-08	7.052E-09	2.533E-09	1.256E-09	7.397E-10	4.844E-10	3.408E-10	2.526E-10	1.946E-10
ENE	6.722E-08	2.273E-08	1.167E-08	5.548E-09	1.993E-09	9.884E-10	5.820E-10	3.811E-10	2.681E-10	1.987E-10	1.531E-10
E	6.747E-08	2.281E-08	1.171E-08	5.569E-09	2.000E-09	9.920E-10	5.841E-10	3.825E-10	2.691E-10	1.995E-10	1.537E-10
ESE	1.070E-07	3.618E-08	1.858E-08	8.832E-09	3.173E-09	1.573E-09	9.264E-10	6.066E-10	4.268E-10	3.163E-10	2.438E-10
SE	1.942E-07	6.566E-08	3.372E-08	1.603E-08	5.758E-09	2.855E-09	1.681E-09	1.101E-09	7.746E-10	5.741E-10	4.424E-10
SSE	2.435E-07	8.236E-08	4.229E-08	2.010E-08	7.221E-09	3.581E-09	2.109E-09	1.381E-09	9.715E-10	7.200E-10	5.548E-10
DIRECTIONS FROM SITE											
DIRECTION 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	4.573E-10	2.032E-10	1.231E-10	6.220E-11	3.765E-11	2.524E-11	1.809E-11	1.358E-11	1.056E-11	8.435E-12	6.885E-12
SSW	2.258E-10	1.003E-10	6.076E-11	3.071E-11	1.859E-11	1.246E-11	8.930E-12	6.706E-12	5.214E-12	4.165E-12	3.399E-12
SW	8.980E-11	3.989E-11	2.417E-11	1.221E-11	7.393E-12	4.957E-12	3.552E-12	2.667E-12	2.074E-12	1.656E-12	1.352E-12
WSW	1.021E-10	4.537E-11	2.748E-11	1.389E-11	8.407E-12	5.637E-12	4.039E-12	3.033E-12	2.358E-12	1.884E-12	1.537E-12
W	1.122E-10	4.986E-11	3.020E-11	1.527E-11	9.239E-12	6.195E-12	4.439E-12	3.333E-12	2.592E-12	2.070E-12	1.690E-12
WNW	1.877E-10	8.338E-11	5.051E-11	2.553E-11	1.545E-11	1.036E-11	7.424E-12	5.574E-12	4.334E-12	3.462E-12	2.826E-12
NW	2.773E-10	1.232E-10	7.461E-11	3.771E-11	2.282E-11	1.530E-11	1.097E-11	8.234E-12	6.402E-12	5.114E-12	4.174E-12
NNW	4.591E-10	2.040E-10	1.235E-10	6.245E-11	3.779E-11	2.534E-11	1.816E-11	1.363E-11	1.060E-11	8.468E-12	6.912E-12
N	5.891E-10	2.617E-10	1.585E-10	8.013E-11	4.850E-11	3.252E-11	2.330E-11	1.750E-11	1.360E-11	1.087E-11	8.870E-12
NNE	3.070E-10	1.364E-10	8.262E-11	4.176E-11	2.528E-11	1.695E-11	1.214E-11	9.118E-12	7.090E-12	5.663E-12	4.623E-12
NE	1.546E-10	6.869E-11	4.161E-11	2.103E-11	1.273E-11	8.535E-12	6.116E-12	4.592E-12	3.571E-12	2.852E-12	2.328E-12
ENE	1.217E-10	5.404E-11	3.274E-11	1.655E-11	1.002E-11	6.715E-12	4.812E-12	3.613E-12	2.809E-12	2.244E-12	1.832E-12
E	1.221E-10	5.424E-11	3.286E-11	1.661E-11	1.005E-11	6.740E-12	4.829E-12	3.626E-12	2.820E-12	2.252E-12	1.838E-12
ESE	1.937E-10	8.603E-11	5.211E-11	2.634E-11	1.594E-11	1.069E-11	7.659E-12	5.751E-12	4.472E-12	3.572E-12	2.916E-12
SE	3.515E-10	1.561E-10	9.457E-11	4.780E-11	2.893E-11	1.940E-11	1.390E-11	1.044E-11	8.115E-12	6.483E-12	5.291E-12
SSE	4.408E-10	1.958E-10	1.186E-10	5.995E-11	3.629E-11	2.433E-11	1.743E-11	1.309E-11	1.018E-11	8.131E-12	6.636E-12

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***** RELATIVE DEPOSITION PER UNIT AREA (M**2) BY DOWNWIND SECTORS *****											
SEGMENT BOUNDARIES IN MILES											
DIRECTION FROM SITE	5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	4.288E-08	8.783E-09	2.293E-09	1.030E-09	5.826E-10	2.240E-10	6.481E-11	2.569E-11	1.372E-11	8.491E-12	
SSW	2.117E-08	4.337E-09	1.132E-09	5.085E-10	2.876E-10	1.106E-10	3.200E-11	1.268E-11	6.773E-12	4.192E-12	
SW	8.421E-09	1.725E-09	4.503E-10	2.022E-10	1.144E-10	4.399E-11	1.273E-11	5.044E-12	2.694E-12	1.667E-12	
WSW	9.576E-09	1.961E-09	5.120E-10	2.300E-10	1.301E-10	5.003E-11	1.447E-11	5.736E-12	3.063E-12	1.896E-12	
W	1.052E-08	2.156E-09	5.627E-10	2.527E-10	1.430E-10	5.498E-11	1.591E-11	6.304E-12	3.367E-12	2.084E-12	
WNW	1.760E-08	3.605E-09	9.411E-10	4.227E-10	2.391E-10	9.196E-11	2.660E-11	1.054E-11	5.630E-12	3.485E-12	
NW	2.600E-08	5.325E-09	1.390E-09	6.244E-10	3.532E-10	1.358E-10	3.929E-11	1.557E-11	8.317E-12	5.148E-12	
NNW	4.305E-08	8.818E-09	2.302E-09	1.034E-09	5.849E-10	2.249E-10	6.507E-11	2.579E-11	1.377E-11	8.524E-12	
N	5.524E-08	1.132E-08	2.954E-09	1.327E-09	7.505E-10	2.886E-10	8.350E-11	3.309E-11	1.767E-11	1.094E-11	
NNE	2.879E-08	5.897E-09	1.539E-09	6.914E-10	3.911E-10	1.504E-10	4.351E-11	1.725E-11	9.210E-12	5.700E-12	
NE	1.450E-08	2.970E-09	7.753E-10	3.482E-10	1.970E-10	7.575E-11	2.191E-11	8.686E-12	4.638E-12	2.871E-12	
ENE	1.141E-08	2.337E-09	6.100E-10	2.740E-10	1.550E-10	5.960E-11	1.724E-11	6.834E-12	3.649E-12	2.259E-12	
E	1.145E-08	2.345E-09	6.122E-10	2.750E-10	1.556E-10	5.982E-11	1.731E-11	6.859E-12	3.663E-12	2.267E-12	
ESE	1.816E-08	3.719E-09	9.710E-10	4.361E-10	2.467E-10	9.487E-11	2.745E-11	1.088E-11	5.809E-12	3.596E-12	
SE	3.295E-08	6.750E-09	1.762E-09	7.914E-10	4.477E-10	1.722E-10	4.981E-11	1.974E-11	1.054E-11	6.525E-12	
SSE	4.133E-08	8.466E-09	2.210E-09	9.926E-10	5.615E-10	2.159E-10	6.247E-11	2.476E-11	1.322E-11	8.184E-12	

VENTS GROUND LEVEL RELEASES - JUL-DEC 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DIST. (MI)	X/Q (SEC/M3) NO DECAY UNDEPLETED	X/Q (SEC/M3) 2.26 DAY DECAY UNDEPLETED	X/Q (SEC/M3) 8.0 DAY DECAY DEPLETED	D/Q (PER SQ.METER)
A	Site Boundary	S	.80	9.6E-06	9.6E-06	8.5E-06	3.7E-08
A	Site Boundary	SSW	.82	5.4E-06	5.3E-06	4.8E-06	1.7E-08
A	Site Boundary	SW	.97	1.7E-06	1.7E-06	1.5E-06	4.4E-09
A	Site Boundary	WSW	.93	1.9E-06	1.9E-06	1.7E-06	5.7E-09
A	Site Boundary	W	.91	1.9E-06	1.8E-06	1.6E-06	6.5E-09
A	Site Boundary	WNW	.94	3.0E-06	3.0E-06	2.6E-06	1.0E-08
A	Site Boundary	NW	.81	5.0E-06	5.0E-06	4.4E-06	2.2E-08
A	Site Boundary	NNW	.69	1.3E-05	1.3E-05	1.2E-05	5.1E-08
A	Site Boundary	N	.67	2.3E-05	2.3E-05	2.1E-05	6.8E-08
A	Site Boundary	NNE	.60	1.9E-05	1.9E-05	1.7E-05	4.3E-08
A	Site Boundary	NE	.62	9.1E-06	9.0E-06	8.1E-06	2.0E-08
A	Site Boundary	ENE	.59	6.4E-06	6.4E-06	5.8E-06	1.7E-08
A	Site Boundary	E	.53	1.0E-05	9.9E-06	9.1E-06	2.1E-08
A	Site Boundary	ESE	.54	1.3E-05	1.3E-05	1.2E-05	3.2E-08
A	Site Boundary	SE	.65	1.7E-05	1.7E-05	1.5E-05	4.3E-08
A	Site Boundary	SSE	.81	1.1E-05	1.1E-05	9.9E-06	3.5E-08
A	Nearest Res	SSW	3.00	3.3E-07	3.2E-07	2.6E-07	7.1E-10
A	Nearest Res	SW	1.00	1.6E-06	1.6E-06	1.4E-06	4.1E-09
A	Nearest Res	WSW	2.50	2.1E-07	2.1E-07	1.7E-07	4.9E-10
A	Nearest Res	W	1.00	1.5E-06	1.5E-06	1.3E-06	5.1E-09
A	Nearest Res	WNW	1.70	7.9E-07	7.8E-07	6.6E-07	2.3E-09
A	Nearest Res	NW	.90	3.9E-06	3.9E-06	3.4E-06	1.7E-08
A	Nearest Res	NNW	1.90	1.5E-06	1.4E-06	1.2E-06	4.2E-09
A	Nearest Res	N	2.90	1.1E-06	1.1E-06	8.9E-07	2.0E-09
A	Nearest Res	NNE	1.70	2.2E-06	2.1E-06	1.8E-06	3.7E-09
A	Nearest Res	ENE	1.70	7.0E-07	6.9E-07	5.9E-07	1.5E-09
A	Nearest Res	E	2.20	5.4E-07	5.3E-07	4.4E-07	7.9E-10
A	Nearest Res	SE	2.80	8.2E-07	7.9E-07	6.5E-07	1.3E-09
A	Nearest Cow	NNW	3.50	4.5E-07	4.3E-07	3.5E-07	1.0E-09
A	Nearest Garde	SSW	3.00	3.3E-07	3.2E-07	2.6E-07	7.1E-10
A	Nearest Garde	SW	2.20	2.8E-07	2.7E-07	2.3E-07	5.8E-10
A	Nearest Garde	WSW	2.50	2.1E-07	2.1E-07	1.7E-07	4.9E-10
A	Nearest Garde	WNW	1.70	7.9E-07	7.8E-07	6.6E-07	2.3E-09
A	Nearest Garde	NW	2.00	6.5E-07	6.4E-07	5.3E-07	2.3E-09
A	Nearest Garde	NNW	2.80	6.8E-07	6.6E-07	5.4E-07	1.7E-09
A	Nearest Garde	ESE	2.30	6.8E-07	6.6E-07	5.5E-07	1.1E-09

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Atmospheric Diffusion Estimates

Ground Level Releases

January-December 2017

VENTS GROUND LEVEL RELEASES - JAN-DEC 2017
 NO DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.258E-05	2.032E-05	1.076E-05	5.388E-06	2.197E-06	1.202E-06	7.674E-07	5.390E-07	4.035E-07	3.161E-07	2.562E-07
SSW	3.156E-05	1.078E-05	5.769E-06	2.882E-06	1.148E-06	6.174E-07	3.894E-07	2.707E-07	2.009E-07	1.563E-07	1.258E-07
SW	1.953E-05	6.656E-06	3.550E-06	1.770E-06	7.015E-07	3.762E-07	2.366E-07	1.641E-07	1.216E-07	9.442E-08	7.594E-08
WSW	1.536E-05	5.272E-06	2.804E-06	1.393E-06	5.508E-07	2.949E-07	1.852E-07	1.284E-07	9.503E-08	7.374E-08	5.926E-08
W	1.591E-05	5.540E-06	2.997E-06	1.501E-06	5.890E-07	3.136E-07	1.962E-07	1.354E-07	9.993E-08	7.732E-08	6.198E-08
WNN	2.099E-05	7.085E-06	3.753E-06	1.866E-06	7.455E-07	4.021E-07	2.542E-07	1.770E-07	1.316E-07	1.025E-07	8.262E-08
NW	2.748E-05	9.338E-06	5.014E-06	2.510E-06	1.004E-06	5.416E-07	3.423E-07	2.384E-07	1.772E-07	1.380E-07	1.113E-07
NNW	6.215E-05	1.984E-05	1.046E-05	5.239E-06	2.158E-06	1.188E-06	7.631E-07	5.383E-07	4.044E-07	3.178E-07	2.583E-07
N	9.746E-05	3.005E-05	1.577E-05	7.932E-06	3.310E-06	1.839E-06	1.188E-06	8.420E-07	6.351E-07	5.007E-07	4.082E-07
NNE	6.767E-05	2.053E-05	1.051E-05	5.227E-06	2.207E-06	1.236E-06	8.031E-07	5.719E-07	4.330E-07	3.426E-07	2.800E-07
NE	3.706E-05	1.121E-05	5.664E-06	2.802E-06	1.191E-06	6.695E-07	4.365E-07	3.116E-07	2.364E-07	1.873E-07	1.533E-07
ENE	2.356E-05	7.318E-06	3.821E-06	1.916E-06	7.981E-07	4.429E-07	2.860E-07	2.026E-07	1.527E-07	1.203E-07	9.806E-08
E	2.901E-05	8.896E-06	4.539E-06	2.251E-06	9.476E-07	5.296E-07	3.438E-07	2.446E-07	1.850E-07	1.463E-07	1.195E-07
ESE	4.293E-05	1.333E-05	6.923E-06	3.460E-06	1.443E-06	8.016E-07	5.179E-07	3.670E-07	2.768E-07	2.183E-07	1.779E-07
SE	6.999E-05	2.164E-05	1.122E-05	5.606E-06	2.341E-06	1.301E-06	8.406E-07	5.960E-07	4.496E-07	3.546E-07	2.890E-07
SSE	8.425E-05	2.659E-05	1.383E-05	6.896E-06	2.853E-06	1.576E-06	1.014E-06	7.166E-07	5.391E-07	4.242E-07	3.451E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.132E-07	1.119E-07	7.357E-08	4.308E-08	2.960E-08	2.217E-08	1.753E-08	1.438E-08	1.213E-08	1.044E-08	9.131E-09
SSW	1.041E-07	5.345E-08	3.461E-08	1.984E-08	1.343E-08	9.947E-09	7.793E-09	6.346E-09	5.315E-09	4.549E-09	3.959E-09
SW	6.276E-08	3.207E-08	2.071E-08	1.182E-08	7.984E-09	5.902E-09	4.617E-09	3.756E-09	3.143E-09	2.687E-09	2.337E-09
WSW	4.895E-08	2.496E-08	1.609E-08	9.169E-09	6.187E-09	4.571E-09	3.575E-09	2.907E-09	2.431E-09	2.078E-09	1.807E-09
W	5.108E-08	2.580E-08	1.651E-08	9.311E-09	6.234E-09	4.576E-09	3.559E-09	2.880E-09	2.399E-09	2.043E-09	1.770E-09
WNN	6.845E-08	3.530E-08	2.294E-08	1.322E-08	8.994E-09	6.685E-09	5.253E-09	4.289E-09	3.601E-09	3.088E-09	2.692E-09
NW	9.216E-08	4.750E-08	3.085E-08	1.775E-08	1.204E-08	8.934E-09	7.009E-09	5.714E-09	4.791E-09	4.103E-09	3.573E-09
NNW	2.154E-07	1.141E-07	7.548E-08	4.457E-08	3.079E-08	2.316E-08	1.837E-08	1.512E-08	1.278E-08	1.102E-08	9.658E-09
N	3.413E-07	1.824E-07	1.215E-07	7.234E-08	5.026E-08	3.796E-08	3.021E-08	2.493E-08	2.112E-08	1.825E-08	1.602E-08
NNE	2.348E-07	1.267E-07	8.491E-08	5.101E-08	3.566E-08	2.706E-08	2.162E-08	1.790E-08	1.520E-08	1.317E-08	1.159E-08
NE	1.287E-07	6.974E-08	4.688E-08	2.828E-08	1.982E-08	1.507E-08	1.206E-08	9.993E-09	8.498E-09	7.369E-09	6.489E-09
ENE	8.198E-08	4.375E-08	2.910E-08	1.731E-08	1.202E-08	9.071E-09	7.217E-09	5.954E-09	5.042E-09	4.357E-09	3.824E-09
E	1.002E-07	5.394E-08	3.611E-08	2.167E-08	1.513E-08	1.148E-08	9.166E-09	7.585E-09	6.441E-09	5.579E-09	4.907E-09
ESE	1.488E-07	7.950E-08	5.294E-08	3.153E-08	2.191E-08	1.655E-08	1.318E-08	1.087E-08	9.214E-09	7.965E-09	6.994E-09
SE	2.418E-07	1.293E-07	8.611E-08	5.131E-08	3.567E-08	2.695E-08	2.147E-08	1.772E-08	1.502E-08	1.298E-08	1.140E-08
SSE	2.882E-07	1.531E-07	1.016E-07	6.018E-08	4.168E-08	3.141E-08	2.496E-08	2.057E-08	1.741E-08	1.503E-08	1.319E-08

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.050E-05	2.464E-06	7.918E-07	4.089E-07	2.580E-07	1.174E-07	4.387E-08	2.229E-08	1.442E-08	1.045E-08
SSW	5.598E-06	1.297E-06	4.027E-07	2.038E-07	1.268E-07	5.634E-08	2.028E-08	1.001E-08	6.367E-09	4.557E-09
SW	3.449E-06	7.943E-07	2.448E-07	1.234E-07	7.653E-08	3.384E-08	1.209E-08	5.943E-09	3.768E-09	2.693E-09
WSW	2.725E-06	6.243E-07	1.917E-07	9.645E-08	5.973E-08	2.635E-08	9.381E-09	4.604E-09	2.916E-09	2.083E-09
W	2.897E-06	6.692E-07	2.032E-07	1.015E-07	6.249E-08	2.729E-08	9.544E-09	4.611E-09	2.891E-09	2.048E-09
WNN	3.655E-06	8.419E-07	2.628E-07	1.335E-07	8.325E-08	3.717E-08	1.350E-08	6.728E-09	4.302E-09	3.093E-09
NW	4.862E-06	1.133E-06	3.539E-07	1.798E-07	1.121E-07	5.003E-08	1.813E-08	8.994E-09	5.732E-09	4.110E-09
NNW	1.022E-05	2.412E-06	7.866E-07	4.096E-07	2.600E-07	1.194E-07	4.531E-08	2.328E-08	1.516E-08	1.104E-08
N	1.546E-05	3.683E-06	1.223E-06	6.430E-07	4.108E-07	1.906E-07	7.344E-08	3.814E-08	2.499E-08	1.828E-08
NNE	1.039E-05	2.446E-06	8.260E-07	4.383E-07	2.818E-07	1.321E-07	5.172E-08	2.718E-08	1.794E-08	1.319E-08
NE	5.624E-06	1.317E-06	4.486E-07	2.392E-07	1.543E-07	7.268E-08	2.865E-08	1.513E-08	1.001E-08	7.378E-09
ENE	3.751E-06	8.886E-07	2.945E-07	1.546E-07	9.871E-08	4.573E-08	1.758E-08	9.115E-09	5.967E-09	4.363E-09
E	4.490E-06	1.051E-06	3.536E-07	1.873E-07	1.203E-07	5.628E-08	2.197E-08	1.153E-08	7.601E-09	5.585E-09
ESE	6.807E-06	1.606E-06	5.332E-07	2.803E-07	1.791E-07	8.309E-08	3.201E-08	1.663E-08	1.090E-08	7.975E-09
SE	1.104E-05	2.604E-06	8.655E-07	4.552E-07	2.909E-07	1.351E-07	5.209E-08	2.708E-08	1.776E-08	1.300E-08
SSE	1.358E-05	3.184E-06	1.045E-06	5.460E-07	3.474E-07	1.602E-07	6.115E-08	3.157E-08	2.062E-08	1.505E-08

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2017
 2.260 DAY DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	6.246E-05	2.025E-05	1.070E-05	5.351E-06	2.173E-06	1.184E-06	7.534E-07	5.270E-07	3.929E-07	3.066E-07	2.475E-07
SSW	3.151E-05	1.074E-05	5.744E-06	2.865E-06	1.137E-06	6.098E-07	3.833E-07	2.656E-07	1.964E-07	1.523E-07	1.222E-07
SW	1.950E-05	6.636E-06	3.534E-06	1.759E-06	6.948E-07	3.713E-07	2.327E-07	1.609E-07	1.188E-07	9.188E-08	7.363E-08
WSW	1.533E-05	5.255E-06	2.790E-06	1.384E-06	5.452E-07	2.908E-07	1.820E-07	1.257E-07	9.269E-08	7.165E-08	5.737E-08
W	1.589E-05	5.525E-06	2.985E-06	1.492E-06	5.841E-07	3.100E-07	1.934E-07	1.331E-07	9.791E-08	7.552E-08	6.036E-08
WNW	2.095E-05	7.062E-06	3.735E-06	1.854E-06	7.381E-07	3.967E-07	2.498E-07	1.733E-07	1.284E-07	9.959E-08	8.000E-08
NW	2.744E-05	9.309E-06	4.991E-06	2.495E-06	9.945E-07	5.348E-07	3.369E-07	2.339E-07	1.732E-07	1.344E-07	1.080E-07
NNW	6.201E-05	1.976E-05	1.040E-05	5.198E-06	2.132E-06	1.170E-06	7.478E-07	5.252E-07	3.928E-07	3.074E-07	2.487E-07
N	9.724E-05	2.992E-05	1.567E-05	7.868E-06	3.269E-06	1.808E-06	1.163E-06	8.207E-07	6.162E-07	4.837E-07	3.926E-07
NNE	6.749E-05	2.043E-05	1.043E-05	5.177E-06	2.174E-06	1.211E-06	7.832E-07	5.548E-07	4.179E-07	3.289E-07	2.675E-07
NE	3.696E-05	1.115E-05	5.622E-06	2.775E-06	1.173E-06	6.562E-07	4.256E-07	3.022E-07	2.281E-07	1.798E-07	1.464E-07
ENE	2.350E-05	7.286E-06	3.797E-06	1.899E-06	7.878E-07	4.352E-07	2.797E-07	1.972E-07	1.480E-07	1.161E-07	9.413E-08
E	2.893E-05	8.853E-06	4.508E-06	2.231E-06	9.343E-07	5.196E-07	3.356E-07	2.376E-07	1.789E-07	1.407E-07	1.144E-07
ESE	4.283E-05	1.327E-05	6.878E-06	3.431E-06	1.425E-06	7.876E-07	5.064E-07	3.573E-07	2.682E-07	2.105E-07	1.707E-07
SE	6.982E-05	2.154E-05	1.114E-05	5.557E-06	2.309E-06	1.277E-06	8.216E-07	5.797E-07	4.352E-07	3.416E-07	2.771E-07
SSE	8.405E-05	2.647E-05	1.374E-05	6.838E-06	2.816E-06	1.548E-06	9.916E-07	6.973E-07	5.221E-07	4.088E-07	3.310E-07

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	2.052E-07	1.055E-07	6.802E-08	3.830E-08	2.532E-08	1.826E-08	1.393E-08	1.103E-08	8.989E-09	7.484E-09	6.339E-09
SSW	1.008E-07	5.083E-08	3.235E-08	1.792E-08	1.173E-08	8.399E-09	6.370E-09	5.026E-09	4.081E-09	3.389E-09	2.864E-09
SW	6.063E-08	3.042E-08	1.929E-08	1.062E-08	6.918E-09	4.937E-09	3.732E-09	2.935E-09	2.377E-09	1.968E-09	1.659E-09
WSW	4.721E-08	2.361E-08	1.493E-08	8.187E-09	5.320E-09	3.787E-09	2.856E-09	2.241E-09	1.810E-09	1.495E-09	1.258E-09
W	4.959E-08	2.466E-08	1.554E-08	8.500E-09	5.522E-09	3.935E-09	2.973E-09	2.339E-09	1.895E-09	1.570E-09	1.324E-09
WNW	6.603E-08	3.341E-08	2.130E-08	1.182E-08	7.747E-09	5.552E-09	4.211E-09	3.321E-09	2.695E-09	2.236E-09	1.888E-09
NW	8.917E-08	4.517E-08	2.883E-08	1.602E-08	1.051E-08	7.542E-09	5.728E-09	4.525E-09	3.679E-09	3.058E-09	2.586E-09
NNW	2.066E-07	1.070E-07	6.932E-08	3.924E-08	2.602E-08	1.880E-08	1.435E-08	1.137E-08	9.268E-09	7.717E-09	6.535E-09
N	3.269E-07	1.709E-07	1.113E-07	6.351E-08	4.233E-08	3.071E-08	2.352E-08	1.869E-08	1.527E-08	1.274E-08	1.081E-08
NNE	2.231E-07	1.173E-07	7.665E-08	4.382E-08	2.919E-08	2.114E-08	1.615E-08	1.280E-08	1.042E-08	8.669E-09	7.332E-09
NE	1.223E-07	6.457E-08	4.232E-08	2.428E-08	1.621E-08	1.176E-08	8.999E-09	7.141E-09	5.823E-09	4.848E-09	4.104E-09
ENE	7.833E-08	4.084E-08	2.655E-08	1.510E-08	1.003E-08	7.258E-09	5.543E-09	4.394E-09	3.581E-09	2.981E-09	2.524E-09
E	9.538E-08	5.010E-08	3.273E-08	1.872E-08	1.248E-08	9.048E-09	6.919E-09	5.490E-09	4.477E-09	3.728E-09	3.157E-09
ESE	1.421E-07	7.419E-08	4.827E-08	2.747E-08	1.826E-08	1.322E-08	1.010E-08	8.006E-09	6.526E-09	5.433E-09	4.600E-09
SE	2.307E-07	1.204E-07	7.833E-08	4.455E-08	2.960E-08	2.140E-08	1.634E-08	1.294E-08	1.054E-08	8.769E-09	7.419E-09
SSE	2.751E-07	1.427E-07	9.244E-08	5.227E-08	3.460E-08	2.494E-08	1.899E-08	1.501E-08	1.220E-08	1.013E-08	8.558E-09

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.045E-05	2.440E-06	7.777E-07	3.984E-07	2.494E-07	1.110E-07	3.913E-08	1.841E-08	1.108E-08	7.506E-09
SSW	5.575E-06	1.287E-06	3.966E-07	1.994E-07	1.232E-07	5.372E-08	1.837E-08	8.475E-09	5.050E-09	3.400E-09
SW	3.434E-06	7.875E-07	2.409E-07	1.206E-07	7.422E-08	3.219E-08	1.090E-08	4.983E-09	2.950E-09	1.975E-09
WSW	2.713E-06	6.186E-07	1.885E-07	9.410E-08	5.784E-08	2.499E-08	8.411E-09	3.823E-09	2.252E-09	1.501E-09
W	2.886E-06	6.641E-07	2.004E-07	9.943E-08	6.086E-08	2.615E-08	8.742E-09	3.974E-09	2.351E-09	1.575E-09
WNW	3.638E-06	8.344E-07	2.584E-07	1.303E-07	8.063E-08	3.528E-08	1.212E-08	5.601E-09	3.337E-09	2.243E-09
NW	4.842E-06	1.124E-06	3.485E-07	1.758E-07	1.089E-07	4.768E-08	1.642E-08	7.608E-09	4.546E-09	3.067E-09
NNW	1.017E-05	2.386E-06	7.712E-07	3.981E-07	2.505E-07	1.124E-07	4.005E-08	1.894E-08	1.142E-08	7.739E-09
N	1.537E-05	3.642E-06	1.198E-06	6.242E-07	3.952E-07	1.791E-07	6.472E-08	3.093E-08	1.877E-08	1.278E-08
NNE	1.032E-05	2.414E-06	8.060E-07	4.231E-07	2.692E-07	1.227E-07	4.461E-08	2.129E-08	1.285E-08	8.693E-09
NE	5.586E-06	1.299E-06	4.378E-07	2.309E-07	1.474E-07	6.751E-08	2.470E-08	1.184E-08	7.170E-09	4.861E-09
ENE	3.729E-06	8.780E-07	2.881E-07	1.499E-07	9.478E-08	4.282E-08	1.539E-08	7.311E-09	4.413E-09	2.990E-09
E	4.461E-06	1.038E-06	3.455E-07	1.811E-07	1.151E-07	5.244E-08	1.906E-08	9.112E-09	5.512E-09	3.738E-09
ESE	6.766E-06	1.587E-06	5.217E-07	2.716E-07	1.719E-07	7.777E-08	2.800E-08	1.332E-08	8.040E-09	5.448E-09
SE	1.097E-05	2.572E-06	8.464E-07	4.408E-07	2.790E-07	1.262E-07	4.541E-08	2.156E-08	1.300E-08	8.795E-09
SSE	1.350E-05	3.146E-06	1.022E-06	5.290E-07	3.334E-07	1.498E-07	5.334E-08	2.514E-08	1.508E-08	1.016E-08

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2017
 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	5.919E-05	1.854E-05	9.573E-06	4.707E-06	1.860E-06	9.909E-07	6.184E-07	4.254E-07	3.124E-07	2.405E-07	1.918E-07
SSW	2.986E-05	9.832E-06	5.135E-06	2.518E-06	9.720E-07	5.095E-07	3.140E-07	2.139E-07	1.558E-07	1.191E-07	9.435E-08
SW	1.848E-05	6.073E-06	3.160E-06	1.547E-06	5.941E-07	3.103E-07	1.908E-07	1.296E-07	9.425E-08	7.192E-08	5.691E-08
WSW	1.453E-05	4.810E-06	2.495E-06	1.217E-06	4.664E-07	2.432E-07	1.493E-07	1.014E-07	7.363E-08	5.614E-08	4.439E-08
W	1.505E-05	5.055E-06	2.668E-06	1.312E-06	4.990E-07	2.588E-07	1.582E-07	1.070E-07	7.752E-08	5.896E-08	4.651E-08
WNW	1.985E-05	6.464E-06	3.340E-06	1.631E-06	6.314E-07	3.317E-07	2.049E-07	1.398E-07	1.019E-07	7.802E-08	6.190E-08
NW	2.600E-05	8.520E-06	4.462E-06	2.194E-06	8.502E-07	4.468E-07	2.760E-07	1.883E-07	1.374E-07	1.051E-07	8.342E-08
NNW	5.878E-05	1.809E-05	9.302E-06	4.576E-06	1.826E-06	9.796E-07	6.146E-07	4.246E-07	3.129E-07	2.416E-07	1.932E-07
N	9.218E-05	2.741E-05	1.403E-05	6.928E-06	2.801E-06	1.515E-06	9.565E-07	6.639E-07	4.913E-07	3.806E-07	3.052E-07
NNE	6.399E-05	1.873E-05	9.342E-06	4.563E-06	1.866E-06	1.017E-06	6.459E-07	4.504E-07	3.345E-07	2.599E-07	2.090E-07
NE	3.504E-05	1.022E-05	5.037E-06	2.446E-06	1.007E-06	5.512E-07	3.510E-07	2.453E-07	1.826E-07	1.421E-07	1.144E-07
ENE	2.228E-05	6.674E-06	3.399E-06	1.673E-06	6.753E-07	3.649E-07	2.302E-07	1.597E-07	1.181E-07	9.143E-08	7.328E-08
E	2.743E-05	8.112E-06	4.037E-06	1.965E-06	8.016E-07	4.362E-07	2.766E-07	1.927E-07	1.430E-07	1.111E-07	8.923E-08
ESE	4.060E-05	1.216E-05	6.158E-06	3.021E-06	1.221E-06	6.605E-07	4.168E-07	2.893E-07	2.141E-07	1.658E-07	1.329E-07
SE	6.619E-05	1.974E-05	9.979E-06	4.895E-06	1.980E-06	1.072E-06	6.765E-07	4.697E-07	3.476E-07	2.693E-07	2.159E-07
SSE	7.968E-05	2.425E-05	1.230E-05	6.022E-06	2.414E-06	1.299E-06	8.163E-07	5.648E-07	4.168E-07	3.222E-07	2.578E-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	1.572E-07	7.754E-08	4.831E-08	2.587E-08	1.649E-08	1.156E-08	8.611E-09	6.684E-09	5.348E-09	4.381E-09	3.655E-09
SSW	7.689E-08	3.714E-08	2.280E-08	1.197E-08	7.532E-09	5.229E-09	3.864E-09	2.980E-09	2.372E-09	1.935E-09	1.608E-09
SW	4.632E-08	2.227E-08	1.363E-08	7.122E-09	4.468E-09	3.095E-09	2.282E-09	1.757E-09	1.397E-09	1.137E-09	9.440E-10
WSW	3.611E-08	1.732E-08	1.058E-08	5.515E-09	3.455E-09	2.390E-09	1.761E-09	1.355E-09	1.076E-09	8.753E-10	7.260E-10
W	3.775E-08	1.795E-08	1.090E-08	5.638E-09	3.512E-09	2.420E-09	1.778E-09	1.365E-09	1.082E-09	8.790E-10	7.283E-10
WNW	5.050E-08	2.449E-08	1.508E-08	7.956E-09	5.024E-09	3.497E-09	2.589E-09	2.000E-09	1.594E-09	1.301E-09	1.083E-09
NW	6.805E-08	3.300E-08	2.032E-08	1.071E-08	6.753E-09	4.696E-09	3.474E-09	2.683E-09	2.138E-09	1.744E-09	1.451E-09
NNW	1.587E-07	7.894E-08	4.946E-08	2.669E-08	1.710E-08	1.203E-08	8.978E-09	6.983E-09	5.597E-09	4.591E-09	3.834E-09
N	2.513E-07	1.262E-07	7.956E-08	4.328E-08	2.788E-08	1.969E-08	1.475E-08	1.150E-08	9.240E-09	7.594E-09	6.354E-09
NNE	1.725E-07	8.734E-08	5.537E-08	3.033E-08	1.962E-08	1.389E-08	1.043E-08	8.141E-09	6.546E-09	5.382E-09	4.504E-09
NE	9.454E-08	4.808E-08	3.057E-08	1.681E-08	1.090E-08	7.733E-09	5.811E-09	4.543E-09	3.657E-09	3.009E-09	2.521E-09
ENE	6.032E-08	3.023E-08	1.904E-08	1.034E-08	6.648E-09	4.690E-09	3.509E-09	2.734E-09	2.194E-09	1.802E-09	1.506E-09
E	7.362E-08	3.722E-08	2.358E-08	1.290E-08	8.342E-09	5.908E-09	4.433E-09	3.462E-09	2.784E-09	2.290E-09	1.917E-09
ESE	1.095E-07	5.493E-08	3.462E-08	1.882E-08	1.212E-08	8.553E-09	6.402E-09	4.990E-09	4.006E-09	3.290E-09	2.751E-09
SE	1.778E-07	8.927E-08	5.628E-08	3.060E-08	1.970E-08	1.391E-08	1.041E-08	8.112E-09	6.512E-09	5.348E-09	4.471E-09
SSE	2.120E-07	1.057E-07	6.639E-08	3.590E-08	2.302E-08	1.621E-08	1.210E-08	9.416E-09	7.547E-09	6.189E-09	5.168E-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	9.403E-06	2.107E-06	6.405E-07	3.173E-07	1.934E-07	8.225E-08	2.669E-08	1.170E-08	6.726E-09	4.399E-09
SSW	5.016E-06	1.110E-06	3.261E-07	1.584E-07	9.521E-08	3.960E-08	1.241E-08	5.297E-09	3.001E-09	1.943E-09
SW	3.090E-06	6.797E-07	1.982E-07	9.585E-08	5.743E-08	2.377E-08	7.388E-09	3.136E-09	1.770E-09	1.143E-09
WSW	2.442E-06	5.341E-07	1.552E-07	7.489E-08	4.481E-08	1.850E-08	5.724E-09	2.422E-09	1.365E-09	8.794E-10
W	2.596E-06	5.728E-07	1.646E-07	7.888E-08	4.695E-08	1.922E-08	5.863E-09	2.454E-09	1.375E-09	8.833E-10
WNW	3.275E-06	7.202E-07	2.126E-07	1.036E-07	6.245E-08	2.609E-08	8.237E-09	3.541E-09	2.014E-09	1.307E-09
NW	4.356E-06	9.695E-07	2.865E-07	1.397E-07	8.416E-08	3.516E-08	1.109E-08	4.756E-09	2.701E-09	1.752E-09
NNW	9.155E-06	2.061E-06	6.359E-07	3.177E-07	1.948E-07	8.356E-08	2.749E-08	1.216E-08	7.025E-09	4.609E-09
N	1.384E-05	3.147E-06	9.885E-07	4.985E-07	3.076E-07	1.333E-07	4.450E-08	1.990E-08	1.157E-08	7.622E-09
NNE	9.303E-06	2.088E-06	6.668E-07	3.392E-07	2.106E-07	9.205E-08	3.113E-08	1.403E-08	8.186E-09	5.402E-09
NE	5.037E-06	1.124E-06	3.621E-07	1.851E-07	1.153E-07	5.062E-08	1.724E-08	7.808E-09	4.568E-09	3.020E-09
ENE	3.360E-06	7.590E-07	2.379E-07	1.198E-07	7.386E-08	3.194E-08	1.063E-08	4.740E-09	2.750E-09	1.809E-09
E	4.022E-06	8.978E-07	2.856E-07	1.450E-07	8.991E-08	3.925E-08	1.325E-08	5.967E-09	3.481E-09	2.298E-09
ESE	6.097E-06	1.372E-06	4.308E-07	2.172E-07	1.340E-07	5.802E-08	1.935E-08	8.643E-09	5.019E-09	3.303E-09
SE	9.888E-06	2.224E-06	6.991E-07	3.526E-07	2.176E-07	9.428E-08	3.146E-08	1.405E-08	8.158E-09	5.368E-09
SSE	1.217E-05	2.720E-06	8.443E-07	4.231E-07	2.599E-07	1.119E-07	3.695E-08	1.638E-08	9.472E-09	6.213E-09

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2017
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	2.568E-07	8.685E-08	4.459E-08	2.120E-08	7.615E-09	3.776E-09	2.224E-09	1.456E-09	1.025E-09	7.593E-10	5.851E-10
SSW	1.429E-07	4.833E-08	2.482E-08	1.180E-08	4.238E-09	2.102E-09	1.238E-09	8.103E-10	5.702E-10	4.226E-10	3.256E-10
SW	8.218E-08	2.779E-08	1.427E-08	6.783E-09	2.437E-09	1.208E-09	7.115E-10	4.659E-10	3.278E-10	2.429E-10	1.872E-10
WSW	5.638E-08	1.907E-08	9.789E-09	4.654E-09	1.672E-09	8.290E-10	4.881E-10	3.196E-10	2.249E-10	1.667E-10	1.284E-10
W	6.447E-08	2.180E-08	1.119E-08	5.322E-09	1.912E-09	9.480E-10	5.582E-10	3.655E-10	2.572E-10	1.906E-10	1.469E-10
WNW	8.069E-08	2.728E-08	1.401E-08	6.660E-09	2.392E-09	1.186E-09	6.986E-10	4.574E-10	3.219E-10	2.385E-10	1.838E-10
NW	1.275E-07	4.311E-08	2.214E-08	1.052E-08	3.780E-09	1.875E-09	1.104E-09	7.228E-10	5.086E-10	3.769E-10	2.905E-10
NNW	2.286E-07	7.729E-08	3.968E-08	1.887E-08	6.777E-09	3.361E-09	1.979E-09	1.296E-09	9.118E-10	6.757E-10	5.207E-10
N	3.173E-07	1.073E-07	5.509E-08	2.619E-08	9.408E-09	4.666E-09	2.747E-09	1.799E-09	1.266E-09	9.381E-10	7.229E-10
NNE	1.589E-07	5.374E-08	2.759E-08	1.312E-08	4.712E-09	2.337E-09	1.376E-09	9.009E-10	6.339E-10	4.698E-10	3.620E-10
NE	8.001E-08	2.705E-08	1.389E-08	6.604E-09	2.372E-09	1.176E-09	6.927E-10	4.536E-10	3.192E-10	2.365E-10	1.823E-10
ENE	6.081E-08	2.056E-08	1.056E-08	5.020E-09	1.803E-09	8.942E-10	5.265E-10	3.448E-10	2.426E-10	1.798E-10	1.385E-10
E	6.727E-08	2.275E-08	1.168E-08	5.552E-09	1.994E-09	9.891E-10	5.824E-10	3.813E-10	2.683E-10	1.989E-10	1.532E-10
ESE	1.166E-07	3.944E-08	2.025E-08	9.626E-09	3.458E-09	1.715E-09	1.010E-09	6.611E-10	4.652E-10	3.448E-10	2.657E-10
SE	2.098E-07	7.094E-08	3.643E-08	1.732E-08	6.220E-09	3.085E-09	1.816E-09	1.189E-09	8.369E-10	6.202E-10	4.779E-10
SSE	2.658E-07	8.988E-08	4.615E-08	2.194E-08	7.881E-09	3.908E-09	2.301E-09	1.507E-09	1.060E-09	7.857E-10	6.055E-10

DIRECTION FROM SITE	DISTANCES IN MILES										
	5.00	7.50	10.00	15.00	20.00	25.00	30.00	35.00	40.00	45.00	50.00
S	4.648E-10	2.065E-10	1.251E-10	6.322E-11	3.827E-11	2.566E-11	1.838E-11	1.380E-11	1.073E-11	8.574E-12	6.998E-12
SSW	2.587E-10	1.149E-10	6.961E-11	3.519E-11	2.130E-11	1.428E-11	1.023E-11	7.683E-12	5.973E-12	4.772E-12	3.895E-12
SW	1.487E-10	6.607E-11	4.002E-11	2.023E-11	1.224E-11	8.209E-12	5.882E-12	4.417E-12	3.434E-12	2.743E-12	2.239E-12
WSW	1.020E-10	4.533E-11	2.746E-11	1.388E-11	8.401E-12	5.632E-12	4.036E-12	3.030E-12	2.356E-12	1.882E-12	1.536E-12
W	1.167E-10	5.183E-11	3.140E-11	1.587E-11	9.606E-12	6.440E-12	4.615E-12	3.465E-12	2.694E-12	2.152E-12	1.757E-12
WNW	1.460E-10	6.487E-11	3.930E-11	1.986E-11	1.202E-11	8.060E-12	5.776E-12	4.337E-12	3.372E-12	2.694E-12	2.199E-12
NW	2.307E-10	1.025E-10	6.209E-11	3.138E-11	1.900E-11	1.274E-11	9.126E-12	6.853E-12	5.328E-12	4.256E-12	3.474E-12
NNW	4.137E-10	1.838E-10	1.113E-10	5.627E-11	3.406E-11	2.283E-11	1.636E-11	1.229E-11	9.552E-12	7.630E-12	6.228E-12
N	5.743E-10	2.551E-10	1.545E-10	7.812E-11	4.728E-11	3.170E-11	2.271E-11	1.706E-11	1.326E-11	1.059E-11	8.647E-12
NNE	2.876E-10	1.278E-10	7.739E-11	3.912E-11	2.368E-11	1.587E-11	1.137E-11	8.541E-12	6.641E-12	5.305E-12	4.330E-12
NE	1.448E-10	6.433E-11	3.897E-11	1.970E-11	1.192E-11	7.993E-12	5.727E-12	4.300E-12	3.344E-12	2.671E-12	2.180E-12
ENE	1.101E-10	4.890E-11	2.962E-11	1.497E-11	9.061E-12	6.075E-12	4.353E-12	3.269E-12	2.542E-12	2.030E-12	1.657E-12
E	1.217E-10	5.408E-11	3.276E-11	1.656E-11	1.002E-11	6.720E-12	4.815E-12	3.616E-12	2.811E-12	2.246E-12	1.833E-12
ESE	2.111E-10	9.376E-11	5.680E-11	2.871E-11	1.738E-11	1.165E-11	8.348E-12	6.268E-12	4.874E-12	3.893E-12	3.178E-12
SE	3.797E-10	1.687E-10	1.022E-10	5.165E-11	3.126E-11	2.096E-11	1.502E-11	1.128E-11	8.768E-12	7.004E-12	5.717E-12
SSE	4.810E-10	2.137E-10	1.294E-10	6.543E-11	3.960E-11	2.655E-11	1.903E-11	1.429E-11	1.111E-11	8.873E-12	7.242E-12

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	4.359E-08	8.928E-09	2.331E-09	1.047E-09	5.922E-10	2.277E-10	6.588E-11	2.611E-11	1.394E-11	8.630E-12
SSW	2.426E-08	4.969E-09	1.297E-09	5.825E-10	3.296E-10	1.267E-10	3.666E-11	1.453E-11	7.760E-12	4.803E-12
SW	1.395E-08	2.857E-09	7.457E-10	3.349E-10	1.895E-10	7.286E-11	2.108E-11	8.354E-12	4.461E-12	2.761E-12
WSW	9.568E-09	1.960E-09	5.116E-10	2.298E-10	1.300E-10	4.999E-11	1.446E-11	5.732E-12	3.061E-12	1.895E-12
W	1.094E-08	2.241E-09	5.850E-10	2.628E-10	1.486E-10	5.716E-11	1.654E-11	6.554E-12	3.500E-12	2.166E-12
WNW	1.369E-08	2.805E-09	7.322E-10	3.288E-10	1.860E-10	7.154E-11	2.070E-11	8.203E-12	4.380E-12	2.711E-12
NW	2.164E-08	4.432E-09	1.157E-09	5.196E-10	2.940E-10	1.130E-10	3.270E-11	1.296E-11	6.921E-12	4.284E-12
NNW	3.879E-08	7.945E-09	2.074E-09	9.316E-10	5.270E-10	2.027E-10	5.863E-11	2.324E-11	1.241E-11	7.681E-12
N	5.385E-08	1.103E-08	2.880E-09	1.293E-09	7.316E-10	2.814E-10	8.140E-11	3.226E-11	1.723E-11	1.066E-11
NNE	2.697E-08	5.524E-09	1.442E-09	6.477E-10	3.664E-10	1.409E-10	4.076E-11	1.616E-11	8.627E-12	5.340E-12
NE	1.358E-08	2.781E-09	7.260E-10	3.261E-10	1.845E-10	7.094E-11	2.052E-11	8.134E-12	4.344E-12	2.688E-12
ENE	1.032E-08	2.114E-09	5.519E-10	2.479E-10	1.402E-10	5.392E-11	1.560E-11	6.183E-12	3.302E-12	2.044E-12
E	1.142E-08	2.338E-09	6.104E-10	2.742E-10	1.551E-10	5.964E-11	1.725E-11	6.839E-12	3.652E-12	2.260E-12
ESE	1.979E-08	4.054E-09	1.058E-09	4.753E-10	2.689E-10	1.034E-10	2.991E-11	1.186E-11	6.331E-12	3.919E-12
SE	3.560E-08	7.293E-09	1.904E-09	8.550E-10	4.837E-10	1.860E-10	5.381E-11	2.133E-11	1.139E-11	7.050E-12
SSE	4.511E-08	9.239E-09	2.412E-09	1.083E-09	6.128E-10	2.357E-10	6.818E-11	2.702E-11	1.443E-11	8.931E-12

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VENTS GROUND LEVEL RELEASES - JAN-DEC 2017
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	9.2E-06	9.2E-06	8.2E-06	3.8E-08
A	Site Boundary	SSW	.82	4.6E-06	4.6E-06	4.1E-06	1.9E-08
A	Site Boundary	SW	.97	1.9E-06	1.9E-06	1.6E-06	7.2E-09
A	Site Boundary	WSW	.93	1.7E-06	1.7E-06	1.5E-06	5.7E-09
A	Site Boundary	W	.91	1.9E-06	1.9E-06	1.6E-06	6.7E-09
A	Site Boundary	WNW	.94	2.2E-06	2.2E-06	1.9E-06	7.9E-09
A	Site Boundary	NW	.81	4.2E-06	4.1E-06	3.7E-06	1.8E-08
A	Site Boundary	NNW	.69	1.2E-05	1.2E-05	1.1E-05	4.6E-08
A	Site Boundary	N	.67	1.9E-05	1.8E-05	1.7E-05	6.6E-08
A	Site Boundary	NNE	.60	1.5E-05	1.5E-05	1.4E-05	4.0E-08
A	Site Boundary	NE	.62	7.6E-06	7.6E-06	6.9E-06	1.9E-08
A	Site Boundary	ENE	.59	5.6E-06	5.6E-06	5.1E-06	1.6E-08
A	Site Boundary	E	.53	8.2E-06	8.1E-06	7.4E-06	2.1E-08
A	Site Boundary	ESE	.54	1.2E-05	1.2E-05	1.1E-05	3.5E-08
A	Site Boundary	SE	.65	1.4E-05	1.4E-05	1.3E-05	4.6E-08
A	Site Boundary	SSE	.81	1.1E-05	1.1E-05	1.0E-05	3.8E-08
A	Nearest Res	SSW	3.00	2.7E-07	2.7E-07	2.1E-07	8.1E-10
A	Nearest Res	SW	1.00	1.8E-06	1.8E-06	1.5E-06	6.8E-09
A	Nearest Res	WSW	2.50	1.9E-07	1.8E-07	1.5E-07	4.9E-10
A	Nearest Res	W	1.00	1.5E-06	1.5E-06	1.3E-06	5.3E-09
A	Nearest Res	WNW	1.70	5.7E-07	5.6E-07	4.8E-07	1.8E-09
A	Nearest Res	NW	.90	3.2E-06	3.2E-06	2.8E-06	1.4E-08
A	Nearest Res	NNW	1.90	1.3E-06	1.3E-06	1.1E-06	3.8E-09
A	Nearest Res	N	2.90	9.0E-07	8.7E-07	7.1E-07	1.9E-09
A	Nearest Res	NNE	1.70	1.7E-06	1.7E-06	1.4E-06	3.5E-09
A	Nearest Res	ENE	1.70	6.2E-07	6.1E-07	5.2E-07	1.3E-09
A	Nearest Res	E	2.20	4.4E-07	4.3E-07	3.6E-07	7.9E-10
A	Nearest Res	SE	2.80	6.8E-07	6.6E-07	5.4E-07	1.4E-09
A	Nearest Cow	NNW	3.50	4.0E-07	3.9E-07	3.1E-07	9.1E-10
A	Nearest Garde	SSW	3.00	2.7E-07	2.7E-07	2.1E-07	8.1E-10
A	Nearest Garde	SW	2.20	3.1E-07	3.0E-07	2.5E-07	9.6E-10
A	Nearest Garde	WSW	2.50	1.9E-07	1.8E-07	1.5E-07	4.9E-10
A	Nearest Garde	WNW	1.70	5.7E-07	5.6E-07	4.8E-07	1.8E-09
A	Nearest Garde	NW	2.00	5.4E-07	5.3E-07	4.5E-07	1.9E-09
A	Nearest Garde	NNW	2.80	6.1E-07	6.0E-07	4.9E-07	1.5E-09
A	Nearest Garde	ESE	2.30	6.1E-07	6.0E-07	4.9E-07	1.2E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-March 2017

ERP ELEVATED STACK RELEASES - JAN-MAR 2017
 NO DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTOR

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	2.973E-09	2.058E-08	5.352E-08	7.592E-08	8.239E-08	7.011E-08	5.710E-08	4.662E-08	3.862E-08	4.199E-08	4.390E-08
SSW	4.336E-08	3.389E-08	5.805E-08	8.294E-08	9.447E-08	8.242E-08	6.814E-08	7.065E-08	6.802E-08	5.742E-08	4.921E-08
SW	1.552E-08	3.628E-08	8.329E-08	1.452E-07	1.964E-07	1.275E-07	8.924E-08	6.624E-08	5.142E-08	4.131E-08	3.411E-08
WSW	2.903E-10	2.678E-08	9.492E-08	1.520E-07	1.845E-07	1.103E-07	7.356E-08	5.286E-08	4.008E-08	3.163E-08	2.574E-08
W	2.806E-10	5.739E-08	2.327E-07	2.650E-07	2.035E-07	1.206E-07	8.006E-08	5.742E-08	4.351E-08	3.433E-08	2.794E-08
WNV	4.459E-09	2.447E-08	1.150E-07	1.910E-07	2.121E-07	1.272E-07	8.569E-08	6.555E-08	5.286E-08	4.217E-08	3.468E-08
NW	6.701E-11	6.796E-09	6.595E-08	1.801E-07	3.306E-07	1.974E-07	1.321E-07	9.743E-08	7.552E-08	5.968E-08	4.865E-08
NNW	3.106E-08	4.502E-08	5.121E-08	6.170E-08	8.718E-08	9.056E-08	8.897E-08	8.483E-08	8.166E-08	6.514E-08	5.356E-08
N	8.710E-09	2.751E-08	4.052E-08	4.121E-08	3.817E-08	3.338E-08	2.854E-08	2.401E-08	2.050E-08	1.778E-08	1.563E-08
NNE	2.685E-08	2.253E-08	2.322E-08	2.290E-08	2.252E-08	1.982E-08	1.690E-08	1.441E-08	1.241E-08	1.082E-08	9.556E-09
NE	5.932E-11	4.256E-09	1.596E-08	2.483E-08	2.939E-08	2.643E-08	2.243E-08	1.891E-08	1.608E-08	1.384E-08	1.206E-08
ENE	5.305E-16	4.717E-10	7.434E-09	1.428E-08	1.803E-08	1.628E-08	1.376E-08	1.154E-08	9.775E-09	8.381E-09	7.283E-09
E	2.401E-16	2.590E-10	4.722E-09	9.803E-09	1.330E-08	1.239E-08	1.065E-08	9.038E-09	7.713E-09	6.655E-09	5.812E-09
ESE	9.905E-16	7.967E-10	1.282E-08	2.499E-08	3.185E-08	2.872E-08	2.417E-08	2.018E-08	1.700E-08	1.450E-08	1.254E-08
SE	1.087E-10	8.411E-09	4.280E-08	6.966E-08	8.069E-08	7.058E-08	5.859E-08	4.855E-08	4.069E-08	3.459E-08	2.982E-08
SSE	3.198E-09	3.725E-08	9.744E-08	1.350E-07	1.472E-07	1.267E-07	1.041E-07	8.560E-08	7.125E-08	6.019E-08	5.161E-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	3.893E-08	2.756E-08	1.803E-08	1.044E-08	7.524E-09	5.799E-09	4.532E-09	3.683E-09	3.119E-09	2.687E-09	2.334E-09
SSW	4.360E-08	2.872E-08	1.836E-08	1.031E-08	7.164E-09	5.312E-09	4.105E-09	3.304E-09	2.742E-09	2.326E-09	2.009E-09
SW	3.041E-08	2.163E-08	1.414E-08	8.181E-09	5.874E-09	4.522E-09	3.653E-09	2.964E-09	2.475E-09	2.113E-09	1.835E-09
WSW	2.204E-08	1.289E-08	8.770E-09	5.243E-09	3.495E-09	2.558E-09	1.986E-09	1.603E-09	1.333E-09	1.134E-09	9.813E-10
W	2.331E-08	1.221E-08	8.407E-09	5.313E-09	3.913E-09	2.882E-09	2.234E-09	1.803E-09	1.499E-09	1.274E-09	1.103E-09
WNV	2.966E-08	1.733E-08	1.221E-08	7.848E-09	5.511E-09	4.191E-09	3.372E-09	2.789E-09	2.350E-09	2.014E-09	1.755E-09
NW	4.106E-08	2.245E-08	1.510E-08	8.979E-09	6.024E-09	4.430E-09	3.493E-09	2.837E-09	2.364E-09	2.014E-09	1.746E-09
NNW	4.644E-08	2.796E-08	1.846E-08	1.085E-08	7.464E-09	5.594E-09	4.482E-09	3.716E-09	3.199E-09	2.770E-09	2.419E-09
N	1.394E-08	9.181E-09	8.177E-09	7.470E-09	6.808E-09	5.820E-09	4.611E-09	3.773E-09	3.167E-09	2.716E-09	2.368E-09
NNE	1.095E-08	1.885E-08	1.229E-08	7.115E-09	4.850E-09	3.611E-09	2.841E-09	2.322E-09	1.951E-09	1.674E-09	1.461E-09
NE	1.301E-08	2.328E-08	1.528E-08	8.930E-09	6.126E-09	4.584E-09	3.678E-09	3.046E-09	2.590E-09	2.226E-09	1.945E-09
ENE	7.577E-09	1.052E-08	6.975E-09	4.115E-09	2.834E-09	2.125E-09	1.774E-09	1.504E-09	1.264E-09	1.085E-09	9.463E-10
E	6.129E-09	1.016E-08	6.838E-09	4.112E-09	2.868E-09	2.170E-09	1.729E-09	1.428E-09	1.276E-09	1.145E-09	1.003E-09
ESE	1.253E-08	1.309E-08	8.648E-09	5.067E-09	3.470E-09	2.590E-09	2.040E-09	1.668E-09	1.402E-09	1.203E-09	1.050E-09
SE	2.602E-08	1.559E-08	1.167E-08	7.871E-09	5.551E-09	4.219E-09	3.365E-09	2.775E-09	2.305E-09	1.958E-09	1.692E-09
SSE	5.214E-08	4.875E-08	3.102E-08	1.734E-08	1.153E-08	8.421E-09	6.523E-09	5.261E-09	4.370E-09	3.712E-09	3.210E-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	5.615E-08	7.549E-08	5.638E-08	4.219E-08	4.149E-08	2.585E-08	1.083E-08	5.752E-09	3.711E-09	2.684E-09
SSW	6.374E-08	8.655E-08	7.295E-08	6.473E-08	4.956E-08	2.742E-08	1.070E-08	5.323E-09	3.319E-09	2.332E-09
SW	1.004E-07	1.544E-07	9.025E-08	5.180E-08	3.487E-08	2.025E-08	8.480E-09	4.535E-09	2.975E-09	2.117E-09
WSW	1.052E-07	1.443E-07	7.509E-08	4.051E-08	2.611E-08	1.309E-08	5.250E-09	2.579E-09	1.610E-09	1.136E-09
W	2.081E-07	1.803E-07	8.181E-08	4.399E-08	2.812E-08	1.299E-08	5.378E-09	2.898E-09	1.810E-09	1.277E-09
WNV	1.287E-07	1.697E-07	8.869E-08	5.241E-08	3.504E-08	1.779E-08	7.779E-09	4.215E-09	2.788E-09	2.018E-09
NW	1.035E-07	2.380E-07	1.356E-07	7.575E-08	4.911E-08	2.332E-08	9.025E-09	4.480E-09	2.844E-09	2.018E-09
NNW	5.450E-08	8.302E-08	8.774E-08	7.627E-08	5.436E-08	2.784E-08	1.103E-08	5.648E-09	3.738E-09	2.767E-09
N	3.794E-08	3.672E-08	2.802E-08	2.047E-08	1.564E-08	9.793E-09	7.333E-09	5.600E-09	3.781E-09	2.721E-09
NNE	2.292E-08	2.141E-08	1.668E-08	1.238E-08	1.045E-08	1.418E-08	7.258E-09	3.633E-09	2.329E-09	1.677E-09
NE	1.730E-08	2.706E-08	2.209E-08	1.604E-08	1.294E-08	1.744E-08	9.095E-09	4.632E-09	3.053E-09	2.230E-09
ENE	8.931E-09	1.642E-08	1.354E-08	9.750E-09	7.717E-09	8.289E-09	4.181E-09	2.174E-09	1.490E-09	1.086E-09
E	5.988E-09	1.212E-08	1.047E-08	7.688E-09	6.179E-09	7.787E-09	4.165E-09	2.180E-09	1.456E-09	1.131E-09
ESE	1.556E-08	2.894E-08	2.379E-08	1.696E-08	1.312E-08	1.099E-08	5.153E-09	2.605E-09	1.673E-09	1.205E-09
SE	4.710E-08	7.375E-08	5.777E-08	4.062E-08	2.983E-08	1.617E-08	7.684E-09	4.232E-09	2.765E-09	1.962E-09
SSE	1.008E-07	1.354E-07	1.027E-07	7.114E-08	5.435E-08	4.162E-08	1.780E-08	8.491E-09	5.282E-09	3.721E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2017
 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	2.972E-09	2.057E-08	5.348E-08	7.583E-08	8.224E-08	6.993E-08	5.691E-08	4.644E-08	3.844E-08	4.175E-08	4.360E-08
SSW	4.335E-08	3.388E-08	5.799E-08	8.282E-08	9.424E-08	8.214E-08	6.784E-08	7.026E-08	6.756E-08	5.697E-08	4.877E-08
SW	1.552E-08	3.627E-08	8.321E-08	1.450E-07	1.959E-07	1.270E-07	8.877E-08	6.581E-08	5.102E-08	4.094E-08	3.376E-08
WSW	2.901E-10	2.675E-08	9.479E-08	1.518E-07	1.840E-07	1.098E-07	7.315E-08	5.250E-08	3.975E-08	3.133E-08	2.546E-08
W	2.805E-10	5.734E-08	2.324E-07	2.645E-07	2.029E-07	1.201E-07	7.967E-08	5.708E-08	4.321E-08	3.405E-08	2.769E-08
WNW	4.458E-09	2.445E-08	1.149E-07	1.907E-07	2.116E-07	1.267E-07	8.530E-08	6.517E-08	5.248E-08	4.181E-08	3.434E-08
NW	6.698E-11	6.790E-09	6.586E-08	1.797E-07	3.295E-07	1.965E-07	1.313E-07	9.680E-08	7.495E-08	5.917E-08	4.818E-08
NNW	3.105E-08	4.501E-08	5.118E-08	6.164E-08	8.703E-08	9.034E-08	8.868E-08	8.447E-08	8.123E-08	6.474E-08	5.319E-08
N	8.708E-09	2.750E-08	4.050E-08	4.118E-08	3.813E-08	3.332E-08	2.848E-08	2.394E-08	2.044E-08	1.771E-08	1.556E-08
NNE	2.685E-08	2.252E-08	2.320E-08	2.287E-08	2.246E-08	1.975E-08	1.681E-08	1.432E-08	1.232E-08	1.073E-08	9.466E-09
NE	5.930E-11	4.253E-09	1.595E-08	2.480E-08	2.933E-08	2.636E-08	2.235E-08	1.883E-08	1.600E-08	1.376E-08	1.198E-08
ENE	5.304E-16	4.714E-10	7.427E-09	1.427E-08	1.800E-08	1.624E-08	1.371E-08	1.150E-08	9.734E-09	8.342E-09	7.244E-09
E	2.400E-16	2.588E-10	4.716E-09	9.783E-09	1.326E-08	1.234E-08	1.059E-08	8.979E-09	7.656E-09	6.598E-09	5.757E-09
ESE	9.903E-16	7.963E-10	1.280E-08	2.496E-08	3.178E-08	2.863E-08	2.408E-08	2.009E-08	1.691E-08	1.441E-08	1.245E-08
SE	1.087E-10	8.408E-09	4.276E-08	6.959E-08	8.055E-08	7.040E-08	5.839E-08	4.835E-08	4.049E-08	3.439E-08	2.962E-08
SSE	3.197E-09	3.723E-08	9.734E-08	1.348E-07	1.469E-07	1.263E-07	1.037E-07	8.518E-08	7.083E-08	5.979E-08	5.122E-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	3.863E-08	2.722E-08	1.773E-08	1.018E-08	7.272E-09	5.555E-09	4.304E-09	3.468E-09	2.911E-09	2.486E-09	2.141E-09
SSW	4.315E-08	2.823E-08	1.794E-08	9.947E-09	6.820E-09	4.990E-09	3.807E-09	3.025E-09	2.478E-09	2.076E-09	1.770E-09
SW	3.006E-08	2.122E-08	1.378E-08	7.868E-09	5.569E-09	4.226E-09	3.364E-09	2.692E-09	2.218E-09	1.867E-09	1.599E-09
WSW	2.177E-08	1.262E-08	8.518E-09	5.003E-09	3.281E-09	2.362E-09	1.804E-09	1.432E-09	1.172E-09	9.799E-10	8.341E-10
W	2.307E-08	1.202E-08	8.220E-09	5.118E-09	3.708E-09	2.691E-09	2.056E-09	1.636E-09	1.341E-09	1.124E-09	9.583E-10
WNW	2.933E-08	1.701E-08	1.190E-08	7.523E-09	5.200E-09	3.892E-09	3.082E-09	2.508E-09	2.080E-09	1.755E-09	1.506E-09
NW	4.062E-08	2.210E-08	1.478E-08	8.706E-09	5.783E-09	4.211E-09	3.289E-09	2.645E-09	2.184E-09	1.843E-09	1.583E-09
NNW	4.607E-08	2.760E-08	1.814E-08	1.056E-08	7.200E-09	5.346E-09	4.242E-09	3.483E-09	2.968E-09	2.545E-09	2.201E-09
N	1.387E-08	9.103E-09	8.071E-09	7.300E-09	6.590E-09	5.584E-09	4.387E-09	3.560E-09	2.964E-09	2.521E-09	2.180E-09
NNE	1.083E-08	1.863E-08	1.210E-08	6.953E-09	4.705E-09	3.478E-09	2.717E-09	2.206E-09	1.840E-09	1.569E-09	1.359E-09
NE	1.291E-08	2.296E-08	1.500E-08	8.685E-09	5.902E-09	4.375E-09	3.477E-09	2.853E-09	2.402E-09	2.045E-09	1.770E-09
ENE	7.533E-09	1.041E-08	6.881E-09	4.030E-09	2.756E-09	2.052E-09	1.698E-09	1.429E-09	1.192E-09	1.015E-09	8.788E-10
E	6.067E-09	9.949E-09	6.646E-09	3.934E-09	2.700E-09	2.011E-09	1.576E-09	1.281E-09	1.122E-09	9.885E-10	8.511E-10
ESE	1.243E-08	1.291E-08	8.483E-09	4.917E-09	3.331E-09	2.458E-09	1.915E-09	1.548E-09	1.287E-09	1.092E-09	9.417E-10
SE	2.583E-08	1.541E-08	1.148E-08	7.675E-09	5.366E-09	4.044E-09	3.199E-09	2.616E-09	2.155E-09	1.815E-09	1.555E-09
SSE	5.170E-08	4.805E-08	3.042E-08	1.683E-08	1.108E-08	8.011E-09	6.143E-09	4.904E-09	4.032E-09	3.391E-09	2.902E-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	5.610E-08	7.535E-08	5.619E-08	4.199E-08	4.121E-08	2.554E-08	1.057E-08	5.513E-09	3.495E-09	2.484E-09
SSW	6.367E-08	8.632E-08	7.262E-08	6.430E-08	4.912E-08	2.697E-08	1.033E-08	5.005E-09	3.040E-09	2.082E-09
SW	1.002E-07	1.540E-07	8.978E-08	5.140E-08	3.452E-08	1.988E-08	8.160E-09	4.240E-09	2.703E-09	1.872E-09
WSW	1.050E-07	1.439E-07	7.468E-08	4.019E-08	2.583E-08	1.283E-08	5.019E-09	2.384E-09	1.439E-09	9.827E-10
W	2.078E-07	1.798E-07	8.142E-08	4.368E-08	2.786E-08	1.278E-08	5.180E-09	2.708E-09	1.644E-09	1.127E-09
WNW	1.285E-07	1.692E-07	8.829E-08	5.204E-08	3.470E-08	1.748E-08	7.462E-09	3.917E-09	2.509E-09	1.759E-09
NW	1.034E-07	2.371E-07	1.349E-07	7.518E-08	4.863E-08	2.296E-08	8.757E-09	4.261E-09	2.653E-09	1.848E-09
NNW	5.446E-08	8.286E-08	8.744E-08	7.587E-08	5.397E-08	2.750E-08	1.075E-08	5.399E-09	3.504E-09	2.543E-09
N	3.791E-08	3.667E-08	2.795E-08	2.040E-08	1.557E-08	9.705E-09	7.156E-09	5.374E-09	3.569E-09	2.526E-09
NNE	2.290E-08	2.134E-08	1.660E-08	1.229E-08	1.035E-08	1.399E-08	7.098E-09	3.501E-09	2.213E-09	1.572E-09
NE	1.728E-08	2.700E-08	2.201E-08	1.595E-08	1.285E-08	1.719E-08	8.853E-09	4.423E-09	2.859E-09	2.049E-09
ENE	8.921E-09	1.639E-08	1.350E-08	9.709E-09	7.677E-09	8.203E-09	4.097E-09	2.098E-09	1.416E-09	1.017E-09
E	5.978E-09	1.208E-08	1.041E-08	7.631E-09	6.121E-09	7.618E-09	3.988E-09	2.021E-09	1.305E-09	9.772E-10
ESE	1.554E-08	2.887E-08	2.370E-08	1.687E-08	1.302E-08	1.083E-08	5.005E-09	2.474E-09	1.554E-09	1.094E-09
SE	4.705E-08	7.360E-08	5.758E-08	4.041E-08	2.963E-08	1.598E-08	7.495E-09	4.059E-09	2.607E-09	1.819E-09
SSE	1.006E-07	1.351E-07	1.023E-07	7.073E-08	5.394E-08	4.102E-08	1.730E-08	8.082E-09	4.926E-09	3.400E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2017
 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	2.973E-09	2.041E-08	5.303E-08	7.544E-08	8.135E-08	6.863E-08	5.542E-08	4.489E-08	3.690E-08	3.997E-08	4.172E-08
SSW	4.336E-08	3.360E-08	5.750E-08	8.246E-08	9.332E-08	8.071E-08	6.616E-08	6.815E-08	6.522E-08	5.469E-08	4.659E-08
SW	1.552E-08	3.596E-08	8.242E-08	1.444E-07	1.935E-07	1.243E-07	8.620E-08	6.349E-08	4.895E-08	3.909E-08	3.210E-08
WSW	2.902E-10	2.654E-08	9.363E-08	1.504E-07	1.810E-07	1.070E-07	7.069E-08	5.039E-08	3.793E-08	2.974E-08	2.406E-08
W	2.806E-10	5.712E-08	2.309E-07	2.608E-07	1.974E-07	1.155E-07	7.590E-08	5.395E-08	4.056E-08	3.177E-08	2.570E-08
WNW	4.459E-09	2.430E-08	1.145E-07	1.890E-07	2.078E-07	1.233E-07	8.244E-08	6.275E-08	5.042E-08	4.000E-08	3.271E-08
NW	6.700E-11	6.741E-09	6.562E-08	1.791E-07	3.264E-07	1.933E-07	1.285E-07	9.433E-08	7.282E-08	5.725E-08	4.640E-08
NNW	3.106E-08	4.462E-08	5.037E-08	6.100E-08	8.618E-08	8.929E-08	8.766E-08	8.356E-08	8.047E-08	6.397E-08	5.236E-08
N	8.709E-09	2.727E-08	3.984E-08	4.056E-08	3.750E-08	3.265E-08	2.781E-08	2.330E-08	1.983E-08	1.715E-08	1.503E-08
NNE	2.685E-08	2.232E-08	2.281E-08	2.254E-08	2.212E-08	1.937E-08	1.642E-08	1.393E-08	1.195E-08	1.037E-08	9.126E-09
NE	5.931E-11	4.223E-09	1.583E-08	2.470E-08	2.905E-08	2.594E-08	2.186E-08	1.832E-08	1.550E-08	1.327E-08	1.152E-08
ENE	5.305E-16	4.716E-10	7.432E-09	1.428E-08	1.787E-08	1.600E-08	1.342E-08	1.118E-08	9.414E-09	8.029E-09	6.943E-09
E	2.400E-16	2.589E-10	4.721E-09	9.797E-09	1.318E-08	1.216E-08	1.037E-08	8.737E-09	7.408E-09	6.355E-09	5.521E-09
ESE	9.904E-16	7.966E-10	1.281E-08	2.498E-08	3.155E-08	2.820E-08	2.354E-08	1.951E-08	1.632E-08	1.383E-08	1.189E-08
SE	1.087E-10	8.356E-09	4.258E-08	6.943E-08	7.981E-08	6.923E-08	5.700E-08	4.689E-08	3.904E-08	3.299E-08	2.827E-08
SSE	3.197E-09	3.694E-08	9.638E-08	1.339E-07	1.452E-07	1.240E-07	1.011E-07	8.242E-08	6.811E-08	5.715E-08	4.870E-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	3.686E-08	2.570E-08	1.629E-08	8.863E-09	5.964E-09	4.332E-09	3.229E-09	2.515E-09	2.056E-09	1.718E-09	1.451E-09
SSW	4.107E-08	2.649E-08	1.640E-08	8.660E-09	5.656E-09	4.015E-09	2.988E-09	2.324E-09	1.868E-09	1.539E-09	1.292E-09
SW	2.853E-08	2.004E-08	1.269E-08	6.882E-09	4.604E-09	3.334E-09	2.583E-09	2.022E-09	1.634E-09	1.352E-09	1.141E-09
WSW	2.051E-08	1.171E-08	7.743E-09	4.388E-09	2.788E-09	1.958E-09	1.464E-09	1.142E-09	9.203E-10	7.599E-10	6.394E-10
W	2.131E-08	1.089E-08	7.387E-09	4.456E-09	3.118E-09	2.206E-09	1.648E-09	1.287E-09	1.038E-09	8.576E-10	7.224E-10
WNW	2.783E-08	1.579E-08	1.078E-08	6.473E-09	4.193E-09	2.988E-09	2.294E-09	1.827E-09	1.486E-09	1.233E-09	1.042E-09
NW	3.893E-08	2.062E-08	1.341E-08	7.484E-09	4.736E-09	3.314E-09	2.513E-09	1.974E-09	1.595E-09	1.321E-09	1.114E-09
NNW	4.518E-08	2.635E-08	1.678E-08	9.137E-09	5.752E-09	4.000E-09	3.007E-09	2.371E-09	1.966E-09	1.648E-09	1.397E-09
N	1.338E-08	8.744E-09	7.799E-09	7.158E-09	6.377E-09	5.180E-09	3.979E-09	3.166E-09	2.591E-09	2.170E-09	1.850E-09
NNE	1.049E-08	1.817E-08	1.145E-08	6.264E-09	4.074E-09	2.914E-09	2.214E-09	1.754E-09	1.432E-09	1.197E-09	1.018E-09
NE	1.243E-08	2.241E-08	1.421E-08	7.826E-09	5.086E-09	3.635E-09	2.803E-09	2.247E-09	1.855E-09	1.551E-09	1.321E-09
ENE	7.219E-09	1.009E-08	6.474E-09	3.568E-09	2.273E-09	1.595E-09	1.255E-09	1.018E-09	8.286E-10	6.902E-10	5.857E-10
E	5.819E-09	9.748E-09	6.343E-09	3.552E-09	2.282E-09	1.610E-09	1.206E-09	9.413E-10	7.973E-10	6.831E-10	5.749E-10
ESE	1.186E-08	1.238E-08	7.927E-09	4.356E-09	2.777E-09	1.949E-09	1.454E-09	1.132E-09	9.088E-10	7.475E-10	6.266E-10
SE	2.455E-08	1.441E-08	1.066E-08	7.087E-09	4.932E-09	3.710E-09	2.934E-09	2.393E-09	1.941E-09	1.613E-09	1.365E-09
SSE	4.904E-08	4.544E-08	2.793E-08	1.469E-08	9.233E-09	6.423E-09	4.766E-09	3.697E-09	2.963E-09	2.434E-09	2.040E-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	5.574E-08	7.439E-08	5.473E-08	4.035E-08	3.940E-08	2.400E-08	9.226E-09	4.326E-09	2.544E-09	1.719E-09
SSW	6.328E-08	8.530E-08	7.084E-08	6.205E-08	4.695E-08	2.525E-08	9.045E-09	4.042E-09	2.340E-09	1.545E-09
SW	9.965E-08	1.518E-07	8.727E-08	4.935E-08	3.285E-08	1.866E-08	7.160E-09	3.372E-09	2.035E-09	1.357E-09
WSW	1.040E-07	1.413E-07	7.226E-08	3.837E-08	2.443E-08	1.190E-08	4.422E-09	1.982E-09	1.150E-09	7.628E-10
W	2.055E-07	1.751E-07	7.769E-08	4.104E-08	2.587E-08	1.165E-08	4.512E-09	2.226E-09	1.295E-09	8.610E-10
WNW	1.276E-07	1.661E-07	8.546E-08	4.997E-08	3.306E-08	1.624E-08	6.417E-09	3.032E-09	1.830E-09	1.237E-09
NW	1.030E-07	2.345E-07	1.321E-07	7.303E-08	4.685E-08	2.149E-08	7.580E-09	3.373E-09	1.984E-09	1.326E-09
NNW	5.382E-08	8.197E-08	8.646E-08	7.507E-08	5.314E-08	2.628E-08	9.331E-09	4.070E-09	2.398E-09	1.649E-09
N	3.737E-08	3.603E-08	2.730E-08	1.980E-08	1.505E-08	9.355E-09	6.953E-09	5.019E-09	3.179E-09	2.176E-09
NNE	2.258E-08	2.099E-08	1.621E-08	1.191E-08	1.000E-08	1.348E-08	6.443E-09	2.944E-09	1.763E-09	1.200E-09
NE	1.719E-08	2.670E-08	2.153E-08	1.546E-08	1.237E-08	1.655E-08	8.028E-09	3.689E-09	2.257E-09	1.556E-09
ENE	8.928E-09	1.624E-08	1.321E-08	9.392E-09	7.367E-09	7.844E-09	3.638E-09	1.640E-09	1.014E-09	6.925E-10
E	5.985E-09	1.197E-08	1.019E-08	7.387E-09	5.878E-09	7.362E-09	3.608E-09	1.627E-09	9.620E-10	6.769E-10
ESE	1.555E-08	2.860E-08	2.317E-08	1.628E-08	1.245E-08	1.029E-08	4.448E-09	1.972E-09	1.139E-09	7.506E-10
SE	4.691E-08	7.280E-08	5.622E-08	3.898E-08	2.829E-08	1.500E-08	6.923E-09	3.725E-09	2.376E-09	1.618E-09
SSE	9.987E-08	1.333E-07	9.972E-08	6.802E-08	5.133E-08	3.846E-08	1.521E-08	6.509E-09	3.722E-09	2.445E-09

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ERP ELEVATED STACK RELEASES - JAN-MAR 2017
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	2.540E-09	2.886E-09	3.668E-09	3.230E-09	1.863E-09	1.218E-09	8.502E-10	6.208E-10	4.688E-10	3.948E-10	3.486E-10	
SSW	3.562E-09	3.534E-09	3.944E-09	3.264E-09	1.816E-09	1.172E-09	8.134E-10	5.922E-10	5.561E-10	4.204E-10	3.290E-10	
SW	3.486E-09	3.076E-09	2.969E-09	2.255E-09	2.079E-09	1.124E-09	6.944E-10	4.707E-10	3.399E-10	2.570E-10	2.012E-10	
WSW	2.416E-09	2.147E-09	2.094E-09	3.110E-09	1.499E-09	8.086E-10	4.987E-10	3.376E-10	2.436E-10	1.841E-10	1.441E-10	
W	3.427E-10	4.778E-09	4.508E-09	2.917E-09	1.416E-09	7.607E-10	4.671E-10	3.149E-10	2.263E-10	1.703E-10	1.328E-10	
WNV	1.372E-09	1.371E-09	3.900E-09	2.860E-09	1.694E-09	8.540E-10	5.064E-10	3.347E-10	2.477E-10	1.876E-10	1.497E-10	
NW	5.944E-10	8.217E-10	1.199E-09	2.617E-09	1.745E-09	8.733E-10	5.193E-10	3.482E-10	2.554E-10	2.011E-10	1.676E-10	
NNW	4.991E-09	3.870E-09	3.008E-09	1.916E-09	1.360E-09	7.257E-10	4.457E-10	3.623E-10	2.714E-10	2.190E-10	1.871E-10	
N	4.774E-09	3.941E-09	3.435E-09	2.421E-09	1.203E-09	7.442E-10	5.053E-10	3.638E-10	2.728E-10	2.108E-10	1.669E-10	
NNE	3.672E-09	2.820E-09	2.149E-09	1.342E-09	5.974E-10	3.520E-10	2.329E-10	1.653E-10	1.230E-10	9.482E-11	7.506E-11	
NE	5.783E-10	7.253E-10	9.937E-10	9.029E-10	5.296E-10	3.482E-10	2.437E-10	1.782E-10	1.346E-10	1.044E-10	8.268E-11	
ENE	4.017E-11	2.410E-10	5.132E-10	5.315E-10	3.320E-10	2.226E-10	1.572E-10	1.155E-10	8.749E-11	6.790E-11	5.378E-11	
E	2.410E-11	1.446E-10	3.079E-10	3.189E-10	1.992E-10	1.336E-10	9.435E-11	6.931E-11	5.249E-11	4.074E-11	3.227E-11	
ESE	7.499E-11	4.499E-10	9.579E-10	9.922E-10	6.198E-10	4.156E-10	2.935E-10	2.156E-10	1.633E-10	1.268E-10	1.004E-10	
SE	1.264E-09	2.093E-09	3.356E-09	3.223E-09	1.945E-09	1.290E-09	9.067E-10	6.644E-10	5.026E-10	3.899E-10	3.088E-10	
SSE	4.450E-09	4.742E-09	5.691E-09	4.885E-09	2.776E-09	1.806E-09	1.258E-09	9.172E-10	6.922E-10	5.365E-10	4.248E-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	2.803E-10	1.610E-10	1.034E-10	5.660E-11	3.530E-11	2.956E-11	2.112E-11	1.581E-11	1.225E-11	9.772E-12	7.977E-12
SSW	2.652E-10	1.478E-10	9.408E-11	5.110E-11	3.767E-11	2.656E-11	1.903E-11	1.429E-11	1.116E-11	8.916E-12	7.278E-12
SW	1.625E-10	9.856E-11	6.462E-11	3.619E-11	2.283E-11	1.752E-11	1.281E-11	9.623E-12	7.482E-12	5.977E-12	4.878E-12
WSW	1.161E-10	6.192E-11	3.891E-11	2.671E-11	1.617E-11	1.084E-11	7.848E-12	5.893E-12	4.582E-12	3.660E-12	2.987E-12
W	1.067E-10	4.759E-11	3.631E-11	2.004E-11	1.577E-11	1.063E-11	7.615E-12	5.718E-12	4.446E-12	3.552E-12	2.899E-12
WNV	1.253E-10	6.812E-11	4.610E-11	2.651E-11	1.755E-11	1.221E-11	8.819E-12	6.622E-12	5.149E-12	4.113E-12	3.357E-12
NW	1.467E-10	9.228E-11	6.714E-11	4.071E-11	2.487E-11	1.666E-11	1.188E-11	8.925E-12	7.037E-12	5.621E-12	4.588E-12
NNW	1.673E-10	1.119E-10	8.374E-11	5.239E-11	3.391E-11	2.270E-11	1.545E-11	1.095E-11	8.262E-12	6.600E-12	5.387E-12
N	1.348E-10	6.422E-11	3.942E-11	2.107E-11	4.977E-11	3.011E-11	2.158E-11	1.620E-11	1.260E-11	1.006E-11	8.214E-12
NNE	6.071E-11	1.129E-10	6.875E-11	3.497E-11	2.121E-11	1.421E-11	1.018E-11	7.636E-12	5.934E-12	4.738E-12	3.866E-12
NE	6.663E-11	1.192E-10	7.286E-11	3.725E-11	2.263E-11	1.516E-11	1.114E-11	8.300E-12	6.453E-12	5.155E-12	4.208E-12
ENE	4.331E-11	5.007E-11	3.638E-11	2.213E-11	1.410E-11	9.338E-12	6.556E-12	4.751E-12	3.696E-12	2.954E-12	2.412E-12
E	2.599E-11	3.647E-11	2.733E-11	1.703E-11	1.091E-11	7.215E-12	5.051E-12	3.690E-12	2.805E-12	2.070E-12	1.688E-12
ESE	8.085E-11	7.490E-11	5.195E-11	3.043E-11	1.922E-11	1.276E-11	9.001E-12	6.639E-12	5.091E-12	4.023E-12	3.256E-12
SE	2.487E-10	1.179E-10	7.189E-11	3.784E-11	2.305E-11	1.578E-11	1.169E-11	1.720E-11	1.329E-11	1.058E-11	8.631E-12
SSE	3.424E-10	3.277E-10	2.007E-10	1.029E-10	6.260E-11	4.194E-11	3.002E-11	2.252E-11	1.749E-11	1.397E-11	1.140E-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	3.300E-09	1.880E-09	8.565E-10	4.840E-10	3.370E-10	1.619E-10	5.753E-11	2.771E-11	1.597E-11	9.843E-12
SSW	3.551E-09	1.852E-09	8.206E-10	5.147E-10	3.325E-10	1.500E-10	5.468E-11	2.651E-11	1.445E-11	8.975E-12
SW	2.675E-09	1.694E-09	7.194E-10	3.457E-10	2.034E-10	9.768E-11	3.657E-11	1.705E-11	9.719E-12	6.016E-12
WSW	2.557E-09	1.550E-09	5.169E-10	2.478E-10	1.456E-10	6.374E-11	2.474E-11	1.106E-11	5.952E-12	3.684E-12
W	3.861E-09	1.458E-09	4.845E-10	2.303E-10	1.342E-10	5.570E-11	2.176E-11	1.079E-11	5.776E-12	3.575E-12
WNV	2.876E-09	1.580E-09	5.304E-10	2.497E-10	1.519E-10	7.104E-11	2.688E-11	1.228E-11	6.689E-12	4.140E-12
NW	1.745E-09	1.551E-09	5.453E-10	2.612E-10	1.698E-10	9.319E-11	3.954E-11	1.694E-11	9.051E-12	5.658E-12
NNW	2.714E-09	1.202E-09	4.870E-10	2.774E-10	1.892E-10	1.117E-10	5.115E-11	2.279E-11	1.121E-11	6.643E-12
N	3.097E-09	1.270E-09	5.124E-10	2.752E-10	1.680E-10	6.888E-11	3.790E-11	3.194E-11	1.637E-11	1.013E-11
NNE	1.939E-09	6.538E-10	2.376E-10	1.244E-10	7.560E-11	8.170E-11	3.636E-11	1.446E-11	7.713E-12	4.769E-12
NE	8.937E-10	5.319E-10	2.453E-10	1.356E-10	8.317E-11	8.692E-11	3.867E-11	1.554E-11	8.407E-12	5.189E-12
ENE	4.609E-10	3.277E-10	1.580E-10	8.803E-11	5.409E-11	4.248E-11	2.173E-11	9.495E-12	4.865E-12	2.973E-12
E	2.765E-10	1.966E-10	9.479E-11	5.282E-11	3.245E-11	3.008E-11	1.660E-11	7.335E-12	3.742E-12	2.146E-12
ESE	8.603E-10	6.118E-10	2.949E-10	1.643E-10	1.010E-10	6.602E-11	3.023E-11	1.298E-11	6.724E-12	4.055E-12
SE	3.016E-09	1.938E-09	9.120E-10	5.059E-10	3.106E-10	1.265E-10	3.883E-11	1.608E-11	1.413E-11	1.066E-11
SSE	5.122E-09	2.813E-09	1.268E-09	6.972E-10	4.274E-10	2.745E-10	1.067E-10	4.268E-11	2.275E-11	1.406E-11

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ERP ELEVATED STACK RELEASES - JAN-MAR 2017
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	5.9E-08	5.9E-08	5.9E-08	3.7E-09
A	Site Boundary	SSW	.82	6.6E-08	6.6E-08	6.6E-08	3.8E-09
A	Site Boundary	SW	.97	1.4E-07	1.4E-07	1.4E-07	2.3E-09
A	Site Boundary	WSW	.93	1.4E-07	1.4E-07	1.4E-07	2.5E-09
A	Site Boundary	W	.91	2.6E-07	2.6E-07	2.6E-07	3.4E-09
A	Site Boundary	WNW	.94	1.8E-07	1.8E-07	1.8E-07	3.2E-09
A	Site Boundary	NW	.81	9.2E-08	9.2E-08	9.2E-08	1.2E-09
A	Site Boundary	NNW	.69	4.7E-08	4.7E-08	4.6E-08	3.2E-09
A	Site Boundary	N	.67	3.7E-08	3.7E-08	3.6E-08	3.5E-09
A	Site Boundary	NNE	.60	2.1E-08	2.1E-08	2.1E-08	2.5E-09
A	Site Boundary	NE	.62	9.0E-09	8.9E-09	8.9E-09	8.5E-10
A	Site Boundary	ENE	.59	1.9E-09	1.9E-09	1.9E-09	3.3E-10
A	Site Boundary	E	.53	4.2E-10	4.2E-10	4.2E-10	1.6E-10
A	Site Boundary	ESE	.54	1.6E-09	1.6E-09	1.6E-09	5.2E-10
A	Site Boundary	SE	.65	2.5E-08	2.5E-08	2.5E-08	2.8E-09
A	Site Boundary	SSE	.81	1.1E-07	1.1E-07	1.1E-07	5.6E-09
A	Nearest Res	SSW	3.00	7.1E-08	7.0E-08	6.8E-08	5.9E-10
A	Nearest Res	SW	1.00	1.5E-07	1.4E-07	1.4E-07	2.3E-09
A	Nearest Res	WSW	2.50	7.4E-08	7.3E-08	7.1E-08	5.0E-10
A	Nearest Res	W	1.00	2.7E-07	2.6E-07	2.6E-07	2.9E-09
A	Nearest Res	WNW	1.70	1.7E-07	1.7E-07	1.7E-07	1.3E-09
A	Nearest Res	NW	.90	1.3E-07	1.3E-07	1.3E-07	2.8E-09
A	Nearest Res	NNW	1.90	9.1E-08	9.0E-08	8.9E-08	8.1E-10
A	Nearest Res	N	2.90	2.5E-08	2.5E-08	2.4E-08	3.9E-10
A	Nearest Res	NNE	1.70	2.2E-08	2.1E-08	2.1E-08	4.6E-10
A	Nearest Res	ENE	1.70	1.8E-08	1.8E-08	1.7E-08	2.8E-10
A	Nearest Res	E	2.20	1.2E-08	1.2E-08	1.1E-08	1.2E-10
A	Nearest Res	SE	2.80	5.2E-08	5.2E-08	5.1E-08	7.5E-10
A	Nearest Cow	NNW	3.50	8.2E-08	8.1E-08	8.0E-08	2.7E-10
A	Nearest Garde	SSW	3.00	7.1E-08	7.0E-08	6.8E-08	5.9E-10
A	Nearest Garde	SW	2.20	1.1E-07	1.1E-07	1.1E-07	9.1E-10
A	Nearest Garde	WSW	2.50	7.4E-08	7.3E-08	7.1E-08	5.0E-10
A	Nearest Garde	WNW	1.70	1.7E-07	1.7E-07	1.7E-07	1.3E-09
A	Nearest Garde	NW	2.00	2.0E-07	2.0E-07	1.9E-07	8.7E-10
A	Nearest Garde	NNW	2.80	8.6E-08	8.6E-08	8.5E-08	4.1E-10
A	Nearest Garde	ESE	2.30	2.6E-08	2.6E-08	2.5E-08	3.4E-10
A	MAXIMUM CHI/Q	S	1.50	8.2E-08	8.2E-08	8.1E-08	1.9E-09
A	MAXIMUM CHI/Q	SSW	1.50	9.4E-08	9.4E-08	9.3E-08	1.8E-09
A	MAXIMUM CHI/Q	SW	1.50	2.0E-07	2.0E-07	1.9E-07	2.1E-09
A	MAXIMUM CHI/Q	WSW	1.50	1.8E-07	1.8E-07	1.8E-07	1.5E-09
A	MAXIMUM CHI/Q	W	1.00	2.7E-07	2.6E-07	2.6E-07	2.9E-09
A	MAXIMUM CHI/Q	WNW	1.50	2.1E-07	2.1E-07	2.1E-07	1.7E-09
A	MAXIMUM CHI/Q	NW	1.50	3.3E-07	3.3E-07	3.3E-07	1.7E-09
A	MAXIMUM CHI/Q	NNW	2.00	9.1E-08	9.0E-08	8.9E-08	7.3E-10
A	MAXIMUM CHI/Q	N	1.00	4.1E-08	4.1E-08	4.1E-08	2.4E-09
A	MAXIMUM CHI/Q	NNE	.25	2.1E-08	2.1E-08	2.1E-08	3.7E-09
A	MAXIMUM CHI/Q	NE	1.50	2.9E-08	2.9E-08	2.9E-08	5.3E-10
A	MAXIMUM CHI/Q	ENE	1.50	1.8E-08	1.8E-08	1.8E-08	3.3E-10
A	MAXIMUM CHI/Q	E	1.50	1.3E-08	1.3E-08	1.3E-08	2.0E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.2E-08	3.2E-08	3.2E-08	6.2E-10
A	MAXIMUM CHI/Q	SE	1.50	8.1E-08	8.1E-08	8.0E-08	1.9E-09
A	MAXIMUM CHI/Q	SSE	1.50	1.5E-07	1.5E-07	1.5E-07	2.8E-09

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Atmospheric Diffusion Estimates

Elevated Releases

April-June 2017

ERP ELEVATED STACK RELEASES - APR-JUN 2017
 NO 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	1.674E-10	1.234E-08	3.636E-08	5.082E-08	5.597E-08	4.856E-08	4.016E-08	3.319E-08	2.777E-08	3.136E-08	3.378E-08
SSW	1.489E-09	1.157E-08	3.217E-08	4.812E-08	5.704E-08	5.181E-08	4.430E-08	4.970E-08	5.181E-08	4.537E-08	4.023E-08
SW	4.285E-08	3.448E-08	7.829E-08	1.428E-07	2.022E-07	1.339E-07	9.529E-08	7.168E-08	5.625E-08	4.561E-08	3.794E-08
WSW	6.684E-16	8.063E-10	4.097E-08	1.151E-07	1.764E-07	1.088E-07	7.415E-08	5.422E-08	4.173E-08	3.335E-08	2.746E-08
W	2.392E-08	3.058E-08	1.328E-07	1.769E-07	1.722E-07	1.092E-07	7.584E-08	5.623E-08	4.373E-08	3.524E-08	2.919E-08
WNW	2.150E-08	1.343E-08	7.079E-08	1.382E-07	1.971E-07	1.247E-07	8.657E-08	6.772E-08	5.494E-08	4.391E-08	3.612E-08
NW	3.074E-08	1.839E-08	5.348E-08	1.161E-07	2.393E-07	1.523E-07	1.069E-07	8.332E-08	6.767E-08	5.482E-08	4.565E-08
NNW	3.098E-09	1.972E-08	5.509E-08	9.501E-08	1.444E-07	1.474E-07	1.428E-07	1.328E-07	1.226E-07	9.716E-08	7.944E-08
N	2.869E-08	8.697E-08	1.106E-07	1.100E-07	1.027E-07	8.946E-08	7.556E-08	6.269E-08	5.276E-08	4.508E-08	3.905E-08
NNE	2.246E-08	7.110E-08	9.197E-08	8.675E-08	7.345E-08	5.862E-08	4.668E-08	3.781E-08	3.124E-08	2.632E-08	2.256E-08
NE	5.743E-16	4.521E-10	7.056E-09	1.394E-08	1.927E-08	1.885E-08	1.693E-08	1.490E-08	1.309E-08	1.157E-08	1.032E-08
ENE	5.175E-09	1.996E-08	1.900E-08	1.772E-08	1.683E-08	1.449E-08	1.209E-08	1.011E-08	8.549E-09	7.330E-09	6.373E-09
E	1.940E-08	1.318E-08	1.825E-08	2.041E-08	1.982E-08	1.654E-08	1.348E-08	1.110E-08	9.294E-09	7.921E-09	6.862E-09
ESE	1.930E-08	7.718E-09	1.607E-08	2.722E-08	3.441E-08	3.141E-08	2.671E-08	2.247E-08	1.903E-08	1.629E-08	1.412E-08
SE	2.133E-11	2.382E-09	2.245E-08	4.125E-08	5.082E-08	4.522E-08	3.777E-08	3.136E-08	2.629E-08	2.234E-08	1.923E-08
SSE	1.967E-08	3.196E-08	7.536E-08	1.003E-07	1.054E-07	8.897E-08	7.234E-08	5.911E-08	4.905E-08	4.139E-08	3.549E-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	2.990E-08	1.902E-08	1.223E-08	6.908E-09	4.737E-09	3.520E-09	2.725E-09	2.197E-09	1.832E-09	1.560E-09	1.348E-09
SSW	3.717E-08	2.872E-08	1.869E-08	1.076E-08	7.686E-09	5.776E-09	4.505E-09	3.655E-09	3.053E-09	2.605E-09	2.262E-09
SW	3.431E-08	2.422E-08	1.579E-08	9.091E-09	6.397E-09	4.845E-09	3.854E-09	3.121E-09	2.601E-09	2.217E-09	1.922E-09
WSW	2.412E-08	1.613E-08	1.177E-08	7.500E-09	5.062E-09	3.741E-09	2.927E-09	2.380E-09	1.991E-09	1.702E-09	1.480E-09
W	2.471E-08	1.365E-08	9.911E-09	6.642E-09	5.038E-09	3.753E-09	2.935E-09	2.387E-09	1.997E-09	1.707E-09	1.485E-09
WNW	3.079E-08	1.744E-08	1.191E-08	7.246E-09	4.971E-09	3.712E-09	2.933E-09	2.395E-09	2.004E-09	1.711E-09	1.486E-09
NW	3.962E-08	2.407E-08	1.741E-08	1.135E-08	7.806E-09	5.852E-09	4.765E-09	3.943E-09	3.321E-09	2.855E-09	2.495E-09
NNW	6.807E-08	3.906E-08	2.550E-08	1.476E-08	1.005E-08	7.467E-09	5.916E-09	4.860E-09	4.131E-09	3.551E-09	3.090E-09
N	3.435E-08	2.127E-08	1.710E-08	1.329E-08	1.119E-08	9.331E-09	7.352E-09	5.991E-09	5.009E-09	4.279E-09	3.719E-09
NNE	2.333E-08	3.046E-08	1.973E-08	1.133E-08	7.686E-09	5.703E-09	4.476E-09	3.650E-09	3.062E-09	2.623E-09	2.286E-09
NE	1.194E-08	1.696E-08	1.100E-08	6.311E-09	4.272E-09	3.163E-09	2.495E-09	2.040E-09	1.714E-09	1.465E-09	1.274E-09
ENE	6.659E-09	1.126E-08	7.565E-09	4.540E-09	3.164E-09	2.393E-09	2.033E-09	1.744E-09	1.471E-09	1.266E-09	1.108E-09
E	7.201E-09	1.358E-08	9.140E-09	5.499E-09	3.840E-09	2.909E-09	2.319E-09	1.916E-09	1.705E-09	1.523E-09	1.334E-09
ESE	1.410E-08	1.328E-08	8.655E-09	4.975E-09	3.362E-09	2.483E-09	1.940E-09	1.576E-09	1.316E-09	1.124E-09	9.756E-10
SE	1.676E-08	9.974E-09	7.392E-09	5.003E-09	3.593E-09	2.805E-09	2.310E-09	1.970E-09	1.649E-09	1.409E-09	1.225E-09
SSE	3.638E-08	3.982E-08	2.550E-08	1.439E-08	9.637E-09	7.077E-09	5.507E-09	4.459E-09	3.716E-09	3.166E-09	2.745E-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	3.745E-08	5.153E-08	3.962E-08	3.068E-08	3.163E-08	1.842E-08	7.125E-09	3.526E-09	2.209E-09	1.562E-09
SSW	3.468E-08	5.273E-08	4.846E-08	4.876E-08	4.062E-08	2.614E-08	1.116E-08	5.777E-09	3.668E-09	2.611E-09
SW	9.724E-08	1.587E-07	9.615E-08	5.661E-08	3.887E-08	2.272E-08	9.382E-09	4.862E-09	3.132E-09	2.222E-09
WSW	6.501E-08	1.328E-07	7.542E-08	4.211E-08	2.797E-08	1.597E-08	7.366E-09	3.768E-09	2.388E-09	1.706E-09
W	1.297E-07	1.452E-07	7.688E-08	4.407E-08	2.932E-08	1.445E-08	6.656E-09	3.768E-09	2.395E-09	1.711E-09
WNW	8.800E-08	1.518E-07	8.920E-08	5.439E-08	3.645E-08	1.795E-08	7.271E-09	3.736E-09	2.400E-09	1.714E-09
NW	7.353E-08	1.733E-07	1.096E-07	6.725E-08	4.613E-08	2.457E-08	1.112E-08	5.938E-09	3.941E-09	2.860E-09
NNW	6.497E-08	1.348E-07	1.400E-07	1.158E-07	8.048E-08	3.948E-08	1.505E-08	7.534E-09	4.884E-09	3.552E-09
N	1.051E-07	9.844E-08	7.412E-08	5.267E-08	3.910E-08	2.232E-08	1.321E-08	9.036E-09	6.006E-09	4.288E-09
NNE	8.501E-08	6.982E-08	4.632E-08	3.124E-08	2.396E-08	2.411E-08	1.158E-08	5.741E-09	3.662E-09	2.628E-09
NE	8.647E-09	1.790E-08	1.663E-08	1.303E-08	1.129E-08	1.319E-08	6.446E-09	3.192E-09	2.046E-09	1.468E-09
ENE	1.864E-08	1.599E-08	1.194E-08	8.530E-09	6.762E-09	8.594E-09	4.601E-09	2.454E-09	1.722E-09	1.268E-09
E	1.808E-08	1.849E-08	1.334E-08	9.287E-09	7.301E-09	1.019E-08	5.571E-09	2.921E-09	1.951E-09	1.507E-09
ESE	1.917E-08	3.148E-08	2.627E-08	1.897E-08	1.476E-08	1.141E-08	5.076E-09	2.500E-09	1.581E-09	1.126E-09
SE	2.635E-08	4.620E-08	3.719E-08	2.623E-08	1.924E-08	1.034E-08	4.907E-09	2.817E-09	1.945E-09	1.412E-09
SSE	7.681E-08	9.696E-08	7.148E-08	4.900E-08	3.757E-08	3.269E-08	1.475E-08	7.132E-09	4.476E-09	3.173E-09

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ERP ELEVATED STACK RELEASES - APR-JUN 2017
 2.260 DAY DECAY, UNDELETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

ANNUAL AVERAGE SECTOR	CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	1.500	2.000	2.500	3.000	3.500	4.000	4.500		
S	1.673E-10	1.233E-08	3.632E-08	5.074E-08	5.582E-08	4.839E-08	3.999E-08	3.301E-08	2.759E-08	3.113E-08	3.351E-08	5.582E-08	4.839E-08	3.999E-08	3.301E-08	2.759E-08	3.113E-08	3.351E-08		
SSW	1.489E-09	1.156E-08	3.215E-08	4.805E-08	5.691E-08	5.164E-08	4.412E-08	4.944E-08	5.149E-08	4.505E-08	3.990E-08	5.691E-08	5.164E-08	4.412E-08	4.944E-08	5.149E-08	4.505E-08	3.990E-08		
SW	4.282E-08	3.446E-08	7.822E-08	1.426E-07	2.016E-07	1.334E-07	9.476E-08	7.119E-08	5.579E-08	4.517E-08	3.752E-08	2.016E-07	1.334E-07	9.476E-08	7.119E-08	5.579E-08	4.517E-08	3.752E-08		
WSW	6.682E-16	8.057E-10	4.091E-08	1.149E-07	1.758E-07	1.083E-07	7.372E-08	5.385E-08	4.139E-08	3.305E-08	2.717E-08	1.758E-07	1.083E-07	7.372E-08	5.385E-08	4.139E-08	3.305E-08	2.717E-08		
W	2.391E-08	3.055E-08	1.326E-07	1.765E-07	1.715E-07	1.086E-07	7.535E-08	5.580E-08	4.333E-08	3.487E-08	2.884E-08	1.715E-07	1.086E-07	7.535E-08	5.580E-08	4.333E-08	3.487E-08	2.884E-08		
WNW	2.149E-08	1.342E-08	7.068E-08	1.379E-07	1.965E-07	1.241E-07	8.607E-08	6.725E-08	5.449E-08	4.349E-08	3.574E-08	1.965E-07	1.241E-07	8.607E-08	6.725E-08	5.449E-08	4.349E-08	3.574E-08		
NW	3.073E-08	1.837E-08	5.342E-08	1.159E-07	2.386E-07	1.517E-07	1.064E-07	8.279E-08	6.716E-08	5.434E-08	4.519E-08	2.386E-07	1.517E-07	1.064E-07	8.279E-08	6.716E-08	5.434E-08	4.519E-08		
NNW	3.097E-09	1.970E-08	5.503E-08	9.488E-08	1.441E-07	1.469E-07	1.421E-07	1.320E-07	1.217E-07	9.637E-08	7.872E-08	1.441E-07	1.469E-07	1.421E-07	1.320E-07	1.217E-07	9.637E-08	7.872E-08		
N	2.868E-08	8.695E-08	1.105E-07	1.099E-07	1.025E-07	8.922E-08	7.529E-08	6.242E-08	5.249E-08	4.481E-08	3.879E-08	1.025E-07	8.922E-08	7.529E-08	6.242E-08	5.249E-08	4.481E-08	3.879E-08		
NNE	2.245E-08	7.108E-08	9.191E-08	8.667E-08	7.334E-08	5.849E-08	4.655E-08	3.768E-08	3.112E-08	2.620E-08	2.244E-08	7.334E-08	5.849E-08	4.655E-08	3.768E-08	3.112E-08	2.620E-08	2.244E-08		
NE	5.742E-16	4.519E-10	7.050E-08	1.392E-08	1.392E-08	1.880E-08	1.483E-08	1.483E-08	1.303E-08	1.151E-08	1.025E-08	1.392E-08	1.392E-08	1.880E-08	1.483E-08	1.483E-08	1.303E-08	1.151E-08		
ENE	5.172E-09	1.994E-08	1.897E-08	1.768E-08	1.679E-08	1.444E-08	1.204E-08	1.005E-08	8.496E-09	7.278E-09	6.322E-09	1.679E-08	1.444E-08	1.204E-08	1.005E-08	8.496E-09	7.278E-09	6.322E-09		
E	1.939E-08	1.317E-08	1.823E-08	2.039E-08	1.978E-08	1.650E-08	1.344E-08	1.106E-08	9.252E-09	7.880E-09	6.822E-09	2.039E-08	1.978E-08	1.650E-08	1.344E-08	1.106E-08	9.252E-09	7.880E-09		
ESE	1.929E-08	7.711E-09	1.605E-08	2.717E-08	3.431E-08	3.129E-08	2.658E-08	2.234E-08	1.889E-08	1.616E-08	1.399E-08	3.431E-08	3.129E-08	2.658E-08	2.234E-08	1.889E-08	1.616E-08	1.399E-08		
SE	2.133E-11	2.381E-09	2.243E-08	4.120E-08	5.071E-08	4.508E-08	3.762E-08	3.121E-08	2.614E-08	2.219E-08	1.909E-08	5.071E-08	4.508E-08	3.762E-08	3.121E-08	2.614E-08	2.219E-08	1.909E-08		
SSE	1.966E-08	3.194E-08	7.530E-08	1.002E-07	1.051E-07	8.873E-08	7.208E-08	5.885E-08	4.879E-08	4.114E-08	3.525E-08	1.051E-07	8.873E-08	7.208E-08	5.885E-08	4.879E-08	4.114E-08	3.525E-08		

ANNUAL AVERAGE SECTOR	CHI/Q (SEC/METER CUBED)										DISTANCE IN MILES FROM THE SITE									
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000		
S	2.964E-08	1.878E-08	1.203E-08	6.739E-09	4.584E-09	3.380E-09	2.597E-09	2.078E-09	1.720E-09	1.453E-09	1.246E-09	4.584E-09	3.380E-09	2.597E-09	2.078E-09	1.720E-09	1.453E-09	1.246E-09		
SSW	3.683E-08	2.829E-08	1.832E-08	1.043E-08	7.373E-09	5.482E-09	4.231E-09	3.398E-09	2.808E-09	2.372E-09	2.038E-09	7.373E-09	5.482E-09	4.231E-09	3.398E-09	2.808E-09	2.372E-09	2.038E-09		
SW	3.387E-08	2.374E-08	1.537E-08	8.725E-09	6.055E-09	4.524E-09	3.550E-09	2.836E-09	2.333E-09	1.961E-09	1.678E-09	6.055E-09	4.524E-09	3.550E-09	2.836E-09	2.333E-09	1.961E-09	1.678E-09		
WSW	2.384E-08	1.583E-08	1.148E-08	7.210E-09	4.802E-09	3.502E-09	2.704E-09	2.170E-09	1.792E-09	1.512E-09	1.298E-09	4.802E-09	3.502E-09	2.704E-09	2.170E-09	1.792E-09	1.512E-09	1.298E-09		
W	2.439E-08	1.337E-08	9.641E-09	6.361E-09	4.746E-09	3.481E-09	2.682E-09	2.148E-09	1.771E-09	1.492E-09	1.278E-09	4.746E-09	3.481E-09	2.682E-09	2.148E-09	1.771E-09	1.492E-09	1.278E-09		
WNW	3.043E-08	1.714E-08	1.163E-08	6.992E-09	4.741E-09	3.499E-09	2.732E-09	2.206E-09	1.824E-09	1.539E-09	1.322E-09	3.499E-09	2.732E-09	2.206E-09	1.824E-09	1.539E-09	1.322E-09	1.106E-09		
NW	3.917E-08	2.366E-08	1.700E-08	1.094E-08	7.432E-09	5.502E-09	4.424E-09	3.614E-09	3.007E-09	2.553E-09	2.204E-09	7.432E-09	5.502E-09	4.424E-09	3.614E-09	3.007E-09	2.553E-09	2.204E-09		
NNW	6.738E-08	3.847E-08	2.498E-08	1.431E-08	9.640E-09	7.093E-09	5.563E-09	4.524E-09	3.808E-09	3.240E-09	2.792E-09	7.093E-09	5.563E-09	4.524E-09	3.808E-09	3.240E-09	2.792E-09	2.399E-09		
N	3.410E-08	2.103E-08	1.683E-08	1.296E-08	1.080E-08	8.900E-09	6.944E-09	5.604E-09	4.641E-09	3.928E-09	3.381E-09	1.080E-08	8.900E-09	6.944E-09	5.604E-09	4.641E-09	3.928E-09	3.381E-09		
NNE	2.319E-08	3.004E-08	1.936E-08	1.100E-08	7.393E-09	5.431E-09	4.219E-09	3.406E-09	2.828E-09	2.399E-09	2.069E-09	7.393E-09	5.431E-09	4.219E-09	3.406E-09	2.828E-09	2.399E-09	2.069E-09		
NE	1.185E-08	1.677E-08	1.083E-08	6.167E-09	4.142E-09	3.044E-09	2.383E-09	1.934E-09	1.613E-09	1.368E-09	1.181E-09	4.142E-09	3.044E-09	2.383E-09	1.934E-09	1.613E-09	1.368E-09	1.181E-09		
ENE	6.602E-09	1.112E-08	7.442E-09	4.430E-09	3.061E-09	2.296E-09	1.935E-09	1.646E-09	1.377E-09	1.176E-09	1.021E-09	4.430E-09	3.061E-09	2.296E-09	1.935E-09	1.646E-09	1.377E-09	1.021E-09		
E	7.153E-09	1.342E-08	9.000E-09	5.372E-09	3.722E-09	2.797E-09	2.213E-09	1.814E-09	1.600E-09	1.418E-09	1.232E-09	5.372E-09	3.722E-09	2.797E-09	2.213E-09	1.814E-09	1.600E-09	1.418E-09		
ESE	1.395E-08	1.308E-08	8.482E-09	4.828E-09	3.232E-09	2.364E-09	1.830E-09	1.472E-09	1.219E-09	1.031E-09	8.872E-10	4.828E-09	3.232E-09	2.364E-09	1.830E-09	1.472E-09	1.219E-09	1.031E-09		
SE	1.662E-08	9.847E-09	7.265E-09	4.875E-09	3.470E-09	2.686E-09	2.193E-09	1.854E-09	1.538E-09	1.303E-09	1.123E-09	3.470E-09	2.686E-09	2.193E-09	1.854E-09	1.538E-09	1.303E-09	1.123E-09		
SSE	3.610E-08	3.926E-08	2.502E-08	1.398E-08	9.273E-09	6.743E-09	5.196E-09	4.167E-09	3.439E-09	2.902E-09	2.492E-09	9.273E-09	6.743E-09	5.196E-09	4.167E-09	3.439E-09	2.902E-09	2.492E-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	3.740E-08	5.139E-08	3.944E-08	3.049E-08	3.137E-08	1.819E-08	6.956E-09	3.388E-09	2.090E-09	1.455E-09
SSW	3.464E-08	5.260E-08	4.826E-08	4.845E-08	4.029E-08	2.576E-08	1.083E-08	5.486E-09	3.411E-09	2.377E-09
SW	9.712E-08	1.582E-07	9.562E-08	5.614E-08	3.844E-08	2.227E-08	9.015E-09	4.543E-09	2.848E-09	1.966E-09
WSW	6.488E-08	1.323E-07	7.500E-08	4.177E-08	2.768E-08	1.567E-08	7.088E-09	3.530E-09	2.178E-09	1.516E-09
W	1.295E-07	1.447E-07	7.640E-08	4.367E-08	2.898E-08	1.416E-08	6.372E-09	3.499E-09	2.157E-09	1.495E-09
WNW	8.782E-08	1.513E-07	8.869E-08	5.395E-08	3.607E-08	1.764E-08	7.022E-09	3.523E-09	2.211E-09	1.543E-09
NW	7.342E-08	1.727E-07	1.090E-07	6.674E-08	4.567E-08	2.415E-08	1.073E-08	5.586E-09	3.614E-09	2.558E-09
NNW	6.489E-08	1.344E-07	1.393E-07	1.150E-07	7.975E-08	3.890E-08	1.461E-08	7.160E-09	4.548E-09	3.242E-09
N	1.050E-07	9.824E-08	7.386E-08	5.240E-08	3.884E-08	2.207E-08	1.286E-08	8.624E-09	5.620E-09	3.937E-09
NNE	8.495E-08	6.970E-08	4.619E-08	3.112E-08	2.383E-08	2.377E-08	1.126E-08	5.469E-09	3.418E-09	2.404E-09
NE	8.638E-09	1.786E-08	1.657E-08	1.296E-08	1.121E-08	1.303E-08	6.303E-09	3.072E-09	1.940E-09	1.371E-09
ENE	1.861E-08	1.594E-08	1.188E-08	8.477E-09	6.709E-09	8.480E-09	4.491E-09	2.356E-09	1.626E-09	1.178E-09
E	1.806E-08	1.846E-08	1.330E-08	9.245E-09	7.258E-09	1.006E-08	5.445E-09	2.810E-09	1.846E-09	1.403E-09
ESE	1.914E-08	3.138E-08	2.614E-08	1.883E-08	1.462E-08	1.123E-08	4.930E-09	2.382E-09	1.478E-09	1.033E-09
SE	2.632E-08	4.609E-08	3.705E-08	2.608E-08	1.909E-08	1.021E-08	4.782E-09	2.698E-09	1.830E-09	1.306E-09
SSE	7.673E-08	9.675E-08	7.123E-08	4.875E-08	3.731E-08	3.223E-08	1.434E-08	6.799E-09	4.184E-09	2.909E-09

B290

ERP ELEVATED STACK RELEASES - APR-JUN 2017
 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	1.674E-10	1.224E-08	3.595E-08	5.039E-08	5.518E-08	4.751E-08	3.897E-08	3.197E-08	2.655E-08	2.992E-08	3.223E-08
SSW	1.489E-09	1.147E-08	3.189E-08	4.783E-08	5.638E-08	5.084E-08	4.319E-08	4.829E-08	5.023E-08	4.383E-08	3.874E-08
SW	4.284E-08	3.418E-08	7.759E-08	1.422E-07	1.993E-07	1.308E-07	9.231E-08	6.899E-08	5.383E-08	4.342E-08	3.596E-08
WSW	6.683E-16	8.061E-10	4.095E-08	1.149E-07	1.738E-07	1.060E-07	7.154E-08	5.190E-08	3.966E-08	3.151E-08	2.580E-08
W	2.392E-08	3.043E-08	1.320E-07	1.748E-07	1.688E-07	1.063E-07	7.342E-08	5.419E-08	4.197E-08	3.371E-08	2.784E-08
WNW	2.150E-08	1.334E-08	7.055E-08	1.372E-07	1.942E-07	1.220E-07	8.418E-08	6.562E-08	5.308E-08	4.221E-08	3.454E-08
NW	3.074E-08	1.822E-08	5.298E-08	1.153E-07	2.366E-07	1.497E-07	1.047E-07	8.138E-08	6.599E-08	5.326E-08	4.415E-08
NNW	3.098E-09	1.954E-08	5.452E-08	9.443E-08	1.429E-07	1.451E-07	1.403E-07	1.303E-07	1.202E-07	9.491E-08	7.722E-08
N	2.869E-08	8.620E-08	1.087E-07	1.083E-07	1.009E-07	8.743E-08	7.344E-08	6.061E-08	5.076E-08	4.317E-08	3.725E-08
NNE	2.246E-08	7.047E-08	9.029E-08	8.520E-08	7.194E-08	5.707E-08	4.514E-08	3.632E-08	2.983E-08	2.499E-08	2.131E-08
NE	5.743E-16	4.520E-10	7.054E-09	1.393E-08	1.912E-08	1.858E-08	1.661E-08	1.456E-08	1.275E-08	1.124E-08	9.991E-09
ENE	5.174E-09	1.978E-08	1.867E-08	1.746E-08	1.657E-08	1.417E-08	1.175E-08	9.763E-09	8.210E-09	7.003E-09	6.059E-09
E	1.940E-08	1.306E-08	1.797E-08	2.014E-08	1.948E-08	1.614E-08	1.307E-08	1.069E-08	8.895E-09	7.541E-09	6.501E-09
ESE	1.929E-08	7.654E-09	1.599E-08	2.714E-08	3.405E-08	3.081E-08	2.600E-08	2.171E-08	1.826E-08	1.554E-08	1.339E-08
SE	2.133E-11	2.372E-09	2.241E-08	4.120E-08	5.032E-08	4.437E-08	3.674E-08	3.028E-08	2.520E-08	2.127E-08	1.820E-08
SSE	1.967E-08	3.169E-08	7.450E-08	9.944E-08	1.038E-07	8.698E-08	7.013E-08	5.686E-08	4.683E-08	3.925E-08	3.345E-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	2.844E-08	1.770E-08	1.102E-08	5.848E-09	3.749E-09	2.639E-09	1.964E-09	1.528E-09	1.235E-09	1.022E-09	8.592E-10
SSW	3.574E-08	2.720E-08	1.712E-08	9.197E-09	6.112E-09	4.404E-09	3.311E-09	2.598E-09	2.104E-09	1.745E-09	1.475E-09
SW	3.245E-08	2.261E-08	1.426E-08	7.681E-09	5.021E-09	3.571E-09	2.725E-09	2.129E-09	1.717E-09	1.419E-09	1.195E-09
WSW	2.260E-08	1.483E-08	1.053E-08	6.364E-09	4.102E-09	2.914E-09	2.200E-09	1.731E-09	1.406E-09	1.169E-09	9.900E-10
W	2.351E-08	1.283E-08	9.223E-09	5.830E-09	4.148E-09	2.968E-09	2.239E-09	1.762E-09	1.430E-09	1.189E-09	1.007E-09
WNW	2.928E-08	1.607E-08	1.061E-08	6.018E-09	3.808E-09	2.674E-09	2.026E-09	1.597E-09	1.292E-09	1.070E-09	9.024E-10
NW	3.813E-08	2.248E-08	1.571E-08	9.523E-09	6.076E-09	4.274E-09	3.330E-09	2.658E-09	2.166E-09	1.806E-09	1.533E-09
NNW	6.582E-08	3.660E-08	2.305E-08	1.238E-08	7.734E-09	5.347E-09	3.981E-09	3.111E-09	2.547E-09	2.120E-09	1.790E-09
N	3.264E-08	1.992E-08	1.594E-08	1.237E-08	1.021E-08	8.129E-09	6.209E-09	4.920E-09	4.007E-09	3.342E-09	2.839E-09
NNE	2.203E-08	2.893E-08	1.810E-08	9.765E-09	6.241E-09	4.401E-09	3.303E-09	2.587E-09	2.091E-09	1.731E-09	1.460E-09
NE	1.159E-08	1.641E-08	1.027E-08	5.544E-09	3.546E-09	2.503E-09	1.899E-09	1.504E-09	1.227E-09	1.021E-09	8.660E-10
ENE	6.329E-09	1.084E-08	7.046E-09	3.944E-09	2.535E-09	1.790E-09	1.431E-09	1.173E-09	9.576E-10	8.001E-10	6.807E-10
E	6.826E-09	1.311E-08	8.533E-09	4.786E-09	3.079E-09	2.177E-09	1.633E-09	1.278E-09	1.080E-09	9.232E-10	7.801E-10
ESE	1.334E-08	1.250E-08	7.892E-09	4.260E-09	2.688E-09	1.872E-09	1.388E-09	1.076E-09	8.605E-10	7.056E-10	5.899E-10
SE	1.578E-08	9.181E-09	6.712E-09	4.474E-09	3.175E-09	2.461E-09	2.018E-09	1.712E-09	1.401E-09	1.173E-09	1.001E-09
SSE	3.422E-08	3.742E-08	2.314E-08	1.228E-08	7.761E-09	5.424E-09	4.041E-09	3.145E-09	2.528E-09	2.083E-09	1.750E-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	3.710E-08	5.071E-08	3.845E-08	2.938E-08	3.014E-08	1.712E-08	6.064E-09	2.665E-09	1.541E-09	1.025E-09
SSW	3.444E-08	5.202E-08	4.727E-08	4.724E-08	3.914E-08	2.462E-08	9.586E-09	4.422E-09	2.614E-09	1.751E-09
SW	9.664E-08	1.561E-07	9.323E-08	5.419E-08	3.687E-08	2.109E-08	7.961E-09	3.619E-09	2.142E-09	1.424E-09
WSW	6.491E-08	1.306E-07	7.286E-08	4.005E-08	2.631E-08	1.465E-08	6.285E-09	2.945E-09	1.741E-09	1.173E-09
W	1.285E-07	1.423E-07	7.450E-08	4.232E-08	2.797E-08	1.360E-08	5.837E-09	2.991E-09	1.772E-09	1.193E-09
WNW	8.744E-08	1.494E-07	8.683E-08	5.252E-08	3.486E-08	1.658E-08	6.056E-09	2.717E-09	1.604E-09	1.074E-09
NW	7.294E-08	1.710E-07	1.074E-07	6.554E-08	4.462E-08	2.295E-08	9.366E-09	4.377E-09	2.663E-09	1.812E-09
NNW	6.449E-08	1.331E-07	1.376E-07	1.135E-07	7.824E-08	3.707E-08	1.269E-08	5.437E-09	3.145E-09	2.125E-09
N	1.035E-07	9.655E-08	7.204E-08	5.068E-08	3.729E-08	2.098E-08	1.220E-08	7.917E-09	4.940E-09	3.353E-09
NNE	8.362E-08	6.828E-08	4.480E-08	2.984E-08	2.267E-08	2.259E-08	1.005E-08	4.452E-09	2.602E-09	1.737E-09
NE	8.644E-09	1.773E-08	1.631E-08	1.269E-08	1.095E-08	1.261E-08	5.706E-09	2.539E-09	1.511E-09	1.025E-09
ENE	1.838E-08	1.570E-08	1.160E-08	8.194E-09	6.439E-09	8.151E-09	4.007E-09	1.845E-09	1.165E-09	8.026E-10
E	1.784E-08	1.815E-08	1.294E-08	8.891E-09	6.929E-09	9.679E-09	4.860E-09	2.200E-09	1.304E-09	9.168E-10
ESE	1.909E-08	3.108E-08	2.557E-08	1.821E-08	1.401E-08	1.064E-08	4.368E-09	1.896E-09	1.083E-09	7.086E-10
SE	2.631E-08	4.565E-08	3.619E-08	2.515E-08	1.821E-08	9.549E-09	4.394E-09	2.474E-09	1.681E-09	1.177E-09
SSE	7.607E-08	9.537E-08	6.932E-08	4.681E-08	3.545E-08	3.036E-08	1.268E-08	5.494E-09	3.166E-09	2.092E-09

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ERP ELEVATED STACK RELEASES - APR-JUN 2017
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	1.652E-09	1.771E-09	2.136E-09	1.838E-09	1.046E-09	6.808E-10	4.742E-10	3.459E-10	2.611E-10	2.100E-10	1.938E-10
SSW	1.397E-09	1.595E-09	2.034E-09	1.794E-09	1.036E-09	6.774E-10	4.729E-10	3.454E-10	3.258E-10	2.463E-10	1.928E-10
SW	2.958E-09	2.817E-09	3.003E-09	2.423E-09	2.391E-09	1.297E-09	8.022E-10	5.442E-10	3.931E-10	2.973E-10	2.327E-10
WSW	6.887E-11	4.132E-10	8.797E-10	1.972E-09	1.129E-09	6.139E-10	3.798E-10	2.575E-10	1.859E-10	1.405E-10	1.099E-10
W	3.006E-10	2.538E-09	2.355E-09	1.565E-09	7.548E-10	4.054E-10	2.490E-10	1.679E-10	1.207E-10	9.086E-11	7.089E-11
WNW	5.548E-10	6.141E-10	1.586E-09	1.460E-09	8.488E-10	4.399E-10	2.674E-10	1.845E-10	1.452E-10	1.154E-10	9.712E-11
NW	1.585E-09	1.365E-09	1.273E-09	1.891E-09	1.152E-09	5.751E-10	3.433E-10	2.323E-10	1.729E-10	1.387E-10	1.180E-10
NNW	1.901E-09	1.907E-09	2.154E-09	1.794E-09	1.850E-09	1.003E-09	6.220E-10	5.169E-10	3.830E-10	3.043E-10	2.563E-10
N	1.281E-08	1.033E-08	8.649E-09	5.897E-09	2.851E-09	1.743E-09	1.177E-09	8.444E-10	6.321E-10	4.883E-10	3.866E-10
NNE	1.016E-08	8.013E-09	6.442E-09	4.236E-09	1.983E-09	1.196E-09	8.011E-10	5.726E-10	4.278E-10	3.302E-10	2.614E-10
NE	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
ENE	5.468E-10	5.664E-10	6.613E-10	5.601E-10	3.158E-10	2.049E-10	1.425E-10	1.039E-10	7.836E-11	6.073E-11	4.809E-11
E	1.581E-09	1.342E-09	1.223E-09	8.916E-10	4.549E-10	2.845E-10	1.942E-10	1.402E-10	1.053E-10	8.145E-11	6.449E-11
ESE	5.826E-10	7.809E-10	1.118E-09	1.033E-09	6.114E-10	4.031E-10	2.825E-10	2.067E-10	1.562E-10	1.212E-10	9.595E-11
SE	3.840E-10	9.466E-10	1.743E-09	1.743E-09	1.072E-09	7.153E-10	5.041E-10	3.699E-10	2.800E-10	2.173E-10	1.721E-10
SSE	3.816E-09	3.893E-09	4.477E-09	3.763E-09	2.112E-09	1.368E-09	9.509E-10	6.928E-10	5.226E-10	4.049E-10	3.207E-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	1.558E-10	1.039E-10	6.983E-11	3.989E-11	2.516E-11	1.826E-11	1.308E-11	9.825E-12	7.838E-12	6.263E-12	5.113E-12
SSW	1.556E-10	1.216E-10	8.502E-11	5.024E-11	3.203E-11	2.183E-11	1.564E-11	1.175E-11	9.183E-12	7.335E-12	5.987E-12
SW	1.881E-10	1.130E-10	7.374E-11	4.106E-11	2.580E-11	2.077E-11	1.469E-11	1.103E-11	8.578E-12	6.852E-12	5.593E-12
WSW	8.857E-11	5.880E-11	3.946E-11	2.545E-11	1.540E-11	1.033E-11	7.559E-12	5.676E-12	4.413E-12	3.525E-12	2.877E-12
W	5.692E-11	2.542E-11	3.348E-11	2.155E-11	1.331E-11	9.033E-12	6.473E-12	4.860E-12	3.779E-12	3.019E-12	2.464E-12
WNW	8.576E-11	5.538E-11	4.073E-11	2.507E-11	1.560E-11	9.850E-12	7.041E-12	5.289E-12	4.185E-12	3.343E-12	2.729E-12
NW	1.052E-10	6.999E-11	5.220E-11	3.199E-11	1.979E-11	1.321E-11	9.063E-12	6.805E-12	5.291E-12	4.227E-12	3.450E-12
NNW	2.267E-10	1.472E-10	1.087E-10	6.703E-11	4.296E-11	2.853E-11	1.993E-11	1.430E-11	1.096E-11	8.755E-12	7.146E-12
N	3.122E-10	1.489E-10	9.154E-11	4.906E-11	8.465E-11	5.521E-11	3.951E-11	2.967E-11	2.307E-11	1.843E-11	1.504E-11
NNE	2.112E-10	2.286E-10	1.401E-10	7.185E-11	4.368E-11	2.926E-11	2.093E-11	1.568E-11	1.218E-11	9.713E-12	7.920E-12
NE	4.426E-11	9.854E-11	6.128E-11	3.193E-11	1.950E-11	1.305E-11	9.149E-12	6.838E-12	5.317E-12	4.247E-12	3.467E-12
ENE	3.877E-11	4.631E-11	3.395E-11	2.083E-11	1.333E-11	8.855E-12	6.234E-12	4.367E-12	3.406E-12	2.730E-12	2.235E-12
E	5.204E-11	5.652E-11	4.091E-11	2.491E-11	1.598E-11	1.067E-11	7.556E-12	5.589E-12	4.289E-12	3.424E-12	2.788E-12
ESE	7.732E-11	7.002E-11	4.839E-11	2.830E-11	1.790E-11	1.192E-11	8.430E-12	6.236E-12	4.792E-12	3.796E-12	3.078E-12
SE	1.386E-10	6.565E-11	4.002E-11	2.104E-11	1.280E-11	8.756E-12	6.485E-12	9.888E-12	7.636E-12	6.078E-12	4.957E-12
SSE	2.585E-10	2.641E-10	1.619E-10	8.310E-11	5.056E-11	3.387E-11	2.424E-11	1.817E-11	1.411E-11	1.126E-11	9.186E-12

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.922E-09	1.060E-09	4.780E-10	2.659E-10	1.845E-10	1.003E-10	4.000E-11	1.803E-11	9.999E-12	6.304E-12
SSW	1.830E-09	1.045E-09	4.764E-10	3.011E-10	1.949E-10	1.129E-10	4.988E-11	2.208E-11	1.188E-11	7.383E-12
SW	2.704E-09	1.912E-09	8.308E-10	3.998E-10	2.353E-10	1.122E-10	4.154E-11	1.968E-11	1.114E-11	6.897E-12
WSW	1.261E-09	1.087E-09	3.933E-10	1.891E-10	1.111E-10	5.682E-11	2.410E-11	1.057E-11	5.733E-12	3.548E-12
W	2.045E-09	7.796E-10	2.583E-10	1.228E-10	7.163E-11	3.600E-11	2.054E-11	9.150E-12	4.909E-12	3.038E-12
WNW	1.314E-09	8.029E-10	2.802E-10	1.451E-10	9.832E-11	5.562E-11	2.434E-11	1.026E-11	5.369E-12	3.365E-12
NW	1.568E-09	1.060E-09	3.608E-10	1.769E-10	1.194E-10	6.992E-11	3.106E-11	1.331E-11	6.874E-12	4.254E-12
NNW	1.939E-09	1.461E-09	6.815E-10	3.913E-10	2.596E-10	1.477E-10	6.558E-11	2.893E-11	1.463E-11	8.812E-12
N	7.799E-09	3.036E-09	1.195E-09	6.380E-10	3.892E-10	1.597E-10	7.432E-11	5.678E-11	2.996E-11	1.855E-11
NNE	5.811E-09	2.134E-09	8.150E-10	4.320E-10	2.632E-10	1.854E-10	7.451E-11	2.977E-11	1.585E-11	9.779E-12
NE	4.710E-10	3.349E-10	1.615E-10	8.997E-11	5.527E-11	6.992E-11	3.293E-11	1.321E-11	6.919E-12	4.275E-12
ENE	5.952E-10	3.208E-10	1.437E-10	7.893E-11	4.838E-11	3.914E-11	2.041E-11	9.001E-12	4.534E-12	2.747E-12
E	1.102E-09	4.762E-10	1.967E-10	1.062E-10	6.490E-11	4.859E-11	2.450E-11	1.084E-11	5.656E-12	3.444E-12
ESE	1.005E-09	6.125E-10	2.843E-10	1.573E-10	9.652E-11	6.203E-11	2.814E-11	1.212E-11	6.313E-12	3.825E-12
SE	1.566E-09	1.063E-09	5.067E-10	2.818E-10	1.731E-10	7.047E-11	2.159E-11	8.926E-12	8.058E-12	6.124E-12
SSE	4.030E-09	2.148E-09	9.590E-10	5.264E-10	3.226E-10	2.174E-10	8.615E-11	3.447E-11	1.836E-11	1.134E-11

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ERP ELEVATED STACK RELEASES - APR-JUN 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DIST. (MI)	X/Q (SEC/M3)			D/Q (PER SQ.METER)
				NO DEPLETION	2.26 DAY DEPLETION	8.0 DAY DEPLETION	
				UNDEPLETED	UNDEPLETED	DEPLETED	
A	Site Boundary	S	.80	4.0E-08	4.0E-08	4.0E-08	2.1E-09
A	Site Boundary	SSW	.82	3.8E-08	3.8E-08	3.7E-08	2.0E-09
A	Site Boundary	SW	.97	1.4E-07	1.4E-07	1.4E-07	2.5E-09
A	Site Boundary	WSW	.93	9.4E-08	9.4E-08	9.4E-08	1.4E-09
A	Site Boundary	W	.91	1.7E-07	1.7E-07	1.7E-07	1.8E-09
A	Site Boundary	WNW	.94	1.2E-07	1.2E-07	1.2E-07	1.6E-09
A	Site Boundary	NW	.81	6.8E-08	6.8E-08	6.7E-08	1.2E-09
A	Site Boundary	NNW	.69	4.3E-08	4.2E-08	4.2E-08	2.1E-09
A	Site Boundary	N	.67	1.0E-07	1.0E-07	1.0E-07	9.0E-09
A	Site Boundary	NNE	.60	8.0E-08	8.0E-08	7.9E-08	7.2E-09
A	Site Boundary	NE	.62	2.7E-09	2.7E-09	2.7E-09	3.8E-10
A	Site Boundary	ENE	.59	1.9E-08	1.9E-08	1.9E-08	5.9E-10
A	Site Boundary	E	.53	1.2E-08	1.2E-08	1.2E-08	1.3E-09
A	Site Boundary	ESE	.54	6.7E-09	6.7E-09	6.7E-09	8.3E-10
A	Site Boundary	SE	.65	1.2E-08	1.2E-08	1.2E-08	1.4E-09
A	Site Boundary	SSE	.81	8.3E-08	8.3E-08	8.2E-08	4.4E-09
A	Nearest Res	SSW	3.00	5.0E-08	4.9E-08	4.8E-08	3.5E-10
A	Nearest Res	SW	1.00	1.4E-07	1.4E-07	1.4E-07	2.4E-09
A	Nearest Res	WSW	2.50	7.4E-08	7.4E-08	7.2E-08	3.8E-10
A	Nearest Res	W	1.00	1.8E-07	1.8E-07	1.7E-07	1.6E-09
A	Nearest Res	WNW	1.70	1.6E-07	1.6E-07	1.6E-07	6.4E-10
A	Nearest Res	NW	.90	9.0E-08	9.0E-08	8.9E-08	1.9E-09
A	Nearest Res	NNW	1.90	1.5E-07	1.5E-07	1.5E-07	1.1E-09
A	Nearest Res	N	2.90	6.5E-08	6.5E-08	6.3E-08	9.0E-10
A	Nearest Res	NNE	1.70	6.7E-08	6.7E-08	6.6E-08	1.6E-09
A	Nearest Res	ENE	1.70	1.6E-08	1.6E-08	1.6E-08	2.6E-10
A	Nearest Res	E	2.20	1.5E-08	1.5E-08	1.5E-08	2.4E-10
A	Nearest Res	SE	2.80	3.4E-08	3.4E-08	3.3E-08	4.2E-10
A	Nearest Cow	NNW	3.50	1.2E-07	1.2E-07	1.2E-07	3.8E-10
A	Nearest Garde	SSW	3.00	5.0E-08	4.9E-08	4.8E-08	3.5E-10
A	Nearest Garde	SW	2.20	1.2E-07	1.2E-07	1.1E-07	1.1E-09
A	Nearest Garde	WSW	2.50	7.4E-08	7.4E-08	7.2E-08	3.8E-10
A	Nearest Garde	WNW	1.70	1.6E-07	1.6E-07	1.6E-07	6.4E-10
A	Nearest Garde	NW	2.00	1.5E-07	1.5E-07	1.5E-07	5.7E-10
A	Nearest Garde	NNW	2.80	1.4E-07	1.4E-07	1.3E-07	5.8E-10
A	Nearest Garde	ESE	2.30	2.9E-08	2.8E-08	2.8E-08	3.2E-10
A	MAXIMUM CHI/Q	S	1.50	5.6E-08	5.6E-08	5.5E-08	1.0E-09
A	MAXIMUM CHI/Q	SSW	1.50	5.7E-08	5.7E-08	5.6E-08	1.0E-09
A	MAXIMUM CHI/Q	SW	1.50	2.0E-07	2.0E-07	2.0E-07	2.4E-09
A	MAXIMUM CHI/Q	WSW	1.50	1.8E-07	1.8E-07	1.7E-07	1.1E-09
A	MAXIMUM CHI/Q	W	1.00	1.8E-07	1.8E-07	1.7E-07	1.6E-09
A	MAXIMUM CHI/Q	WNW	1.50	2.0E-07	2.0E-07	1.9E-07	8.5E-10
A	MAXIMUM CHI/Q	NW	1.50	2.4E-07	2.4E-07	2.4E-07	1.2E-09
A	MAXIMUM CHI/Q	NNW	2.00	1.5E-07	1.5E-07	1.5E-07	1.0E-09
A	MAXIMUM CHI/Q	N	.75	1.1E-07	1.1E-07	1.1E-07	8.6E-09
A	MAXIMUM CHI/Q	NNE	.75	9.2E-08	9.2E-08	9.0E-08	6.4E-09
A	MAXIMUM CHI/Q	NE	1.50	1.9E-08	1.9E-08	1.9E-08	3.4E-10
A	MAXIMUM CHI/Q	ENE	.50	2.0E-08	2.0E-08	2.0E-08	5.7E-10
A	MAXIMUM CHI/Q	E	1.00	2.0E-08	2.0E-08	2.0E-08	8.9E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.4E-08	3.4E-08	3.4E-08	6.1E-10
A	MAXIMUM CHI/Q	SE	1.50	5.1E-08	5.1E-08	5.0E-08	1.1E-09
A	MAXIMUM CHI/Q	SSE	1.50	1.1E-07	1.1E-07	1.0E-07	2.1E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-June 2017

ERP ELEVATED STACK RELEASES - JAN-JUN 2017
 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	1.562E-09	1.644E-08	4.489E-08	6.330E-08	6.911E-08	5.928E-08	4.858E-08	3.987E-08	3.316E-08	3.665E-08	3.881E-08
SSW	2.231E-08	2.267E-08	4.504E-08	6.543E-08	7.565E-08	6.703E-08	5.616E-08	6.012E-08	5.987E-08	5.136E-08	4.469E-08
SW	2.926E-08	3.538E-08	8.078E-08	1.440E-07	1.993E-07	1.307E-07	9.228E-08	6.898E-08	5.385E-08	4.347E-08	3.603E-08
WSW	1.443E-10	1.372E-08	6.779E-08	1.335E-07	1.805E-07	1.096E-07	7.386E-08	5.355E-08	4.091E-08	3.250E-08	2.660E-08
W	1.217E-08	4.391E-08	1.825E-07	2.207E-07	1.877E-07	1.148E-07	7.794E-08	5.683E-08	4.362E-08	3.479E-08	2.857E-08
WNW	1.303E-08	1.892E-08	9.279E-08	1.644E-07	2.046E-07	1.259E-07	8.614E-08	6.664E-08	5.391E-08	4.304E-08	3.540E-08
NW	1.549E-08	1.262E-08	5.968E-08	1.479E-07	2.847E-07	1.747E-07	1.194E-07	9.034E-08	7.157E-08	5.724E-08	4.714E-08
NNW	1.700E-08	3.230E-08	5.316E-08	7.844E-08	1.160E-07	1.192E-07	1.160E-07	1.089E-07	1.022E-07	8.124E-08	6.657E-08
N	1.875E-08	5.741E-08	7.575E-08	7.579E-08	7.062E-08	6.157E-08	5.218E-08	4.346E-08	3.672E-08	3.150E-08	2.741E-08
NNE	2.464E-08	4.695E-08	5.778E-08	5.500E-08	4.813E-08	3.933E-08	3.187E-08	2.617E-08	2.188E-08	1.861E-08	1.609E-08
NE	2.949E-11	2.343E-09	1.148E-08	1.936E-08	2.430E-08	2.262E-08	1.967E-08	1.690E-08	1.458E-08	1.270E-08	1.119E-08
ENE	2.602E-09	1.027E-08	1.325E-08	1.601E-08	1.743E-08	1.538E-08	1.292E-08	1.082E-08	9.159E-09	7.853E-09	6.825E-09
E	9.755E-09	6.756E-09	1.152E-08	1.514E-08	1.658E-08	1.448E-08	1.207E-08	1.007E-08	8.508E-09	7.292E-09	6.340E-09
ESE	9.702E-09	4.277E-09	1.445E-08	2.611E-08	3.314E-08	3.007E-08	2.545E-08	2.134E-08	1.802E-08	1.540E-08	1.333E-08
SE	6.477E-11	5.380E-09	3.257E-08	5.538E-08	6.567E-08	5.783E-08	4.812E-08	3.991E-08	3.345E-08	2.843E-08	2.450E-08
SSE	1.148E-08	3.459E-08	8.634E-08	1.176E-07	1.262E-07	1.077E-07	8.815E-08	7.228E-08	6.008E-08	5.074E-08	4.351E-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	3.439E-08	2.327E-08	1.511E-08	8.665E-09	6.122E-09	4.653E-09	3.623E-09	2.936E-09	2.472E-09	2.120E-09	1.838E-09
SSW	4.037E-08	2.872E-08	1.853E-08	1.053E-08	7.426E-09	5.545E-09	4.306E-09	3.481E-09	2.898E-09	2.466E-09	2.136E-09
SW	3.237E-08	2.293E-08	1.497E-08	8.638E-09	6.137E-09	4.684E-09	3.754E-09	3.043E-09	2.539E-09	2.165E-09	1.879E-09
WSW	2.308E-08	1.452E-08	1.028E-08	6.377E-09	4.283E-09	3.153E-09	2.459E-09	1.994E-09	1.664E-09	1.420E-09	1.232E-09
W	2.401E-08	1.293E-08	9.163E-09	5.981E-09	4.479E-09	3.320E-09	2.586E-09	2.096E-09	1.749E-09	1.492E-09	1.295E-09
WNW	3.023E-08	1.739E-08	1.206E-08	7.545E-09	5.239E-09	3.950E-09	3.151E-09	2.591E-09	2.176E-09	1.861E-09	1.620E-09
NW	4.033E-08	2.327E-08	1.626E-08	1.017E-08	6.920E-09	5.145E-09	4.132E-09	3.393E-09	2.845E-09	2.437E-09	2.123E-09
NNW	5.732E-08	3.354E-08	2.200E-08	1.281E-08	8.762E-09	6.536E-09	5.203E-09	4.291E-09	3.667E-09	3.163E-09	2.756E-09
N	2.420E-08	1.526E-08	1.266E-08	1.040E-08	9.013E-09	7.585E-09	5.989E-09	4.888E-09	4.093E-09	3.502E-09	3.047E-09
NNE	1.717E-08	2.468E-08	1.603E-08	9.232E-09	6.276E-09	4.663E-09	3.663E-09	2.990E-09	2.509E-09	2.151E-09	1.875E-09
NE	1.247E-08	2.010E-08	1.313E-08	7.613E-09	5.194E-09	3.869E-09	3.083E-09	2.541E-09	2.150E-09	1.844E-09	1.608E-09
ENE	7.116E-09	1.089E-08	7.272E-09	4.329E-09	3.000E-09	2.260E-09	1.904E-09	1.625E-09	1.368E-09	1.176E-09	1.028E-09
E	6.668E-09	1.188E-08	7.996E-09	4.809E-09	3.357E-09	2.541E-09	2.026E-09	1.673E-09	1.491E-09	1.335E-09	1.169E-09
ESE	1.332E-08	1.318E-08	8.652E-09	5.021E-09	3.416E-09	2.536E-09	1.990E-09	1.622E-09	1.359E-09	1.163E-09	1.012E-09
SE	2.137E-08	1.277E-08	9.519E-09	6.429E-09	4.566E-09	3.508E-09	2.835E-09	2.370E-09	1.975E-09	1.682E-09	1.457E-09
SSE	4.421E-08	4.426E-08	2.824E-08	1.586E-08	1.058E-08	7.745E-09	6.012E-09	4.858E-09	4.041E-09	3.438E-09	2.976E-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	4.675E-08	6.345E-08	4.795E-08	3.641E-08	3.653E-08	2.212E-08	8.968E-09	4.633E-09	2.956E-09	2.120E-09
SSW	4.913E-08	6.955E-08	6.064E-08	5.670E-08	4.507E-08	2.678E-08	1.093E-08	5.551E-09	3.494E-09	2.472E-09
SW	9.880E-08	1.566E-07	9.322E-08	5.422E-08	3.688E-08	2.149E-08	8.934E-09	4.700E-09	3.054E-09	2.170E-09
WSW	8.498E-08	1.385E-07	7.525E-08	4.131E-08	2.704E-08	1.454E-08	6.314E-09	3.177E-09	2.001E-09	1.423E-09
W	1.687E-07	1.627E-07	7.933E-08	4.403E-08	2.872E-08	1.372E-08	6.020E-09	3.335E-09	2.104E-09	1.495E-09
WNW	1.082E-07	1.607E-07	8.895E-08	5.341E-08	3.575E-08	1.787E-08	7.524E-09	3.974E-09	2.593E-09	1.865E-09
NW	8.845E-08	2.054E-07	1.225E-07	7.148E-08	4.761E-08	2.395E-08	1.008E-08	5.213E-09	3.395E-09	2.441E-09
NNW	5.976E-08	1.090E-07	1.140E-07	9.614E-08	6.749E-08	3.370E-08	1.305E-08	6.596E-09	4.314E-09	3.162E-09
N	7.169E-08	6.775E-08	5.120E-08	3.666E-08	2.743E-08	1.609E-08	1.029E-08	7.327E-09	4.900E-09	3.509E-09
NNE	5.414E-08	4.574E-08	3.158E-08	2.186E-08	1.724E-08	1.917E-08	9.429E-09	4.693E-09	2.999E-09	2.155E-09
NE	1.295E-08	2.246E-08	1.935E-08	1.453E-08	1.211E-08	1.531E-08	7.763E-09	3.908E-09	2.547E-09	1.847E-09
ENE	1.381E-08	1.620E-08	1.274E-08	9.137E-09	7.237E-09	8.442E-09	4.392E-09	2.315E-09	1.607E-09	1.178E-09
E	1.207E-08	1.532E-08	1.191E-08	8.492E-09	6.743E-09	8.994E-09	4.872E-09	2.553E-09	1.705E-09	1.320E-09
ESE	1.737E-08	3.021E-08	2.504E-08	1.797E-08	1.394E-08	1.120E-08	5.114E-09	2.552E-09	1.627E-09	1.165E-09
SE	3.666E-08	5.990E-08	4.743E-08	3.338E-08	2.450E-08	1.323E-08	6.288E-09	3.521E-09	2.352E-09	1.685E-09
SSE	8.872E-08	1.161E-07	8.703E-08	6.001E-08	4.591E-08	3.713E-08	1.626E-08	7.808E-09	4.877E-09	3.446E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2017
 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	1.562E-09	1.643E-08	4.485E-08	6.322E-08	6.896E-08	5.910E-08	4.840E-08	3.969E-08	3.298E-08	3.641E-08	3.853E-08
SSW	2.230E-08	2.266E-08	4.500E-08	6.534E-08	7.547E-08	6.681E-08	5.592E-08	5.980E-08	5.948E-08	5.098E-08	4.431E-08
SW	2.925E-08	3.536E-08	8.070E-08	1.438E-07	1.987E-07	1.302E-07	9.178E-08	6.851E-08	5.342E-08	4.306E-08	3.565E-08
WSW	1.443E-10	1.371E-08	6.770E-08	1.332E-07	1.799E-07	1.091E-07	7.344E-08	5.318E-08	4.058E-08	3.219E-08	2.632E-08
W	1.216E-08	4.387E-08	1.822E-07	2.203E-07	1.871E-07	1.143E-07	7.750E-08	5.644E-08	4.327E-08	3.446E-08	2.827E-08
WNW	1.302E-08	1.891E-08	9.267E-08	1.641E-07	2.040E-07	1.254E-07	8.569E-08	6.621E-08	5.349E-08	4.266E-08	3.504E-08
NW	1.548E-08	1.261E-08	5.960E-08	1.477E-07	2.838E-07	1.740E-07	1.188E-07	8.975E-08	7.103E-08	5.674E-08	4.668E-08
NNW	1.700E-08	3.229E-08	5.312E-08	7.835E-08	1.157E-07	1.188E-07	1.156E-07	1.084E-07	1.016E-07	8.064E-08	6.602E-08
N	1.875E-08	5.739E-08	7.571E-08	7.572E-08	7.050E-08	6.142E-08	5.201E-08	4.329E-08	3.655E-08	3.134E-08	2.724E-08
NNE	2.464E-08	4.693E-08	5.775E-08	5.494E-08	4.804E-08	3.923E-08	3.176E-08	2.606E-08	2.177E-08	1.851E-08	1.599E-08
NE	2.949E-11	2.342E-09	1.147E-08	1.933E-08	2.425E-08	2.256E-08	1.960E-08	1.682E-08	1.451E-08	1.263E-08	1.111E-08
ENE	2.600E-09	1.026E-08	1.323E-08	1.598E-08	1.739E-08	1.533E-08	1.287E-08	1.077E-08	9.112E-09	7.807E-09	6.781E-09
E	9.749E-09	6.751E-09	1.151E-08	1.511E-08	1.654E-08	1.443E-08	1.202E-08	1.002E-08	8.458E-09	7.243E-09	6.292E-09
ESE	9.697E-09	4.273E-09	1.444E-08	2.607E-08	3.305E-08	2.997E-08	2.533E-08	2.122E-08	1.790E-08	1.529E-08	1.322E-08
SE	6.476E-11	5.378E-09	3.254E-08	5.532E-08	6.555E-08	5.767E-08	4.795E-08	3.973E-08	3.328E-08	2.826E-08	2.432E-08
SSE	1.147E-08	3.457E-08	8.626E-08	1.174E-07	1.259E-07	1.074E-07	8.781E-08	7.194E-08	5.975E-08	5.041E-08	4.319E-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	3.411E-08	2.298E-08	1.486E-08	8.450E-09	5.921E-09	4.462E-09	3.446E-09	2.769E-09	2.312E-09	1.967E-09	1.691E-09
SSW	3.997E-08	2.826E-08	1.813E-08	1.019E-08	7.098E-09	5.238E-09	4.020E-09	3.212E-09	2.644E-09	2.224E-09	1.905E-09
SW	3.198E-08	2.249E-08	1.458E-08	8.299E-09	5.814E-09	4.376E-09	3.458E-09	2.765E-09	2.275E-09	1.914E-09	1.639E-09
WSW	2.281E-08	1.424E-08	1.000E-08	6.112E-09	4.046E-09	2.935E-09	2.256E-09	1.803E-09	1.483E-09	1.247E-09	1.067E-09
W	2.373E-08	1.270E-08	8.934E-09	5.743E-09	4.230E-09	3.089E-09	2.371E-09	1.894E-09	1.557E-09	1.309E-09	1.119E-09
WNW	2.988E-08	1.707E-08	1.176E-08	7.256E-09	4.969E-09	3.694E-09	2.906E-09	2.356E-09	1.951E-09	1.647E-09	1.413E-09
NW	3.989E-08	2.288E-08	1.590E-08	9.829E-09	6.612E-09	4.860E-09	3.859E-09	3.133E-09	2.597E-09	2.200E-09	1.895E-09
NNW	5.678E-08	3.306E-08	2.158E-08	1.245E-08	8.427E-09	6.224E-09	4.906E-09	4.006E-09	3.390E-09	2.894E-09	2.498E-09
N	2.404E-08	1.510E-08	1.248E-08	1.015E-08	8.706E-09	7.251E-09	5.672E-09	4.588E-09	3.807E-09	3.228E-09	2.784E-09
NNE	1.705E-08	2.436E-08	1.575E-08	8.990E-09	6.056E-09	4.460E-09	3.472E-09	2.809E-09	2.337E-09	1.986E-09	1.716E-09
NE	1.238E-08	1.985E-08	1.291E-08	7.419E-09	5.018E-09	3.706E-09	2.927E-09	2.391E-09	2.005E-09	1.705E-09	1.474E-09
ENE	7.065E-09	1.077E-08	7.163E-09	4.231E-09	2.909E-09	2.175E-09	1.817E-09	1.538E-09	1.285E-09	1.096E-09	9.502E-10
E	6.613E-09	1.170E-08	7.830E-09	4.657E-09	3.214E-09	2.406E-09	1.896E-09	1.549E-09	1.363E-09	1.204E-09	1.043E-09
ESE	1.320E-08	1.299E-08	8.482E-09	4.872E-09	3.281E-09	2.411E-09	1.872E-09	1.510E-09	1.253E-09	1.061E-09	9.143E-10
SE	2.120E-08	1.261E-08	9.362E-09	6.267E-09	4.413E-09	3.361E-09	2.693E-09	2.233E-09	1.844E-09	1.557E-09	1.338E-09
SSE	4.385E-08	4.363E-08	2.770E-08	1.540E-08	1.017E-08	7.374E-09	5.667E-09	4.533E-09	3.734E-09	3.145E-09	2.696E-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	4.670E-08	6.330E-08	4.777E-08	3.621E-08	3.627E-08	2.185E-08	8.751E-09	4.445E-09	2.788E-09	1.967E-09
SSW	4.907E-08	6.937E-08	6.037E-08	5.633E-08	4.468E-08	2.636E-08	1.058E-08	5.247E-09	3.227E-09	2.230E-09
SW	9.867E-08	1.561E-07	9.271E-08	5.379E-08	3.649E-08	2.108E-08	8.590E-09	4.392E-09	2.776E-09	1.919E-09
WSW	8.483E-08	1.380E-07	7.484E-08	4.098E-08	2.676E-08	1.426E-08	6.059E-09	2.960E-09	1.811E-09	1.251E-09
W	1.684E-07	1.621E-07	7.890E-08	4.368E-08	2.842E-08	1.348E-08	5.780E-09	3.106E-09	1.902E-09	1.312E-09
WNW	1.080E-07	1.602E-07	8.849E-08	5.300E-08	3.539E-08	1.756E-08	7.241E-09	3.719E-09	2.359E-09	1.650E-09
NW	8.830E-08	2.047E-07	1.219E-07	7.094E-08	4.715E-08	2.356E-08	9.749E-09	4.927E-09	3.136E-09	2.205E-09
NNW	5.970E-08	1.088E-07	1.135E-07	9.554E-08	6.693E-08	3.323E-08	1.269E-08	6.284E-09	4.029E-09	2.895E-09
N	7.164E-08	6.763E-08	5.103E-08	3.649E-08	2.727E-08	1.592E-08	1.002E-08	7.008E-09	4.600E-09	3.235E-09
NNE	5.410E-08	4.566E-08	3.147E-08	2.175E-08	1.713E-08	1.891E-08	9.189E-09	4.491E-09	2.819E-09	1.990E-09
NE	1.294E-08	2.241E-08	1.928E-08	1.445E-08	1.203E-08	1.510E-08	7.571E-09	3.744E-09	2.397E-09	1.708E-09
ENE	1.379E-08	1.616E-08	1.269E-08	9.090E-09	7.190E-09	8.342E-09	4.295E-09	2.228E-09	1.521E-09	1.098E-09
E	1.205E-08	1.528E-08	1.186E-08	8.442E-09	6.693E-09	8.848E-09	4.721E-09	2.418E-09	1.577E-09	1.191E-09
ESE	1.735E-08	3.013E-08	2.492E-08	1.785E-08	1.382E-08	1.103E-08	4.967E-09	2.428E-09	1.516E-09	1.064E-09
SE	3.663E-08	5.977E-08	4.726E-08	3.321E-08	2.433E-08	1.308E-08	6.131E-09	3.374E-09	2.216E-09	1.561E-09
SSE	8.862E-08	1.158E-07	8.669E-08	5.968E-08	4.538E-08	3.660E-08	1.581E-08	7.437E-09	4.553E-09	3.153E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2017
 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	1.562E-09	1.630E-08	4.444E-08	6.285E-08	6.820E-08	5.801E-08	4.715E-08	3.839E-08	3.170E-08	3.492E-08	3.695E-08
SSW	2.231E-08	2.248E-08	4.462E-08	6.505E-08	7.475E-08	6.569E-08	5.461E-08	5.817E-08	5.769E-08	4.923E-08	4.264E-08
SW	2.926E-08	3.507E-08	7.999E-08	1.433E-07	1.964E-07	1.275E-07	8.927E-08	6.625E-08	5.140E-08	4.127E-08	3.404E-08
WSW	1.443E-10	1.360E-08	6.715E-08	1.326E-07	1.774E-07	1.065E-07	7.112E-08	5.115E-08	3.880E-08	3.063E-08	2.494E-08
W	1.217E-08	4.370E-08	1.812E-07	2.175E-07	1.830E-07	1.109E-07	7.465E-08	5.407E-08	4.127E-08	3.275E-08	2.677E-08
WNW	1.302E-08	1.879E-08	9.241E-08	1.630E-07	2.010E-07	1.226E-07	8.332E-08	6.419E-08	5.176E-08	4.111E-08	3.363E-08
NW	1.549E-08	1.251E-08	5.927E-08	1.470E-07	2.813E-07	1.714E-07	1.165E-07	8.782E-08	6.938E-08	5.524E-08	4.527E-08
NNW	1.700E-08	3.201E-08	5.246E-08	7.781E-08	1.147E-07	1.174E-07	1.141E-07	1.071E-07	1.005E-07	7.953E-08	6.486E-08
N	1.875E-08	5.690E-08	7.446E-08	7.461E-08	6.937E-08	6.019E-08	5.075E-08	4.206E-08	3.538E-08	3.023E-08	2.620E-08
NNE	2.464E-08	4.653E-08	5.674E-08	5.404E-08	4.717E-08	3.833E-08	3.086E-08	2.519E-08	2.094E-08	1.772E-08	1.525E-08
NE	2.949E-11	2.327E-09	1.142E-08	1.929E-08	2.406E-08	2.224E-08	1.922E-08	1.643E-08	1.412E-08	1.225E-08	1.075E-08
ENE	2.601E-09	1.018E-08	1.308E-08	1.588E-08	1.722E-08	1.508E-08	1.258E-08	1.047E-08	8.808E-09	7.513E-09	6.498E-09
E	9.753E-09	6.697E-09	1.138E-08	1.500E-08	1.635E-08	1.416E-08	1.173E-08	9.717E-09	8.156E-09	6.951E-09	6.013E-09
ESE	9.701E-09	4.244E-09	1.441E-08	2.607E-08	3.281E-08	2.951E-08	2.477E-08	2.062E-08	1.730E-08	1.469E-08	1.265E-08
SE	6.477E-11	5.347E-09	3.244E-08	5.524E-08	6.498E-08	5.673E-08	4.682E-08	3.854E-08	3.208E-08	2.710E-08	2.321E-08
SSE	1.148E-08	3.430E-08	8.538E-08	1.166E-07	1.244E-07	1.054E-07	8.551E-08	6.957E-08	5.741E-08	4.815E-08	4.103E-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	3.263E-08	2.168E-08	1.364E-08	7.347E-09	4.851E-09	3.481E-09	2.593E-09	2.019E-09	1.643E-09	1.368E-09	1.153E-09
SSW	3.839E-08	2.685E-08	1.676E-08	8.930E-09	5.885E-09	4.211E-09	3.150E-09	2.462E-09	1.987E-09	1.642E-09	1.384E-09
SW	3.050E-08	2.134E-08	1.348E-08	7.284E-09	4.814E-09	3.453E-09	2.654E-09	2.076E-09	1.676E-09	1.386E-09	1.168E-09
WSW	2.156E-08	1.328E-08	9.144E-09	5.381E-09	3.449E-09	2.438E-09	1.834E-09	1.439E-09	1.164E-09	9.654E-10	8.157E-10
W	2.241E-08	1.187E-08	8.310E-09	5.147E-09	3.636E-09	2.589E-09	1.945E-09	1.526E-09	1.235E-09	1.024E-09	8.652E-10
WNW	2.856E-08	1.593E-08	1.070E-08	6.244E-09	4.000E-09	2.830E-09	2.159E-09	1.711E-09	1.389E-09	1.151E-09	9.719E-10
NW	3.853E-08	2.156E-08	1.457E-08	8.509E-09	5.410E-09	3.797E-09	2.924E-09	2.318E-09	1.882E-09	1.565E-09	1.325E-09
NNW	5.556E-08	3.150E-08	1.993E-08	1.077E-08	6.749E-09	4.677E-09	3.496E-09	2.743E-09	2.258E-09	1.886E-09	1.595E-09
N	2.306E-08	1.437E-08	1.189E-08	9.779E-09	8.305E-09	6.663E-09	5.100E-09	4.048E-09	3.303E-09	2.759E-09	2.347E-09
NNE	1.629E-08	2.358E-08	1.479E-08	8.024E-09	5.163E-09	3.662E-09	2.762E-09	2.173E-09	1.763E-09	1.465E-09	1.240E-09
NE	1.200E-08	1.939E-08	1.223E-08	6.679E-09	4.312E-09	3.066E-09	2.349E-09	1.873E-09	1.539E-09	1.285E-09	1.092E-09
ENE	6.772E-09	1.047E-08	6.761E-09	3.757E-09	2.405E-09	1.693E-09	1.344E-09	1.096E-09	8.935E-10	7.455E-10	6.334E-10
E	6.326E-09	1.144E-08	7.444E-09	4.172E-09	2.683E-09	1.895E-09	1.421E-09	1.111E-09	9.396E-10	8.038E-10	6.781E-10
ESE	1.260E-08	1.244E-08	7.909E-09	4.308E-09	2.732E-09	1.910E-09	1.421E-09	1.104E-09	8.845E-10	7.264E-10	6.081E-10
SE	2.014E-08	1.178E-08	8.675E-09	5.774E-09	4.048E-09	3.082E-09	2.473E-09	2.051E-09	1.670E-09	1.392E-09	1.182E-09
SSE	4.159E-08	4.141E-08	2.552E-08	1.348E-08	8.493E-09	5.921E-09	4.401E-09	3.419E-09	2.744E-09	2.258E-09	1.894E-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	4.637E-08	6.248E-08	4.654E-08	3.484E-08	3.475E-08	2.054E-08	7.636E-09	3.491E-09	2.040E-09	1.370E-09
SSW	4.878E-08	6.857E-08	5.899E-08	5.460E-08	4.302E-08	2.493E-08	9.317E-09	4.233E-09	2.478E-09	1.649E-09
SW	9.814E-08	1.540E-07	9.027E-08	5.178E-08	3.487E-08	1.988E-08	7.563E-09	3.496E-09	2.089E-09	1.391E-09
WSW	8.433E-08	1.359E-07	7.256E-08	3.922E-08	2.537E-08	1.328E-08	5.359E-09	2.466E-09	1.447E-09	9.689E-10
W	1.668E-07	1.586E-07	7.608E-08	4.168E-08	2.693E-08	1.263E-08	5.178E-09	2.611E-09	1.535E-09	1.028E-09
WNW	1.074E-07	1.577E-07	8.615E-08	5.125E-08	3.397E-08	1.641E-08	6.236E-09	2.874E-09	1.716E-09	1.155E-09
NW	8.788E-08	2.026E-07	1.197E-07	6.926E-08	4.573E-08	2.222E-08	8.478E-09	3.878E-09	2.325E-09	1.570E-09
NNW	5.918E-08	1.077E-07	1.122E-07	9.437E-08	6.576E-08	3.171E-08	1.102E-08	4.757E-09	2.774E-09	1.888E-09
N	7.062E-08	6.645E-08	4.979E-08	3.532E-08	2.623E-08	1.520E-08	9.593E-09	6.476E-09	4.065E-09	2.768E-09
NNE	5.327E-08	4.477E-08	3.058E-08	2.093E-08	1.637E-08	1.806E-08	8.257E-09	3.702E-09	2.185E-09	1.470E-09
NE	1.289E-08	2.219E-08	1.891E-08	1.407E-08	1.166E-08	1.457E-08	6.860E-09	3.111E-09	1.882E-09	1.289E-09
ENE	1.368E-08	1.597E-08	1.240E-08	8.790E-09	6.900E-09	7.998E-09	3.823E-09	1.743E-09	1.090E-09	7.478E-10
E	1.195E-08	1.508E-08	1.157E-08	8.143E-09	6.407E-09	8.526E-09	4.237E-09	1.915E-09	1.134E-09	7.975E-10
ESE	1.733E-08	2.985E-08	2.438E-08	1.725E-08	1.324E-08	1.046E-08	4.408E-09	1.934E-09	1.111E-09	7.295E-10
SE	3.655E-08	5.915E-08	4.615E-08	3.203E-08	2.322E-08	1.226E-08	5.652E-09	3.096E-09	2.026E-09	1.396E-09
SSE	8.790E-08	1.142E-07	8.443E-08	5.736E-08	4.335E-08	3.439E-08	1.394E-08	5.999E-09	3.443E-09	2.267E-09

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ERP ELEVATED STACK RELEASES - JAN-JUN 2017
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		2.094E-09	2.325E-09	2.898E-09	2.530E-09	1.452E-09	9.479E-10	6.611E-10	4.826E-10	3.644E-10	3.019E-10	2.708E-10		
SSW		2.474E-09	2.559E-09	2.984E-09	2.525E-09	1.424E-09	9.235E-10	6.422E-10	4.681E-10	4.403E-10	3.329E-10	2.605E-10		
SW		3.220E-09	2.946E-09	2.986E-09	2.339E-09	2.236E-09	1.211E-09	7.486E-10	5.076E-10	3.667E-10	2.772E-10	2.170E-10		
WSW		1.236E-09	1.275E-09	1.483E-09	2.538E-09	1.313E-09	7.107E-10	4.389E-10	2.973E-10	2.146E-10	1.622E-10	1.269E-10		
W		3.215E-10	3.652E-09	3.425E-09	2.237E-09	1.084E-09	5.821E-10	3.574E-10	2.410E-10	1.732E-10	1.304E-10	1.017E-10		
WNW		9.612E-10	9.906E-10	2.737E-09	2.156E-09	1.269E-09	6.458E-10	3.862E-10	2.591E-10	1.962E-10	1.513E-10	1.233E-10		
NW		1.092E-09	1.095E-09	1.236E-09	2.252E-09	1.447E-09	7.234E-10	4.309E-10	2.900E-10	2.140E-10	1.697E-10	1.427E-10		
NNW		3.437E-09	2.883E-09	2.579E-09	1.854E-09	1.607E-09	8.650E-10	5.343E-10	4.401E-10	3.275E-10	2.619E-10	2.219E-10		
N		8.812E-09	7.153E-09	6.056E-09	4.169E-09	2.031E-09	1.247E-09	8.428E-10	6.054E-10	4.534E-10	3.503E-10	2.774E-10		
NNE		6.933E-09	5.431E-09	4.307E-09	2.797E-09	1.294E-09	7.763E-10	5.186E-10	3.701E-10	2.763E-10	2.131E-10	1.687E-10		
NE		3.082E-10	4.845E-10	7.578E-10	7.221E-10	4.339E-10	2.875E-10	2.020E-10	1.480E-10	1.119E-10	8.681E-11	6.874E-11		
ENE		2.949E-10	4.046E-10	5.877E-10	5.459E-10	3.239E-10	2.137E-10	1.498E-10	1.097E-10	8.290E-11	6.430E-11	5.092E-11		
E		8.068E-10	7.464E-10	7.678E-10	6.069E-10	3.278E-10	2.094E-10	1.446E-10	1.050E-10	7.904E-11	6.121E-11	4.846E-11		
ESE		3.302E-10	6.163E-10	1.038E-09	1.013E-09	6.155E-10	4.093E-10	2.880E-10	2.111E-10	1.598E-10	1.239E-10	9.815E-11		
SE		8.215E-10	1.517E-09	2.545E-09	2.479E-09	1.506E-09	1.001E-09	7.043E-10	5.163E-10	3.907E-10	3.031E-10	2.400E-10		
SSE		4.131E-09	4.315E-09	5.081E-09	4.321E-09	2.442E-09	1.586E-09	1.103E-09	8.044E-10	6.069E-10	4.704E-10	3.725E-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		2.177E-10	1.323E-10	8.652E-11	4.820E-11	3.020E-11	2.388E-11	1.708E-11	1.280E-11	1.003E-11	8.008E-12	6.537E-12		
SSW		2.101E-10	1.346E-10	8.953E-11	5.067E-11	3.484E-11	2.418E-11	1.733E-11	1.301E-11	1.017E-11	8.121E-12	6.629E-12		
SW		1.753E-10	1.058E-10	6.920E-11	3.863E-11	2.433E-11	1.915E-11	1.376E-11	1.033E-11	8.033E-12	6.417E-12	5.237E-12		
WSW		1.023E-10	6.035E-11	3.919E-11	2.608E-11	1.578E-11	1.058E-11	7.702E-12	5.784E-12	4.497E-12	3.592E-12	2.932E-12		
W		8.165E-11	3.644E-11	3.489E-11	2.079E-11	1.454E-11	9.826E-12	7.041E-12	5.287E-12	4.111E-12	3.284E-12	2.680E-12		
WNW		1.054E-10	6.172E-11	4.340E-11	2.579E-11	1.657E-11	1.102E-11	7.925E-12	5.952E-12	4.664E-12	3.726E-12	3.041E-12		
NW		1.258E-10	8.108E-11	5.963E-11	3.633E-11	2.232E-11	1.493E-11	1.046E-11	7.859E-12	6.159E-12	4.920E-12	4.016E-12		
NNW		1.972E-10	1.297E-10	9.627E-11	5.975E-11	3.846E-11	2.563E-11	1.770E-11	1.263E-11	9.618E-12	7.683E-12	6.272E-12		
N		2.240E-10	1.068E-10	6.562E-11	3.514E-11	6.731E-11	4.273E-11	3.059E-11	2.297E-11	1.786E-11	1.427E-11	1.165E-11		
NNE		1.364E-10	1.711E-10	1.046E-10	5.351E-11	3.251E-11	2.178E-11	1.558E-11	1.168E-11	9.072E-12	7.240E-12	5.904E-12		
NE		5.538E-11	1.088E-10	6.704E-11	3.458E-11	2.106E-11	1.410E-11	1.014E-11	7.565E-12	5.882E-12	4.699E-12	3.835E-12		
ENE		4.102E-11	4.818E-11	3.516E-11	2.148E-11	1.372E-11	9.095E-12	6.394E-12	4.558E-12	3.550E-12	2.841E-12	2.323E-12		
E		3.909E-11	4.655E-11	3.416E-11	2.099E-11	1.346E-11	8.952E-12	6.311E-12	4.645E-12	3.551E-12	2.751E-12	2.241E-12		
ESE		7.907E-11	7.245E-11	5.016E-11	2.936E-11	1.855E-11	1.234E-11	8.714E-12	6.437E-12	4.941E-12	3.909E-12	3.167E-12		
SE		1.934E-10	9.161E-11	5.587E-11	2.939E-11	1.790E-11	1.225E-11	9.072E-12	1.352E-11	1.045E-11	8.317E-12	6.784E-12		
SSE		3.002E-10	2.957E-10	1.812E-10	9.295E-11	5.654E-11	3.789E-11	2.711E-11	2.033E-11	1.579E-11	1.261E-11	1.029E-11		

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*****		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		2.607E-09	1.468E-09	6.662E-10	3.743E-10	2.604E-10	1.309E-10	4.872E-11	2.285E-11	1.297E-11	8.063E-12		
SSW		2.686E-09	1.446E-09	6.476E-10	4.073E-10	2.633E-10	1.314E-10	5.227E-11	2.428E-11	1.316E-11	8.175E-12		
SW		2.690E-09	1.803E-09	7.754E-10	3.729E-10	2.194E-10	1.050E-10	3.907E-11	1.837E-11	1.044E-11	6.459E-12		
WSW		1.906E-09	1.317E-09	4.548E-10	2.183E-10	1.282E-10	6.026E-11	2.442E-11	1.082E-11	5.842E-12	3.616E-12		
W		2.948E-09	1.117E-09	3.708E-10	1.762E-10	1.028E-10	4.580E-11	2.114E-11	9.968E-12	5.340E-12	3.305E-12		
WNW		2.091E-09	1.189E-09	4.046E-10	1.971E-10	1.250E-10	6.329E-11	2.560E-11	1.126E-11	6.025E-12	3.750E-12		
NW		1.656E-09	1.304E-09	4.525E-10	2.188E-10	1.444E-10	8.149E-11	3.528E-11	1.511E-11	7.956E-12	4.952E-12		
NNW		2.324E-09	1.332E-09	5.848E-10	3.347E-10	2.246E-10	1.298E-10	5.841E-11	2.588E-11	1.293E-11	7.734E-12		
N		5.461E-09	2.157E-09	8.555E-10	4.576E-10	2.792E-10	1.145E-10	5.621E-11	4.443E-11	2.320E-11	1.436E-11		
NNE		3.886E-09	1.398E-09	5.279E-10	2.790E-10	1.699E-10	1.338E-10	5.554E-11	2.216E-11	1.180E-11	7.288E-12		
NE		6.812E-10	4.329E-10	2.032E-10	1.126E-10	6.915E-11	7.837E-11	3.578E-11	1.437E-11	7.659E-12	4.729E-12		
ENE		5.284E-10	3.243E-10	1.508E-10	8.346E-11	5.122E-11	4.080E-11	2.107E-11	9.247E-12	4.699E-12	2.859E-12		
E		6.915E-10	3.372E-10	1.460E-10	7.966E-11	4.877E-11	3.938E-11	2.057E-11	9.097E-12	4.704E-12	2.799E-12		
ESE		9.333E-10	6.122E-10	2.896E-10	1.608E-10	9.873E-11	6.401E-11	2.918E-11	1.255E-11	6.518E-12	3.940E-12		
SE		2.287E-09	1.498E-09	7.083E-10	3.932E-10	2.414E-10	9.834E-11	3.017E-11	1.248E-11	1.108E-11	8.380E-12		
SSE		4.573E-09	2.479E-09	1.112E-09	6.113E-10	3.747E-10	2.458E-10	9.638E-11	3.855E-11	2.054E-11	1.269E-11		

ERP ELEVATED STACK RELEASES - JAN-JUN 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE TYPE	DIRECTION	DIST.	X/Q (SEC/M3)	X/Q (SEC/M3)	X/Q (SEC/M3)	D/Q (PER SQ.METER)	
ID	LOCATION	FROM SITE (MI)	NO DECAY	2.26 DAY DECAY	8.0 DAY DECAY		
			UNDEPLETED	UNDEPLETED	DEPLETED		
A	Site Boundary	S	.80	5.0E-08	5.0E-08	4.9E-08	2.9E-09
A	Site Boundary	SSW	.82	5.2E-08	5.2E-08	5.1E-08	2.9E-09
A	Site Boundary	SW	.97	1.4E-07	1.4E-07	1.4E-07	2.4E-09
A	Site Boundary	WSW	.93	1.2E-07	1.2E-07	1.1E-07	2.0E-09
A	Site Boundary	W	.91	2.2E-07	2.2E-07	2.1E-07	2.6E-09
A	Site Boundary	WNW	.94	1.5E-07	1.5E-07	1.5E-07	2.4E-09
A	Site Boundary	NW	.81	8.0E-08	8.0E-08	7.9E-08	1.2E-09
A	Site Boundary	NNW	.69	4.5E-08	4.5E-08	4.4E-08	2.6E-09
A	Site Boundary	N	.67	7.0E-08	7.0E-08	6.8E-08	6.3E-09
A	Site Boundary	NNE	.60	5.1E-08	5.1E-08	5.0E-08	4.9E-09
A	Site Boundary	NE	.62	5.8E-09	5.8E-09	5.8E-09	6.1E-10
A	Site Boundary	ENE	.59	1.1E-08	1.1E-08	1.0E-08	4.6E-10
A	Site Boundary	E	.53	6.5E-09	6.4E-09	6.4E-09	7.4E-10
A	Site Boundary	ESE	.54	4.2E-09	4.2E-09	4.1E-09	6.7E-10
A	Site Boundary	SE	.65	1.9E-08	1.9E-08	1.8E-08	2.1E-09
A	Site Boundary	SSE	.81	9.6E-08	9.6E-08	9.5E-08	5.0E-09
A	Nearest Res	SSW	3.00	6.0E-08	6.0E-08	5.8E-08	4.7E-10
A	Nearest Res	SW	1.00	1.4E-07	1.4E-07	1.4E-07	2.3E-09
A	Nearest Res	WSW	2.50	7.4E-08	7.3E-08	7.1E-08	4.4E-10
A	Nearest Res	W	1.00	2.2E-07	2.2E-07	2.2E-07	2.2E-09
A	Nearest Res	WNW	1.70	1.7E-07	1.7E-07	1.6E-07	9.4E-10
A	Nearest Res	NW	.90	1.1E-07	1.1E-07	1.1E-07	2.3E-09
A	Nearest Res	NNW	1.90	1.2E-07	1.2E-07	1.2E-07	9.7E-10
A	Nearest Res	N	2.90	4.5E-08	4.5E-08	4.4E-08	6.4E-10
A	Nearest Res	NNE	1.70	4.5E-08	4.4E-08	4.4E-08	1.0E-09
A	Nearest Res	ENE	1.70	1.7E-08	1.7E-08	1.7E-08	2.7E-10
A	Nearest Res	E	2.20	1.3E-08	1.3E-08	1.3E-08	1.8E-10
A	Nearest Res	SE	2.80	4.3E-08	4.3E-08	4.2E-08	5.8E-10
A	Nearest Cow	NNW	3.50	1.0E-07	1.0E-07	1.0E-07	3.3E-10
A	Nearest Garde	SSW	3.00	6.0E-08	6.0E-08	5.8E-08	4.7E-10
A	Nearest Garde	SW	2.20	1.1E-07	1.1E-07	1.1E-07	9.8E-10
A	Nearest Garde	WSW	2.50	7.4E-08	7.3E-08	7.1E-08	4.4E-10
A	Nearest Garde	WNW	1.70	1.7E-07	1.7E-07	1.6E-07	9.4E-10
A	Nearest Garde	NW	2.00	1.7E-07	1.7E-07	1.7E-07	7.2E-10
A	Nearest Garde	NNW	2.80	1.1E-07	1.1E-07	1.1E-07	5.0E-10
A	Nearest Garde	ESE	2.30	2.7E-08	2.7E-08	2.7E-08	3.3E-10
A	MAXIMUM CHI/Q	S	1.50	6.9E-08	6.9E-08	6.8E-08	1.5E-09
A	MAXIMUM CHI/Q	SSW	1.50	7.6E-08	7.5E-08	7.5E-08	1.4E-09
A	MAXIMUM CHI/Q	SW	1.50	2.0E-07	2.0E-07	2.0E-07	2.2E-09
A	MAXIMUM CHI/Q	WSW	1.50	1.8E-07	1.8E-07	1.8E-07	1.3E-09
A	MAXIMUM CHI/Q	W	1.00	2.2E-07	2.2E-07	2.2E-07	2.2E-09
A	MAXIMUM CHI/Q	WNW	1.50	2.0E-07	2.0E-07	2.0E-07	1.3E-09
A	MAXIMUM CHI/Q	NW	1.50	2.8E-07	2.8E-07	2.8E-07	1.4E-09
A	MAXIMUM CHI/Q	NNW	2.00	1.2E-07	1.2E-07	1.2E-07	8.6E-10
A	MAXIMUM CHI/Q	N	1.00	7.6E-08	7.6E-08	7.5E-08	4.2E-09
A	MAXIMUM CHI/Q	NNE	.75	5.8E-08	5.8E-08	5.7E-08	4.3E-09
A	MAXIMUM CHI/Q	NE	1.50	2.4E-08	2.4E-08	2.4E-08	4.3E-10
A	MAXIMUM CHI/Q	ENE	1.50	1.7E-08	1.7E-08	1.7E-08	3.2E-10
A	MAXIMUM CHI/Q	E	1.50	1.7E-08	1.7E-08	1.6E-08	3.3E-10
A	MAXIMUM CHI/Q	ESE	1.50	3.3E-08	3.3E-08	3.3E-08	6.2E-10
A	MAXIMUM CHI/Q	SE	1.50	6.6E-08	6.6E-08	6.5E-08	1.5E-09
A	MAXIMUM CHI/Q	SSE	1.50	1.3E-07	1.3E-07	1.2E-07	2.4E-09

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Atmospheric Diffusion Estimates

Elevated Releases

July-September 2017

ERP ELEVATED STACK RELEASES - JUL-SEP 2017
 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	1.009E-15	1.191E-09	2.115E-08	4.355E-08	5.926E-08	5.551E-08	4.791E-08	4.074E-08	3.482E-08	4.210E-08	4.921E-08
SSW	8.150E-16	1.335E-09	2.612E-08	5.575E-08	7.775E-08	7.346E-08	6.373E-08	7.192E-08	7.676E-08	6.865E-08	6.241E-08
SW	2.280E-16	6.079E-10	3.349E-08	1.073E-07	2.148E-07	1.533E-07	1.143E-07	8.880E-08	7.145E-08	5.911E-08	5.002E-08
WSW	2.726E-16	5.473E-10	3.645E-08	1.184E-07	2.278E-07	1.505E-07	1.072E-07	8.086E-08	6.366E-08	5.178E-08	4.322E-08
W	1.546E-13	3.706E-08	2.179E-07	2.932E-07	2.911E-07	1.884E-07	1.327E-07	9.929E-08	7.771E-08	6.291E-08	5.229E-08
WNW	8.933E-15	7.766E-09	1.579E-07	3.364E-07	4.761E-07	2.997E-07	2.070E-07	1.605E-07	1.291E-07	1.029E-07	8.443E-08
NW	9.169E-11	7.267E-09	1.207E-07	3.554E-07	6.497E-07	3.911E-07	2.639E-07	1.969E-07	1.545E-07	1.229E-07	1.008E-07
NNW	1.109E-09	1.572E-08	6.999E-08	1.420E-07	2.369E-07	2.457E-07	2.366E-07	2.183E-07	2.018E-07	1.601E-07	1.310E-07
N	3.221E-10	1.838E-08	5.236E-08	7.508E-08	8.961E-08	8.571E-08	7.627E-08	6.540E-08	5.642E-08	4.918E-08	4.333E-08
NNE	2.415E-11	1.997E-09	1.517E-08	2.905E-08	3.971E-08	3.806E-08	3.355E-08	2.907E-08	2.525E-08	2.211E-08	1.956E-08
NE	3.126E-16	3.662E-10	6.329E-09	1.279E-08	1.731E-08	1.640E-08	1.439E-08	1.247E-08	1.086E-08	9.543E-09	8.483E-09
ENE	2.725E-16	3.937E-10	7.280E-09	1.501E-08	2.011E-08	1.861E-08	1.595E-08	1.353E-08	1.155E-08	9.985E-09	8.739E-09
E	2.165E-16	4.527E-10	9.562E-09	2.110E-08	3.022E-08	2.880E-08	2.503E-08	2.136E-08	1.828E-08	1.578E-08	1.378E-08
ESE	3.387E-11	2.677E-09	1.077E-08	1.815E-08	2.297E-08	2.107E-08	1.797E-08	1.517E-08	1.289E-08	1.108E-08	9.645E-08
SE	5.577E-16	6.076E-10	1.033E-08	2.037E-08	2.620E-08	2.384E-08	2.026E-08	1.707E-08	1.450E-08	1.247E-08	1.085E-08
SSE	1.053E-15	1.021E-09	1.722E-08	3.468E-08	4.630E-08	4.305E-08	3.704E-08	3.145E-08	2.686E-08	2.318E-08	2.024E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.518E-08	3.639E-08	2.431E-08	1.447E-08	1.076E-08	8.484E-09	6.683E-09	5.468E-09	4.676E-09	4.062E-09	3.543E-09
SSW	6.004E-08	6.093E-08	4.067E-08	2.419E-08	1.842E-08	1.431E-08	1.127E-08	9.214E-09	7.763E-09	6.666E-09	5.819E-09
SW	4.704E-08	4.037E-08	2.700E-08	1.606E-08	1.187E-08	9.298E-09	7.617E-09	6.217E-09	5.216E-09	4.470E-09	3.896E-09
WSW	3.870E-08	2.654E-08	1.926E-08	1.221E-08	8.261E-09	6.114E-09	4.791E-09	3.897E-09	3.260E-09	2.788E-09	2.424E-09
W	4.439E-08	2.467E-08	1.786E-08	1.173E-08	8.690E-09	6.452E-09	5.034E-09	4.085E-09	3.412E-09	2.912E-09	2.529E-09
WNW	7.172E-08	4.008E-08	2.713E-08	1.633E-08	1.114E-08	8.284E-09	6.525E-09	5.319E-09	4.445E-09	3.787E-09	3.283E-09
NW	8.585E-08	4.882E-08	3.392E-08	2.115E-08	1.434E-08	1.063E-08	8.550E-09	7.029E-09	5.888E-09	5.035E-09	4.380E-09
NNW	1.126E-07	6.552E-08	4.293E-08	2.496E-08	1.704E-08	1.270E-08	1.010E-08	8.330E-09	7.127E-09	6.156E-09	5.362E-09
N	3.867E-08	2.520E-08	1.644E-08	1.824E-08	1.586E-08	1.341E-08	1.061E-08	8.680E-09	7.271E-09	6.222E-09	5.415E-09
NNE	2.223E-08	3.473E-08	2.262E-08	1.306E-08	8.875E-09	6.592E-09	5.177E-09	4.224E-09	3.544E-09	3.037E-09	2.646E-09
NE	9.956E-09	2.019E-08	1.327E-08	7.756E-09	5.318E-09	3.976E-09	3.182E-09	2.631E-09	2.237E-09	1.922E-09	1.678E-09
ENE	9.339E-09	1.891E-08	1.284E-08	7.799E-09	5.476E-09	4.164E-09	3.586E-09	3.109E-09	2.627E-09	2.265E-09	1.985E-09
E	1.436E-08	2.353E-08	1.586E-08	9.541E-09	6.657E-09	5.038E-09	4.015E-09	3.316E-09	2.967E-09	2.666E-09	2.334E-09
ESE	9.849E-09	1.430E-08	9.757E-09	5.957E-09	4.192E-09	3.191E-09	2.553E-09	2.115E-09	1.797E-09	1.557E-09	1.369E-09
SE	9.551E-09	5.917E-09	4.643E-09	3.547E-09	2.736E-09	2.279E-09	1.988E-09	1.782E-09	1.512E-09	1.308E-09	1.149E-09
SSE	2.184E-08	3.255E-08	2.123E-08	1.228E-08	8.357E-09	6.214E-09	4.884E-09	3.988E-09	3.348E-09	2.871E-09	2.503E-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	2.667E-08	5.410E-08	4.707E-08	3.929E-08	4.561E-08	3.297E-08	1.501E-08	8.371E-09	5.513E-09	4.052E-09
SSW	3.378E-08	7.095E-08	6.960E-08	7.229E-08	6.338E-08	5.173E-08	2.529E-08	1.419E-08	9.248E-09	6.677E-09
SW	5.897E-08	1.636E-07	1.145E-07	7.171E-08	5.161E-08	3.591E-08	1.663E-08	9.311E-08	6.236E-09	4.478E-09
WSW	6.491E-08	1.691E-07	1.082E-07	6.405E-08	4.408E-08	2.601E-08	1.202E-08	6.157E-09	3.910E-09	2.793E-09
W	2.111E-07	2.459E-07	1.342E-07	7.824E-08	5.251E-08	2.603E-08	1.174E-08	6.482E-09	4.100E-09	2.918E-09
WNW	2.039E-07	3.667E-07	2.131E-07	1.281E-07	8.520E-08	4.136E-08	1.642E-08	8.342E-09	5.331E-09	3.795E-09
NW	1.998E-07	4.694E-07	2.710E-07	1.546E-07	1.018E-07	5.043E-08	2.096E-08	1.079E-08	7.029E-09	5.045E-09
NNW	8.992E-08	2.197E-07	2.317E-07	1.906E-07	1.328E-07	6.594E-08	2.544E-08	1.282E-08	8.379E-09	6.150E-09
N	5.491E-08	8.465E-08	7.444E-08	5.623E-08	4.334E-08	2.661E-08	1.794E-08	1.295E-08	8.695E-09	6.234E-09
NNE	1.841E-08	3.661E-08	3.296E-08	2.514E-08	2.130E-08	2.657E-08	1.332E-08	6.635E-09	4.237E-09	3.042E-09
NE	7.876E-09	1.590E-08	1.416E-08	1.082E-08	9.343E-09	1.484E-08	7.898E-09	4.016E-09	2.638E-09	1.925E-09
ENE	9.185E-09	1.831E-08	1.569E-08	1.152E-08	9.330E-09	1.408E-08	7.886E-09	4.283E-09	3.061E-09	2.269E-09
E	1.267E-08	2.756E-08	2.457E-08	1.821E-08	1.459E-08	1.808E-08	9.663E-09	5.061E-09	3.383E-09	2.632E-09
ESE	1.225E-08	2.105E-08	1.767E-08	1.285E-08	1.015E-08	1.129E-08	6.017E-09	3.203E-09	2.119E-09	1.558E-09
SE	1.263E-08	2.386E-08	1.994E-08	1.446E-08	1.085E-08	6.158E-09	3.430E-09	2.285E-09	1.738E-09	1.310E-09
SSE	2.138E-08	4.227E-08	3.641E-08	2.677E-08	2.170E-08	2.514E-08	1.253E-08	6.253E-09	4.000E-09	2.876E-09

B301

ERP ELEVATED STACK RELEASES - JUL-SEP 2017
 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	1.009E-15	1.190E-09	2.113E-08	4.347E-08	5.908E-08	5.528E-08	4.766E-08	4.049E-08	3.457E-08	4.176E-08	4.876E-08
SSW	8.148E-16	1.333E-09	2.608E-08	5.563E-08	7.746E-08	7.308E-08	6.332E-08	7.135E-08	7.603E-08	6.790E-08	6.163E-08
SW	2.279E-16	6.072E-10	3.342E-08	1.069E-07	2.137E-07	1.523E-07	1.133E-07	8.789E-08	7.060E-08	5.830E-08	4.925E-08
WSW	2.725E-16	5.468E-10	3.637E-08	1.180E-07	2.266E-07	1.494E-07	1.062E-07	7.998E-08	6.285E-08	5.103E-08	4.251E-08
W	1.546E-13	3.702E-08	2.174E-07	2.924E-07	2.899E-07	1.873E-07	1.317E-07	9.838E-08	7.687E-08	6.213E-08	5.156E-08
WNW	8.929E-15	7.758E-09	1.576E-07	3.355E-07	4.741E-07	2.979E-07	2.055E-07	1.590E-07	1.278E-07	1.017E-07	8.328E-08
NW	9.167E-11	7.263E-09	1.205E-07	3.547E-07	6.476E-07	3.894E-07	2.624E-07	1.956E-07	1.532E-07	1.217E-07	9.973E-08
NNW	1.109E-09	1.572E-08	6.993E-08	1.418E-07	2.364E-07	2.450E-07	2.357E-07	2.173E-07	2.005E-07	1.589E-07	1.300E-07
N	3.221E-10	1.837E-08	5.232E-08	7.499E-08	8.942E-08	8.546E-08	7.599E-08	6.511E-08	5.614E-08	4.889E-08	4.305E-08
NNE	2.415E-11	1.997E-09	1.515E-08	2.901E-08	3.960E-08	3.791E-08	3.339E-08	2.891E-08	2.508E-08	2.194E-08	1.940E-08
NE	3.125E-16	3.660E-10	6.322E-09	1.277E-08	1.727E-08	1.635E-08	1.434E-08	1.241E-08	1.080E-08	9.485E-09	8.424E-09
ENE	2.724E-16	3.934E-10	7.270E-09	1.498E-08	2.005E-08	1.853E-08	1.587E-08	1.344E-08	1.147E-08	9.903E-09	8.659E-09
E	2.164E-16	4.523E-10	9.545E-09	2.105E-08	3.010E-08	2.863E-08	2.485E-08	2.118E-08	1.810E-08	1.560E-08	1.361E-08
ESE	3.386E-11	2.675E-09	1.076E-08	1.811E-08	2.289E-08	2.097E-08	1.786E-08	1.506E-08	1.278E-08	1.097E-08	9.541E-09
SE	5.576E-16	6.072E-10	1.032E-08	2.034E-08	2.613E-08	2.376E-08	2.017E-08	1.698E-08	1.440E-08	1.237E-08	1.075E-08
SSE	1.052E-15	1.020E-09	1.720E-08	3.462E-08	4.616E-08	4.288E-08	3.684E-08	3.126E-08	2.666E-08	2.298E-08	2.005E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.471E-08	3.565E-08	2.363E-08	1.384E-08	1.010E-08	7.812E-09	6.053E-09	4.871E-09	4.091E-09	3.492E-09	2.997E-09
SSW	5.918E-08	5.932E-08	3.922E-08	2.288E-08	1.705E-08	1.296E-08	1.001E-08	8.028E-09	6.631E-09	5.587E-09	4.787E-09
SW	4.623E-08	3.929E-08	2.604E-08	1.521E-08	1.103E-08	8.478E-09	6.812E-09	5.460E-09	4.499E-09	3.788E-09	3.244E-09
WSW	3.798E-08	2.576E-08	1.849E-08	1.146E-08	7.585E-09	5.495E-09	4.215E-09	3.357E-09	2.751E-09	2.305E-09	1.964E-09
W	4.370E-08	2.408E-08	1.728E-08	1.114E-08	8.089E-09	5.896E-09	4.518E-09	3.602E-09	2.956E-09	2.479E-09	2.115E-09
WNW	7.063E-08	3.915E-08	2.628E-08	1.555E-08	1.043E-08	7.631E-09	5.910E-09	4.737E-09	3.893E-09	3.264E-09	2.784E-09
NW	8.479E-08	4.787E-08	3.299E-08	2.025E-08	1.352E-08	9.877E-09	7.815E-09	6.323E-09	5.218E-09	4.397E-09	3.770E-09
NNW	1.115E-07	6.448E-08	4.201E-08	2.414E-08	1.629E-08	1.200E-08	9.431E-09	7.680E-09	6.485E-09	5.530E-09	4.761E-09
N	3.839E-08	2.493E-08	2.133E-08	1.781E-08	1.526E-08	1.270E-08	9.933E-09	8.030E-09	6.654E-09	5.633E-09	4.851E-09
NNE	2.203E-08	3.416E-08	2.212E-08	1.262E-08	8.483E-09	6.230E-09	4.838E-09	3.903E-09	3.238E-09	2.745E-09	2.365E-09
NE	9.877E-09	1.982E-08	1.294E-08	7.467E-09	5.054E-09	3.731E-09	2.945E-09	2.403E-09	2.015E-09	1.710E-09	1.474E-09
ENE	9.246E-09	1.852E-08	1.248E-08	7.471E-09	5.167E-09	3.871E-09	3.276E-09	2.792E-09	2.324E-09	1.975E-09	1.706E-09
E	1.416E-08	2.295E-08	1.533E-08	9.057E-09	6.207E-09	4.615E-09	3.613E-09	2.932E-09	2.572E-09	2.266E-09	1.950E-09
ESE	9.732E-09	1.402E-08	9.495E-09	5.716E-09	3.966E-09	2.977E-09	2.349E-09	1.919E-09	1.608E-09	1.374E-09	1.193E-09
SE	9.452E-09	5.820E-09	4.535E-09	3.412E-09	2.592E-09	2.123E-09	1.821E-09	1.604E-09	1.340E-09	1.142E-09	9.877E-10
SSE	2.160E-08	3.179E-08	2.056E-08	1.169E-08	7.824E-09	5.720E-09	4.422E-09	3.551E-09	2.933E-09	2.475E-09	2.123E-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	2.663E-08	5.392E-08	4.682E-08	3.900E-08	4.519E-08	3.232E-08	1.435E-08	7.719E-09	4.912E-09	3.487E-09
SSW	3.371E-08	7.066E-08	6.913E-08	7.160E-08	6.258E-08	5.035E-08	2.392E-08	1.287E-08	8.061E-09	5.600E-09
SW	5.880E-08	1.627E-07	1.135E-07	7.085E-08	5.081E-08	3.494E-08	1.576E-08	8.491E-09	5.480E-09	3.797E-09
WSW	6.471E-08	1.682E-07	1.072E-07	6.324E-08	4.336E-08	2.525E-08	1.130E-08	5.540E-09	3.371E-09	2.311E-09
W	2.106E-07	2.448E-07	1.332E-07	7.740E-08	5.178E-08	2.542E-08	1.115E-08	5.930E-09	3.618E-09	2.485E-09
WNW	2.034E-07	3.650E-07	2.116E-07	1.268E-07	8.404E-08	4.043E-08	1.566E-08	7.690E-09	4.751E-09	3.273E-09
NW	1.994E-07	4.677E-07	2.695E-07	1.533E-07	1.007E-07	4.946E-08	2.009E-08	1.002E-08	6.328E-09	4.408E-09
NNW	8.981E-08	2.192E-07	2.308E-07	1.895E-07	1.317E-07	6.494E-08	2.462E-08	1.212E-08	7.725E-09	5.528E-09
N	5.485E-08	8.445E-08	7.416E-08	5.594E-08	4.305E-08	2.632E-08	1.746E-08	1.228E-08	8.049E-09	5.646E-09
NNE	1.839E-08	3.650E-08	3.281E-08	2.498E-08	2.113E-08	2.611E-08	1.289E-08	6.274E-09	3.917E-09	2.750E-09
NE	7.865E-09	1.586E-08	1.411E-08	1.076E-08	9.276E-09	1.455E-08	7.611E-09	3.769E-09	2.410E-09	1.713E-09
ENE	9.169E-09	1.825E-08	1.561E-08	1.144E-08	9.245E-09	1.378E-08	7.561E-09	3.979E-09	2.752E-09	1.979E-09
E	1.264E-08	2.744E-08	2.439E-08	1.803E-08	1.440E-08	1.761E-08	9.183E-09	4.639E-09	2.989E-09	2.240E-09
ESE	1.223E-08	2.097E-08	1.757E-08	1.274E-08	1.004E-08	1.105E-08	5.778E-09	2.989E-09	1.924E-09	1.376E-09
SE	1.261E-08	2.379E-08	1.985E-08	1.436E-08	1.075E-08	6.056E-09	3.297E-09	2.127E-09	1.566E-09	1.143E-09
SSE	2.135E-08	4.214E-08	3.622E-08	2.657E-08	2.149E-08	2.453E-08	1.194E-08	5.762E-09	3.565E-09	2.480E-09

B302

ERP ELEVATED STACK RELEASES - JUL-SEP 2017
 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	1.009E-15	1.190E-09	2.115E-08	4.353E-08	5.870E-08	5.452E-08	4.669E-08	3.944E-08	3.349E-08	4.049E-08	4.743E-08
SSW	8.150E-16	1.334E-09	2.611E-08	5.572E-08	7.699E-08	7.210E-08	6.204E-08	6.967E-08	7.417E-08	6.609E-08	5.992E-08
SW	2.279E-16	6.077E-10	3.347E-08	1.072E-07	2.126E-07	1.506E-07	1.115E-07	8.619E-08	6.903E-08	5.688E-08	4.796E-08
WSW	2.726E-16	5.472E-10	3.642E-08	1.183E-07	2.250E-07	1.472E-07	1.041E-07	7.801E-08	6.109E-08	4.947E-08	4.112E-08
W	1.546E-13	3.705E-08	2.166E-07	2.897E-07	2.850E-07	1.830E-07	1.281E-07	9.534E-08	7.428E-08	5.991E-08	4.963E-08
WNW	8.932E-15	7.764E-09	1.578E-07	3.343E-07	4.688E-07	2.927E-07	2.009E-07	1.550E-07	1.243E-07	9.849E-08	8.036E-08
NW	9.169E-11	7.216E-09	1.204E-07	3.538E-07	6.413E-07	3.827E-07	2.565E-07	1.905E-07	1.488E-07	1.178E-07	9.613E-08
NNW	1.109E-09	1.559E-08	6.949E-08	1.414E-07	2.348E-07	2.422E-07	2.328E-07	2.145E-07	1.981E-07	1.566E-07	1.275E-07
N	3.221E-10	1.823E-08	5.180E-08	7.450E-08	8.853E-08	8.420E-08	7.455E-08	6.364E-08	5.469E-08	4.750E-08	4.172E-08
NNE	2.415E-11	1.986E-09	1.512E-08	2.900E-08	3.933E-08	3.743E-08	3.279E-08	2.826E-08	2.442E-08	2.130E-08	1.877E-08
NE	3.126E-16	3.661E-10	6.327E-09	1.279E-08	1.716E-08	1.614E-08	1.407E-08	1.213E-08	1.051E-08	9.206E-09	8.157E-09
ENE	2.725E-16	3.936E-10	7.278E-09	1.500E-08	1.992E-08	1.827E-08	1.553E-08	1.308E-08	1.110E-08	9.537E-09	8.305E-09
E	2.165E-16	4.526E-10	9.557E-09	2.109E-08	2.992E-08	2.825E-08	2.436E-08	2.063E-08	1.753E-08	1.504E-08	1.306E-08
ESE	3.387E-11	2.655E-09	1.069E-08	1.805E-08	2.270E-08	2.064E-08	1.747E-08	1.463E-08	1.235E-08	1.055E-08	9.136E-09
SE	5.577E-16	6.075E-10	1.032E-08	2.037E-08	2.595E-08	2.341E-08	1.974E-08	1.652E-08	1.394E-08	1.191E-08	1.032E-08
SSE	1.053E-15	1.021E-09	1.721E-08	3.467E-08	4.586E-08	4.228E-08	3.609E-08	3.044E-08	2.583E-08	2.216E-08	1.926E-08

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	5.000	7.500	10.000	15.000	20.000	25.000	30.000	35.000	40.000	45.000	50.000
S	4.346E-08	3.451E-08	2.228E-08	1.236E-08	8.477E-09	6.239E-09	4.658E-09	3.629E-09	2.974E-09	2.496E-09	2.109E-09
SSW	5.760E-08	5.796E-08	3.735E-08	2.066E-08	1.450E-08	1.075E-08	8.130E-09	6.413E-09	5.222E-09	4.345E-09	3.681E-09
SW	4.507E-08	3.830E-08	2.475E-08	1.371E-08	9.327E-09	6.813E-09	5.342E-09	4.201E-09	3.405E-09	2.826E-09	2.389E-09
WSW	3.675E-08	2.473E-08	1.740E-08	1.042E-08	6.719E-09	4.770E-09	3.599E-09	2.827E-09	2.290E-09	1.899E-09	1.605E-09
W	4.200E-08	2.304E-08	1.653E-08	1.024E-08	7.114E-09	5.069E-09	3.812E-09	2.991E-09	2.421E-09	2.007E-09	1.696E-09
WNW	6.787E-08	3.673E-08	2.403E-08	1.348E-08	8.496E-09	5.920E-09	4.452E-09	3.495E-09	2.820E-09	2.325E-09	1.955E-09
NW	8.139E-08	4.487E-08	3.015E-08	1.756E-08	1.109E-08	7.735E-09	5.944E-09	4.708E-09	3.812E-09	3.158E-09	2.666E-09
NNW	1.090E-07	6.144E-08	3.883E-08	2.094E-08	1.311E-08	9.075E-09	6.776E-09	5.311E-09	4.371E-09	3.651E-09	3.083E-09
N	3.713E-08	2.397E-08	2.057E-08	1.737E-08	1.475E-08	1.185E-08	9.081E-09	7.216E-09	5.887E-09	4.915E-09	4.180E-09
NNE	2.138E-08	3.343E-08	2.102E-08	1.139E-08	7.285E-09	5.137E-09	3.855E-09	3.018E-09	2.439E-09	2.018E-09	1.702E-09
NE	9.603E-09	1.954E-08	1.239E-08	6.794E-09	4.377E-09	3.105E-09	2.376E-09	1.897E-09	1.563E-09	1.304E-09	1.108E-09
ENE	8.877E-09	1.825E-08	1.197E-08	6.762E-09	4.363E-09	3.088E-09	2.493E-09	2.050E-09	1.665E-09	1.384E-09	1.172E-09
E	1.359E-08	2.252E-08	1.467E-08	8.217E-09	5.282E-09	3.727E-09	2.791E-09	2.178E-09	1.847E-09	1.581E-09	1.329E-09
ESE	9.315E-09	1.369E-08	9.046E-09	5.160E-09	3.358E-09	2.391E-09	1.803E-09	1.416E-09	1.145E-09	9.469E-10	7.976E-10
SE	9.039E-09	5.503E-09	4.283E-09	3.256E-09	2.499E-09	2.075E-09	1.806E-09	1.614E-09	1.343E-09	1.142E-09	9.863E-10
SSE	2.077E-08	3.107E-08	1.955E-08	1.056E-08	6.696E-09	4.685E-09	3.490E-09	2.715E-09	2.180E-09	1.793E-09	1.504E-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	2.666E-08	5.347E-08	4.588E-08	3.786E-08	4.390E-08	3.106E-08	1.284E-08	6.203E-09	3.673E-09	2.494E-09
SSW	3.376E-08	7.009E-08	6.778E-08	6.981E-08	6.089E-08	4.872E-08	2.163E-08	1.070E-08	6.450E-09	4.359E-09
SW	5.892E-08	1.616E-07	1.118E-07	6.931E-08	4.953E-08	3.378E-08	1.421E-08	6.895E-09	4.224E-09	2.836E-09
WSW	6.483E-08	1.667E-07	1.051E-07	6.150E-08	4.197E-08	2.414E-08	1.033E-08	4.821E-09	2.843E-09	1.906E-09
W	2.092E-07	2.407E-07	1.296E-07	7.482E-08	4.985E-08	2.436E-08	1.025E-08	5.111E-09	3.008E-09	2.015E-09
WNW	2.029E-07	3.606E-07	2.070E-07	1.232E-07	8.111E-08	3.800E-08	1.361E-08	6.019E-09	3.511E-09	2.335E-09
NW	1.990E-07	4.625E-07	2.638E-07	1.489E-07	9.711E-08	4.644E-08	1.748E-08	7.913E-09	4.720E-09	3.169E-09
NNW	8.948E-08	2.173E-07	2.280E-07	1.870E-07	1.293E-07	6.196E-08	2.144E-08	9.231E-09	5.371E-09	3.654E-09
N	5.443E-08	8.349E-08	7.276E-08	5.451E-08	4.173E-08	2.539E-08	1.692E-08	1.151E-08	7.242E-09	4.931E-09
NNE	1.837E-08	3.619E-08	3.221E-08	2.433E-08	2.049E-08	2.524E-08	1.171E-08	5.197E-09	3.036E-09	2.026E-09
NE	7.873E-09	1.574E-08	1.385E-08	1.048E-08	9.003E-09	1.416E-08	6.965E-09	3.153E-09	1.906E-09	1.308E-09
ENE	9.181E-09	1.809E-08	1.528E-08	1.107E-08	8.882E-09	1.337E-08	6.853E-09	3.190E-09	2.030E-09	1.389E-09
E	1.266E-08	2.722E-08	2.390E-08	1.747E-08	1.385E-08	1.705E-08	8.345E-09	3.767E-09	2.227E-09	1.567E-09
ESE	1.218E-08	2.075E-08	1.718E-08	1.232E-08	9.623E-09	1.066E-08	5.223E-09	2.414E-09	1.423E-09	9.502E-10
SE	1.263E-08	2.358E-08	1.943E-08	1.390E-08	1.032E-08	5.746E-09	3.148E-09	2.080E-09	1.566E-09	1.144E-09
SSE	2.137E-08	4.178E-08	3.548E-08	2.575E-08	2.068E-08	2.366E-08	1.084E-08	4.743E-09	2.733E-09	1.801E-09

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ERP ELEVATED STACK RELEASES - JUL-SEP 2017
 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		1.022E-10	6.130E-10	1.305E-09	1.352E-09	8.445E-10	5.662E-10	4.000E-10	2.938E-10	2.225E-10	1.743E-10	1.670E-10		
SSW		1.153E-10	6.916E-10	1.473E-09	1.525E-09	9.527E-10	6.388E-10	4.512E-10	3.315E-10	3.121E-10	2.363E-10	1.850E-10		
SW		5.895E-11	3.537E-10	7.530E-10	7.800E-10	8.519E-10	4.785E-10	3.030E-10	2.086E-10	1.521E-10	1.156E-10	9.065E-11		
WSW		5.371E-11	3.222E-10	6.861E-10	1.051E-09	8.821E-10	4.799E-10	2.968E-10	2.013E-10	1.453E-10	1.098E-10	8.591E-11		
W		6.419E-11	3.095E-09	3.054E-09	2.212E-09	1.038E-09	5.647E-10	3.493E-10	2.369E-10	1.710E-10	1.292E-10	1.011E-10		
WNW		9.301E-11	5.580E-10	2.152E-09	2.972E-09	1.675E-09	8.874E-10	5.433E-10	3.735E-10	3.006E-10	2.334E-10	1.915E-10		
NW		9.050E-10	1.402E-09	2.178E-09	4.925E-09	3.301E-09	1.651E-09	9.795E-10	6.533E-10	4.756E-10	3.708E-10	3.057E-10		
NNW		2.686E-09	2.691E-09	3.036E-09	2.527E-09	2.600E-09	1.410E-09	8.760E-10	7.437E-10	5.598E-10	4.542E-10	3.912E-10		
N		3.465E-09	3.339E-09	3.608E-09	2.934E-09	1.614E-09	1.038E-09	7.188E-10	5.228E-10	3.940E-10	3.052E-10	2.417E-10		
NNE		3.222E-10	5.905E-10	9.880E-10	9.616E-10	5.838E-10	3.881E-10	2.730E-10	2.002E-10	1.514E-10	1.175E-10	9.305E-11		
NE		3.013E-11	1.808E-10	3.849E-10	3.987E-10	2.490E-10	1.670E-10	1.179E-10	8.664E-11	6.562E-11	5.093E-11	4.033E-11		
ENE		3.275E-11	1.965E-10	4.183E-10	4.333E-10	2.707E-10	1.815E-10	1.282E-10	9.417E-11	7.132E-11	5.536E-11	4.384E-11		
E		4.061E-11	2.436E-10	5.187E-10	5.373E-10	3.356E-10	2.250E-10	1.590E-10	1.168E-10	8.844E-11	6.864E-11	5.436E-11		
ESE		2.868E-10	3.783E-10	5.362E-10	4.937E-10	2.915E-10	1.921E-10	1.346E-10	9.845E-11	7.442E-11	5.771E-11	4.570E-11		
SE		5.109E-11	3.065E-10	6.526E-10	6.760E-10	4.222E-10	2.831E-10	2.000E-10	1.469E-10	1.113E-10	8.636E-11	6.839E-11		
SSE		9.039E-11	5.423E-10	1.155E-09	1.196E-09	7.470E-10	5.009E-10	3.538E-10	2.599E-10	1.968E-10	1.528E-10	1.210E-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		1.343E-10	1.217E-10	8.769E-11	5.300E-11	3.375E-11	2.184E-11	1.558E-11	1.164E-11	9.079E-12	7.255E-12	5.923E-12		
SSW		1.512E-10	1.311E-10	9.362E-11	5.620E-11	3.300E-11	2.326E-11	1.667E-11	1.253E-11	9.932E-12	7.934E-12	6.476E-12		
SW		7.632E-11	8.308E-11	6.174E-11	3.822E-11	2.451E-11	1.500E-11	1.072E-11	8.048E-12	6.257E-12	4.999E-12	4.080E-12		
WSW		6.981E-11	5.484E-11	3.848E-11	2.324E-11	1.406E-11	9.428E-12	7.148E-12	5.367E-12	4.173E-12	3.333E-12	2.721E-12		
W		8.126E-11	3.635E-11	4.528E-11	2.941E-11	1.816E-11	1.254E-11	8.986E-12	6.747E-12	5.246E-12	4.191E-12	3.421E-12		
WNW		1.672E-10	1.011E-10	7.203E-11	4.324E-11	2.714E-11	1.744E-11	1.277E-11	9.597E-12	7.677E-12	6.132E-12	5.005E-12		
NW		2.648E-10	1.613E-10	1.156E-10	7.182E-11	4.414E-11	2.948E-11	2.063E-11	1.549E-11	1.224E-11	9.775E-12	7.979E-12		
NNW		3.532E-10	2.429E-10	1.836E-10	1.152E-10	7.409E-11	4.911E-11	3.299E-11	2.325E-11	1.799E-11	1.437E-11	1.173E-11		
N		1.949E-10	9.255E-11	5.660E-11	3.000E-11	9.866E-11	5.632E-11	4.036E-11	3.030E-11	2.356E-11	1.882E-11	1.537E-11		
NNE		7.496E-11	1.634E-10	1.016E-10	5.299E-11	3.238E-11	2.166E-11	1.546E-11	1.156E-11	8.953E-12	7.131E-12	5.806E-12		
NE		3.248E-11	7.752E-11	4.847E-11	2.543E-11	1.556E-11	1.041E-11	7.423E-12	5.512E-12	4.285E-12	3.423E-12	2.794E-12		
ENE		3.531E-11	5.002E-11	3.755E-11	2.342E-11	1.501E-11	9.923E-12	6.948E-12	4.545E-12	3.534E-12	2.824E-12	2.307E-12		
E		4.378E-11	5.711E-11	4.232E-11	2.615E-11	1.672E-11	1.106E-11	7.755E-12	5.673E-12	4.319E-12	3.171E-12	2.581E-12		
ESE		3.683E-11	4.601E-11	3.392E-11	2.089E-11	1.336E-11	8.858E-12	6.221E-12	4.562E-12	3.477E-12	2.732E-12	2.199E-12		
SE		5.508E-11	2.608E-11	1.589E-11	8.351E-12	5.080E-12	3.491E-12	2.611E-12	4.592E-12	3.552E-12	2.834E-12	2.322E-12		
SSE		9.745E-11	1.274E-10	8.018E-11	4.238E-11	2.600E-11	1.737E-11	1.238E-11	9.238E-12	7.147E-12	5.685E-12	4.623E-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		1.172E-09	8.336E-10	4.018E-10	2.245E-10	1.570E-10	1.094E-10	5.215E-11	2.251E-11	1.179E-11	7.302E-12		
SSW		1.322E-09	9.405E-10	4.534E-10	2.887E-10	1.877E-10	1.189E-10	5.420E-11	2.322E-11	1.272E-11	7.986E-12		
SW		6.763E-10	6.700E-10	3.120E-10	1.543E-10	9.273E-11	7.209E-11	3.735E-11	1.582E-11	8.129E-12	5.031E-12		
WSW		7.673E-10	7.409E-10	3.074E-10	1.478E-10	8.703E-11	5.089E-11	2.254E-11	9.750E-12	5.421E-12	3.355E-12		
W		2.689E-09	1.089E-09	3.618E-10	1.739E-10	1.021E-10	5.030E-11	2.794E-11	1.262E-11	6.815E-12	4.218E-12		
WNW		2.162E-09	1.613E-09	5.671E-10	2.958E-10	1.949E-10	1.029E-10	4.248E-11	1.816E-11	9.773E-12	6.172E-12		
NW		3.226E-09	2.929E-09	1.028E-09	4.865E-10	3.098E-10	1.640E-10	6.926E-11	2.985E-11	1.572E-11	9.839E-12		
NNW		2.733E-09	2.055E-09	9.654E-10	5.721E-10	3.958E-10	2.411E-10	1.121E-10	4.932E-11	2.403E-11	1.447E-11		
N		3.248E-09	1.651E-09	7.255E-10	3.970E-10	2.432E-10	9.931E-11	6.643E-11	6.123E-11	3.061E-11	1.895E-11		
NNE		8.880E-10	5.808E-10	2.746E-10	1.524E-10	9.359E-11	1.163E-10	5.464E-11	2.204E-11	1.168E-11	7.180E-12		
NE		3.456E-10	2.458E-10	1.185E-10	6.603E-11	4.056E-11	5.460E-11	2.616E-11	1.059E-11	5.590E-12	3.445E-12		
ENE		3.757E-10	2.672E-10	1.288E-10	7.177E-11	4.409E-11	4.121E-11	2.282E-11	1.009E-11	4.847E-12	2.843E-12		
E		4.659E-10	3.313E-10	1.597E-10	8.899E-11	5.467E-11	4.758E-11	2.555E-11	1.125E-11	5.752E-12	3.292E-12		
ESE		4.822E-10	2.922E-10	1.355E-10	7.492E-11	4.597E-11	3.860E-11	2.044E-11	9.005E-12	4.623E-12	2.755E-12		
SE		5.861E-10	4.168E-10	2.009E-10	1.120E-10	6.878E-11	2.800E-11	8.573E-12	3.563E-12	3.630E-12	2.857E-12		
SSE		1.037E-09	7.374E-10	3.555E-10	1.981E-10	1.217E-10	9.976E-11	4.350E-11	1.768E-11	9.339E-12	5.725E-12		

ERP ELEVATED STACK RELEASES - JUL-SEP 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST

RELEASE ID	TYPE OF LOCATION	DIRECTION FROM SITE	DIST. (MI)	X/Q			D/Q
				NO	2.26 DAY	8.0 DAY	(PER SQ.METER)
				(SEC/M3)	(SEC/M3)	(SEC/M3)	
				DECAY	DECAY	DECAY	
				UNDEPLETED	UNDEPLETED	DEPLETED	
A	Site Boundary	S	.80	2.6E-08	2.6E-08	2.6E-08	1.4E-09
A	Site Boundary	SSW	.82	3.6E-08	3.6E-08	3.6E-08	1.6E-09
A	Site Boundary	SW	.97	1.0E-07	9.9E-08	1.0E-07	8.0E-10
A	Site Boundary	WSW	.93	9.3E-08	9.3E-08	9.3E-08	9.4E-10
A	Site Boundary	W	.91	2.8E-07	2.8E-07	2.8E-07	2.3E-09
A	Site Boundary	WNW	.94	3.0E-07	3.0E-07	3.0E-07	3.3E-09
A	Site Boundary	NW	.81	1.8E-07	1.7E-07	1.7E-07	2.2E-09
A	Site Boundary	NNW	.69	5.0E-08	5.0E-08	4.9E-08	2.9E-09
A	Site Boundary	N	.67	4.0E-08	4.0E-08	4.0E-08	3.5E-09
A	Site Boundary	NNE	.60	5.3E-09	5.3E-09	5.3E-09	7.4E-10
A	Site Boundary	NE	.62	2.4E-09	2.4E-09	2.4E-09	2.8E-10
A	Site Boundary	ENE	.59	1.7E-09	1.7E-09	1.7E-09	2.7E-10
A	Site Boundary	E	.53	7.5E-10	7.5E-10	7.5E-10	2.7E-10
A	Site Boundary	ESE	.54	3.4E-09	3.4E-09	3.4E-09	4.0E-10
A	Site Boundary	SE	.65	5.0E-09	5.0E-09	5.0E-09	5.1E-10
A	Site Boundary	SSE	.81	2.2E-08	2.2E-08	2.2E-08	1.2E-09
A	Nearest Res	SSW	3.00	7.2E-08	7.1E-08	7.0E-08	3.3E-10
A	Nearest Res	SW	1.00	1.1E-07	1.1E-07	1.1E-07	7.8E-10
A	Nearest Res	WSW	2.50	1.1E-07	1.1E-07	1.0E-07	3.0E-10
A	Nearest Res	W	1.00	2.9E-07	2.9E-07	2.9E-07	2.2E-09
A	Nearest Res	WNW	1.70	3.9E-07	3.9E-07	3.8E-07	1.3E-09
A	Nearest Res	NW	.90	2.6E-07	2.6E-07	2.6E-07	5.0E-09
A	Nearest Res	NNW	1.90	2.5E-07	2.5E-07	2.4E-07	1.6E-09
A	Nearest Res	N	2.90	6.7E-08	6.7E-08	6.6E-08	5.6E-10
A	Nearest Res	NNE	1.70	4.0E-08	4.0E-08	3.9E-08	4.9E-10
A	Nearest Res	ENE	1.70	2.0E-08	2.0E-08	2.0E-08	2.3E-10
A	Nearest Res	E	2.20	2.7E-08	2.7E-08	2.7E-08	1.9E-10
A	Nearest Res	SE	2.80	1.8E-08	1.8E-08	1.8E-08	1.7E-10
A	Nearest Cow	NNW	3.50	2.0E-07	2.0E-07	2.0E-07	5.6E-10
A	Nearest Garde	SSW	3.00	7.2E-08	7.1E-08	7.0E-08	3.3E-10
A	Nearest Garde	SW	2.20	1.4E-07	1.3E-07	1.3E-07	3.9E-10
A	Nearest Garde	WSW	2.50	1.1E-07	1.1E-07	1.0E-07	3.0E-10
A	Nearest Garde	WNW	1.70	3.9E-07	3.9E-07	3.8E-07	1.3E-09
A	Nearest Garde	NW	2.00	3.9E-07	3.9E-07	3.8E-07	1.7E-09
A	Nearest Garde	NNW	2.80	2.3E-07	2.2E-07	2.2E-07	8.3E-10
A	Nearest Garde	ESE	2.30	1.9E-08	1.9E-08	1.9E-08	1.5E-10
A	MAXIMUM CHI/Q	S	1.50	5.9E-08	5.9E-08	5.9E-08	8.4E-10
A	MAXIMUM CHI/Q	SSW	1.50	7.8E-08	7.7E-08	7.7E-08	9.5E-10
A	MAXIMUM CHI/Q	SW	1.50	2.1E-07	2.1E-07	2.1E-07	8.5E-10
A	MAXIMUM CHI/Q	WSW	1.50	2.3E-07	2.3E-07	2.2E-07	8.8E-10
A	MAXIMUM CHI/Q	W	1.00	2.9E-07	2.9E-07	2.9E-07	2.2E-09
A	MAXIMUM CHI/Q	WNW	1.50	4.8E-07	4.7E-07	4.7E-07	1.7E-09
A	MAXIMUM CHI/Q	NW	1.50	6.5E-07	6.5E-07	6.4E-07	3.3E-09
A	MAXIMUM CHI/Q	NNW	2.00	2.5E-07	2.4E-07	2.4E-07	1.4E-09
A	MAXIMUM CHI/Q	N	1.50	9.0E-08	8.9E-08	8.9E-08	1.6E-09
A	MAXIMUM CHI/Q	NNE	1.50	4.0E-08	4.0E-08	3.9E-08	5.8E-10
A	MAXIMUM CHI/Q	NE	7.50	2.0E-08	2.0E-08	2.0E-08	7.8E-11
A	MAXIMUM CHI/Q	ENE	1.50	2.0E-08	2.0E-08	2.0E-08	2.7E-10
A	MAXIMUM CHI/Q	E	1.50	3.0E-08	3.0E-08	3.0E-08	3.4E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.3E-08	2.3E-08	2.3E-08	2.9E-10
A	MAXIMUM CHI/Q	SE	1.50	2.6E-08	2.6E-08	2.6E-08	4.2E-10
A	MAXIMUM CHI/Q	SSE	1.50	4.6E-08	4.6E-08	4.6E-08	7.5E-10

B305

Atmospheric Diffusion Estimates

Elevated Releases

October-December 2017

ERP ELEVATED STACK RELEASES - OCT-DEC 2017
 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	2.000E-15	1.587E-09	2.474E-08	4.690E-08	5.712E-08	4.988E-08	4.100E-08	3.360E-08	2.788E-08	3.014E-08	3.067E-08
SSW	1.365E-09	5.727E-09	3.345E-08	6.095E-08	7.626E-08	6.904E-08	5.855E-08	6.418E-08	6.510E-08	5.617E-08	4.900E-08
SW	2.491E-16	3.279E-10	1.394E-08	4.186E-08	8.720E-08	6.278E-08	4.717E-08	3.693E-08	2.991E-08	2.488E-08	2.116E-08
WSW	2.390E-16	3.433E-10	1.721E-08	5.084E-08	9.758E-08	6.361E-08	4.517E-08	3.410E-08	2.691E-08	2.196E-08	1.838E-08
W	6.762E-14	1.117E-08	6.577E-08	9.873E-08	1.106E-07	7.259E-08	5.176E-08	3.918E-08	3.100E-08	2.534E-08	2.126E-08
WNW	8.322E-15	4.064E-09	6.815E-08	1.324E-07	1.683E-07	1.030E-07	6.986E-08	5.302E-08	4.194E-08	3.316E-08	2.704E-08
NW	5.814E-11	4.614E-09	8.449E-08	2.228E-07	3.445E-07	2.046E-07	1.368E-07	1.011E-07	7.859E-08	6.222E-08	5.080E-08
NNW	9.498E-11	8.298E-09	3.901E-08	7.568E-08	1.195E-07	1.166E-07	1.055E-07	9.440E-08	8.697E-08	6.891E-08	5.634E-08
N	3.712E-09	1.922E-08	4.281E-08	5.882E-08	6.526E-08	5.905E-08	5.053E-08	4.220E-08	3.567E-08	3.058E-08	2.658E-08
NNE	3.538E-10	2.093E-08	4.232E-08	4.711E-08	4.536E-08	3.852E-08	3.198E-08	2.676E-08	2.272E-08	1.959E-08	1.714E-08
NE	5.814E-11	3.811E-09	1.349E-08	2.073E-08	2.555E-08	2.406E-08	2.117E-08	1.836E-08	1.596E-08	1.399E-08	1.238E-08
ENE	4.729E-16	4.225E-10	6.980E-09	1.405E-08	1.892E-08	1.776E-08	1.544E-08	1.325E-08	1.144E-08	9.981E-09	8.813E-09
E	3.212E-16	3.450E-10	6.476E-09	1.389E-08	1.994E-08	1.930E-08	1.703E-08	1.472E-08	1.274E-08	1.111E-08	9.778E-09
ESE	8.241E-16	7.629E-10	1.289E-08	2.557E-08	3.316E-08	3.027E-08	2.574E-08	2.169E-08	1.842E-08	1.583E-08	1.377E-08
SE	2.789E-15	1.950E-09	2.958E-08	5.609E-08	6.994E-08	6.272E-08	5.276E-08	4.410E-08	3.720E-08	3.179E-08	2.752E-08
SSE	5.527E-11	6.408E-09	5.148E-08	9.131E-08	1.099E-07	9.716E-08	8.100E-08	6.729E-08	5.651E-08	4.812E-08	4.156E-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	2.667E-08	1.597E-08	1.017E-08	5.665E-09	3.828E-09	2.817E-09	2.167E-09	1.738E-09	1.442E-09	1.223E-09	1.052E-09
SSW	4.416E-08	2.811E-08	1.789E-08	9.975E-09	6.708E-09	4.890E-09	3.766E-09	3.022E-09	2.500E-09	2.115E-09	1.822E-09
SW	2.010E-08	1.763E-08	1.185E-08	7.101E-09	5.274E-09	4.152E-09	3.430E-09	2.808E-09	2.358E-09	2.023E-09	1.765E-09
WSW	1.661E-08	1.183E-08	8.722E-09	5.575E-09	3.790E-09	2.815E-09	2.212E-09	1.804E-09	1.514E-09	1.297E-09	1.130E-09
W	1.819E-08	1.045E-08	8.013E-09	5.754E-09	4.530E-09	3.396E-09	2.674E-09	2.187E-09	1.839E-09	1.580E-09	1.379E-09
WNW	2.280E-08	1.241E-08	8.258E-09	4.864E-09	3.285E-09	2.424E-09	1.895E-09	1.536E-09	1.278E-09	1.086E-09	9.395E-10
NW	4.296E-08	2.370E-08	1.604E-08	9.625E-09	6.462E-09	4.754E-09	3.762E-09	3.064E-09	2.555E-09	2.176E-09	1.886E-09
NNW	4.843E-08	2.834E-08	1.854E-08	1.077E-08	7.350E-09	5.476E-09	4.364E-09	3.602E-09	3.085E-09	2.661E-09	2.319E-09
N	2.345E-08	1.469E-08	1.220E-08	1.083E-08	1.066E-08	9.688E-09	7.729E-09	6.352E-09	5.342E-09	4.589E-09	4.007E-09
NNE	1.924E-08	4.555E-08	3.023E-08	1.792E-08	1.241E-08	9.355E-09	7.434E-09	6.126E-09	5.183E-09	4.475E-09	3.926E-09
NE	1.405E-08	2.490E-08	1.632E-08	9.516E-09	6.518E-09	4.871E-09	3.895E-09	3.218E-09	2.728E-09	2.343E-09	2.046E-09
ENE	9.718E-09	2.213E-08	1.507E-08	9.181E-09	6.458E-09	4.916E-09	4.230E-09	3.664E-09	3.097E-09	2.672E-09	2.343E-09
E	1.049E-08	1.722E-08	1.157E-08	6.941E-09	4.834E-09	3.654E-09	2.909E-09	2.400E-09	2.137E-09	1.914E-09	1.675E-09
ESE	1.408E-08	1.526E-08	1.002E-08	5.814E-09	3.954E-09	2.935E-09	2.301E-09	1.875E-09	1.570E-09	1.343E-09	1.169E-09
SE	2.411E-08	1.466E-08	1.120E-08	7.967E-09	5.836E-09	4.614E-09	3.827E-09	3.276E-09	2.748E-09	2.354E-09	2.050E-09
SSE	4.332E-08	4.209E-08	2.678E-08	1.496E-08	9.935E-09	7.245E-09	5.604E-09	4.514E-09	3.745E-09	3.177E-09	2.744E-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	2.944E-08	5.163E-08	4.041E-08	3.038E-08	2.903E-08	1.577E-08	5.849E-09	2.827E-09	1.748E-09	1.225E-09
SSW	3.951E-08	6.965E-08	6.360E-08	6.143E-08	4.933E-08	2.713E-08	1.028E-08	4.925E-09	3.036E-09	2.120E-09
SW	2.332E-08	6.627E-08	4.724E-08	3.000E-08	2.187E-08	1.561E-08	7.345E-09	4.162E-09	2.814E-09	2.027E-09
WSW	2.841E-08	7.210E-08	4.566E-08	2.708E-08	1.878E-08	1.151E-08	5.481E-09	2.834E-09	1.810E-09	1.300E-09
W	6.829E-08	9.105E-08	5.228E-08	3.118E-08	2.133E-08	1.109E-08	5.712E-09	3.409E-09	2.194E-09	1.582E-09
WNW	8.245E-08	1.313E-07	7.196E-08	4.176E-08	2.728E-08	1.287E-08	4.916E-09	2.442E-09	1.541E-09	1.089E-09
NW	1.282E-07	2.553E-07	1.406E-07	7.880E-08	5.128E-08	2.458E-08	9.645E-09	4.813E-09	3.070E-09	2.181E-09
NNW	4.848E-08	1.085E-07	1.040E-07	8.221E-08	5.713E-08	2.845E-08	1.098E-08	5.531E-09	3.623E-09	2.660E-09
N	4.468E-08	6.107E-08	4.947E-08	3.560E-08	2.661E-08	1.553E-08	1.106E-08	9.164E-09	6.361E-09	4.597E-09
NNE	3.969E-08	4.271E-08	3.163E-08	2.268E-08	1.864E-08	3.290E-08	1.821E-08	9.402E-09	6.141E-09	4.482E-09
NE	1.456E-08	2.382E-08	2.082E-08	1.590E-08	1.348E-08	1.868E-08	9.696E-09	4.920E-09	3.225E-09	2.347E-09
ENE	8.666E-09	1.732E-08	1.518E-08	1.140E-08	9.494E-09	1.623E-08	9.278E-09	5.053E-09	3.610E-09	2.676E-09
E	8.410E-09	1.831E-08	1.671E-08	1.268E-08	1.044E-08	1.321E-08	7.033E-09	3.671E-09	2.445E-09	1.892E-09
ESE	1.583E-08	3.019E-08	2.533E-08	1.837E-08	1.449E-08	1.267E-08	5.922E-09	2.953E-09	1.881E-09	1.346E-09
SE	3.522E-08	6.365E-08	5.195E-08	3.711E-08	2.753E-08	1.522E-08	7.739E-09	4.625E-09	3.232E-09	2.358E-09
SSE	5.917E-08	1.001E-07	7.982E-08	5.639E-08	4.415E-08	3.556E-08	1.536E-08	7.306E-09	4.532E-09	3.185E-09

B307

ERP ELEVATED STACK RELEASES - OCT-DEC 2017
 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	2.000E-15	1.586E-09	2.471E-08	4.684E-08	5.701E-08	4.975E-08	4.086E-08	3.346E-08	2.774E-08	2.997E-08	3.047E-08
SSW	1.365E-09	5.724E-09	3.342E-08	6.087E-08	7.610E-08	6.884E-08	5.833E-08	6.387E-08	6.471E-08	5.578E-08	4.861E-08
SW	2.490E-16	3.277E-10	1.392E-08	4.177E-08	8.687E-08	6.244E-08	4.683E-08	3.660E-08	2.958E-08	2.455E-08	2.083E-08
WSW	2.389E-16	3.430E-10	1.719E-08	5.075E-08	9.728E-08	6.332E-08	4.490E-08	3.384E-08	2.666E-08	2.171E-08	1.815E-08
W	6.760E-14	1.116E-08	6.568E-08	9.854E-08	1.102E-07	7.229E-08	5.149E-08	3.894E-08	3.077E-08	2.513E-08	2.106E-08
WNW	8.320E-15	4.061E-09	6.805E-08	1.321E-07	1.677E-07	1.025E-07	6.943E-08	5.262E-08	4.157E-08	3.283E-08	2.673E-08
NW	5.812E-11	4.611E-09	8.440E-08	2.224E-07	3.433E-07	2.036E-07	1.359E-07	1.002E-07	7.774E-08	6.142E-08	5.005E-08
NNW	9.494E-11	8.292E-09	3.897E-08	7.557E-08	1.192E-07	1.163E-07	1.052E-07	9.399E-08	8.652E-08	6.850E-08	5.596E-08
N	3.711E-09	1.922E-08	4.279E-08	5.876E-08	6.516E-08	5.892E-08	5.039E-08	4.205E-08	3.553E-08	3.044E-08	2.644E-08
NNE	3.537E-10	2.092E-08	4.228E-08	4.705E-08	4.528E-08	3.842E-08	3.188E-08	2.666E-08	2.262E-08	1.949E-08	1.704E-08
NE	5.812E-11	3.809E-09	1.348E-08	2.071E-08	2.551E-08	2.401E-08	2.111E-08	1.830E-08	1.590E-08	1.393E-08	1.232E-08
ENE	4.727E-16	4.222E-10	6.973E-09	1.403E-08	1.886E-08	1.769E-08	1.535E-08	1.316E-08	1.135E-08	9.891E-09	8.722E-09
E	3.212E-16	3.448E-10	6.467E-09	1.386E-08	1.988E-08	1.921E-08	1.693E-08	1.462E-08	1.263E-08	1.100E-08	9.675E-09
ESE	8.239E-16	7.624E-10	1.288E-08	2.553E-08	3.309E-08	3.018E-08	2.564E-08	2.159E-08	1.832E-08	1.573E-08	1.368E-08
SE	2.789E-15	1.949E-09	2.956E-08	5.602E-08	6.981E-08	6.256E-08	5.258E-08	4.392E-08	3.702E-08	3.161E-08	2.735E-08
SSE	5.526E-11	6.404E-09	5.144E-08	9.121E-08	1.098E-07	9.694E-08	8.076E-08	6.705E-08	5.627E-08	4.789E-08	4.133E-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	2.647E-08	1.579E-08	1.001E-08	5.537E-09	3.714E-09	2.712E-09	2.071E-09	1.648E-09	1.358E-09	1.142E-09	9.759E-10
SSW	4.376E-08	2.772E-08	1.756E-08	9.702E-09	6.463E-09	4.668E-09	3.562E-09	2.833E-09	2.321E-09	1.946E-09	1.661E-09
SW	1.974E-08	1.699E-08	1.126E-08	6.566E-09	4.728E-09	3.609E-09	2.885E-09	2.299E-09	1.883E-09	1.576E-09	1.343E-09
WSW	1.636E-08	1.155E-08	8.437E-09	5.301E-09	3.545E-09	2.592E-09	2.005E-09	1.611E-09	1.331E-09	1.124E-09	9.658E-10
W	1.801E-08	1.029E-08	7.849E-09	5.579E-09	4.347E-09	3.226E-09	2.514E-09	2.036E-09	1.694E-09	1.440E-09	1.245E-09
WNW	2.251E-08	1.217E-08	8.053E-09	4.685E-09	3.125E-09	2.278E-09	1.760E-09	1.410E-09	1.159E-09	9.729E-10	8.315E-10
NW	4.224E-08	2.306E-08	1.544E-08	9.071E-09	5.972E-09	4.309E-09	3.344E-09	2.673E-09	2.189E-09	1.832E-09	1.562E-09
NNW	4.807E-08	2.802E-08	1.827E-08	1.053E-08	7.129E-09	5.272E-09	4.168E-09	3.414E-09	2.902E-09	2.483E-09	2.147E-09
N	2.331E-08	1.456E-08	1.204E-08	1.059E-08	1.027E-08	9.183E-09	7.244E-09	5.888E-09	4.903E-09	4.171E-09	3.608E-09
NNE	1.911E-08	4.419E-08	2.900E-08	1.682E-08	1.141E-08	8.427E-09	6.566E-09	5.310E-09	4.412E-09	3.744E-09	3.229E-09
NE	1.398E-08	2.466E-08	1.611E-08	9.333E-09	6.351E-09	4.714E-09	3.744E-09	3.073E-09	2.587E-09	2.207E-09	1.914E-09
ENE	9.602E-09	2.157E-08	1.454E-08	8.702E-09	6.012E-09	4.499E-09	3.797E-09	3.227E-09	2.685E-09	2.281E-09	1.970E-09
E	1.037E-08	1.682E-08	1.120E-08	6.604E-09	4.520E-09	3.359E-09	2.630E-09	2.136E-09	1.864E-09	1.637E-09	1.411E-09
ESE	1.397E-08	1.511E-08	9.887E-09	5.701E-09	3.853E-09	2.842E-09	2.215E-09	1.793E-09	1.493E-09	1.269E-09	1.097E-09
SE	2.394E-08	1.449E-08	1.102E-08	7.750E-09	5.615E-09	4.390E-09	3.602E-09	3.051E-09	2.534E-09	2.149E-09	1.854E-09
SSE	4.304E-08	4.142E-08	2.621E-08	1.448E-08	9.511E-09	6.861E-09	5.251E-09	4.186E-09	3.437E-09	2.887E-09	2.469E-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	2.941E-08	5.152E-08	4.027E-08	3.022E-08	2.884E-08	1.560E-08	5.722E-09	2.723E-09	1.658E-09	1.144E-09
SSW	3.946E-08	6.949E-08	6.335E-08	6.106E-08	4.894E-08	2.677E-08	1.001E-08	4.705E-09	2.846E-09	1.952E-09
SW	2.328E-08	6.599E-08	4.690E-08	2.967E-08	2.153E-08	1.506E-08	6.793E-09	3.618E-09	2.308E-09	1.581E-09
WSW	2.836E-08	7.185E-08	4.539E-08	2.683E-08	1.854E-08	1.124E-08	5.218E-09	2.611E-09	1.617E-09	1.127E-09
W	6.817E-08	9.077E-08	5.202E-08	3.096E-08	2.114E-08	1.092E-08	5.536E-09	3.240E-09	2.042E-09	1.443E-09
WNW	8.229E-08	1.308E-07	7.152E-08	4.140E-08	2.697E-08	1.264E-08	4.740E-09	2.297E-09	1.414E-09	9.756E-10
NW	1.280E-07	2.543E-07	1.397E-07	7.795E-08	5.053E-08	2.394E-08	9.109E-09	4.367E-09	2.680E-09	1.838E-09
NNW	4.842E-08	1.082E-07	1.037E-07	8.179E-08	5.675E-08	2.814E-08	1.074E-08	5.326E-09	3.434E-09	2.483E-09
N	4.465E-08	6.097E-08	4.933E-08	3.545E-08	2.647E-08	1.539E-08	1.077E-08	8.698E-09	5.900E-09	4.179E-09
NNE	3.966E-08	4.262E-08	3.154E-08	2.258E-08	1.853E-08	3.187E-08	1.712E-08	8.478E-09	5.327E-09	3.751E-09
NE	1.455E-08	2.378E-08	2.076E-08	1.583E-08	1.341E-08	1.849E-08	9.514E-09	4.763E-09	3.080E-09	2.211E-09
ENE	8.653E-09	1.727E-08	1.510E-08	1.131E-08	9.395E-09	1.579E-08	8.805E-09	4.622E-09	3.183E-09	2.285E-09
E	8.394E-09	1.824E-08	1.661E-08	1.258E-08	1.033E-08	1.289E-08	6.700E-09	3.377E-09	2.174E-09	1.621E-09
ESE	1.581E-08	3.012E-08	2.523E-08	1.827E-08	1.439E-08	1.254E-08	5.810E-09	2.860E-09	1.799E-09	1.272E-09
SE	3.519E-08	6.352E-08	5.178E-08	3.693E-08	2.735E-08	1.505E-08	7.527E-09	4.402E-09	3.011E-09	2.154E-09
SSE	5.911E-08	9.994E-08	7.959E-08	5.616E-08	4.391E-08	3.502E-08	1.488E-08	6.923E-09	4.205E-09	2.895E-09

B308

ERP ELEVATED STACK RELEASES - OCT-DEC 2017
 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	2.000E-15	1.587E-09	2.473E-08	4.688E-08	5.657E-08	4.893E-08	3.984E-08	3.237E-08	2.664E-08	2.867E-08	2.907E-08
SSW	1.365E-09	5.692E-09	3.338E-08	6.088E-08	7.553E-08	6.782E-08	5.708E-08	6.228E-08	6.295E-08	5.406E-08	4.697E-08
SW	2.491E-16	3.278E-10	1.393E-08	4.183E-08	8.643E-08	6.184E-08	4.624E-08	3.606E-08	2.911E-08	2.415E-08	2.048E-08
WSW	2.389E-16	3.432E-10	1.720E-08	5.076E-08	9.655E-08	6.253E-08	4.419E-08	3.323E-08	2.614E-08	2.127E-08	1.776E-08
W	6.762E-14	1.117E-08	6.541E-08	9.772E-08	1.090E-07	7.132E-08	5.071E-08	3.831E-08	3.025E-08	2.469E-08	2.068E-08
WNW	8.322E-15	4.063E-09	6.807E-08	1.313E-07	1.653E-07	1.002E-07	6.745E-08	5.091E-08	4.008E-08	3.152E-08	2.555E-08
NW	5.813E-11	4.584E-09	8.431E-08	2.216E-07	3.389E-07	1.991E-07	1.321E-07	9.701E-08	7.500E-08	5.903E-08	4.790E-08
NNW	9.497E-11	8.229E-09	3.869E-08	7.531E-08	1.183E-07	1.148E-07	1.035E-07	9.243E-08	8.510E-08	6.714E-08	5.461E-08
N	3.712E-09	1.906E-08	4.239E-08	5.842E-08	6.447E-08	5.794E-08	4.927E-08	4.090E-08	3.440E-08	2.936E-08	2.541E-08
NNE	3.538E-10	2.075E-08	4.163E-08	4.640E-08	4.455E-08	3.762E-08	3.107E-08	2.586E-08	2.186E-08	1.877E-08	1.637E-08
NE	5.813E-11	3.781E-09	1.338E-08	2.062E-08	2.528E-08	2.368E-08	2.073E-08	1.791E-08	1.552E-08	1.356E-08	1.197E-08
ENE	4.728E-16	4.224E-10	6.978E-09	1.405E-08	1.874E-08	1.745E-08	1.505E-08	1.284E-08	1.102E-08	9.567E-09	8.410E-09
E	3.212E-16	3.450E-10	6.473E-09	1.388E-08	1.976E-08	1.897E-08	1.662E-08	1.428E-08	1.229E-08	1.066E-08	9.349E-09
ESE	8.240E-16	7.628E-10	1.289E-08	2.556E-08	3.286E-08	2.974E-08	2.509E-08	2.100E-08	1.772E-08	1.514E-08	1.311E-08
SE	2.789E-15	1.950E-09	2.958E-08	5.607E-08	6.930E-08	6.161E-08	5.141E-08	4.267E-08	3.577E-08	3.039E-08	2.617E-08
SSE	5.527E-11	6.377E-09	5.135E-08	9.117E-08	1.089E-07	9.538E-08	7.889E-08	6.507E-08	5.429E-08	4.595E-08	3.948E-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	2.515E-08	1.468E-08	9.059E-09	4.762E-09	3.034E-09	2.123E-09	1.568E-09	1.212E-09	9.742E-10	8.023E-10	6.721E-10
SSW	4.220E-08	2.628E-08	1.618E-08	8.460E-09	5.330E-09	3.725E-09	2.766E-09	2.148E-09	1.723E-09	1.417E-09	1.188E-09
SW	1.945E-08	1.683E-08	1.091E-08	6.046E-09	4.103E-09	2.995E-09	2.351E-09	1.847E-09	1.494E-09	1.236E-09	1.043E-09
WSW	1.603E-08	1.120E-08	7.984E-09	4.804E-09	3.112E-09	2.218E-09	1.679E-09	1.325E-09	1.077E-09	8.968E-10	7.605E-10
W	1.768E-08	1.010E-08	7.654E-09	5.147E-09	3.789E-09	2.732E-09	2.078E-09	1.647E-09	1.346E-09	1.125E-09	9.576E-10
WNW	2.142E-08	1.128E-08	7.267E-09	4.004E-09	2.508E-09	1.745E-09	1.308E-09	1.023E-09	8.229E-10	6.779E-10	5.694E-10
NW	4.027E-08	2.152E-08	1.408E-08	7.895E-09	4.943E-09	3.425E-09	2.583E-09	2.023E-09	1.628E-09	1.342E-09	1.127E-09
NNW	4.671E-08	2.651E-08	1.675E-08	9.043E-09	5.678E-09	3.942E-09	2.958E-09	2.329E-09	1.927E-09	1.610E-09	1.362E-09
N	2.233E-08	1.381E-08	1.143E-08	1.022E-08	9.875E-09	8.547E-09	6.601E-09	5.269E-09	4.316E-09	3.617E-09	3.087E-09
NNE	1.842E-08	4.394E-08	2.810E-08	1.556E-08	1.007E-08	7.167E-09	5.412E-09	4.259E-09	3.455E-09	2.869E-09	2.426E-09
NE	1.361E-08	2.414E-08	1.528E-08	8.394E-09	5.442E-09	3.883E-09	2.992E-09	2.396E-09	1.973E-09	1.650E-09	1.406E-09
ENE	9.285E-09	2.142E-08	1.407E-08	7.953E-09	5.124E-09	3.622E-09	2.915E-09	2.395E-09	1.945E-09	1.616E-09	1.367E-09
E	1.003E-08	1.657E-08	1.075E-08	5.995E-09	3.837E-09	2.699E-09	2.016E-09	1.571E-09	1.324E-09	1.130E-09	9.513E-10
ESE	1.339E-08	1.454E-08	9.241E-09	5.026E-09	3.178E-09	2.217E-09	1.647E-09	1.278E-09	1.023E-09	8.398E-10	7.028E-10
SE	2.282E-08	1.362E-08	1.030E-08	7.259E-09	5.270E-09	4.141E-09	3.420E-09	2.909E-09	2.385E-09	2.001E-09	1.709E-09
SSE	4.110E-08	3.955E-08	2.429E-08	1.277E-08	8.032E-09	5.592E-09	4.152E-09	3.223E-09	2.585E-09	2.125E-09	1.782E-09

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	2.943E-08	5.102E-08	3.928E-08	2.905E-08	2.750E-08	1.451E-08	4.949E-09	2.144E-09	1.223E-09	8.050E-10
SSW	3.945E-08	6.885E-08	6.202E-08	5.937E-08	4.731E-08	2.533E-08	8.785E-09	3.769E-09	2.162E-09	1.423E-09
SW	2.331E-08	6.559E-08	4.633E-08	2.920E-08	2.118E-08	1.478E-08	6.263E-09	3.033E-09	1.856E-09	1.241E-09
WSW	2.837E-08	7.126E-08	4.470E-08	2.631E-08	1.816E-08	1.084E-08	4.759E-09	2.241E-09	1.332E-09	8.998E-10
W	6.771E-08	8.976E-08	5.125E-08	3.043E-08	2.076E-08	1.070E-08	5.101E-09	2.752E-09	1.655E-09	1.128E-09
WNW	8.195E-08	1.288E-07	6.957E-08	3.991E-08	2.579E-08	1.175E-08	4.064E-09	1.774E-09	1.028E-09	6.807E-10
NW	1.276E-07	2.507E-07	1.359E-07	7.520E-08	4.837E-08	2.238E-08	7.958E-09	3.493E-09	2.033E-09	1.347E-09
NNW	4.820E-08	1.072E-07	1.021E-07	8.035E-08	5.539E-08	2.666E-08	9.259E-09	4.011E-09	2.356E-09	1.612E-09
N	4.433E-08	6.023E-08	4.823E-08	3.434E-08	2.544E-08	1.465E-08	1.034E-08	8.123E-09	5.287E-09	3.628E-09
NNE	3.911E-08	4.188E-08	3.073E-08	2.182E-08	1.784E-08	3.123E-08	1.591E-08	7.240E-09	4.282E-09	2.878E-09
NE	1.446E-08	2.353E-08	2.039E-08	1.545E-08	1.305E-08	1.787E-08	8.613E-09	3.942E-09	2.405E-09	1.655E-09
ENE	8.662E-09	1.712E-08	1.480E-08	1.098E-08	9.077E-09	1.546E-08	8.055E-09	3.740E-09	2.372E-09	1.621E-09
E	8.405E-09	1.810E-08	1.631E-08	1.224E-08	9.992E-09	1.253E-08	6.093E-09	2.729E-09	1.604E-09	1.121E-09
ESE	1.583E-08	2.985E-08	2.469E-08	1.768E-08	1.382E-08	1.193E-08	5.141E-09	2.245E-09	1.286E-09	8.434E-10
SE	3.521E-08	6.294E-08	5.064E-08	3.569E-08	2.618E-08	1.419E-08	7.052E-09	4.154E-09	2.856E-09	2.007E-09
SSE	5.905E-08	9.894E-08	7.776E-08	5.419E-08	4.200E-08	3.311E-08	1.322E-08	5.667E-09	3.245E-09	2.134E-09

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ERP ELEVATED STACK RELEASES - OCT-DEC 2017
 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	1.462E-10	8.771E-10	1.868E-09	1.934E-09	1.208E-09	8.102E-10	5.723E-10	4.204E-10	3.184E-10	2.692E-10	2.390E-10
SSW	4.188E-10	1.163E-09	2.205E-09	2.222E-09	1.371E-09	9.157E-10	6.457E-10	4.739E-10	4.532E-10	3.425E-10	2.680E-10
SW	2.766E-11	1.659E-10	3.533E-10	3.660E-10	4.331E-10	2.384E-10	1.487E-10	1.014E-10	7.349E-11	5.565E-11	4.358E-11
WSW	2.634E-11	1.580E-10	3.365E-10	7.765E-10	4.316E-10	2.348E-10	1.452E-10	9.849E-11	7.111E-11	5.373E-11	4.204E-11
W	1.844E-11	1.019E-09	9.843E-10	6.340E-10	2.975E-10	1.619E-10	1.001E-10	6.788E-11	4.901E-11	3.704E-11	2.897E-11
WNW	4.742E-11	2.845E-10	1.952E-09	1.584E-09	9.932E-10	5.043E-10	3.003E-10	1.999E-10	1.478E-10	1.119E-10	8.932E-11
NW	6.229E-10	1.037E-09	1.667E-09	3.988E-09	2.624E-09	1.302E-09	7.642E-10	5.003E-10	3.545E-10	2.669E-10	2.114E-10
NNW	8.441E-10	1.015E-09	1.348E-09	1.210E-09	1.338E-09	7.271E-10	4.521E-10	3.827E-10	2.849E-10	2.287E-10	1.948E-10
N	2.971E-09	2.976E-09	3.357E-09	2.793E-09	1.559E-09	1.008E-09	6.996E-10	5.095E-10	3.842E-10	2.977E-10	2.357E-10
NNE	3.143E-09	2.661E-09	2.415E-09	1.756E-09	8.940E-10	5.585E-10	3.812E-10	2.752E-10	2.066E-10	1.598E-10	1.265E-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	3.820E-11	2.292E-10	4.879E-10	5.054E-10	3.157E-10	2.117E-10	1.495E-10	1.098E-10	8.318E-11	6.456E-11	5.113E-11
E	3.293E-11	1.975E-10	4.206E-10	4.357E-10	2.721E-10	1.825E-10	1.289E-10	9.468E-11	7.171E-11	5.566E-11	4.408E-11
ESE	6.981E-11	4.188E-10	8.917E-10	9.237E-10	5.769E-10	3.869E-10	2.733E-10	2.007E-10	1.520E-10	1.180E-10	9.345E-11
SE	1.897E-10	1.138E-09	2.423E-09	2.510E-09	1.568E-09	1.051E-09	7.424E-10	5.454E-10	4.131E-10	3.206E-10	2.539E-10
SSE	7.967E-10	2.080E-09	3.888E-09	3.903E-09	2.404E-09	1.605E-09	1.132E-09	8.305E-10	6.287E-10	4.879E-10	3.863E-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	1.921E-10	1.046E-10	6.575E-11	3.514E-11	2.169E-11	1.877E-11	1.343E-11	1.007E-11	7.996E-12	6.387E-12	5.214E-12
SSW	2.157E-10	1.441E-10	9.676E-11	5.512E-11	3.840E-11	2.598E-11	1.862E-11	1.398E-11	1.089E-11	8.702E-12	7.103E-12
SW	3.566E-11	4.599E-11	3.501E-11	2.207E-11	1.418E-11	8.485E-12	5.904E-12	4.433E-12	3.447E-12	2.754E-12	2.248E-12
WSW	3.379E-11	3.593E-11	2.663E-11	1.606E-11	9.719E-12	6.516E-12	4.669E-12	3.506E-12	2.726E-12	2.178E-12	1.777E-12
W	2.329E-11	1.042E-11	3.036E-11	2.006E-11	1.072E-11	7.190E-12	5.152E-12	3.868E-12	3.008E-12	2.403E-12	1.961E-12
WNW	7.632E-11	4.232E-11	2.890E-11	1.672E-11	1.089E-11	7.442E-12	5.420E-12	4.071E-12	3.213E-12	2.567E-12	2.095E-12
NW	1.758E-10	9.354E-11	6.244E-11	4.035E-11	2.461E-11	1.647E-11	1.206E-11	9.049E-12	7.059E-12	5.639E-12	4.603E-12
NNW	1.741E-10	1.166E-10	8.714E-11	5.423E-11	3.478E-11	2.304E-11	1.535E-11	1.117E-11	8.676E-12	6.931E-12	5.658E-12
N	1.900E-10	9.022E-11	5.515E-11	2.918E-11	6.710E-11	4.181E-11	2.991E-11	2.245E-11	1.746E-11	1.394E-11	1.138E-11
NNE	1.021E-10	2.064E-10	1.272E-10	6.563E-11	3.997E-11	2.676E-11	1.912E-11	1.432E-11	1.111E-11	8.854E-12	7.215E-12
NE	6.127E-11	1.474E-10	9.089E-11	4.689E-11	2.856E-11	1.912E-11	1.346E-11	1.011E-11	7.860E-12	6.278E-12	5.124E-12
ENE	4.118E-11	6.649E-11	5.079E-11	3.209E-11	2.062E-11	1.362E-11	9.524E-12	6.310E-12	4.899E-12	3.909E-12	3.188E-12
E	3.550E-11	6.329E-11	4.891E-11	3.115E-11	2.005E-11	1.324E-11	9.247E-12	6.733E-12	5.102E-12	3.562E-12	2.905E-12
ESE	7.526E-11	8.841E-11	6.440E-11	3.927E-11	2.503E-11	1.657E-11	1.163E-11	8.526E-12	6.499E-12	5.106E-12	4.110E-12
SE	2.045E-10	9.681E-11	5.900E-11	3.099E-11	1.884E-11	1.291E-11	9.602E-12	1.706E-11	1.313E-11	1.041E-11	8.464E-12
SSE	3.112E-10	3.406E-10	2.077E-10	1.058E-10	6.423E-11	4.304E-11	3.081E-11	2.311E-11	1.796E-11	1.434E-11	1.170E-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	1.677E-09	1.193E-09	5.750E-10	3.288E-10	2.306E-10	1.068E-10	3.596E-11	1.741E-11	1.024E-11	6.429E-12
SSW	1.981E-09	1.358E-09	6.490E-10	4.170E-10	2.707E-10	1.390E-10	5.694E-11	2.635E-11	1.413E-11	8.759E-12
SW	3.173E-10	3.316E-10	1.537E-10	7.468E-11	4.423E-11	3.882E-11	2.144E-11	8.972E-12	4.478E-12	2.772E-12
WSW	4.924E-10	4.208E-10	1.504E-10	7.231E-11	4.245E-11	3.132E-11	1.559E-11	6.632E-12	3.541E-12	2.192E-12
W	8.363E-10	3.120E-10	1.037E-10	4.984E-11	2.926E-11	2.214E-11	1.820E-11	7.317E-12	3.907E-12	2.418E-12
WNW	1.418E-09	9.073E-10	3.145E-10	1.490E-10	9.121E-11	4.391E-11	1.684E-11	7.554E-12	4.130E-12	2.584E-12
NW	2.559E-09	2.340E-09	8.022E-10	3.628E-10	2.147E-10	9.800E-11	3.826E-11	1.688E-11	9.152E-12	5.676E-12
NNW	1.213E-09	1.038E-09	4.977E-10	2.914E-10	1.972E-10	1.163E-10	5.290E-11	2.309E-11	1.141E-11	6.977E-12
N	3.022E-09	1.588E-09	7.057E-10	3.870E-10	2.371E-10	9.682E-11	5.181E-11	4.379E-11	2.668E-11	1.404E-11
NNE	2.177E-09	9.365E-10	3.861E-10	2.083E-10	1.273E-10	1.480E-10	6.790E-11	2.723E-11	1.447E-11	8.914E-12
NE	8.337E-10	4.910E-10	2.258E-10	1.247E-10	7.649E-11	1.032E-10	4.852E-11	1.937E-11	1.021E-11	6.319E-12
ENE	4.382E-10	3.116E-10	1.502E-10	8.371E-11	5.143E-11	5.389E-11	3.115E-11	1.385E-11	6.691E-12	3.936E-12
E	3.778E-10	2.686E-10	1.295E-10	7.216E-11	4.433E-11	5.072E-11	3.017E-11	1.346E-11	6.830E-12	3.775E-12
ESE	8.008E-10	5.695E-10	2.745E-10	1.530E-10	9.398E-11	7.482E-11	3.852E-11	1.685E-11	8.641E-12	5.150E-12
SE	2.176E-09	1.547E-09	7.459E-10	4.156E-10	2.554E-10	1.039E-10	3.181E-11	1.317E-11	1.343E-11	1.050E-11
SSE	3.493E-09	2.382E-09	1.137E-09	6.327E-10	3.886E-10	2.750E-10	1.100E-10	4.380E-11	2.335E-11	1.443E-11

B310

ERP ELEVATED STACK RELEASES - OCT-DEC 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST		RELEASE TYPE OF DIRECTION DIST.				D/Q
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	(PER SQ.METER)
			UNDEPLETED	UNDEPLETED	DEPLETED	
A	Site Boundary	S	.80 3.0E-08	3.0E-08	3.0E-08	2.0E-09
A	Site Boundary	SSW	.82 4.3E-08	4.3E-08	4.3E-08	2.3E-09
A	Site Boundary	SW	.97 3.9E-08	3.9E-08	3.9E-08	3.8E-10
A	Site Boundary	WSW	.93 4.1E-08	4.1E-08	4.1E-08	4.1E-10
A	Site Boundary	W	.91 9.0E-08	9.0E-08	8.9E-08	7.4E-10
A	Site Boundary	WNW	.94 1.2E-07	1.2E-07	1.2E-07	1.8E-09
A	Site Boundary	NW	.81 1.2E-07	1.2E-07	1.2E-07	1.7E-09
A	Site Boundary	NNW	.69 2.8E-08	2.8E-08	2.8E-08	1.3E-09
A	Site Boundary	N	.67 3.4E-08	3.4E-08	3.3E-08	3.2E-09
A	Site Boundary	NNE	.60 3.0E-08	3.0E-08	3.0E-08	2.5E-09
A	Site Boundary	NE	.62 7.8E-09	7.8E-09	7.7E-09	8.0E-10
A	Site Boundary	ENE	.59 1.7E-09	1.7E-09	1.7E-09	3.2E-10
A	Site Boundary	E	.53 5.6E-10	5.6E-10	5.6E-10	2.2E-10
A	Site Boundary	ESE	.54 1.5E-09	1.5E-09	1.5E-09	4.9E-10
A	Site Boundary	SE	.65 1.5E-08	1.5E-08	1.5E-08	1.9E-09
A	Site Boundary	SSE	.81 6.4E-08	6.4E-08	6.4E-08	4.1E-09
A	Nearest Res	SSW	3.00 6.4E-08	6.4E-08	6.2E-08	4.7E-10
A	Nearest Res	SW	1.00 4.2E-08	4.2E-08	4.2E-08	3.7E-10
A	Nearest Res	WSW	2.50 4.5E-08	4.5E-08	4.4E-08	1.5E-10
A	Nearest Res	W	1.00 9.9E-08	9.9E-08	9.8E-08	6.3E-10
A	Nearest Res	WNW	1.70 1.4E-07	1.4E-07	1.3E-07	7.4E-10
A	Nearest Res	NW	.90 1.7E-07	1.7E-07	1.7E-07	4.1E-09
A	Nearest Res	NNW	1.90 1.2E-07	1.2E-07	1.2E-07	8.1E-10
A	Nearest Res	N	2.90 4.4E-08	4.4E-08	4.2E-08	5.4E-10
A	Nearest Res	NNE	1.70 4.3E-08	4.3E-08	4.2E-08	7.2E-10
A	Nearest Res	ENE	1.70 1.9E-08	1.9E-08	1.9E-08	2.7E-10
A	Nearest Res	E	2.20 1.8E-08	1.8E-08	1.8E-08	1.6E-10
A	Nearest Res	SE	2.80 4.7E-08	4.7E-08	4.6E-08	6.1E-10
A	Nearest Cow	NNW	3.50 8.7E-08	8.7E-08	8.5E-08	2.8E-10
A	Nearest Garde	SSW	3.00 6.4E-08	6.4E-08	6.2E-08	4.7E-10
A	Nearest Garde	SW	2.20 5.6E-08	5.5E-08	5.5E-08	1.9E-10
A	Nearest Garde	WSW	2.50 4.5E-08	4.5E-08	4.4E-08	1.5E-10
A	Nearest Garde	WNW	1.70 1.4E-07	1.4E-07	1.3E-07	7.4E-10
A	Nearest Garde	NW	2.00 2.0E-07	2.0E-07	2.0E-07	1.3E-09
A	Nearest Garde	NNW	2.80 9.8E-08	9.8E-08	9.6E-08	4.3E-10
A	Nearest Garde	ESE	2.30 2.8E-08	2.7E-08	2.7E-08	3.1E-10
A	MAXIMUM CHI/Q	S	1.50 5.7E-08	5.7E-08	5.7E-08	1.2E-09
A	MAXIMUM CHI/Q	SSW	1.50 7.6E-08	7.6E-08	7.6E-08	1.4E-09
A	MAXIMUM CHI/Q	SW	1.50 8.7E-08	8.7E-08	8.6E-08	4.3E-10
A	MAXIMUM CHI/Q	WSW	1.50 9.8E-08	9.7E-08	9.7E-08	4.3E-10
A	MAXIMUM CHI/Q	W	1.50 1.1E-07	1.1E-07	1.1E-07	3.0E-10
A	MAXIMUM CHI/Q	WNW	1.50 1.7E-07	1.7E-07	1.7E-07	9.9E-10
A	MAXIMUM CHI/Q	NW	1.50 3.4E-07	3.4E-07	3.4E-07	2.6E-09
A	MAXIMUM CHI/Q	NNW	1.50 1.2E-07	1.2E-07	1.2E-07	1.3E-09
A	MAXIMUM CHI/Q	N	1.50 6.5E-08	6.5E-08	6.4E-08	1.6E-09
A	MAXIMUM CHI/Q	NNE	1.00 4.7E-08	4.7E-08	4.6E-08	1.8E-09
A	MAXIMUM CHI/Q	NE	1.50 2.6E-08	2.6E-08	2.5E-08	4.9E-10
A	MAXIMUM CHI/Q	ENE	7.50 2.2E-08	2.2E-08	2.1E-08	6.6E-11
A	MAXIMUM CHI/Q	E	1.50 2.0E-08	2.0E-08	2.0E-08	2.7E-10
A	MAXIMUM CHI/Q	ESE	1.50 3.3E-08	3.3E-08	3.3E-08	5.8E-10
A	MAXIMUM CHI/Q	SE	1.50 7.0E-08	7.0E-08	6.9E-08	1.6E-09
A	MAXIMUM CHI/Q	SSE	1.50 1.1E-07	1.1E-07	1.1E-07	2.4E-09

B311

Atmospheric Diffusion Estimates

Elevated Releases

July-December 2017

ERP ELEVATED STACK RELEASES - JUL-DEC 2017
 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	1.503E-15	1.388E-09	2.294E-08	4.522E-08	5.819E-08	5.270E-08	4.446E-08	3.718E-08	3.136E-08	3.614E-08	3.998E-08
SSW	6.807E-10	3.525E-09	2.978E-08	5.834E-08	7.700E-08	7.125E-08	6.115E-08	6.808E-08	7.101E-08	6.253E-08	5.585E-08
SW	2.385E-16	4.683E-10	2.374E-08	7.465E-08	1.511E-07	1.082E-07	8.080E-08	6.293E-08	5.072E-08	4.203E-08	3.561E-08
WSW	2.558E-16	4.456E-10	2.685E-08	8.472E-08	1.629E-07	1.072E-07	7.628E-08	5.755E-08	4.535E-08	3.692E-08	3.085E-08
W	1.112E-13	2.415E-08	1.420E-07	1.962E-07	2.016E-07	1.312E-07	9.284E-08	6.978E-08	5.483E-08	4.455E-08	3.716E-08
WNW	8.628E-15	5.920E-09	1.131E-07	2.347E-07	3.231E-07	2.021E-07	1.391E-07	1.074E-07	8.613E-08	6.854E-08	5.618E-08
NW	7.496E-11	5.944E-09	1.026E-07	2.893E-07	4.959E-07	2.967E-07	1.994E-07	1.481E-07	1.157E-07	9.190E-08	7.525E-08
NNW	6.034E-10	1.202E-08	5.455E-08	1.089E-07	1.784E-07	1.814E-07	1.714E-07	1.568E-07	1.449E-07	1.150E-07	9.413E-08
N	2.012E-09	1.880E-08	4.760E-08	6.697E-08	7.747E-08	7.242E-08	6.344E-08	5.383E-08	4.608E-08	3.991E-08	3.498E-08
NNE	1.885E-10	1.144E-08	2.870E-08	3.806E-08	4.253E-08	3.828E-08	3.277E-08	2.791E-08	2.398E-08	2.085E-08	1.835E-08
NE	2.899E-11	2.084E-09	9.901E-09	1.675E-08	2.142E-08	2.022E-08	1.777E-08	1.541E-08	1.341E-08	1.176E-08	1.043E-08
ENE	3.724E-16	4.080E-10	7.131E-09	1.453E-08	1.952E-08	1.818E-08	1.569E-08	1.339E-08	1.149E-08	9.976E-09	8.768E-09
E	2.687E-16	3.990E-10	8.023E-09	1.751E-08	2.510E-08	2.406E-08	2.104E-08	1.805E-08	1.552E-08	1.345E-08	1.179E-08
ESE	1.698E-11	1.722E-09	1.183E-08	2.185E-08	2.805E-08	2.566E-08	2.185E-08	1.842E-08	1.565E-08	1.345E-08	1.171E-08
SE	1.670E-15	1.277E-09	1.993E-08	3.818E-08	4.801E-08	4.323E-08	3.646E-08	3.055E-08	2.582E-08	2.210E-08	1.916E-08
SSE	2.756E-11	3.707E-09	3.430E-08	6.292E-08	7.804E-08	7.003E-08	5.895E-08	4.932E-08	4.164E-08	3.561E-08	3.086E-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	3.598E-08	2.637E-08	1.739E-08	1.017E-08	7.390E-09	5.738E-09	4.496E-09	3.662E-09	3.113E-09	2.691E-09	2.341E-09	
SSW	5.230E-08	4.513E-08	2.972E-08	1.737E-08	1.282E-08	9.818E-09	7.689E-09	6.262E-09	5.256E-09	4.498E-09	3.915E-09	
SW	3.358E-08	2.889E-08	1.934E-08	1.152E-08	8.507E-09	6.666E-09	5.466E-09	4.463E-09	3.745E-09	3.210E-09	2.798E-09	
WSW	2.770E-08	1.928E-08	1.409E-08	8.986E-09	6.091E-09	4.515E-09	3.543E-09	2.885E-09	2.416E-09	2.068E-09	1.800E-09	
W	3.164E-08	1.779E-08	1.314E-08	8.907E-09	6.752E-09	5.035E-09	3.942E-09	3.209E-09	2.687E-09	2.299E-09	2.000E-09	
WNW	4.766E-08	2.653E-08	1.791E-08	1.075E-08	7.323E-09	5.441E-09	4.282E-09	3.488E-09	2.913E-09	2.481E-09	2.150E-09	
NW	6.390E-08	3.596E-08	2.478E-08	1.528E-08	1.033E-08	7.640E-09	6.117E-09	5.016E-09	4.197E-09	3.585E-09	3.115E-09	
NNW	8.091E-08	4.727E-08	3.097E-08	1.801E-08	1.230E-08	9.171E-09	7.304E-09	6.026E-09	5.161E-09	4.458E-09	3.884E-09	
N	3.108E-08	1.996E-08	1.693E-08	1.454E-08	1.323E-08	1.151E-08	9.136E-09	7.485E-09	6.280E-09	5.383E-09	4.691E-09	
NNE	2.072E-08	3.890E-08	2.555E-08	1.493E-08	1.024E-08	7.662E-09	6.052E-09	4.962E-09	4.181E-09	3.596E-09	3.144E-09	
NE	1.201E-08	2.271E-08	1.491E-08	8.706E-09	5.968E-09	4.462E-09	3.570E-09	2.952E-09	2.507E-09	2.154E-09	1.881E-09	
ENE	9.507E-09	2.021E-08	1.372E-08	8.341E-09	5.857E-09	4.454E-09	3.829E-09	3.314E-09	2.801E-09	2.415E-09	2.117E-09	
E	1.243E-08	2.028E-08	1.364E-08	8.191E-09	5.708E-09	4.316E-09	3.437E-09	2.836E-09	2.530E-09	2.269E-09	1.986E-09	
ESE	1.197E-08	1.487E-08	9.959E-09	5.934E-09	4.109E-09	3.092E-09	2.451E-09	2.015E-09	1.701E-09	1.465E-09	1.283E-09	
SE	1.681E-08	1.027E-08	7.902E-09	5.737E-09	4.270E-09	3.434E-09	2.898E-09	2.523E-09	2.125E-09	1.826E-09	1.596E-09	
SSE	3.253E-08	3.726E-08	2.398E-08	1.361E-08	9.139E-09	6.726E-09	5.242E-09	4.250E-09	3.546E-09	3.024E-09	2.624E-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	2.805E-08	5.287E-08	4.375E-08	3.484E-08	3.736E-08	2.451E-08	1.054E-08	5.682E-09	3.691E-09	2.686E-09
SSW	3.664E-08	7.030E-08	6.662E-08	6.694E-08	5.651E-08	3.987E-08	1.809E-08	9.767E-09	6.286E-09	4.507E-09
SW	4.120E-08	1.150E-07	8.095E-08	5.090E-08	3.676E-08	2.569E-08	1.192E-08	6.677E-09	4.476E-09	3.216E-09
WSW	4.671E-08	1.207E-07	7.702E-08	4.563E-08	3.149E-08	1.884E-08	8.833E-09	4.546E-09	2.894E-09	2.072E-09
W	1.399E-07	1.691E-07	9.384E-08	5.519E-08	3.731E-08	1.880E-08	8.890E-09	5.056E-09	3.219E-09	2.303E-09
WNW	1.433E-07	2.497E-07	1.432E-07	8.550E-08	5.669E-08	2.739E-08	1.082E-08	5.479E-09	3.496E-09	2.487E-09
NW	1.641E-07	3.614E-07	2.048E-07	1.159E-07	7.598E-08	3.720E-08	1.519E-08	7.748E-09	5.019E-09	3.593E-09
NNW	6.926E-08	1.643E-07	1.682E-07	1.369E-07	9.541E-08	4.750E-08	1.836E-08	9.260E-09	6.062E-09	4.454E-09
N	4.981E-08	7.289E-08	6.199E-08	4.594E-08	3.500E-08	2.108E-08	1.449E-08	1.102E-08	7.498E-09	5.392E-09
NNE	2.902E-08	3.965E-08	3.230E-08	2.391E-08	1.997E-08	2.893E-08	1.521E-08	7.706E-09	4.976E-09	3.602E-09
NE	1.121E-08	1.985E-08	1.748E-08	1.335E-08	1.141E-08	1.686E-08	8.867E-09	4.507E-09	2.959E-09	2.157E-09
ENE	8.926E-09	1.782E-08	1.543E-08	1.146E-08	9.400E-09	1.495E-08	8.433E-09	4.578E-09	3.265E-09	2.419E-09
E	1.054E-08	2.295E-08	2.065E-08	1.545E-08	1.252E-08	1.559E-08	8.298E-09	4.335E-09	2.891E-09	2.242E-09
ESE	1.404E-08	2.561E-08	2.149E-08	1.560E-08	1.232E-08	1.204E-08	6.017E-09	3.107E-09	2.020E-09	1.467E-09
SE	2.390E-08	4.370E-08	3.590E-08	2.575E-08	1.916E-08	1.067E-08	5.566E-09	3.443E-09	2.478E-09	1.829E-09
SSE	4.022E-08	7.112E-08	5.805E-08	4.153E-08	3.288E-08	3.031E-08	1.393E-08	6.776E-09	4.265E-09	3.030E-09

B313

ERP ELEVATED STACK RELEASES - JUL-DEC 2017
 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	1.503E-15	1.387E-09	2.292E-08	4.515E-08	5.805E-08	5.252E-08	4.427E-08	3.698E-08	3.116E-08	3.588E-08	3.965E-08
SSW	6.805E-10	3.523E-09	2.974E-08	5.824E-08	7.678E-08	7.097E-08	6.083E-08	6.763E-08	7.045E-08	6.195E-08	5.525E-08
SW	2.384E-16	4.678E-10	2.370E-08	7.444E-08	1.504E-07	1.075E-07	8.014E-08	6.230E-08	5.013E-08	4.146E-08	3.506E-08
WSW	2.557E-16	4.452E-10	2.681E-08	8.449E-08	1.621E-07	1.065E-07	7.565E-08	5.698E-08	4.481E-08	3.642E-08	3.038E-08
W	1.112E-13	2.413E-08	1.418E-07	1.957E-07	2.007E-07	1.305E-07	9.217E-08	6.917E-08	5.427E-08	4.402E-08	3.666E-08
WNW	8.625E-15	5.914E-09	1.129E-07	2.341E-07	3.217E-07	2.010E-07	1.381E-07	1.064E-07	8.523E-08	6.771E-08	5.541E-08
NW	7.494E-11	5.941E-09	1.025E-07	2.887E-07	4.943E-07	2.954E-07	1.982E-07	1.471E-07	1.147E-07	9.099E-08	7.439E-08
NNW	6.033E-10	1.201E-08	5.449E-08	1.088E-07	1.780E-07	1.808E-07	1.707E-07	1.560E-07	1.441E-07	1.142E-07	9.336E-08
N	2.012E-09	1.879E-08	4.757E-08	6.690E-08	7.732E-08	7.223E-08	6.323E-08	5.361E-08	4.586E-08	3.969E-08	3.477E-08
NNE	1.885E-10	1.143E-08	2.868E-08	3.800E-08	4.243E-08	3.817E-08	3.264E-08	2.778E-08	2.385E-08	2.072E-08	1.822E-08
NE	2.898E-11	2.083E-09	9.893E-09	1.673E-08	2.138E-08	2.017E-08	1.772E-08	1.535E-08	1.335E-08	1.170E-08	1.037E-08
ENE	3.723E-16	4.078E-10	7.122E-09	1.451E-08	1.946E-08	1.811E-08	1.561E-08	1.330E-08	1.141E-08	9.891E-09	8.683E-09
E	2.686E-16	3.987E-10	8.010E-09	1.747E-08	2.500E-08	2.393E-08	2.090E-08	1.791E-08	1.537E-08	1.331E-08	1.165E-08
ESE	1.698E-11	1.721E-09	1.182E-08	2.181E-08	2.797E-08	2.556E-08	2.174E-08	1.832E-08	1.554E-08	1.335E-08	1.161E-08
SE	1.670E-15	1.276E-09	1.991E-08	3.813E-08	4.791E-08	4.311E-08	3.633E-08	3.041E-08	2.568E-08	2.196E-08	1.902E-08
SSE	2.755E-11	3.705E-09	3.427E-08	6.284E-08	7.788E-08	6.983E-08	5.874E-08	4.910E-08	4.142E-08	3.539E-08	3.065E-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	3.564E-08	2.588E-08	1.694E-08	9.761E-09	6.967E-09	5.311E-09	4.097E-09	3.286E-09	2.746E-09	2.335E-09	2.000E-09
SSW	5.165E-08	4.403E-08	2.874E-08	1.649E-08	1.191E-08	8.934E-09	6.869E-09	5.492E-09	4.524E-09	3.804E-09	3.253E-09
SW	3.300E-08	2.805E-08	1.859E-08	1.085E-08	7.842E-09	6.015E-09	4.824E-09	3.862E-09	3.178E-09	2.673E-09	2.286E-09
WSW	2.722E-08	1.873E-08	1.354E-08	8.443E-09	5.606E-09	4.071E-09	3.130E-09	2.499E-09	2.053E-09	1.724E-09	1.472E-09
W	3.116E-08	1.738E-08	1.273E-08	8.473E-09	6.305E-09	4.621E-09	3.558E-09	2.850E-09	2.348E-09	1.977E-09	1.694E-09
WNW	4.693E-08	2.590E-08	1.734E-08	1.023E-08	6.849E-09	5.003E-09	3.871E-09	3.100E-09	2.547E-09	2.135E-09	1.821E-09
NW	6.308E-08	3.522E-08	2.407E-08	1.459E-08	9.707E-09	7.068E-09	5.564E-09	4.489E-09	3.697E-09	3.111E-09	2.663E-09
NNW	8.016E-08	4.654E-08	3.033E-08	1.744E-08	1.178E-08	8.683E-09	6.835E-09	5.575E-09	4.716E-09	4.025E-09	3.469E-09
N	3.087E-08	1.976E-08	1.670E-08	1.421E-08	1.275E-08	1.092E-08	8.574E-09	6.948E-09	5.770E-09	4.896E-09	4.225E-09
NNE	2.056E-08	3.815E-08	2.488E-08	1.434E-08	9.705E-09	7.163E-09	5.583E-09	4.519E-09	3.759E-09	3.193E-09	2.757E-09
NE	1.193E-08	2.237E-08	1.461E-08	8.447E-09	5.731E-09	4.242E-09	3.359E-09	2.748E-09	2.309E-09	1.965E-09	1.699E-09
ENE	9.405E-09	1.979E-08	1.334E-08	7.984E-09	5.524E-09	4.139E-09	3.499E-09	2.980E-09	2.482E-09	2.111E-09	1.825E-09
E	1.227E-08	1.981E-08	1.321E-08	7.798E-09	5.341E-09	3.972E-09	3.111E-09	2.525E-09	2.211E-09	1.946E-09	1.676E-09
ESE	1.185E-08	1.464E-08	9.746E-09	5.741E-09	3.931E-09	2.924E-09	2.293E-09	1.864E-09	1.557E-09	1.327E-09	1.149E-09
SE	1.667E-08	1.014E-08	7.760E-09	5.565E-09	4.092E-09	3.249E-09	2.706E-09	2.324E-09	1.934E-09	1.643E-09	1.419E-09
SSE	3.227E-08	3.656E-08	2.336E-08	1.308E-08	8.662E-09	6.288E-09	4.835E-09	3.867E-09	3.184E-09	2.680E-09	2.296E-09

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES FROM THE SITE									
	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50	
S	2.801E-08	5.272E-08	4.355E-08	3.462E-08	3.705E-08	2.408E-08	1.011E-08	5.267E-09	3.312E-09	2.333E-09
SSW	3.658E-08	7.008E-08	6.626E-08	6.641E-08	5.590E-08	3.893E-08	1.718E-08	8.903E-09	5.517E-09	3.813E-09
SW	4.109E-08	1.145E-07	8.030E-08	5.030E-08	3.619E-08	2.494E-08	1.123E-08	6.026E-09	3.876E-09	2.679E-09
WSW	4.659E-08	1.201E-07	7.640E-08	4.509E-08	3.100E-08	1.831E-08	8.315E-09	4.104E-09	2.510E-09	1.728E-09
W	1.396E-07	1.684E-07	9.318E-08	5.462E-08	3.680E-08	1.837E-08	8.455E-09	4.645E-09	2.861E-09	1.982E-09
WNW	1.430E-07	2.486E-07	1.422E-07	8.461E-08	5.591E-08	2.677E-08	1.031E-08	5.043E-09	3.110E-09	2.140E-09
NW	1.638E-07	3.602E-07	2.037E-07	1.149E-07	7.512E-08	3.646E-08	1.453E-08	7.171E-09	4.494E-09	3.119E-09
NNW	6.917E-08	1.639E-07	1.675E-07	1.361E-07	9.464E-08	4.680E-08	1.779E-08	8.770E-09	5.608E-09	4.024E-09
N	4.976E-08	7.274E-08	6.178E-08	4.573E-08	3.478E-08	2.087E-08	1.411E-08	1.047E-08	6.964E-09	4.906E-09
NNE	2.899E-08	3.955E-08	3.217E-08	2.378E-08	1.983E-08	2.834E-08	1.462E-08	7.209E-09	4.533E-09	3.199E-09
NE	1.120E-08	1.981E-08	1.742E-08	1.329E-08	1.134E-08	1.660E-08	8.610E-09	4.286E-09	2.756E-09	1.968E-09
ENE	8.912E-09	1.776E-08	1.535E-08	1.137E-08	9.308E-09	1.461E-08	8.080E-09	4.253E-09	2.939E-09	2.115E-09
E	1.052E-08	2.285E-08	2.051E-08	1.531E-08	1.237E-08	1.520E-08	7.909E-09	3.992E-09	2.573E-09	1.924E-09
ESE	1.402E-08	2.553E-08	2.139E-08	1.550E-08	1.221E-08	1.185E-08	5.826E-09	2.940E-09	1.870E-09	1.329E-09
SE	2.387E-08	4.360E-08	3.577E-08	2.561E-08	1.902E-08	1.053E-08	5.398E-09	3.257E-09	2.284E-09	1.646E-09
SSE	4.018E-08	7.096E-08	5.784E-08	4.132E-08	3.266E-08	2.974E-08	1.340E-08	6.340E-09	3.884E-09	2.687E-09

B314

ERP ELEVATED STACK RELEASES - JUL-DEC 2017
 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	1.503E-15	1.388E-09	2.293E-08	4.520E-08	5.764E-08	5.173E-08	4.328E-08	3.591E-08	3.008E-08	3.459E-08	3.829E-08
SSW	6.806E-10	3.507E-09	2.974E-08	5.829E-08	7.626E-08	6.996E-08	5.957E-08	6.600E-08	6.864E-08	6.019E-08	5.359E-08
SW	2.385E-16	4.681E-10	2.373E-08	7.459E-08	1.497E-07	1.063E-07	7.894E-08	6.118E-08	4.911E-08	4.054E-08	3.424E-08
WSW	2.558E-16	4.455E-10	2.684E-08	8.461E-08	1.609E-07	1.050E-07	7.421E-08	5.569E-08	4.367E-08	3.542E-08	2.949E-08
W	1.112E-13	2.415E-08	1.412E-07	1.940E-07	1.977E-07	1.278E-07	8.999E-08	6.735E-08	5.273E-08	4.271E-08	3.552E-08
WNW	8.628E-15	5.918E-09	1.130E-07	2.331E-07	3.179E-07	1.972E-07	1.348E-07	1.036E-07	8.276E-08	6.550E-08	5.338E-08
NW	7.495E-11	5.903E-09	1.024E-07	2.879E-07	4.889E-07	2.898E-07	1.933E-07	1.429E-07	1.112E-07	8.779E-08	7.147E-08
NNW	6.033E-10	1.192E-08	5.413E-08	1.085E-07	1.767E-07	1.787E-07	1.684E-07	1.539E-07	1.422E-07	1.123E-07	9.150E-08
N	2.012E-09	1.864E-08	4.711E-08	6.648E-08	7.653E-08	7.111E-08	6.195E-08	5.230E-08	4.457E-08	3.845E-08	3.359E-08
NNE	1.885E-10	1.134E-08	2.834E-08	3.768E-08	4.193E-08	3.752E-08	3.193E-08	2.706E-08	2.314E-08	2.003E-08	1.757E-08
NE	2.899E-11	2.069E-09	9.845E-09	1.669E-08	2.121E-08	1.990E-08	1.739E-08	1.501E-08	1.301E-08	1.138E-08	1.006E-08
ENE	3.724E-16	4.080E-10	7.128E-09	1.453E-08	1.933E-08	1.786E-08	1.529E-08	1.295E-08	1.105E-08	9.545E-09	8.350E-09
E	2.687E-16	3.989E-10	8.019E-09	1.750E-08	2.486E-08	2.362E-08	2.050E-08	1.746E-08	1.492E-08	1.286E-08	1.121E-08
ESE	1.698E-11	1.712E-09	1.179E-08	2.180E-08	2.776E-08	2.518E-08	2.127E-08	1.781E-08	1.503E-08	1.285E-08	1.112E-08
SE	1.670E-15	1.277E-09	1.992E-08	3.817E-08	4.756E-08	4.246E-08	3.553E-08	2.956E-08	2.482E-08	2.112E-08	1.822E-08
SSE	2.756E-11	3.691E-09	3.424E-08	6.284E-08	7.728E-08	6.876E-08	5.743E-08	4.770E-08	4.001E-08	3.402E-08	2.933E-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	3.436E-08	2.478E-08	1.580E-08	8.643E-09	5.824E-09	4.237E-09	3.154E-09	2.453E-09	2.000E-09	1.671E-09	1.409E-09
SSW	5.009E-08	4.269E-08	2.716E-08	1.479E-08	1.009E-08	7.375E-09	5.552E-09	4.361E-09	3.538E-09	2.934E-09	2.479E-09
SW	3.227E-08	2.746E-08	1.775E-08	9.825E-09	6.671E-09	4.867E-09	3.813E-09	2.998E-09	2.429E-09	2.014E-09	1.702E-09
WSW	2.644E-08	1.805E-08	1.278E-08	7.686E-09	4.964E-09	3.529E-09	2.666E-09	2.097E-09	1.700E-09	1.412E-09	1.194E-09
W	3.017E-08	1.679E-08	1.228E-08	7.836E-09	5.561E-09	3.980E-09	3.003E-09	2.364E-09	1.919E-09	1.595E-09	1.351E-09
WNW	4.503E-08	2.427E-08	1.584E-08	8.867E-09	5.581E-09	3.888E-09	2.921E-09	2.291E-09	1.848E-09	1.523E-09	1.280E-09
NW	6.035E-08	3.292E-08	2.194E-08	1.264E-08	7.965E-09	5.547E-09	4.242E-09	3.351E-09	2.709E-09	2.241E-09	1.890E-09
NNW	7.824E-08	4.428E-08	2.799E-08	1.511E-08	9.467E-09	6.559E-09	4.906E-09	3.851E-09	3.175E-09	2.652E-09	2.240E-09
N	2.975E-08	1.891E-08	1.601E-08	1.379E-08	1.229E-08	1.017E-08	7.816E-09	6.222E-09	5.085E-09	4.253E-09	3.622E-09
NNE	1.989E-08	3.752E-08	2.378E-08	1.303E-08	8.396E-09	5.955E-09	4.488E-09	3.528E-09	2.860E-09	2.373E-09	2.006E-09
NE	1.161E-08	2.200E-08	1.394E-08	7.649E-09	4.944E-09	3.518E-09	2.701E-09	2.160E-09	1.779E-09	1.486E-09	1.264E-09
ENE	9.060E-09	1.954E-08	1.282E-08	7.237E-09	4.666E-09	3.300E-09	2.658E-09	2.185E-09	1.775E-09	1.476E-09	1.250E-09
E	1.182E-08	1.946E-08	1.264E-08	7.066E-09	4.532E-09	3.193E-09	2.389E-09	1.863E-09	1.575E-09	1.346E-09	1.133E-09
ESE	1.135E-08	1.420E-08	9.209E-09	5.136E-09	3.299E-09	2.328E-09	1.744E-09	1.362E-09	1.097E-09	9.043E-10	7.595E-10
SE	1.590E-08	9.542E-09	7.275E-09	5.239E-09	3.870E-09	3.098E-09	2.606E-09	2.256E-09	1.860E-09	1.568E-09	1.345E-09
SSE	3.088E-08	3.526E-08	2.189E-08	1.166E-08	7.359E-09	5.136E-09	3.820E-09	2.968E-09	2.382E-09	1.959E-09	1.643E-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	2.804E-08	5.225E-08	4.259E-08	3.347E-08	3.574E-08	2.292E-08	8.982E-09	4.227E-09	2.481E-09	1.672E-09
SSW	3.660E-08	6.947E-08	6.491E-08	6.467E-08	5.425E-08	3.743E-08	1.545E-08	7.370E-09	4.388E-09	2.945E-09
SW	4.116E-08	1.137E-07	7.914E-08	4.930E-08	3.538E-08	2.421E-08	1.018E-08	4.927E-09	3.014E-09	2.021E-09
WSW	4.665E-08	1.191E-07	7.500E-08	4.396E-08	3.012E-08	1.757E-08	7.608E-09	3.566E-09	2.108E-09	1.417E-09
W	1.387E-07	1.658E-07	9.102E-08	5.309E-08	3.567E-08	1.776E-08	7.813E-09	4.011E-09	2.377E-09	1.601E-09
WNW	1.426E-07	2.454E-07	1.389E-07	8.213E-08	5.388E-08	2.514E-08	8.957E-09	3.953E-09	2.302E-09	1.529E-09
NW	1.634E-07	3.557E-07	1.989E-07	1.113E-07	7.218E-08	3.413E-08	1.263E-08	5.670E-09	3.361E-09	2.250E-09
NNW	6.889E-08	1.624E-07	1.654E-07	1.342E-07	9.276E-08	4.459E-08	1.546E-08	6.673E-09	3.895E-09	2.654E-09
N	4.939E-08	7.189E-08	6.053E-08	4.445E-08	3.361E-08	2.003E-08	1.362E-08	9.792E-09	6.244E-09	4.266E-09
NNE	2.871E-08	3.903E-08	3.147E-08	2.308E-08	1.916E-08	2.750E-08	1.336E-08	6.019E-09	3.548E-09	2.381E-09
NE	1.116E-08	1.962E-08	1.711E-08	1.296E-08	1.103E-08	1.611E-08	7.845E-09	3.572E-09	2.170E-09	1.491E-09
ENE	8.922E-09	1.761E-08	1.504E-08	1.102E-08	8.967E-09	1.422E-08	7.334E-09	3.408E-09	2.164E-09	1.481E-09
E	1.054E-08	2.267E-08	2.012E-08	1.486E-08	1.192E-08	1.473E-08	7.180E-09	3.229E-09	1.904E-09	1.335E-09
ESE	1.400E-08	2.529E-08	2.093E-08	1.499E-08	1.172E-08	1.135E-08	5.225E-09	2.353E-09	1.370E-09	9.077E-10
SE	2.389E-08	4.321E-08	3.499E-08	2.477E-08	1.822E-08	9.949E-09	5.083E-09	3.107E-09	2.205E-09	1.572E-09
SSE	4.016E-08	7.028E-08	5.656E-08	3.993E-08	3.130E-08	2.835E-08	1.202E-08	5.202E-09	2.988E-09	1.967E-09

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ERP ELEVATED STACK RELEASES - JUL-DEC 2017
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	1.241E-10	7.447E-10	1.586E-09	1.642E-09	1.026E-09	6.879E-10	4.859E-10	3.569E-10	2.703E-10	2.216E-10	2.029E-10
SSW	2.666E-10	9.265E-10	1.838E-09	1.873E-09	1.161E-09	7.769E-10	5.482E-10	4.025E-10	3.824E-10	2.893E-10	2.264E-10
SW	4.335E-11	2.601E-10	5.537E-10	5.736E-10	6.431E-10	3.587E-10	2.261E-10	1.552E-10	1.129E-10	8.570E-11	6.718E-11
WSW	4.006E-11	2.404E-10	5.118E-10	9.140E-10	6.575E-10	3.577E-10	2.213E-10	1.500E-10	1.083E-10	8.185E-11	6.403E-11
W	4.138E-11	2.060E-09	2.022E-09	1.425E-09	6.688E-10	3.638E-10	2.251E-10	1.526E-10	1.102E-10	8.326E-11	6.513E-11
WNW	7.027E-11	4.216E-10	2.052E-09	2.280E-09	1.335E-09	6.963E-10	4.221E-10	2.869E-10	2.244E-10	1.728E-10	1.406E-10
NW	7.643E-10	1.220E-09	1.923E-09	4.458E-09	2.963E-09	1.477E-09	8.721E-10	5.770E-10	4.152E-10	3.190E-10	2.587E-10
NNW	1.768E-09	1.855E-09	2.195E-09	1.871E-09	1.971E-09	1.069E-09	6.646E-10	5.637E-10	4.228E-10	3.418E-10	2.933E-10
N	3.219E-09	3.158E-09	3.482E-09	2.864E-09	1.586E-09	1.023E-09	7.092E-10	5.161E-10	3.891E-10	3.014E-10	2.387E-10
NNE	1.729E-09	1.623E-09	1.700E-09	1.358E-09	7.385E-10	4.731E-10	3.270E-10	2.376E-10	1.789E-10	1.386E-10	1.097E-10
NE	2.968E-10	4.345E-10	6.552E-10	6.167E-10	3.683E-10	2.436E-10	1.709E-10	1.252E-10	9.464E-11	7.341E-11	5.813E-11
ENE	3.546E-11	2.128E-10	4.530E-10	4.693E-10	2.931E-10	1.965E-10	1.388E-10	1.020E-10	7.724E-11	5.995E-11	4.747E-11
E	3.678E-11	2.206E-10	4.698E-10	4.867E-10	3.040E-10	2.038E-10	1.440E-10	1.058E-10	8.010E-11	6.217E-11	4.923E-11
ESE	1.786E-10	3.985E-10	7.135E-10	7.081E-10	4.338E-10	2.892E-10	2.037E-10	1.495E-10	1.131E-10	8.777E-11	6.951E-11
SE	1.202E-10	7.211E-10	1.535E-09	1.590E-09	9.933E-10	6.660E-10	4.705E-10	3.456E-10	2.617E-10	2.032E-10	1.609E-10
SSE	4.426E-10	1.309E-09	2.518E-09	2.546E-09	1.573E-09	1.052E-09	7.417E-10	5.444E-10	4.122E-10	3.199E-10	2.533E-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	1.631E-10	1.132E-10	7.678E-11	4.412E-11	2.775E-11	2.031E-11	1.451E-11	1.086E-11	8.541E-12	6.824E-12	5.571E-12
SSW	1.834E-10	1.376E-10	9.525E-11	5.571E-11	3.572E-11	2.463E-11	1.765E-11	1.326E-11	1.042E-11	8.322E-12	6.792E-12
SW	5.605E-11	6.456E-11	4.839E-11	3.015E-11	1.935E-11	1.174E-11	8.314E-12	6.243E-12	4.854E-12	3.878E-12	3.165E-12
WSW	5.185E-11	4.543E-11	3.258E-11	1.966E-11	1.190E-11	7.979E-12	5.914E-12	4.441E-12	3.453E-12	2.758E-12	2.251E-12
W	5.236E-11	2.342E-11	3.784E-11	2.478E-11	1.447E-11	9.883E-12	7.082E-12	5.318E-12	4.135E-12	3.303E-12	2.696E-12
WNW	1.219E-10	7.177E-11	5.056E-11	3.004E-11	1.906E-11	1.247E-11	9.115E-12	6.845E-12	5.454E-12	4.357E-12	3.556E-12
NW	2.204E-10	1.275E-10	8.907E-11	5.610E-11	3.438E-11	2.298E-11	1.635E-11	1.228E-11	9.652E-12	7.710E-12	6.293E-12
NNW	2.639E-10	1.800E-10	1.355E-10	8.483E-11	5.450E-11	3.612E-11	2.420E-11	1.723E-11	1.335E-11	1.066E-11	8.705E-12
N	1.925E-10	9.139E-11	5.588E-11	2.959E-11	8.293E-11	4.908E-11	3.514E-11	2.639E-11	2.052E-11	1.639E-11	1.338E-11
NNE	8.849E-11	1.847E-10	1.143E-10	5.922E-11	3.612E-11	2.417E-11	1.727E-11	1.292E-11	1.002E-11	7.981E-12	6.501E-12
NE	4.684E-11	1.124E-10	6.964E-11	3.614E-11	2.205E-11	1.476E-11	1.044E-11	7.806E-12	6.069E-12	4.848E-12	3.957E-12
ENE	3.824E-11	5.819E-11	4.411E-11	2.771E-11	1.779E-11	1.175E-11	8.224E-12	5.419E-12	4.210E-12	3.362E-12	2.743E-12
E	3.965E-11	6.018E-11	4.559E-11	2.863E-11	1.838E-11	1.215E-11	8.496E-12	6.200E-12	4.708E-12	3.365E-12	2.742E-12
ESE	5.599E-11	6.715E-11	4.912E-11	3.005E-11	1.918E-11	1.270E-11	8.920E-12	6.539E-12	4.984E-12	3.916E-12	3.152E-12
SE	1.296E-10	6.135E-11	3.739E-11	1.964E-11	1.194E-11	8.186E-12	6.097E-12	1.081E-11	8.327E-12	6.612E-12	5.385E-12
SSE	2.040E-10	2.337E-10	1.437E-10	7.402E-11	4.506E-11	3.017E-11	2.157E-11	1.616E-11	1.254E-11	9.999E-12	8.151E-12

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

DIRECTION FROM SITE	SEGMENT BOUNDARIES IN MILES									
	.5-1	1-2	2-3	3-4	4-5	5-10	10-20	20-30	30-40	40-50
S	1.424E-09	1.013E-09	4.882E-10	2.765E-10	1.937E-10	1.081E-10	4.410E-11	1.998E-11	1.102E-11	6.869E-12
SSW	1.651E-09	1.148E-09	5.509E-10	3.527E-10	2.291E-10	1.290E-10	5.562E-11	2.480E-11	1.343E-11	8.376E-12
SW	4.973E-10	5.013E-10	2.331E-10	1.146E-10	6.854E-11	5.548E-11	2.940E-11	1.240E-11	6.306E-12	3.903E-12
WSW	6.302E-10	5.813E-10	2.291E-10	1.101E-10	6.480E-11	4.114E-11	1.908E-11	8.198E-12	4.485E-12	2.776E-12
W	1.765E-09	7.014E-10	2.331E-10	1.120E-10	6.577E-11	3.626E-11	2.310E-11	9.986E-12	5.371E-12	3.324E-12
WNW	1.791E-09	1.261E-09	4.412E-10	2.226E-10	1.432E-10	7.348E-11	2.972E-11	1.288E-11	6.964E-12	4.385E-12
NW	2.893E-09	2.635E-09	9.155E-10	4.248E-10	2.624E-10	1.311E-10	5.377E-11	2.337E-11	1.244E-11	7.760E-12
NNW	1.975E-09	1.548E-09	7.322E-10	4.322E-10	2.968E-10	1.789E-10	8.262E-11	3.625E-11	1.774E-11	1.073E-11
N	3.135E-09	1.620E-09	7.156E-10	3.920E-10	2.402E-10	9.807E-11	5.914E-11	5.253E-11	2.665E-11	1.650E-11
NNE	1.531E-09	7.582E-10	3.302E-10	1.803E-10	1.104E-10	1.320E-10	6.118E-11	2.459E-11	1.305E-11	8.036E-12
NE	5.890E-10	3.681E-10	1.720E-10	9.527E-11	5.848E-11	7.883E-11	3.732E-11	1.497E-11	7.896E-12	4.880E-12
ENE	4.069E-10	2.893E-10	1.395E-10	7.772E-11	4.775E-11	4.750E-11	2.695E-11	1.195E-11	5.760E-12	3.384E-12
E	4.219E-10	3.001E-10	1.446E-10	8.060E-11	4.952E-11	4.913E-11	2.784E-11	1.235E-11	6.287E-12	3.532E-12
ESE	6.411E-10	4.305E-10	2.048E-10	1.138E-10	6.991E-11	5.666E-11	2.946E-11	1.292E-11	6.627E-12	3.950E-12
SE	1.379E-09	9.805E-10	4.727E-10	2.634E-10	1.618E-10	6.586E-11	2.016E-11	8.351E-12	8.518E-12	6.666E-12
SSE	2.262E-09	1.558E-09	7.454E-10	4.148E-10	2.548E-10	1.871E-10	7.664E-11	3.070E-11	1.632E-11	1.007E-11

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ERP ELEVATED STACK RELEASES - JUL-DEC 2017
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	2.8E-08	2.8E-08	2.8E-08	1.7E-09
A	Site Boundary	SSW	.82	4.0E-08	4.0E-08	4.0E-08	1.9E-09
A	Site Boundary	SW	.97	6.9E-08	6.9E-08	6.9E-08	5.9E-10
A	Site Boundary	WSW	.93	6.7E-08	6.7E-08	6.7E-08	6.8E-10
A	Site Boundary	W	.91	1.8E-07	1.8E-07	1.8E-07	1.5E-09
A	Site Boundary	WNW	.94	2.1E-07	2.1E-07	2.1E-07	2.5E-09
A	Site Boundary	NW	.81	1.5E-07	1.5E-07	1.5E-07	2.0E-09
A	Site Boundary	NNW	.69	3.9E-08	3.9E-08	3.9E-08	2.1E-09
A	Site Boundary	N	.67	3.7E-08	3.7E-08	3.7E-08	3.3E-09
A	Site Boundary	NNE	.60	1.8E-08	1.8E-08	1.7E-08	1.6E-09
A	Site Boundary	NE	.62	5.1E-09	5.1E-09	5.0E-09	5.4E-10
A	Site Boundary	ENE	.59	1.7E-09	1.7E-09	1.7E-09	2.9E-10
A	Site Boundary	E	.53	6.6E-10	6.6E-10	6.6E-10	2.4E-10
A	Site Boundary	ESE	.54	2.5E-09	2.5E-09	2.4E-09	4.4E-10
A	Site Boundary	SE	.65	9.8E-09	9.8E-09	9.8E-09	1.2E-09
A	Site Boundary	SSE	.81	4.3E-08	4.3E-08	4.3E-08	2.6E-09
A	Nearest Res	SSW	3.00	6.8E-08	6.8E-08	6.6E-08	4.0E-10
A	Nearest Res	SW	1.00	7.5E-08	7.4E-08	7.5E-08	5.7E-10
A	Nearest Res	WSW	2.50	7.6E-08	7.6E-08	7.4E-08	2.2E-10
A	Nearest Res	W	1.00	2.0E-07	2.0E-07	1.9E-07	1.4E-09
A	Nearest Res	WNW	1.70	2.6E-07	2.6E-07	2.6E-07	1.0E-09
A	Nearest Res	NW	.90	2.1E-07	2.1E-07	2.1E-07	4.6E-09
A	Nearest Res	NNW	1.90	1.8E-07	1.8E-07	1.8E-07	1.2E-09
A	Nearest Res	N	2.90	5.6E-08	5.5E-08	5.4E-08	5.5E-10
A	Nearest Res	NNE	1.70	4.1E-08	4.1E-08	4.1E-08	6.1E-10
A	Nearest Res	ENE	1.70	1.9E-08	1.9E-08	1.9E-08	2.5E-10
A	Nearest Res	E	2.20	2.3E-08	2.3E-08	2.2E-08	1.8E-10
A	Nearest Res	SE	2.80	3.3E-08	3.3E-08	3.2E-08	3.9E-10
A	Nearest Cow	NNW	3.50	1.4E-07	1.4E-07	1.4E-07	4.2E-10
A	Nearest Garde	SSW	3.00	6.8E-08	6.8E-08	6.6E-08	4.0E-10
A	Nearest Garde	SW	2.20	9.6E-08	9.5E-08	9.4E-08	2.9E-10
A	Nearest Garde	WSW	2.50	7.6E-08	7.6E-08	7.4E-08	2.2E-10
A	Nearest Garde	WNW	1.70	2.6E-07	2.6E-07	2.6E-07	1.0E-09
A	Nearest Garde	NW	2.00	3.0E-07	3.0E-07	2.9E-07	1.5E-09
A	Nearest Garde	NNW	2.80	1.6E-07	1.6E-07	1.6E-07	6.3E-10
A	Nearest Garde	ESE	2.30	2.3E-08	2.3E-08	2.3E-08	2.3E-10
A	MAXIMUM CHI/Q	S	1.50	5.8E-08	5.8E-08	5.8E-08	1.0E-09
A	MAXIMUM CHI/Q	SSW	1.50	7.7E-08	7.7E-08	7.6E-08	1.2E-09
A	MAXIMUM CHI/Q	SW	1.50	1.5E-07	1.5E-07	1.5E-07	6.4E-10
A	MAXIMUM CHI/Q	WSW	1.50	1.6E-07	1.6E-07	1.6E-07	6.6E-10
A	MAXIMUM CHI/Q	W	1.50	2.0E-07	2.0E-07	2.0E-07	6.7E-10
A	MAXIMUM CHI/Q	WNW	1.50	3.2E-07	3.2E-07	3.2E-07	1.3E-09
A	MAXIMUM CHI/Q	NW	1.50	5.0E-07	4.9E-07	4.9E-07	3.0E-09
A	MAXIMUM CHI/Q	NNW	2.00	1.8E-07	1.8E-07	1.8E-07	1.1E-09
A	MAXIMUM CHI/Q	N	1.50	7.7E-08	7.7E-08	7.7E-08	1.6E-09
A	MAXIMUM CHI/Q	NNE	1.50	4.3E-08	4.2E-08	4.2E-08	7.4E-10
A	MAXIMUM CHI/Q	NE	7.50	2.3E-08	2.2E-08	2.2E-08	1.1E-10
A	MAXIMUM CHI/Q	ENE	7.50	2.0E-08	2.0E-08	2.0E-08	5.8E-11
A	MAXIMUM CHI/Q	E	1.50	2.5E-08	2.5E-08	2.5E-08	3.0E-10
A	MAXIMUM CHI/Q	ESE	1.50	2.8E-08	2.8E-08	2.8E-08	4.3E-10
A	MAXIMUM CHI/Q	SE	1.50	4.8E-08	4.8E-08	4.8E-08	9.9E-10
A	MAXIMUM CHI/Q	SSE	1.50	7.8E-08	7.8E-08	7.7E-08	1.6E-09

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Atmospheric Diffusion Estimates

Elevated Releases

January-December 2017

ERP ELEVATED STACK RELEASES - JAN-DEC 2017
 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	7.758E-10	8.861E-09	3.384E-08	5.420E-08	6.361E-08	5.597E-08	4.651E-08	3.852E-08	3.225E-08	3.639E-08	3.939E-08
SSW	1.142E-08	1.303E-08	3.736E-08	6.186E-08	7.633E-08	6.916E-08	5.867E-08	6.413E-08	6.548E-08	5.698E-08	5.031E-08
SW	1.453E-08	1.780E-08	5.206E-08	1.091E-07	1.751E-07	1.194E-07	8.649E-08	6.592E-08	5.227E-08	4.274E-08	3.581E-08
WSW	7.167E-11	7.037E-09	4.718E-08	1.089E-07	1.716E-07	1.083E-07	7.504E-08	5.553E-08	4.311E-08	3.470E-08	2.872E-08
W	6.042E-09	3.396E-08	1.621E-07	2.084E-07	1.946E-07	1.230E-07	8.538E-08	6.330E-08	4.922E-08	3.967E-08	3.287E-08
WNW	6.469E-09	1.237E-08	1.030E-07	1.998E-07	2.643E-07	1.643E-07	1.129E-07	8.722E-08	7.022E-08	5.596E-08	4.594E-08
NW	7.729E-09	9.261E-09	8.131E-08	2.191E-07	3.910E-07	2.361E-07	1.596E-07	1.194E-07	9.379E-08	7.467E-08	6.127E-08
NNW	8.746E-09	2.209E-08	5.386E-08	9.378E-08	1.474E-07	1.505E-07	1.440E-07	1.331E-07	1.238E-07	9.832E-08	8.051E-08
N	1.033E-08	3.797E-08	6.158E-08	7.135E-08	7.407E-08	6.703E-08	5.785E-08	4.868E-08	4.143E-08	3.574E-08	3.122E-08
NNE	1.233E-08	2.907E-08	4.314E-08	4.647E-08	4.531E-08	3.880E-08	3.232E-08	2.705E-08	2.294E-08	1.974E-08	1.723E-08
NE	2.924E-11	2.213E-09	1.069E-08	1.804E-08	2.285E-08	2.141E-08	1.871E-08	1.615E-08	1.399E-08	1.223E-08	1.081E-08
ENE	1.292E-09	5.306E-09	1.017E-08	1.527E-08	1.848E-08	1.679E-08	1.431E-08	1.211E-08	1.033E-08	8.922E-09	7.803E-09
E	4.844E-09	3.556E-09	9.760E-09	1.633E-08	2.087E-08	1.930E-08	1.659E-08	1.409E-08	1.204E-08	1.039E-08	9.082E-09
ESE	4.826E-09	2.991E-09	1.313E-08	2.397E-08	3.058E-08	2.785E-08	2.364E-08	1.987E-08	1.683E-08	1.442E-08	1.251E-08
SE	3.216E-11	3.314E-09	2.620E-08	4.672E-08	5.678E-08	5.048E-08	4.225E-08	3.520E-08	2.961E-08	2.524E-08	2.181E-08
SSE	5.715E-09	1.904E-08	6.014E-08	9.006E-08	1.019E-07	8.876E-08	7.345E-08	6.072E-08	5.080E-08	4.312E-08	3.714E-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	3.518E-08	2.477E-08	1.621E-08	9.389E-09	6.730E-09	5.171E-09	4.040E-09	3.282E-09	2.777E-09	2.392E-09	2.077E-09
SSW	4.636E-08	3.691E-08	2.411E-08	1.394E-08	1.011E-08	7.665E-09	5.984E-09	4.860E-09	4.067E-09	3.474E-09	3.018E-09
SW	3.297E-08	2.591E-08	1.715E-08	1.008E-08	7.322E-09	5.675E-09	4.610E-09	3.753E-09	3.142E-09	2.688E-09	2.338E-09
WSW	2.539E-08	1.692E-08	1.222E-08	7.720E-09	5.214E-09	3.855E-09	3.019E-09	2.454E-09	2.053E-09	1.755E-09	1.526E-09
W	2.783E-08	1.537E-08	1.117E-08	7.471E-09	5.650E-09	4.207E-09	3.287E-09	2.672E-09	2.235E-09	1.910E-09	1.660E-09
WNW	3.908E-08	2.206E-08	1.507E-08	9.212E-09	6.330E-09	4.735E-09	3.750E-09	3.068E-09	2.570E-09	2.194E-09	1.904E-09
NW	5.218E-08	2.965E-08	2.054E-08	1.273E-08	8.630E-09	6.396E-09	5.127E-09	4.206E-09	3.522E-09	3.012E-09	2.620E-09
NNW	6.926E-08	4.049E-08	2.654E-08	1.545E-08	1.056E-08	7.870E-09	6.267E-09	5.169E-09	4.424E-09	3.818E-09	3.327E-09
N	2.767E-08	1.763E-08	1.482E-08	1.250E-08	1.115E-08	9.571E-09	7.581E-09	6.201E-09	5.199E-09	4.453E-09	3.878E-09
NNE	1.896E-08	3.181E-08	2.080E-08	1.209E-08	8.261E-09	6.163E-09	4.858E-09	3.976E-09	3.345E-09	2.874E-09	2.510E-09
NE	1.224E-08	2.144E-08	1.404E-08	8.177E-09	5.593E-09	4.175E-09	3.335E-09	2.754E-09	2.335E-09	2.005E-09	1.750E-09
ENE	8.318E-09	1.552E-08	1.047E-08	6.317E-09	4.415E-09	3.346E-09	2.855E-09	2.458E-09	2.075E-09	1.787E-09	1.565E-09
E	9.569E-09	1.613E-08	1.085E-08	6.521E-09	4.547E-09	3.440E-09	2.741E-09	2.263E-09	2.018E-09	1.809E-09	1.584E-09
ESE	1.264E-08	1.404E-08	9.316E-09	5.486E-09	3.770E-09	2.820E-09	2.225E-09	1.823E-09	1.534E-09	1.318E-09	1.151E-09
SE	1.907E-08	1.151E-08	8.702E-09	6.075E-09	4.412E-09	3.465E-09	2.861E-09	2.442E-09	2.046E-09	1.750E-09	1.523E-09
SSE	3.833E-08	4.076E-08	2.611E-08	1.474E-08	9.862E-09	7.238E-09	5.629E-09	4.556E-09	3.795E-09	3.233E-09	2.801E-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	3.734E-08	5.812E-08	4.583E-08	3.562E-08	3.694E-08	2.328E-08	9.723E-09	5.134E-09	3.306E-09	2.389E-09
SSW	4.284E-08	6.993E-08	6.365E-08	6.185E-08	5.082E-08	3.332E-08	1.450E-08	7.644E-09	4.879E-09	3.481E-09
SW	6.980E-08	1.357E-07	8.703E-08	5.254E-08	3.681E-08	2.359E-08	1.043E-08	5.688E-09	3.765E-09	2.693E-09
WSW	6.571E-08	1.295E-07	7.611E-08	4.346E-08	2.926E-08	1.672E-08	7.606E-09	3.883E-09	2.463E-09	1.758E-09
W	1.542E-07	1.659E-07	8.658E-08	4.961E-08	3.302E-08	1.627E-08	7.483E-09	4.224E-09	2.681E-09	1.914E-09
WNW	1.259E-07	2.055E-07	1.163E-07	6.964E-08	4.637E-08	2.273E-08	9.232E-09	4.766E-09	3.073E-09	2.198E-09
NW	1.265E-07	2.840E-07	1.639E-07	9.383E-08	6.188E-08	3.061E-08	1.264E-08	6.484E-09	4.209E-09	3.018E-09
NNW	6.454E-08	1.369E-07	1.414E-07	1.168E-07	8.162E-08	4.068E-08	1.574E-08	7.945E-09	5.199E-09	3.816E-09
N	6.068E-08	7.034E-08	5.663E-08	4.133E-08	3.125E-08	1.861E-08	1.242E-08	9.197E-09	6.214E-09	4.461E-09
NNE	4.149E-08	4.268E-08	3.194E-08	2.289E-08	1.861E-08	2.406E-08	1.232E-08	6.200E-09	3.988E-09	2.879E-09
NE	1.207E-08	2.114E-08	1.841E-08	1.393E-08	1.176E-08	1.611E-08	8.333E-09	4.217E-09	2.760E-09	2.008E-09
ENE	1.135E-08	1.702E-08	1.409E-08	1.030E-08	8.325E-09	1.168E-08	6.395E-09	3.434E-09	2.425E-09	1.790E-09
E	1.130E-08	1.916E-08	1.631E-08	1.200E-08	9.651E-09	1.232E-08	6.606E-09	3.456E-09	2.306E-09	1.788E-09
ESE	1.569E-08	2.790E-08	2.325E-08	1.678E-08	1.312E-08	1.163E-08	5.574E-09	2.835E-09	1.828E-09	1.320E-09
SE	3.024E-08	5.174E-08	4.162E-08	2.954E-08	2.181E-08	1.194E-08	5.920E-09	3.476E-09	2.411E-09	1.754E-09
SSE	6.431E-08	9.344E-08	7.244E-08	5.071E-08	3.935E-08	3.371E-08	1.510E-08	7.294E-09	4.573E-09	3.240E-09

B319

ERP ELEVATED STACK RELEASES - JAN-DEC 2017
 2.260 DAY DECAY, UNDEPLETED
 CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SECTOR	ANNUAL AVERAGE CHI/Q (SEC/METER CUBED)										
	.250	.500	.750	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500
S	7.756E-10	8.856E-09	3.381E-08	5.412E-08	6.347E-08	5.579E-08	4.632E-08	3.833E-08	3.207E-08	3.615E-08	3.909E-08
SSW	1.142E-08	1.303E-08	3.732E-08	6.176E-08	7.613E-08	6.890E-08	5.839E-08	6.374E-08	6.500E-08	5.650E-08	4.982E-08
SW	1.452E-08	1.779E-08	5.200E-08	1.089E-07	1.744E-07	1.188E-07	8.591E-08	6.538E-08	5.175E-08	4.225E-08	3.535E-08
WSW	7.164E-11	7.030E-09	4.711E-08	1.087E-07	1.709E-07	1.077E-07	7.452E-08	5.506E-08	4.268E-08	3.430E-08	2.834E-08
W	6.039E-09	3.393E-08	1.619E-07	2.079E-07	1.939E-07	1.224E-07	8.483E-08	6.280E-08	4.877E-08	3.925E-08	3.247E-08
WNW	6.465E-09	1.237E-08	1.029E-07	1.994E-07	2.633E-07	1.635E-07	1.121E-07	8.652E-08	6.955E-08	5.534E-08	4.536E-08
NW	7.725E-09	9.254E-09	8.121E-08	2.187E-07	3.898E-07	2.351E-07	1.587E-07	1.186E-07	9.302E-08	7.396E-08	6.062E-08
NNW	8.745E-09	2.208E-08	5.381E-08	9.366E-08	1.471E-07	1.500E-07	1.434E-07	1.324E-07	1.231E-07	9.760E-08	7.985E-08
N	1.032E-08	3.796E-08	6.154E-08	7.128E-08	7.394E-08	6.686E-08	5.766E-08	4.849E-08	4.124E-08	3.555E-08	3.103E-08
NNE	1.233E-08	2.906E-08	4.311E-08	4.642E-08	4.521E-08	3.869E-08	3.221E-08	2.693E-08	2.282E-08	1.962E-08	1.711E-08
NE	2.923E-11	2.212E-09	1.068E-08	1.802E-08	2.281E-08	2.136E-08	1.865E-08	1.608E-08	1.392E-08	1.216E-08	1.074E-08
ENE	1.291E-09	5.300E-09	1.016E-08	1.524E-08	1.843E-08	1.673E-08	1.425E-08	1.205E-08	1.027E-08	8.856E-09	7.738E-09
E	4.841E-09	3.553E-09	9.748E-09	1.630E-08	2.080E-08	1.921E-08	1.649E-08	1.399E-08	1.194E-08	1.030E-08	8.988E-09
ESE	4.824E-09	2.988E-09	1.312E-08	2.393E-08	3.050E-08	2.775E-08	2.353E-08	1.976E-08	1.672E-08	1.431E-08	1.241E-08
SE	3.216E-11	3.313E-09	2.618E-08	4.667E-08	5.667E-08	5.034E-08	4.210E-08	3.504E-08	2.945E-08	2.509E-08	2.165E-08
SSE	5.712E-09	1.903E-08	6.009E-08	8.994E-08	1.017E-07	8.850E-08	7.318E-08	6.044E-08	5.052E-08	4.285E-08	3.688E-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	3.487E-08	2.439E-08	1.587E-08	9.088E-09	6.429E-09	4.875E-09	3.763E-09	3.021E-09	2.524E-09	2.147E-09	1.843E-09
SSW	4.584E-08	3.614E-08	2.343E-08	1.334E-08	9.501E-09	7.082E-09	5.443E-09	4.352E-09	3.584E-09	3.014E-09	2.580E-09
SW	3.248E-08	2.527E-08	1.659E-08	9.576E-09	6.830E-09	5.198E-09	4.143E-09	3.315E-09	2.728E-09	2.295E-09	1.964E-09
WSW	2.502E-08	1.651E-08	1.180E-08	7.305E-09	4.844E-09	3.516E-09	2.703E-09	2.158E-09	1.774E-09	1.490E-09	1.273E-09
W	2.745E-08	1.505E-08	1.085E-08	7.129E-09	5.291E-09	3.872E-09	2.977E-09	2.381E-09	1.960E-09	1.649E-09	1.411E-09
WNW	3.853E-08	2.157E-08	1.462E-08	8.788E-09	5.941E-09	4.371E-09	3.406E-09	2.741E-09	2.259E-09	1.899E-09	1.623E-09
NW	5.155E-08	2.908E-08	2.000E-08	1.222E-08	8.167E-09	5.969E-09	4.716E-09	3.814E-09	3.150E-09	2.658E-09	2.281E-09
NNW	6.860E-08	3.988E-08	2.600E-08	1.497E-08	1.012E-08	7.466E-09	5.880E-09	4.798E-09	4.059E-09	3.465E-09	2.988E-09
N	2.748E-08	1.745E-08	1.461E-08	1.220E-08	1.075E-08	9.105E-09	7.137E-09	5.778E-09	4.797E-09	4.069E-09	3.510E-09
NNE	1.882E-08	3.127E-08	2.033E-08	1.167E-08	7.886E-09	5.816E-09	4.532E-09	3.667E-09	3.051E-09	2.592E-09	2.239E-09
NE	1.215E-08	2.114E-08	1.378E-08	7.946E-09	5.383E-09	3.980E-09	3.148E-09	2.573E-09	2.160E-09	1.837E-09	1.588E-09
ENE	8.242E-09	1.526E-08	1.023E-08	6.099E-09	4.211E-09	3.154E-09	2.656E-09	2.257E-09	1.882E-09	1.603E-09	1.387E-09
E	9.462E-09	1.579E-08	1.055E-08	6.244E-09	4.289E-09	3.197E-09	2.510E-09	2.042E-09	1.791E-09	1.579E-09	1.363E-09
ESE	1.252E-08	1.383E-08	9.123E-09	5.313E-09	3.611E-09	2.671E-09	2.086E-09	1.690E-09	1.407E-09	1.196E-09	1.033E-09
SE	1.892E-08	1.137E-08	8.553E-09	5.910E-09	4.248E-09	3.302E-09	2.697E-09	2.276E-09	1.888E-09	1.599E-09	1.378E-09
SSE	3.802E-08	4.009E-08	2.553E-08	1.424E-08	9.417E-09	6.830E-09	5.250E-09	4.200E-09	3.459E-09	2.912E-09	2.495E-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	3.729E-08	5.798E-08	4.565E-08	3.541E-08	3.666E-08	2.293E-08	9.414E-09	4.845E-09	3.044E-09	2.146E-09
SSW	4.278E-08	6.972E-08	6.333E-08	6.140E-08	5.032E-08	3.265E-08	1.387E-08	7.072E-09	4.371E-09	3.022E-09
SW	6.968E-08	1.351E-07	8.646E-08	5.203E-08	3.633E-08	2.301E-08	9.913E-09	5.211E-09	3.328E-09	2.301E-09
WSW	6.558E-08	1.290E-07	7.559E-08	4.302E-08	2.888E-08	1.631E-08	7.211E-09	3.545E-09	2.167E-09	1.494E-09
W	1.539E-07	1.652E-07	8.603E-08	4.915E-08	3.262E-08	1.594E-08	7.138E-09	3.893E-09	2.391E-09	1.653E-09
WNW	1.256E-07	2.047E-07	1.156E-07	6.899E-08	4.579E-08	2.225E-08	8.818E-09	4.404E-09	2.748E-09	1.903E-09
NW	1.263E-07	2.830E-07	1.630E-07	9.307E-08	6.121E-08	3.004E-08	1.215E-08	6.054E-09	3.818E-09	2.664E-09
NNW	6.447E-08	1.365E-07	1.408E-07	1.160E-07	8.094E-08	4.009E-08	1.527E-08	7.540E-09	4.826E-09	3.464E-09
N	6.063E-08	7.020E-08	5.645E-08	4.114E-08	3.106E-08	1.842E-08	1.209E-08	8.757E-09	5.793E-09	4.078E-09
NNE	4.146E-08	4.258E-08	3.182E-08	2.277E-08	1.849E-08	2.364E-08	1.191E-08	5.854E-09	3.679E-09	2.597E-09
NE	1.206E-08	2.110E-08	1.834E-08	1.387E-08	1.168E-08	1.587E-08	8.104E-09	4.021E-09	2.580E-09	1.841E-09
ENE	1.134E-08	1.697E-08	1.403E-08	1.024E-08	8.256E-09	1.147E-08	6.179E-09	3.237E-09	2.228E-09	1.606E-09
E	1.128E-08	1.909E-08	1.622E-08	1.190E-08	9.551E-09	1.206E-08	6.332E-09	3.213E-09	2.080E-09	1.562E-09
ESE	1.567E-08	2.782E-08	2.315E-08	1.667E-08	1.301E-08	1.145E-08	5.403E-09	2.688E-09	1.695E-09	1.198E-09
SE	3.020E-08	5.163E-08	4.147E-08	2.939E-08	2.166E-08	1.179E-08	5.759E-09	3.312E-09	2.248E-09	1.603E-09
SSE	6.423E-08	9.323E-08	7.217E-08	5.044E-08	3.907E-08	3.316E-08	1.460E-08	6.888E-09	4.218E-09	2.920E-09

B320

ERP ELEVATED STACK RELEASES - JAN-DEC 2017
 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	7.757E-10	8.794E-09	3.361E-08	5.396E-08	6.288E-08	5.485E-08	4.520E-08	3.715E-08	3.088E-08	3.476E-08	3.762E-08
SSW	1.142E-08	1.293E-08	3.713E-08	6.165E-08	7.551E-08	6.784E-08	5.711E-08	6.211E-08	6.320E-08	5.474E-08	4.815E-08
SW	1.453E-08	1.765E-08	5.167E-08	1.087E-07	1.729E-07	1.168E-07	8.406E-08	6.369E-08	5.024E-08	4.090E-08	3.414E-08
WSW	7.166E-11	6.978E-09	4.686E-08	1.084E-07	1.691E-07	1.057E-07	7.264E-08	5.340E-08	4.123E-08	3.302E-08	2.721E-08
W	6.041E-09	3.386E-08	1.611E-07	2.057E-07	1.903E-07	1.193E-07	8.231E-08	6.071E-08	4.700E-08	3.773E-08	3.115E-08
WNW	6.468E-09	1.231E-08	1.028E-07	1.983E-07	2.599E-07	1.602E-07	1.093E-07	8.409E-08	6.745E-08	5.347E-08	4.365E-08
NW	7.728E-09	9.185E-09	8.098E-08	2.179E-07	3.858E-07	2.309E-07	1.551E-07	1.155E-07	9.039E-08	7.161E-08	5.844E-08
NNW	8.746E-09	2.190E-08	5.330E-08	9.323E-08	1.459E-07	1.483E-07	1.415E-07	1.307E-07	1.216E-07	9.613E-08	7.834E-08
N	1.033E-08	3.764E-08	6.069E-08	7.052E-08	7.298E-08	6.569E-08	5.639E-08	4.722E-08	4.001E-08	3.437E-08	2.992E-08
NNE	1.233E-08	2.881E-08	4.244E-08	4.580E-08	4.453E-08	3.792E-08	3.140E-08	2.613E-08	2.205E-08	1.889E-08	1.642E-08
NE	2.924E-11	2.197E-09	1.063E-08	1.798E-08	2.263E-08	2.106E-08	1.830E-08	1.572E-08	1.356E-08	1.181E-08	1.040E-08
ENE	1.292E-09	5.260E-09	1.008E-08	1.520E-08	1.828E-08	1.648E-08	1.394E-08	1.172E-08	9.938E-09	8.536E-09	7.430E-09
E	4.843E-09	3.526E-09	9.688E-09	1.626E-08	2.063E-08	1.893E-08	1.614E-08	1.362E-08	1.156E-08	9.926E-09	8.630E-09
ESE	4.826E-09	2.969E-09	1.309E-08	2.392E-08	3.027E-08	2.733E-08	2.301E-08	1.920E-08	1.616E-08	1.376E-08	1.188E-08
SE	3.216E-11	3.298E-09	2.614E-08	4.665E-08	5.621E-08	4.954E-08	4.114E-08	3.402E-08	2.843E-08	2.409E-08	2.070E-08
SSE	5.714E-09	1.889E-08	5.963E-08	8.953E-08	1.007E-07	8.694E-08	7.137E-08	5.856E-08	4.865E-08	4.104E-08	3.514E-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	3.349E-08	2.318E-08	1.469E-08	7.974E-09	5.319E-09	3.844E-09	2.863E-09	2.227E-09	1.814E-09	1.514E-09	1.276E-09
SSW	4.427E-08	3.476E-08	2.195E-08	1.185E-08	7.979E-09	5.784E-09	4.345E-09	3.406E-09	2.759E-09	2.285E-09	1.929E-09
SW	3.138E-08	2.440E-08	1.562E-08	8.556E-09	5.743E-09	4.161E-09	3.234E-09	2.537E-09	2.053E-09	1.700E-09	1.435E-09
WSW	2.400E-08	1.569E-08	1.099E-08	6.565E-09	4.228E-09	2.999E-09	2.262E-09	1.777E-09	1.440E-09	1.195E-09	1.010E-09
W	2.630E-08	1.434E-08	1.031E-08	6.515E-09	4.625E-09	3.305E-09	2.490E-09	1.958E-09	1.587E-09	1.318E-09	1.115E-09
WNW	3.692E-08	2.020E-08	1.334E-08	7.608E-09	4.826E-09	3.384E-09	2.560E-09	2.017E-09	1.631E-09	1.348E-09	1.135E-09
NW	4.950E-08	2.726E-08	1.827E-08	1.058E-08	6.692E-09	4.675E-09	3.585E-09	2.836E-09	2.297E-09	1.904E-09	1.608E-09
NNW	6.703E-08	3.797E-08	2.401E-08	1.296E-08	8.124E-09	5.629E-09	4.209E-09	3.303E-09	2.721E-09	2.273E-09	1.921E-09
N	2.644E-08	1.666E-08	1.398E-08	1.182E-08	1.032E-08	8.434E-09	6.473E-09	5.146E-09	4.203E-09	3.514E-09	2.991E-09
NNE	1.811E-08	3.056E-08	1.929E-08	1.053E-08	6.783E-09	4.811E-09	3.627E-09	2.852E-09	2.313E-09	1.920E-09	1.624E-09
NE	1.181E-08	2.073E-08	1.311E-08	7.178E-09	4.637E-09	3.298E-09	2.530E-09	2.021E-09	1.663E-09	1.389E-09	1.181E-09
ENE	7.923E-09	1.498E-08	9.768E-09	5.484E-09	3.526E-09	2.490E-09	1.995E-09	1.635E-09	1.331E-09	1.108E-09	9.394E-10
E	9.090E-09	1.549E-08	1.007E-08	5.637E-09	3.619E-09	2.552E-09	1.911E-09	1.492E-09	1.262E-09	1.079E-09	9.083E-10
ESE	1.197E-08	1.334E-08	8.570E-09	4.730E-09	3.022E-09	2.124E-09	1.586E-09	1.236E-09	9.935E-10	8.177E-10	6.859E-10
SE	1.801E-08	1.065E-08	7.968E-09	5.500E-09	3.954E-09	3.085E-09	2.536E-09	2.150E-09	1.762E-09	1.478E-09	1.261E-09
SSE	3.620E-08	3.834E-08	2.371E-08	1.257E-08	7.927E-09	5.529E-09	4.111E-09	3.194E-09	2.564E-09	2.109E-09	1.769E-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	3.714E-08	5.733E-08	4.455E-08	3.415E-08	3.524E-08	2.170E-08	8.286E-09	3.845E-09	2.251E-09	1.515E-09	
SSW	4.265E-08	6.902E-08	6.197E-08	5.967E-08	4.867E-08	3.118E-08	1.237E-08	5.794E-09	3.428E-09	2.293E-09	
SW	6.946E-08	1.337E-07	8.466E-08	5.052E-08	3.512E-08	2.205E-08	8.875E-09	4.212E-09	2.552E-09	1.707E-09	
WSW	6.536E-08	1.274E-07	7.375E-08	4.158E-08	2.774E-08	1.545E-08	6.510E-09	3.032E-09	1.787E-09	1.199E-09	
W	1.526E-07	1.622E-07	8.355E-08	4.739E-08	3.130E-08	1.521E-08	6.519E-09	3.331E-09	1.969E-09	1.323E-09	
WNW	1.251E-07	2.019E-07	1.128E-07	6.688E-08	4.407E-08	2.087E-08	7.646E-09	3.439E-09	2.025E-09	1.353E-09	
NW	1.259E-07	2.797E-07	1.595E-07	9.041E-08	5.903E-08	2.821E-08	1.056E-08	4.777E-09	2.845E-09	1.911E-09	
NNW	6.407E-08	1.353E-07	1.390E-07	1.145E-07	7.942E-08	3.823E-08	1.327E-08	5.727E-09	3.340E-09	2.275E-09	
N	5.993E-08	6.919E-08	5.520E-08	3.992E-08	2.995E-08	1.764E-08	1.163E-08	8.154E-09	5.166E-09	3.524E-09	
NNE	4.091E-08	4.188E-08	3.103E-08	2.201E-08	1.777E-08	2.279E-08	1.081E-08	4.863E-09	2.868E-09	1.927E-09	
NE	1.202E-08	2.090E-08	1.800E-08	1.351E-08	1.134E-08	1.536E-08	7.367E-09	3.348E-09	2.030E-09	1.393E-09	
ENE	1.128E-08	1.679E-08	1.373E-08	9.913E-09	7.940E-09	1.109E-08	5.566E-09	2.569E-09	1.622E-09	1.111E-09	
E	1.124E-08	1.890E-08	1.587E-08	1.153E-08	9.184E-09	1.166E-08	5.726E-09	2.580E-09	1.524E-09	1.070E-09	
ESE	1.565E-08	2.755E-08	2.264E-08	1.612E-08	1.247E-08	1.091E-08	4.824E-09	2.148E-09	1.244E-09	8.210E-10	
SE	3.018E-08	5.112E-08	4.053E-08	2.837E-08	2.070E-08	1.109E-08	5.361E-09	3.097E-09	2.112E-09	1.482E-09	
SSE	6.387E-08	9.210E-08	7.040E-08	4.858E-08	3.728E-08	3.136E-08	1.298E-08	5.602E-09	3.216E-09	2.117E-09	

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ERP ELEVATED STACK RELEASES - JAN-DEC 2017
 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	1.102E-09	1.530E-09	2.237E-09	2.083E-09	1.238E-09	8.170E-10	5.729E-10	4.193E-10	3.170E-10	2.615E-10	2.366E-10
SSW	1.363E-09	1.737E-09	2.407E-09	2.197E-09	1.291E-09	8.497E-10	5.949E-10	4.351E-10	4.112E-10	3.109E-10	2.433E-10
SW	1.621E-09	1.594E-09	1.762E-09	1.450E-09	1.434E-09	7.818E-10	4.855E-10	3.302E-10	2.389E-10	1.808E-10	1.416E-10
WSW	6.340E-10	7.543E-10	9.943E-10	1.720E-09	9.829E-10	5.330E-10	3.293E-10	2.232E-10	1.611E-10	1.217E-10	9.525E-11
W	1.805E-10	2.850E-09	2.719E-09	1.829E-09	8.749E-10	4.722E-10	2.908E-10	1.965E-10	1.415E-10	1.067E-10	8.329E-11
WNW	5.127E-10	7.042E-10	2.392E-09	2.218E-09	1.302E-09	6.713E-10	4.043E-10	2.731E-10	2.104E-10	1.621E-10	1.320E-10
NW	9.272E-10	1.158E-09	1.582E-09	3.362E-09	2.210E-09	1.103E-09	6.530E-10	4.345E-10	3.153E-10	2.448E-10	2.011E-10
NNW	2.597E-09	2.366E-09	2.385E-09	1.863E-09	1.790E-09	9.678E-10	5.999E-10	5.023E-10	3.755E-10	3.021E-10	2.578E-10
N	5.996E-09	5.141E-09	4.760E-09	3.512E-09	1.807E-09	1.134E-09	7.756E-10	5.605E-10	4.211E-10	3.257E-10	2.579E-10
NNE	4.313E-09	3.514E-09	2.994E-09	2.072E-09	1.014E-09	6.236E-10	4.221E-10	3.034E-10	2.273E-10	1.756E-10	1.390E-10
NE	3.025E-10	4.593E-10	7.061E-10	6.690E-10	4.009E-10	2.654E-10	1.863E-10	1.365E-10	1.032E-10	8.006E-11	6.340E-11
ENE	1.643E-10	3.080E-10	5.199E-10	5.073E-10	3.084E-10	2.051E-10	1.443E-10	1.058E-10	8.005E-11	6.211E-11	4.918E-11
E	4.191E-10	4.817E-10	6.178E-10	5.463E-10	3.158E-10	2.066E-10	1.443E-10	1.054E-10	7.957E-11	6.169E-11	4.885E-11
ESE	2.539E-10	5.067E-10	8.749E-10	8.594E-10	5.241E-10	3.488E-10	2.456E-10	1.801E-10	1.363E-10	1.057E-10	8.373E-11
SE	4.684E-10	1.116E-09	2.037E-09	2.032E-09	2.248E-09	8.324E-10	5.866E-10	4.304E-10	3.258E-10	2.528E-10	2.002E-10
SSE	2.274E-09	2.802E-09	3.790E-09	3.427E-09	2.005E-09	1.317E-09	9.213E-10	6.735E-10	5.089E-10	3.946E-10	3.125E-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	1.902E-10	1.227E-10	8.161E-11	4.614E-11	2.896E-11	2.208E-11	1.579E-11	1.183E-11	9.281E-12	7.411E-12	6.050E-12
SSW	1.967E-10	1.361E-10	9.240E-11	5.320E-11	3.528E-11	2.441E-11	1.749E-11	1.314E-11	1.029E-11	8.222E-12	6.711E-12
SW	1.153E-10	8.504E-11	5.872E-11	3.436E-11	2.182E-11	1.542E-11	1.102E-11	8.273E-12	6.432E-12	5.138E-12	4.194E-12
WSW	7.689E-11	5.284E-11	3.587E-11	2.285E-11	1.383E-11	9.272E-12	6.802E-12	5.108E-12	3.971E-12	3.172E-12	2.589E-12
W	6.690E-11	2.989E-11	3.637E-11	2.280E-11	1.451E-11	9.855E-12	7.062E-12	5.303E-12	4.123E-12	3.293E-12	2.688E-12
WNW	1.137E-10	6.679E-11	4.702E-11	2.794E-11	1.783E-11	1.175E-11	8.526E-12	6.403E-12	5.063E-12	4.044E-12	3.301E-12
NW	1.735E-10	1.044E-10	7.445E-11	4.628E-11	2.839E-11	1.898E-11	1.343E-11	1.008E-11	7.917E-12	6.324E-12	5.162E-12
NNW	2.308E-10	1.550E-10	1.160E-10	7.238E-11	4.654E-11	3.091E-11	2.097E-11	1.495E-11	1.150E-11	9.184E-12	7.497E-12
N	2.081E-10	9.905E-11	6.072E-11	3.235E-11	7.517E-11	4.593E-11	3.289E-11	2.469E-11	1.920E-11	1.534E-11	1.252E-11
NNE	1.123E-10	1.780E-10	1.095E-10	5.638E-11	3.432E-11	2.298E-11	1.643E-11	1.230E-11	9.546E-12	7.613E-12	6.205E-12
NE	5.108E-11	1.106E-10	6.835E-11	3.537E-11	2.156E-11	1.443E-11	1.029E-11	7.687E-12	5.976E-12	4.774E-12	3.896E-12
ENE	3.962E-11	5.321E-11	3.966E-11	2.461E-11	1.576E-11	1.043E-11	7.314E-12	4.990E-12	3.882E-12	3.103E-12	2.534E-12
E	3.937E-11	5.341E-11	3.992E-11	2.484E-11	1.594E-11	1.056E-11	7.411E-12	5.428E-12	4.134E-12	3.060E-12	2.493E-12
ESE	6.745E-11	6.978E-11	4.964E-11	2.971E-11	1.887E-11	1.252E-11	8.818E-12	6.488E-12	4.963E-12	3.913E-12	3.159E-12
SE	1.613E-10	7.638E-11	4.656E-11	2.448E-11	1.490E-11	1.020E-11	7.574E-12	1.216E-11	9.379E-12	7.459E-12	6.079E-12
SSE	2.518E-10	2.645E-10	1.623E-10	8.342E-11	5.076E-11	3.400E-11	2.432E-11	1.823E-11	1.415E-11	1.129E-11	9.211E-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	2.012E-09	1.239E-09	5.766E-10	3.251E-10	2.268E-10	1.194E-10	4.639E-11	2.140E-11	1.199E-11	7.461E-12	
SSW	2.165E-09	1.296E-09	5.989E-10	3.798E-10	2.461E-10	1.302E-10	5.395E-11	2.454E-11	1.330E-11	8.276E-12	
SW	1.586E-09	1.148E-09	5.024E-10	2.429E-10	1.435E-10	8.007E-11	3.420E-11	1.537E-11	8.356E-12	5.172E-12	
WSW	1.264E-09	9.468E-10	3.412E-10	1.638E-10	9.630E-11	5.067E-11	2.173E-11	9.499E-12	5.159E-12	3.193E-12	
W	2.352E-09	9.078E-10	3.014E-10	1.439E-10	8.414E-11	4.100E-11	2.213E-11	9.978E-12	5.356E-12	3.315E-12	
WNW	1.940E-09	1.225E-09	4.230E-10	2.099E-10	1.341E-10	6.843E-11	2.768E-11	1.208E-11	6.499E-12	4.071E-12	
NW	2.279E-09	1.974E-09	6.856E-10	3.225E-10	2.038E-10	1.064E-10	4.459E-11	1.927E-11	1.021E-11	6.366E-12	
NNW	2.149E-09	1.441E-09	6.590E-10	3.838E-10	2.609E-10	1.545E-10	7.060E-11	3.110E-11	1.536E-11	9.245E-12	
N	4.290E-09	1.887E-09	7.851E-10	4.246E-10	2.596E-10	1.063E-10	5.768E-11	4.851E-11	2.494E-11	1.544E-11	
NNE	2.700E-09	1.076E-09	4.283E-10	2.293E-10	1.400E-10	1.329E-10	5.838E-11	2.338E-11	1.243E-11	7.664E-12	
NE	6.348E-10	4.003E-10	1.875E-10	1.039E-10	6.378E-11	7.860E-11	3.656E-11	1.467E-11	7.779E-12	4.805E-12	
ENE	4.672E-10	3.067E-10	1.451E-10	8.057E-11	4.947E-11	4.417E-11	2.402E-11	1.061E-11	5.232E-12	3.123E-12	
E	5.558E-10	3.185E-10	1.453E-10	8.013E-11	4.914E-11	4.429E-11	2.423E-11	1.073E-11	5.501E-12	3.168E-12	
ESE	7.862E-10	5.207E-10	2.469E-10	1.372E-10	8.422E-11	6.031E-11	2.932E-11	1.273E-11	6.573E-12	3.945E-12	
SE	1.830E-09	1.237E-09	5.897E-10	3.279E-10	2.014E-10	8.199E-11	2.513E-11	1.040E-11	9.789E-12	7.517E-12	
SSE	3.409E-09	2.015E-09	9.277E-10	5.124E-10	3.143E-10	2.163E-10	8.645E-11	3.460E-11	1.842E-11	1.137E-11	

ERP ELEVATED STACK RELEASES - JAN-DEC 2017
CORRECTED USING STANDARD OPEN TERRAIN FACTORS

SPECIFIC POINTS OF INTEREST		RELEASE TYPE OF DIRECTION DIST.				
ID	LOCATION FROM SITE (MI)	X/Q NO DECAY UNDEPLETED	X/Q (SEC/M3) 2.26 DAY DECAY UNDEPLETED	X/Q (SEC/M3) 8.0 DAY DECAY DEPLETED	D/Q (PER SQ.METER)	
A	Site Boundary S	.80	3.9E-08	3.9E-08	3.9E-08	2.3E-09
A	Site Boundary SSW	.82	4.6E-08	4.6E-08	4.5E-08	2.4E-09
A	Site Boundary SW	.97	1.0E-07	1.0E-07	1.0E-07	1.5E-09
A	Site Boundary WSW	.93	9.1E-08	9.1E-08	9.1E-08	1.3E-09
A	Site Boundary W	.91	2.0E-07	2.0E-07	2.0E-07	2.0E-09
A	Site Boundary WNW	.94	1.8E-07	1.8E-07	1.8E-07	2.5E-09
A	Site Boundary NW	.81	1.1E-07	1.1E-07	1.1E-07	1.6E-09
A	Site Boundary NNW	.69	4.2E-08	4.2E-08	4.1E-08	2.4E-09
A	Site Boundary N	.67	5.3E-08	5.3E-08	5.2E-08	4.8E-09
A	Site Boundary NNE	.60	3.4E-08	3.4E-08	3.4E-08	3.2E-09
A	Site Boundary NE	.62	5.4E-09	5.4E-09	5.4E-09	5.8E-10
A	Site Boundary ENE	.59	6.1E-09	6.1E-09	6.0E-09	3.8E-10
A	Site Boundary E	.53	3.5E-09	3.5E-09	3.5E-09	4.9E-10
A	Site Boundary ESE	.54	3.3E-09	3.3E-09	3.3E-09	5.6E-10
A	Site Boundary SE	.65	1.4E-08	1.4E-08	1.4E-08	1.7E-09
A	Site Boundary SSE	.81	6.9E-08	6.9E-08	6.9E-08	3.8E-09
A	Nearest Res SSW	3.00	6.4E-08	6.4E-08	6.2E-08	4.4E-10
A	Nearest Res SW	1.00	1.1E-07	1.1E-07	1.1E-07	1.5E-09
A	Nearest Res WSW	2.50	7.5E-08	7.4E-08	7.3E-08	3.3E-10
A	Nearest Res W	1.00	2.1E-07	2.1E-07	2.1E-07	1.8E-09
A	Nearest Res WNW	1.70	2.2E-07	2.1E-07	2.1E-07	9.8E-10
A	Nearest Res NW	.90	1.6E-07	1.6E-07	1.6E-07	3.5E-09
A	Nearest Res NNW	1.90	1.5E-07	1.5E-07	1.5E-07	1.1E-09
A	Nearest Res N	2.90	5.0E-08	5.0E-08	4.9E-08	6.0E-10
A	Nearest Res NNE	1.70	4.3E-08	4.3E-08	4.2E-08	8.1E-10
A	Nearest Res ENE	1.70	1.8E-08	1.8E-08	1.8E-08	2.6E-10
A	Nearest Res E	2.20	1.8E-08	1.8E-08	1.8E-08	1.8E-10
A	Nearest Res SE	2.80	3.8E-08	3.8E-08	3.7E-08	4.9E-10
A	Nearest Res SSE	3.50	1.2E-07	1.2E-07	1.2E-07	3.8E-10
A	Nearest Res SSW	3.00	6.4E-08	6.4E-08	6.2E-08	4.4E-10
A	Nearest Res SW	2.20	1.0E-07	1.0E-07	1.0E-07	6.4E-10
A	Nearest Res WSW	2.50	7.5E-08	7.4E-08	7.3E-08	3.3E-10
A	Nearest Res WNW	1.70	2.2E-07	2.1E-07	2.1E-07	9.8E-10
A	Nearest Res NW	2.00	2.4E-07	2.4E-07	2.3E-07	1.1E-09
A	Nearest Res NNW	2.80	1.4E-07	1.4E-07	1.3E-07	5.6E-10
A	Nearest Res ESE	2.30	2.5E-08	2.5E-08	2.5E-08	2.8E-10
A	MAXIMUM CHI/Q S	1.50	6.4E-08	6.3E-08	6.3E-08	1.2E-09
A	MAXIMUM CHI/Q SSW	1.50	7.6E-08	7.6E-08	7.5E-08	1.3E-09
A	MAXIMUM CHI/Q SW	1.50	1.8E-07	1.7E-07	1.7E-07	1.4E-09
A	MAXIMUM CHI/Q WSW	1.50	1.7E-07	1.7E-07	1.7E-07	9.8E-10
A	MAXIMUM CHI/Q W	1.00	2.1E-07	2.1E-07	2.1E-07	1.8E-09
A	MAXIMUM CHI/Q WNW	1.50	2.6E-07	2.6E-07	2.6E-07	1.3E-09
A	MAXIMUM CHI/Q NW	1.50	3.9E-07	3.9E-07	3.9E-07	2.2E-09
A	MAXIMUM CHI/Q NNW	2.00	1.5E-07	1.5E-07	1.5E-07	9.7E-10
A	MAXIMUM CHI/Q N	1.50	7.4E-08	7.4E-08	7.3E-08	1.8E-09
A	MAXIMUM CHI/Q NNE	1.00	4.6E-08	4.6E-08	4.6E-08	2.1E-09
A	MAXIMUM CHI/Q NE	1.50	2.3E-08	2.3E-08	2.3E-08	4.0E-10
A	MAXIMUM CHI/Q ENE	1.50	1.8E-08	1.8E-08	1.8E-08	3.1E-10
A	MAXIMUM CHI/Q E	1.50	2.1E-08	2.1E-08	2.1E-08	3.2E-10
A	MAXIMUM CHI/Q ESE	1.50	3.1E-08	3.0E-08	3.0E-08	5.2E-10
A	MAXIMUM CHI/Q SE	1.50	5.7E-08	5.7E-08	5.6E-08	1.2E-09
A	MAXIMUM CHI/Q SSE	1.50	1.0E-07	1.0E-07	1.0E-07	2.0E-09

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ATMOSPHERIC DIFFUSION MODEL

Onsite meteorological data from January 1 through December 31, 2017 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 2017

TABLE 1. Doses to Maximum Individual at the Site Boundary, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2017 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 2017, 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 2017, 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 2017	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

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TABLE 4. Doses to Population Within a 50-Mile Radius, Resulting From Exposure to Radioactivity Discharged in Liquid Effluents, January-June 2017, 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 2017, 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 2017 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 2017	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00	0.00 E+00

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GASEOUS EFFLUENT DOSE CALCULATIONS (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 2017

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

ANNUAL BETA AIR DOSE = 1.25E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.54E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.70E-06	1.70E-06	1.70E-06	1.70E-06	1.70E-06	1.70E-06	1.72E-06	3.06E-06
GROUND	2.10E-03	2.10E-03	2.10E-03	2.10E-03	2.10E-03	2.10E-03	2.10E-03	2.48E-03
VEGET								
ADULT	3.81E-05	2.76E-04	7.38E-06	2.68E-05	4.75E-06	6.44E-05	9.93E-07	0.00E+00
TEEN	5.56E-05	2.93E-04	1.21E-05	4.16E-05	7.41E-06	8.68E-05	1.86E-06	0.00E+00
CHILD	1.06E-04	1.91E-04	2.86E-05	6.62E-05	1.17E-05	1.66E-04	2.83E-06	0.00E+00
MEAT								
ADULT	9.15E-06	7.24E-05	6.90E-07	5.09E-06	5.96E-07	1.74E-06	8.12E-08	0.00E+00
TEEN	7.08E-06	3.89E-05	5.53E-07	3.97E-06	4.57E-07	1.26E-06	7.68E-08	0.00E+00
CHILD	1.08E-05	1.96E-05	9.82E-07	4.77E-06	5.45E-07	1.90E-06	9.02E-08	0.00E+00
COW MILK								
ADULT	6.78E-06	1.72E-05	5.18E-06	9.01E-06	3.60E-06	4.82E-05	6.87E-07	0.00E+00
TEEN	8.57E-06	2.01E-05	9.22E-06	1.57E-05	6.16E-06	7.62E-05	1.42E-06	0.00E+00
CHILD	1.25E-05	1.33E-05	2.18E-05	2.62E-05	9.87E-06	1.51E-04	2.18E-06	0.00E+00
INFANT	1.75E-05	1.79E-05	3.46E-05	5.04E-05	1.51E-05	3.66E-04	3.95E-06	0.00E+00
GOATMILK								
ADULT	1.24E-05	2.45E-06	1.36E-05	1.88E-05	6.66E-06	5.78E-05	2.06E-06	0.00E+00
TEEN	1.20E-05	2.92E-06	2.46E-05	3.31E-05	1.17E-05	9.14E-05	4.26E-06	0.00E+00
CHILD	9.70E-06	1.98E-06	5.93E-05	5.72E-05	1.95E-05	1.81E-04	6.54E-06	0.00E+00
INFANT	1.01E-05	2.53E-06	9.49E-05	1.12E-04	3.13E-05	4.39E-04	1.18E-05	0.00E+00
INHAL								
ADULT	5.05E-07	7.15E-06	1.43E-07	5.70E-07	1.11E-07	2.81E-06	1.49E-04	0.00E+00
TEEN	6.06E-07	6.51E-06	1.99E-07	7.56E-07	1.49E-07	3.45E-06	2.17E-04	0.00E+00
CHILD	6.28E-07	2.50E-06	2.67E-07	6.78E-07	1.33E-07	3.84E-06	1.76E-04	0.00E+00
INFANT	3.21E-07	8.85E-07	1.63E-07	4.44E-07	7.73E-08	3.51E-06	1.12E-04	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 7.09E-07 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.44E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.67E-07	9.67E-07	9.67E-07	9.67E-07	9.67E-07	9.67E-07	9.74E-07	1.74E-06
GROUND	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.32E-03	1.55E-03
VEGET								
ADULT	2.38E-05	1.72E-04	4.67E-06	1.68E-05	2.98E-06	4.28E-05	6.22E-07	0.00E+00
TEEN	3.48E-05	1.83E-04	7.62E-06	2.60E-05	4.66E-06	5.77E-05	1.16E-06	0.00E+00
CHILD	6.60E-05	1.20E-04	1.81E-05	4.14E-05	7.35E-06	1.11E-04	1.77E-06	0.00E+00
MEAT								
ADULT	5.72E-06	4.52E-05	4.32E-07	3.18E-06	3.73E-07	1.15E-06	5.08E-08	0.00E+00
TEEN	4.42E-06	2.43E-05	3.47E-07	2.48E-06	2.86E-07	8.36E-07	4.81E-08	0.00E+00
CHILD	6.75E-06	1.23E-05	6.15E-07	2.98E-06	3.41E-07	1.26E-06	5.65E-08	0.00E+00
COW MILK								
ADULT	4.24E-06	1.07E-05	3.24E-06	5.64E-06	2.26E-06	3.20E-05	4.30E-07	0.00E+00
TEEN	5.36E-06	1.26E-05	5.78E-06	9.81E-06	3.87E-06	5.07E-05	8.88E-07	0.00E+00
CHILD	7.83E-06	8.29E-06	1.37E-05	1.64E-05	6.20E-06	1.00E-04	1.36E-06	0.00E+00
INFANT	1.10E-05	1.12E-05	2.17E-05	3.16E-05	9.51E-06	2.43E-04	2.47E-06	0.00E+00
GOATMILK								
ADULT	7.76E-06	1.54E-06	8.52E-06	1.18E-05	4.18E-06	3.84E-05	1.29E-06	0.00E+00
TEEN	7.48E-06	1.83E-06	1.54E-05	2.07E-05	7.37E-06	6.08E-05	2.66E-06	0.00E+00
CHILD	6.08E-06	1.24E-06	3.71E-05	3.58E-05	1.22E-05	1.20E-04	4.09E-06	0.00E+00
INFANT	6.32E-06	1.58E-06	5.95E-05	7.00E-05	1.96E-05	2.92E-04	7.41E-06	0.00E+00
INHAL								
ADULT	3.89E-07	5.50E-06	1.10E-07	4.39E-07	8.53E-08	2.09E-06	1.14E-04	0.00E+00
TEEN	4.66E-07	5.00E-06	1.53E-07	5.81E-07	1.14E-07	2.57E-06	1.67E-04	0.00E+00
CHILD	4.83E-07	1.90E-06	2.05E-07	5.21E-07	1.02E-07	2.85E-06	1.35E-04	0.00E+00
INFANT	2.47E-07	6.66E-07	1.25E-07	3.41E-07	5.91E-08	2.61E-06	8.63E-05	0.00E+00

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TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 4.39E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 8.94E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.99E-06	5.99E-06	5.99E-06	5.99E-06	5.99E-06	5.99E-06	6.03E-06	1.07E-05
GROUND	5.70E-04	5.70E-04	5.70E-04	5.70E-04	5.70E-04	5.70E-04	5.70E-04	6.71E-04
VEGET								
ADULT	1.04E-05	7.47E-05	2.33E-06	7.34E-06	1.38E-06	3.27E-05	2.73E-07	0.00E+00
TEEN	1.51E-05	7.95E-05	3.81E-06	1.14E-05	2.15E-06	4.40E-05	5.11E-07	0.00E+00
CHILD	2.87E-05	5.19E-05	9.06E-06	1.82E-05	3.40E-06	8.44E-05	7.78E-07	0.00E+00
MEAT								
ADULT	2.48E-06	1.96E-05	1.93E-07	1.38E-06	1.64E-07	8.80E-07	2.23E-08	0.00E+00
TEEN	1.92E-06	1.05E-05	1.55E-07	1.08E-06	1.26E-07	6.37E-07	2.11E-08	0.00E+00
CHILD	2.93E-06	5.32E-06	2.75E-07	1.30E-06	1.51E-07	9.62E-07	2.48E-08	0.00E+00
COW MILK								
ADULT	1.87E-06	4.67E-06	1.46E-06	2.50E-06	1.04E-06	2.45E-05	1.89E-07	0.00E+00
TEEN	2.37E-06	5.47E-06	2.60E-06	4.35E-06	1.79E-06	3.88E-05	3.90E-07	0.00E+00
CHILD	3.46E-06	3.61E-06	6.15E-06	7.27E-06	2.88E-06	7.67E-05	5.99E-07	0.00E+00
INFANT	4.88E-06	4.87E-06	9.83E-06	1.41E-05	4.45E-06	1.86E-04	1.08E-06	0.00E+00
GOATMILK								
ADULT	3.43E-06	6.82E-07	3.79E-06	5.20E-06	1.90E-06	2.94E-05	5.66E-07	0.00E+00
TEEN	3.32E-06	8.16E-07	6.87E-06	9.16E-06	3.36E-06	4.65E-05	1.17E-06	0.00E+00
CHILD	2.74E-06	5.56E-07	1.65E-05	1.58E-05	5.56E-06	9.20E-05	1.80E-06	0.00E+00
INFANT	2.90E-06	7.05E-07	2.66E-05	3.10E-05	8.97E-06	2.24E-04	3.25E-06	0.00E+00
INHAL								
ADULT	1.10E-07	1.56E-06	3.26E-08	1.25E-07	2.69E-08	9.51E-07	3.21E-05	0.00E+00
TEEN	1.32E-07	1.46E-06	4.54E-08	1.66E-07	3.61E-08	1.18E-06	4.68E-05	0.00E+00
CHILD	1.37E-07	8.51E-07	6.10E-08	1.49E-07	3.24E-08	1.34E-06	3.79E-05	0.00E+00
INFANT	7.03E-08	4.61E-07	3.76E-08	9.83E-08	1.91E-08	1.22E-06	2.42E-05	0.00E+00

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TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 3.18E-07 MILLRADS
ANNUAL GAMMA AIR DOSE = 7.32E-07 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.88E-07	4.88E-07	4.88E-07	4.88E-07	4.88E-07	4.88E-07	4.90E-07	8.36E-07
GROUND	2.90E-05	2.90E-05	2.90E-05	2.90E-05	2.90E-05	2.90E-05	2.90E-05	3.41E-05
VEGET								
ADULT	5.31E-07	3.80E-06	1.41E-07	3.78E-07	7.62E-08	2.70E-06	1.41E-08	0.00E+00
TEEN	7.73E-07	4.04E-06	2.30E-07	5.87E-07	1.19E-07	3.64E-06	2.65E-08	0.00E+00
CHILD	1.47E-06	2.64E-06	5.51E-07	9.36E-07	1.88E-07	6.97E-06	4.03E-08	0.00E+00
MEAT								
ADULT	1.26E-07	9.96E-07	1.02E-08	7.05E-08	8.56E-09	7.26E-08	1.15E-09	0.00E+00
TEEN	9.75E-08	5.35E-07	8.19E-09	5.49E-08	6.58E-09	5.26E-08	1.09E-09	0.00E+00
CHILD	1.49E-07	2.70E-07	1.46E-08	6.62E-08	7.88E-09	7.94E-08	1.28E-09	0.00E+00
COW MILK								
ADULT	9.75E-08	2.38E-07	7.77E-08	1.31E-07	5.77E-08	2.02E-06	9.77E-09	0.00E+00
TEEN	1.24E-07	2.79E-07	1.39E-07	2.28E-07	9.94E-08	3.20E-06	2.02E-08	0.00E+00
CHILD	1.81E-07	1.84E-07	3.29E-07	3.81E-07	1.60E-07	6.34E-06	3.10E-08	0.00E+00
INFANT	2.57E-07	2.48E-07	5.30E-07	7.42E-07	2.50E-07	1.54E-05	5.61E-08	0.00E+00
GOATMILK								
ADULT	1.79E-07	3.58E-08	2.00E-07	2.72E-07	1.03E-07	2.43E-06	2.93E-08	0.00E+00
TEEN	1.75E-07	4.31E-08	3.62E-07	4.79E-07	1.82E-07	3.85E-06	6.05E-08	0.00E+00
CHILD	1.46E-07	2.96E-08	8.72E-07	8.29E-07	3.02E-07	7.61E-06	9.31E-08	0.00E+00
INFANT	1.59E-07	3.71E-08	1.41E-06	1.63E-06	4.89E-07	1.85E-05	1.68E-07	0.00E+00
INHAL								
ADULT	1.27E-08	1.85E-07	4.45E-09	1.48E-08	4.37E-09	2.97E-07	3.59E-06	0.00E+00
TEEN	1.52E-08	1.84E-07	6.21E-09	1.97E-08	5.92E-09	3.72E-07	5.24E-06	0.00E+00
CHILD	1.58E-08	1.88E-07	8.37E-09	1.78E-08	5.38E-09	4.29E-07	4.25E-06	0.00E+00
INFANT	8.24E-09	1.30E-07	5.37E-09	1.21E-08	3.30E-09	3.93E-07	2.72E-06	0.00E+00

TABLE 1. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2017 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
 AT 2.80 MILES NNW

ANNUAL BETA AIR DOSE = 2.90E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.91E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.96E-06	3.99E-06	7.11E-06
GROUND	4.83E-05	4.83E-05	4.83E-05	4.83E-05	4.83E-05	4.83E-05	4.83E-05	5.68E-05
VEGET								
ADULT	8.84E-07	6.33E-06	2.28E-07	6.28E-07	1.25E-07	4.18E-06	2.35E-08	0.00E+00
TEEN	1.29E-06	6.73E-06	3.73E-07	9.76E-07	1.95E-07	5.64E-06	4.40E-08	0.00E+00
CHILD	2.44E-06	4.40E-06	8.90E-07	1.56E-06	3.08E-07	1.08E-05	6.69E-08	0.00E+00
MEAT								
ADULT	2.10E-07	1.66E-06	1.69E-08	1.17E-07	1.42E-08	1.13E-07	1.92E-09	0.00E+00
TEEN	1.62E-07	8.92E-07	1.36E-08	9.15E-08	1.09E-08	8.15E-08	1.81E-09	0.00E+00
CHILD	2.48E-07	4.50E-07	2.41E-08	1.10E-07	1.31E-08	1.23E-07	2.13E-09	0.00E+00
COW MILK								
ADULT	1.62E-07	3.96E-07	1.28E-07	2.17E-07	9.48E-08	3.14E-06	1.62E-08	0.00E+00
TEEN	2.05E-07	4.65E-07	2.29E-07	3.78E-07	1.63E-07	4.97E-06	3.35E-08	0.00E+00
CHILD	3.00E-07	3.07E-07	5.43E-07	6.32E-07	2.62E-07	9.83E-06	5.15E-08	0.00E+00
INFANT	4.25E-07	4.13E-07	8.74E-07	1.23E-06	4.09E-07	2.39E-05	9.32E-08	0.00E+00
GOATMILK								
ADULT	2.97E-07	5.94E-08	3.31E-07	4.50E-07	1.70E-07	3.77E-06	4.87E-08	0.00E+00
TEEN	2.89E-07	7.13E-08	5.99E-07	7.94E-07	3.00E-07	5.96E-06	1.01E-07	0.00E+00
CHILD	2.42E-07	4.89E-08	1.44E-06	1.37E-06	4.97E-07	1.18E-05	1.55E-07	0.00E+00
INFANT	2.62E-07	6.14E-08	2.33E-06	2.70E-06	8.05E-07	2.87E-05	2.80E-07	0.00E+00
INHAL								
ADULT	1.91E-08	2.76E-07	6.42E-09	2.22E-08	6.08E-09	3.47E-07	5.42E-06	0.00E+00
TEEN	2.29E-08	2.76E-07	8.97E-09	2.95E-08	8.22E-09	4.34E-07	7.92E-06	0.00E+00
CHILD	2.39E-08	3.05E-07	1.21E-08	2.66E-08	7.45E-09	4.99E-07	6.42E-06	0.00E+00
INFANT	1.24E-08	2.17E-07	7.70E-09	1.80E-08	4.54E-09	4.57E-07	4.11E-06	0.00E+00

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TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017

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

ANNUAL BETA AIR DOSE = 3.41E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 6.94E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.64E-06	4.64E-06	4.64E-06	4.64E-06	4.64E-06	4.64E-06	4.68E-06	8.35E-06
GROUND	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.63E-03
VEGET								
ADULT	2.77E-05	1.77E-04	9.05E-06	2.05E-05	4.40E-06	1.50E-04	1.16E-06	0.00E+00
TEEN	3.85E-05	1.88E-04	1.49E-05	3.20E-05	6.97E-06	2.02E-04	2.17E-06	0.00E+00
CHILD	7.01E-05	1.23E-04	3.56E-05	5.23E-05	1.14E-05	3.86E-04	3.30E-06	0.00E+00
MEAT								
ADULT	6.11E-06	4.73E-05	6.36E-07	3.38E-06	3.14E-07	4.02E-06	9.45E-08	0.00E+00
TEEN	4.64E-06	2.55E-05	5.28E-07	2.65E-06	2.54E-07	2.91E-06	8.94E-08	0.00E+00
CHILD	6.98E-06	1.29E-05	9.72E-07	3.24E-06	3.21E-07	4.40E-06	1.05E-07	0.00E+00
COW MILK								
ADULT	6.07E-06	1.06E-05	5.50E-06	8.03E-06	3.03E-06	1.12E-04	8.00E-07	0.00E+00
TEEN	6.82E-06	1.25E-05	9.96E-06	1.41E-05	5.36E-06	1.78E-04	1.65E-06	0.00E+00
CHILD	8.14E-06	8.28E-06	2.40E-05	2.43E-05	8.90E-06	3.52E-04	2.54E-06	0.00E+00
INFANT	1.12E-05	7.43E-06	3.89E-05	4.81E-05	1.45E-05	8.55E-04	4.60E-06	0.00E+00
GOATMILK								
ADULT	1.43E-05	1.79E-06	1.60E-05	2.18E-05	7.94E-06	1.35E-04	2.40E-06	0.00E+00
TEEN	1.37E-05	2.18E-06	2.89E-05	3.84E-05	1.40E-05	2.13E-04	4.96E-06	0.00E+00
CHILD	1.09E-05	1.52E-06	6.97E-05	6.65E-05	2.33E-05	4.22E-04	7.62E-06	0.00E+00
INFANT	1.12E-05	1.41E-06	1.12E-04	1.30E-04	3.78E-05	1.03E-03	1.38E-05	0.00E+00
INHAL								
ADULT	2.21E-07	2.62E-06	9.86E-08	2.43E-07	7.22E-08	4.51E-06	5.43E-05	0.00E+00
TEEN	2.49E-07	2.41E-06	1.38E-07	3.25E-07	9.89E-08	5.65E-06	7.94E-05	0.00E+00
CHILD	2.43E-07	1.10E-06	1.87E-07	3.01E-07	9.20E-08	6.53E-06	6.43E-05	0.00E+00
INFANT	1.25E-07	4.86E-07	1.17E-07	2.11E-07	5.78E-08	5.98E-06	4.10E-05	0.00E+00

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TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017 (Continued)

SPECIAL LOCATION NO. 2A Site Boundary
 AT .81 MILES SSE

ANNUAL BETA AIR DOSE = 2.83E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.76E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.85E-06	3.85E-06	3.85E-06	3.85E-06	3.85E-06	3.85E-06	3.88E-06	6.93E-06
GROUND	6.76E-04	6.76E-04	6.76E-04	6.76E-04	6.76E-04	6.76E-04	6.76E-04	7.95E-04
VEGET								
ADULT	1.35E-05	8.62E-05	4.42E-06	9.97E-06	2.15E-06	7.39E-05	5.64E-07	0.00E+00
TEEN	1.88E-05	9.18E-05	7.26E-06	1.56E-05	3.41E-06	9.95E-05	1.06E-06	0.00E+00
CHILD	3.42E-05	6.00E-05	1.74E-05	2.55E-05	5.55E-06	1.91E-04	1.61E-06	0.00E+00
MEAT								
ADULT	2.98E-06	2.31E-05	3.10E-07	1.65E-06	1.53E-07	1.99E-06	4.61E-08	0.00E+00
TEEN	2.26E-06	1.24E-05	2.57E-07	1.29E-06	1.24E-07	1.44E-06	4.36E-08	0.00E+00
CHILD	3.41E-06	6.27E-06	4.74E-07	1.58E-06	1.57E-07	2.17E-06	5.12E-08	0.00E+00
COW MILK								
ADULT	2.96E-06	5.17E-06	2.68E-06	3.92E-06	1.48E-06	5.55E-05	3.90E-07	0.00E+00
TEEN	3.32E-06	6.09E-06	4.86E-06	6.89E-06	2.62E-06	8.78E-05	8.06E-07	0.00E+00
CHILD	3.97E-06	4.04E-06	1.17E-05	1.19E-05	4.35E-06	1.74E-04	1.24E-06	0.00E+00
INFANT	5.47E-06	3.62E-06	1.90E-05	2.35E-05	7.10E-06	4.22E-04	2.24E-06	0.00E+00
GOATMILK								
ADULT	6.98E-06	8.75E-07	7.78E-06	1.06E-05	3.87E-06	6.66E-05	1.17E-06	0.00E+00
TEEN	6.69E-06	1.06E-06	1.41E-05	1.87E-05	6.86E-06	1.05E-04	2.42E-06	0.00E+00
CHILD	5.30E-06	7.42E-07	3.40E-05	3.24E-05	1.14E-05	2.09E-04	3.72E-06	0.00E+00
INFANT	5.49E-06	6.87E-07	5.47E-05	6.36E-05	1.84E-05	5.07E-04	6.72E-06	0.00E+00
INHAL								
ADULT	2.17E-07	2.56E-06	9.73E-08	2.39E-07	7.31E-08	4.67E-06	5.32E-05	0.00E+00
TEEN	2.44E-07	2.35E-06	1.36E-07	3.20E-07	1.00E-07	5.87E-06	7.77E-05	0.00E+00
CHILD	2.38E-07	1.05E-06	1.85E-07	2.97E-07	9.31E-08	6.81E-06	6.30E-05	0.00E+00
INFANT	1.23E-07	4.46E-07	1.16E-07	2.08E-07	5.86E-08	6.24E-06	4.02E-05	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 3.07E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 6.24E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.18E-06	4.18E-06	4.18E-06	4.18E-06	4.18E-06	4.18E-06	4.21E-06	7.52E-06
GROUND	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.53E-04	1.79E-04
VEGET								
ADULT	3.06E-06	1.95E-05	1.14E-06	2.27E-06	5.23E-07	2.37E-05	1.27E-07	0.00E+00
TEEN	4.26E-06	2.08E-05	1.87E-06	3.56E-06	8.27E-07	3.19E-05	2.38E-07	0.00E+00
CHILD	7.77E-06	1.36E-05	4.47E-06	5.81E-06	1.35E-06	6.11E-05	3.63E-07	0.00E+00
MEAT								
ADULT	6.74E-07	5.21E-06	7.19E-08	3.74E-07	3.63E-08	6.36E-07	1.04E-08	0.00E+00
TEEN	5.12E-07	2.80E-06	5.97E-08	2.93E-07	2.93E-08	4.61E-07	9.84E-09	0.00E+00
CHILD	7.70E-07	1.42E-06	1.10E-07	3.58E-07	3.70E-08	6.96E-07	1.16E-08	0.00E+00
COW MILK								
ADULT	6.80E-07	1.18E-06	6.23E-07	9.04E-07	3.65E-07	1.78E-05	8.80E-08	0.00E+00
TEEN	7.69E-07	1.39E-06	1.13E-06	1.59E-06	6.46E-07	2.81E-05	1.82E-07	0.00E+00
CHILD	9.32E-07	9.20E-07	2.72E-06	2.74E-06	1.07E-06	5.57E-05	2.80E-07	0.00E+00
INFANT	1.30E-06	8.39E-07	4.44E-06	5.44E-06	1.76E-06	1.35E-04	5.06E-07	0.00E+00
GOATMILK								
ADULT	1.59E-06	2.05E-07	1.78E-06	2.41E-06	9.08E-07	2.13E-05	2.64E-07	0.00E+00
TEEN	1.53E-06	2.51E-07	3.23E-06	4.26E-06	1.61E-06	3.38E-05	5.46E-07	0.00E+00
CHILD	1.23E-06	1.76E-07	7.79E-06	7.38E-06	2.67E-06	6.69E-05	8.38E-07	0.00E+00
INFANT	1.31E-06	1.65E-07	1.26E-05	1.45E-05	4.33E-06	1.63E-04	1.52E-06	0.00E+00
INHAL								
ADULT	3.16E-08	3.75E-07	1.49E-08	3.55E-08	1.23E-08	8.59E-07	7.55E-06	0.00E+00
TEEN	3.58E-08	3.65E-07	2.09E-08	4.77E-08	1.68E-08	1.08E-06	1.10E-05	0.00E+00
CHILD	3.51E-08	3.23E-07	2.83E-08	4.43E-08	1.57E-08	1.26E-06	8.95E-06	0.00E+00
INFANT	1.84E-08	2.14E-07	1.81E-08	3.16E-08	9.94E-09	1.15E-06	5.72E-06	0.00E+00

TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 4.09E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 8.33E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	5.57E-06	5.57E-06	5.57E-06	5.57E-06	5.57E-06	5.57E-06	5.61E-06	1.00E-05
GROUND	1.67E-05	1.67E-05	1.67E-05	1.67E-05	1.67E-05	1.67E-05	1.67E-05	1.96E-05
VEGET								
ADULT	3.37E-07	2.13E-06	1.51E-07	2.53E-07	6.43E-08	3.91E-06	1.39E-08	0.00E+00
TEEN	4.70E-07	2.27E-06	2.47E-07	3.95E-07	1.01E-07	5.26E-06	2.60E-08	0.00E+00
CHILD	8.57E-07	1.49E-06	5.95E-07	6.45E-07	1.64E-07	1.01E-05	3.96E-08	0.00E+00
MEAT								
ADULT	7.37E-08	5.69E-07	8.21E-09	4.11E-08	4.28E-09	1.05E-07	1.13E-09	0.00E+00
TEEN	5.60E-08	3.06E-07	6.81E-09	3.22E-08	3.44E-09	7.60E-08	1.07E-09	0.00E+00
CHILD	8.42E-08	1.55E-07	1.25E-08	3.94E-08	4.34E-09	1.15E-07	1.26E-09	0.00E+00
COW MILK								
ADULT	7.63E-08	1.30E-07	7.15E-08	1.03E-07	4.57E-08	2.94E-06	9.61E-09	0.00E+00
TEEN	8.75E-08	1.53E-07	1.30E-07	1.80E-07	8.08E-08	4.65E-06	1.99E-08	0.00E+00
CHILD	1.09E-07	1.02E-07	3.12E-07	3.10E-07	1.34E-07	9.20E-06	3.05E-08	0.00E+00
INFANT	1.54E-07	9.56E-08	5.15E-07	6.20E-07	2.21E-07	2.24E-05	5.52E-08	0.00E+00
GOATMILK								
ADULT	1.75E-07	2.39E-08	1.99E-07	2.67E-07	1.06E-07	3.52E-06	2.88E-08	0.00E+00
TEEN	1.71E-07	2.94E-08	3.62E-07	4.71E-07	1.87E-07	5.58E-06	5.95E-08	0.00E+00
CHILD	1.41E-07	2.08E-08	8.72E-07	8.17E-07	3.10E-07	1.10E-05	9.15E-08	0.00E+00
INFANT	1.56E-07	1.99E-08	1.42E-06	1.61E-06	5.06E-07	2.68E-05	1.65E-07	0.00E+00
INHAL								
ADULT	5.91E-09	7.28E-08	3.80E-09	7.65E-09	4.60E-09	4.23E-07	1.14E-06	0.00E+00
TEEN	6.96E-09	9.76E-08	5.33E-09	1.04E-08	6.32E-09	5.33E-07	1.67E-06	0.00E+00
CHILD	7.15E-09	2.89E-07	7.23E-09	9.80E-09	5.93E-09	6.22E-07	1.36E-06	0.00E+00
INFANT	4.11E-09	2.40E-07	5.01E-09	7.68E-09	3.85E-09	5.70E-07	8.79E-07	0.00E+00

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TABLE 2. DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.64E-08 MILLRADS
ANNUAL GAMMA AIR DOSE = 4.96E-08 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.29E-08	3.29E-08	3.29E-08	3.29E-08	3.29E-08	3.29E-08	3.31E-08	5.94E-08
GROUND	2.08E-05	2.08E-05	2.08E-05	2.08E-05	2.08E-05	2.08E-05	2.08E-05	2.45E-05
VEGET								
ADULT	4.18E-07	2.66E-06	1.64E-07	3.12E-07	7.38E-08	3.67E-06	1.74E-08	0.00E+00
TEEN	5.83E-07	2.83E-06	2.70E-07	4.88E-07	1.16E-07	4.94E-06	3.25E-08	0.00E+00
CHILD	1.06E-06	1.85E-06	6.47E-07	7.96E-07	1.89E-07	9.47E-06	4.95E-08	0.00E+00
MEAT								
ADULT	9.19E-08	7.11E-07	9.94E-09	5.11E-08	5.06E-09	9.86E-08	1.42E-09	0.00E+00
TEEN	6.99E-08	3.82E-07	8.24E-09	4.01E-08	4.08E-09	7.14E-08	1.34E-09	0.00E+00
CHILD	1.05E-07	1.93E-07	1.52E-08	4.90E-08	5.15E-09	1.08E-07	1.58E-09	0.00E+00
COW MILK								
ADULT	9.34E-08	1.61E-07	8.62E-08	1.25E-07	5.17E-08	2.75E-06	1.20E-08	0.00E+00
TEEN	1.06E-07	1.90E-07	1.56E-07	2.19E-07	9.15E-08	4.36E-06	2.48E-08	0.00E+00
CHILD	1.29E-07	1.26E-07	3.76E-07	3.77E-07	1.52E-07	8.63E-06	3.81E-08	0.00E+00
INFANT	1.81E-07	1.16E-07	6.16E-07	7.50E-07	2.49E-07	2.10E-05	6.90E-08	0.00E+00
GOATMILK								
ADULT	2.17E-07	2.85E-08	2.45E-07	3.30E-07	1.26E-07	3.30E-06	3.60E-08	0.00E+00
TEEN	2.10E-07	3.48E-08	4.44E-07	5.83E-07	2.23E-07	5.23E-06	7.44E-08	0.00E+00
CHILD	1.70E-07	2.45E-08	1.07E-06	1.01E-06	3.70E-07	1.04E-05	1.14E-07	0.00E+00
INFANT	1.83E-07	2.31E-08	1.73E-06	1.99E-06	6.02E-07	2.52E-05	2.07E-07	0.00E+00
INHAL								
ADULT	9.93E-09	1.18E-07	4.63E-09	1.10E-08	3.75E-09	2.79E-07	2.41E-06	0.00E+00
TEEN	1.12E-08	1.10E-07	6.50E-09	1.48E-08	5.14E-09	3.50E-07	3.52E-06	0.00E+00
CHILD	1.09E-08	5.67E-08	8.80E-09	1.37E-08	4.79E-09	4.07E-07	2.85E-06	0.00E+00
INFANT	5.66E-09	2.74E-08	5.59E-09	9.72E-09	3.03E-09	3.73E-07	1.82E-06	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017

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

ANNUAL BETA AIR DOSE = 4.75E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 9.67E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	6.47E-06	6.47E-06	6.47E-06	6.47E-06	6.47E-06	6.47E-06	6.52E-06	1.16E-05
GROUND	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03	4.61E-03
VEGET								
ADULT	7.30E-05	5.09E-04	1.73E-05	5.22E-05	9.91E-06	2.13E-04	2.26E-06	0.00E+00
TEEN	1.05E-04	5.41E-04	2.83E-05	8.13E-05	1.56E-05	2.87E-04	4.23E-06	0.00E+00
CHILD	1.97E-04	3.54E-04	6.73E-05	1.30E-04	2.48E-05	5.50E-04	6.44E-06	0.00E+00
MEAT								
ADULT	1.71E-05	1.34E-04	1.43E-06	9.49E-06	1.05E-06	5.73E-06	1.84E-07	0.00E+00
TEEN	1.32E-05	7.23E-05	1.16E-06	7.41E-06	8.14E-07	4.15E-06	1.75E-07	0.00E+00
CHILD	2.00E-05	3.65E-05	2.10E-06	8.97E-06	9.86E-07	6.26E-06	2.05E-07	0.00E+00
COW MILK								
ADULT	1.39E-05	3.14E-05	1.13E-05	1.85E-05	7.27E-06	1.60E-04	1.56E-06	0.00E+00
TEEN	1.69E-05	3.68E-05	2.04E-05	3.23E-05	1.26E-05	2.53E-04	3.23E-06	0.00E+00
CHILD	2.32E-05	2.43E-05	4.85E-05	5.45E-05	2.04E-05	5.00E-04	4.96E-06	0.00E+00
INFANT	3.24E-05	2.98E-05	7.77E-05	1.06E-04	3.20E-05	1.21E-03	8.97E-06	0.00E+00
GOATMILK								
ADULT	2.81E-05	4.71E-06	3.10E-05	4.26E-05	1.53E-05	1.92E-04	4.68E-06	0.00E+00
TEEN	2.70E-05	5.66E-06	5.62E-05	7.51E-05	2.70E-05	3.03E-04	9.68E-06	0.00E+00
CHILD	2.17E-05	3.87E-06	1.35E-04	1.30E-04	4.48E-05	6.00E-04	1.49E-05	0.00E+00
INFANT	2.25E-05	4.51E-06	2.17E-04	2.54E-04	7.24E-05	1.46E-03	2.69E-05	0.00E+00
INHAL								
ADULT	7.41E-07	9.92E-06	2.48E-07	8.29E-07	1.89E-07	7.59E-06	2.06E-04	0.00E+00
TEEN	8.70E-07	9.06E-06	3.47E-07	1.10E-06	2.56E-07	9.47E-06	3.01E-04	0.00E+00
CHILD	8.86E-07	3.66E-06	4.67E-07	9.99E-07	2.32E-07	1.08E-05	2.44E-04	0.00E+00
INFANT	4.54E-07	1.40E-06	2.88E-07	6.69E-07	1.40E-07	9.91E-06	1.56E-04	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.29E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.62E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.76E-06	1.76E-06	1.76E-06	1.76E-06	1.76E-06	1.76E-06	1.77E-06	3.16E-06
GROUND	3.06E-03	3.06E-03	3.06E-03	3.06E-03	3.06E-03	3.06E-03	3.06E-03	3.60E-03
VEGET								
ADULT	5.69E-05	3.97E-04	1.25E-05	4.05E-05	7.47E-06	1.19E-04	1.76E-06	0.00E+00
TEEN	8.19E-05	4.23E-04	2.05E-05	6.32E-05	1.17E-05	1.61E-04	3.29E-06	0.00E+00
CHILD	1.53E-04	2.76E-04	4.88E-05	1.01E-04	1.87E-05	3.08E-04	5.01E-06	0.00E+00
MEAT								
ADULT	1.33E-05	1.05E-04	1.11E-06	7.40E-06	8.08E-07	3.21E-06	1.44E-07	0.00E+00
TEEN	1.03E-05	5.64E-05	8.97E-07	5.78E-06	6.28E-07	2.33E-06	1.36E-07	0.00E+00
CHILD	1.56E-05	2.85E-05	1.61E-06	6.99E-06	7.60E-07	3.51E-06	1.60E-07	0.00E+00
COW MILK								
ADULT	1.08E-05	2.45E-05	8.72E-06	1.43E-05	5.47E-06	8.93E-05	1.22E-06	0.00E+00
TEEN	1.31E-05	2.87E-05	1.56E-05	2.49E-05	9.46E-06	1.41E-04	2.51E-06	0.00E+00
CHILD	1.79E-05	1.89E-05	3.72E-05	4.21E-05	1.53E-05	2.79E-04	3.86E-06	0.00E+00
INFANT	2.49E-05	2.32E-05	5.94E-05	8.17E-05	2.39E-05	6.79E-04	6.98E-06	0.00E+00
GOATMILK								
ADULT	2.18E-05	3.63E-06	2.40E-05	3.30E-05	1.17E-05	1.07E-04	3.65E-06	0.00E+00
TEEN	2.09E-05	4.35E-06	4.35E-05	5.82E-05	2.07E-05	1.70E-04	7.53E-06	0.00E+00
CHILD	1.67E-05	2.96E-06	1.05E-04	1.01E-04	3.42E-05	3.35E-04	1.16E-05	0.00E+00
INFANT	1.71E-05	3.46E-06	1.68E-04	1.97E-04	5.52E-05	8.15E-04	2.10E-05	0.00E+00
INHAL								
ADULT	5.83E-07	7.81E-06	1.94E-07	6.51E-07	1.46E-07	5.74E-06	1.63E-04	0.00E+00
TEEN	6.85E-07	7.11E-06	2.71E-07	8.66E-07	1.98E-07	7.15E-06	2.38E-04	0.00E+00
CHILD	6.97E-07	2.72E-06	3.65E-07	7.85E-07	1.79E-07	8.13E-06	1.92E-04	0.00E+00
INFANT	3.57E-07	9.53E-07	2.25E-07	5.25E-07	1.07E-07	7.44E-06	1.23E-04	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 7.46E-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	1.02E-05	1.83E-05
GROUND	6.73E-04	6.73E-04	6.73E-04	6.73E-04	6.73E-04	6.73E-04	6.73E-04	7.92E-04
VEGET								
ADULT	1.26E-05	8.76E-05	3.37E-06	9.05E-06	1.81E-06	5.59E-05	3.91E-07	0.00E+00
TEEN	1.81E-05	9.32E-05	5.52E-06	1.41E-05	2.84E-06	7.54E-05	7.32E-07	0.00E+00
CHILD	3.40E-05	6.09E-05	1.32E-05	2.26E-05	4.54E-06	1.44E-04	1.11E-06	0.00E+00
MEAT								
ADULT	2.94E-06	2.31E-05	2.53E-07	1.64E-06	1.84E-07	1.50E-06	3.19E-08	0.00E+00
TEEN	2.26E-06	1.24E-05	2.06E-07	1.28E-06	1.43E-07	1.09E-06	3.02E-08	0.00E+00
CHILD	3.44E-06	6.27E-06	3.70E-07	1.55E-06	1.74E-07	1.65E-06	3.55E-08	0.00E+00
COW MILK								
ADULT	2.43E-06	5.42E-06	2.01E-06	3.25E-06	1.34E-06	4.20E-05	2.70E-07	0.00E+00
TEEN	2.97E-06	6.36E-06	3.61E-06	5.67E-06	2.32E-06	6.64E-05	5.58E-07	0.00E+00
CHILD	4.09E-06	4.20E-06	8.60E-06	9.57E-06	3.76E-06	1.31E-04	8.58E-07	0.00E+00
INFANT	5.74E-06	5.16E-06	1.39E-05	1.87E-05	5.94E-06	3.20E-04	1.55E-06	0.00E+00
GOATMILK								
ADULT	4.89E-06	8.32E-07	5.44E-06	7.42E-06	2.74E-06	5.04E-05	8.10E-07	0.00E+00
TEEN	4.73E-06	1.00E-06	9.86E-06	1.31E-05	4.84E-06	7.97E-05	1.67E-06	0.00E+00
CHILD	3.85E-06	6.90E-07	2.37E-05	2.26E-05	8.03E-06	1.58E-04	2.57E-06	0.00E+00
INFANT	4.08E-06	8.01E-07	3.82E-05	4.44E-05	1.30E-05	3.83E-04	4.66E-06	0.00E+00
INHAL								
ADULT	1.33E-07	1.79E-06	4.69E-08	1.51E-07	3.85E-08	1.92E-06	3.66E-05	0.00E+00
TEEN	1.57E-07	1.69E-06	6.55E-08	2.01E-07	5.22E-08	2.40E-06	5.34E-05	0.00E+00
CHILD	1.60E-07	1.12E-06	8.83E-08	1.82E-07	4.76E-08	2.77E-06	4.33E-05	0.00E+00
INFANT	8.25E-08	6.55E-07	5.53E-08	1.23E-07	2.90E-08	2.53E-06	2.76E-05	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 6.78E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 1.38E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.25E-06	9.25E-06	9.25E-06	9.25E-06	9.25E-06	9.25E-06	9.32E-06	1.66E-05
GROUND	4.96E-05	4.96E-05	4.96E-05	4.96E-05	4.96E-05	4.96E-05	4.96E-05	5.83E-05
VEGET								
ADULT	9.37E-07	6.46E-06	3.01E-07	6.78E-07	1.48E-07	6.66E-06	2.91E-08	0.00E+00
TEEN	1.35E-06	6.88E-06	4.94E-07	1.06E-06	2.32E-07	8.97E-06	5.45E-08	0.00E+00
CHILD	2.52E-06	4.49E-06	1.18E-06	1.70E-06	3.70E-07	1.72E-05	8.30E-08	0.00E+00
MEAT								
ADULT	2.17E-07	1.70E-06	1.95E-08	1.21E-07	1.41E-08	1.79E-07	2.38E-09	0.00E+00
TEEN	1.67E-07	9.15E-07	1.58E-08	9.47E-08	1.10E-08	1.30E-07	2.25E-09	0.00E+00
CHILD	2.54E-07	4.62E-07	2.85E-08	1.15E-07	1.34E-08	1.96E-07	2.64E-09	0.00E+00
COW MILK								
ADULT	1.84E-07	4.02E-07	1.56E-07	2.48E-07	1.10E-07	5.00E-06	2.01E-08	0.00E+00
TEEN	2.26E-07	4.72E-07	2.80E-07	4.33E-07	1.91E-07	7.92E-06	4.16E-08	0.00E+00
CHILD	3.14E-07	3.12E-07	6.68E-07	7.31E-07	3.10E-07	1.57E-05	6.39E-08	0.00E+00
INFANT	4.45E-07	3.85E-07	1.09E-06	1.44E-06	4.94E-07	3.81E-05	1.16E-07	0.00E+00
GOATMILK								
ADULT	3.68E-07	6.42E-08	4.14E-07	5.60E-07	2.16E-07	6.00E-06	6.04E-08	0.00E+00
TEEN	3.59E-07	7.78E-08	7.51E-07	9.87E-07	3.82E-07	9.50E-06	1.25E-07	0.00E+00
CHILD	3.00E-07	5.40E-08	1.81E-06	1.71E-06	6.34E-07	1.88E-05	1.92E-07	0.00E+00
INFANT	3.28E-07	6.24E-08	2.93E-06	3.36E-06	1.03E-06	4.57E-05	3.47E-07	0.00E+00
INHAL								
ADULT	1.81E-08	2.50E-07	8.30E-09	2.19E-08	9.06E-09	7.26E-07	4.52E-06	0.00E+00
TEEN	2.15E-08	2.83E-07	1.16E-08	2.94E-08	1.24E-08	9.14E-07	6.61E-06	0.00E+00
CHILD	2.22E-08	5.54E-07	1.57E-08	2.70E-08	1.15E-08	1.06E-06	5.36E-06	0.00E+00
INFANT	1.20E-08	4.40E-07	1.05E-08	1.95E-08	7.26E-09	9.73E-07	3.44E-06	0.00E+00

TABLE 3. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.83E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 3.73E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.50E-06	2.50E-06	2.50E-06	2.50E-06	2.50E-06	2.50E-06	2.52E-06	4.49E-06
GROUND	7.96E-05	7.96E-05	7.96E-05	7.96E-05	7.96E-05	7.96E-05	7.96E-05	9.36E-05
VEGET								
ADULT	1.49E-06	1.04E-05	4.18E-07	1.07E-06	2.20E-07	7.52E-06	4.63E-08	0.00E+00
TEEN	2.15E-06	1.10E-05	6.84E-07	1.67E-06	3.44E-07	1.01E-05	8.67E-08	0.00E+00
CHILD	4.02E-06	7.20E-06	1.63E-06	2.68E-06	5.50E-07	1.94E-05	1.32E-07	0.00E+00
MEAT								
ADULT	3.48E-07	2.73E-06	3.02E-08	1.94E-07	2.20E-08	2.02E-07	3.78E-09	0.00E+00
TEEN	2.68E-07	1.47E-06	2.45E-08	1.51E-07	1.71E-08	1.47E-07	3.58E-09	0.00E+00
CHILD	4.06E-07	7.41E-07	4.42E-08	1.83E-07	2.07E-08	2.21E-07	4.20E-09	0.00E+00
COW MILK								
ADULT	2.90E-07	6.41E-07	2.40E-07	3.87E-07	1.62E-07	5.65E-06	3.20E-08	0.00E+00
TEEN	3.53E-07	7.53E-07	4.32E-07	6.75E-07	2.81E-07	8.94E-06	6.61E-08	0.00E+00
CHILD	4.88E-07	4.98E-07	1.03E-06	1.14E-06	4.56E-07	1.77E-05	1.02E-07	0.00E+00
INFANT	6.87E-07	6.12E-07	1.66E-06	2.23E-06	7.22E-07	4.30E-05	1.84E-07	0.00E+00
GOATMILK								
ADULT	5.81E-07	9.94E-08	6.48E-07	8.82E-07	3.29E-07	6.78E-06	9.60E-08	0.00E+00
TEEN	5.62E-07	1.20E-07	1.17E-06	1.55E-06	5.82E-07	1.07E-05	1.98E-07	0.00E+00
CHILD	4.61E-07	8.26E-08	2.83E-06	2.69E-06	9.64E-07	2.12E-05	3.05E-07	0.00E+00
INFANT	4.92E-07	9.59E-08	4.56E-06	5.28E-06	1.56E-06	5.16E-05	5.52E-07	0.00E+00
INHAL								
ADULT	2.52E-08	3.39E-07	9.01E-09	2.86E-08	7.61E-09	4.07E-07	6.87E-06	0.00E+00
TEEN	2.96E-08	3.23E-07	1.26E-08	3.81E-08	1.03E-08	5.10E-07	1.00E-05	0.00E+00
CHILD	3.02E-08	2.41E-07	1.70E-08	3.46E-08	9.42E-09	5.87E-07	8.13E-06	0.00E+00
INFANT	1.57E-08	1.49E-07	1.07E-08	2.35E-08	5.77E-09	5.37E-07	5.20E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017

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

ANNUAL BETA AIR DOSE = 2.16E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 4.39E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.94E-06	2.94E-06	2.94E-06	2.94E-06	2.94E-06	2.94E-06	2.96E-06	5.28E-06
GROUND	1.34E-03	1.34E-03	1.34E-03	1.34E-03	1.34E-03	1.34E-03	1.34E-03	1.57E-03
VEGET								
ADULT	2.54E-05	1.70E-04	6.60E-06	1.75E-05	3.00E-06	2.54E-05	9.41E-07	0.00E+00
TEEN	3.60E-05	1.81E-04	1.08E-05	2.75E-05	4.78E-06	3.36E-05	1.76E-06	0.00E+00
CHILD	6.64E-05	1.18E-04	2.59E-05	4.46E-05	7.84E-06	6.42E-05	2.68E-06	0.00E+00
MEAT								
ADULT	5.82E-06	4.58E-05	5.04E-07	3.12E-06	2.35E-07	6.48E-07	7.69E-08	0.00E+00
TEEN	4.45E-06	2.46E-05	4.18E-07	2.44E-06	1.90E-07	4.69E-07	7.27E-08	0.00E+00
CHILD	6.73E-06	1.24E-05	7.71E-07	2.98E-06	2.41E-07	7.08E-07	8.55E-08	0.00E+00
COW MILK								
ADULT	4.99E-06	1.01E-05	4.29E-06	6.37E-06	2.08E-06	2.06E-05	6.51E-07	0.00E+00
TEEN	5.64E-06	1.19E-05	7.77E-06	1.12E-05	3.69E-06	3.28E-05	1.34E-06	0.00E+00
CHILD	6.85E-06	7.91E-06	1.87E-05	1.93E-05	6.12E-06	6.66E-05	2.07E-06	0.00E+00
INFANT	9.41E-06	6.95E-06	3.00E-05	3.78E-05	9.89E-06	1.62E-04	3.74E-06	0.00E+00
GOATMILK								
ADULT	1.15E-05	1.58E-06	1.27E-05	1.74E-05	6.02E-06	2.47E-05	1.95E-06	0.00E+00
TEEN	1.09E-05	1.91E-06	2.31E-05	3.08E-05	1.07E-05	3.94E-05	4.03E-06	0.00E+00
CHILD	8.45E-06	1.32E-06	5.57E-05	5.33E-05	1.77E-05	7.99E-05	6.20E-06	0.00E+00
INFANT	8.40E-06	1.19E-06	8.91E-05	1.04E-04	2.85E-05	1.94E-04	1.12E-05	0.00E+00
INHAL								
ADULT	4.15E-07	5.23E-06	1.74E-07	4.51E-07	1.53E-07	7.03E-06	1.09E-04	0.00E+00
TEEN	4.77E-07	4.77E-06	2.44E-07	6.05E-07	2.11E-07	9.53E-06	1.59E-04	0.00E+00
CHILD	4.77E-07	1.84E-06	3.31E-07	5.61E-07	1.97E-07	1.25E-05	1.29E-04	0.00E+00
INFANT	2.47E-07	6.51E-07	2.11E-07	3.97E-07	1.26E-07	1.16E-05	8.22E-05	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.69E-07 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.48E-07 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.67E-07	3.70E-07	6.60E-07
GROUND	6.31E-04	6.31E-04	6.31E-04	6.31E-04	6.31E-04	6.31E-04	6.31E-04	7.42E-04
VEGET								
ADULT	1.20E-05	8.02E-05	2.94E-06	8.24E-06	1.37E-06	4.18E-06	4.43E-07	0.00E+00
TEEN	1.69E-05	8.54E-05	4.84E-06	1.29E-05	2.19E-06	5.31E-06	8.30E-07	0.00E+00
CHILD	3.13E-05	5.58E-05	1.15E-05	2.09E-05	3.59E-06	1.01E-05	1.26E-06	0.00E+00
MEAT								
ADULT	2.74E-06	2.16E-05	2.35E-07	1.47E-06	1.09E-07	9.44E-08	3.62E-08	0.00E+00
TEEN	2.10E-06	1.16E-05	1.95E-07	1.15E-06	8.87E-08	6.83E-08	3.42E-08	0.00E+00
CHILD	3.17E-06	5.87E-06	3.60E-07	1.40E-06	1.12E-07	1.03E-07	4.02E-08	0.00E+00
COW MILK								
ADULT	2.34E-06	4.77E-06	2.00E-06	2.98E-06	9.50E-07	3.89E-06	3.06E-07	0.00E+00
TEEN	2.64E-06	5.62E-06	3.62E-06	5.24E-06	1.68E-06	6.30E-06	6.33E-07	0.00E+00
CHILD	3.19E-06	3.72E-06	8.72E-06	9.01E-06	2.79E-06	1.33E-05	9.72E-07	0.00E+00
INFANT	4.37E-06	3.27E-06	1.40E-05	1.77E-05	4.50E-06	3.23E-05	1.76E-06	0.00E+00
GOATMILK								
ADULT	5.41E-06	7.36E-07	5.97E-06	8.19E-06	2.80E-06	4.67E-06	9.18E-07	0.00E+00
TEEN	5.13E-06	8.87E-07	1.08E-05	1.44E-05	4.95E-06	7.56E-06	1.90E-06	0.00E+00
CHILD	3.94E-06	6.12E-07	2.61E-05	2.50E-05	8.21E-06	1.59E-05	2.92E-06	0.00E+00
INFANT	3.88E-06	5.54E-07	4.17E-05	4.89E-05	1.32E-05	3.87E-05	5.28E-06	0.00E+00
INHAL								
ADULT	3.93E-07	4.93E-06	1.66E-07	4.29E-07	1.51E-07	7.19E-06	1.03E-04	0.00E+00
TEEN	4.52E-07	4.50E-06	2.33E-07	5.76E-07	2.08E-07	9.75E-06	1.50E-04	0.00E+00
CHILD	4.52E-07	1.68E-06	3.16E-07	5.34E-07	1.95E-07	1.28E-05	1.22E-04	0.00E+00
INFANT	2.34E-07	5.64E-07	2.02E-07	3.80E-07	1.25E-07	1.19E-05	7.75E-05	0.00E+00

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TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.40E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.85E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.91E-05	1.91E-05	1.91E-05	1.91E-05	1.91E-05	1.91E-05	1.92E-05	3.43E-05
GROUND	3.44E-04	3.44E-04	3.44E-04	3.44E-04	3.44E-04	3.44E-04	3.44E-04	4.05E-04
VEGET								
ADULT	6.62E-06	4.39E-05	2.30E-06	4.62E-06	9.30E-07	3.48E-05	2.45E-07	0.00E+00
TEEN	9.36E-06	4.67E-05	3.78E-06	7.23E-06	1.47E-06	4.67E-05	4.59E-07	0.00E+00
CHILD	1.73E-05	3.06E-05	9.07E-06	1.18E-05	2.40E-06	8.95E-05	6.98E-07	0.00E+00
MEAT								
ADULT	1.50E-06	1.18E-05	1.38E-07	8.07E-07	6.51E-08	9.25E-07	2.00E-08	0.00E+00
TEEN	1.15E-06	6.34E-06	1.15E-07	6.32E-07	5.28E-08	6.70E-07	1.89E-08	0.00E+00
CHILD	1.73E-06	3.20E-06	2.11E-07	7.71E-07	6.70E-08	1.01E-06	2.23E-08	0.00E+00
COW MILK								
ADULT	1.33E-06	2.63E-06	1.19E-06	1.72E-06	6.57E-07	2.66E-05	1.69E-07	0.00E+00
TEEN	1.52E-06	3.10E-06	2.15E-06	3.03E-06	1.16E-06	4.23E-05	3.50E-07	0.00E+00
CHILD	1.89E-06	2.06E-06	5.19E-06	5.21E-06	1.93E-06	8.42E-05	5.38E-07	0.00E+00
INFANT	2.65E-06	1.81E-06	8.45E-06	1.03E-05	3.16E-06	2.05E-04	9.74E-07	0.00E+00
GOATMILK								
ADULT	3.04E-06	4.39E-07	3.43E-06	4.62E-06	1.70E-06	3.20E-05	5.08E-07	0.00E+00
TEEN	2.93E-06	5.35E-07	6.21E-06	8.15E-06	3.02E-06	5.07E-05	1.05E-06	0.00E+00
CHILD	2.34E-06	3.74E-07	1.50E-05	1.41E-05	5.01E-06	1.01E-04	1.61E-06	0.00E+00
INFANT	2.46E-06	3.43E-07	2.41E-05	2.77E-05	8.12E-06	2.45E-04	2.92E-06	0.00E+00
INHAL								
ADULT	7.17E-08	9.03E-07	3.27E-08	8.02E-08	3.24E-08	1.92E-06	1.82E-05	0.00E+00
TEEN	8.27E-08	8.76E-07	4.59E-08	1.08E-07	4.47E-08	2.54E-06	2.67E-05	0.00E+00
CHILD	8.32E-08	7.60E-07	6.22E-08	1.00E-07	4.18E-08	3.23E-06	2.16E-05	0.00E+00
INFANT	4.37E-08	5.00E-07	4.05E-08	7.25E-08	2.69E-08	2.98E-06	1.38E-05	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.08E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 2.19E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.47E-05	1.47E-05	1.47E-05	1.47E-05	1.47E-05	1.47E-05	1.48E-05	2.64E-05
GROUND	2.68E-05	2.68E-05	2.68E-05	2.68E-05	2.68E-05	2.68E-05	2.68E-05	3.15E-05
VEGET								
ADULT	5.19E-07	3.42E-06	2.04E-07	3.64E-07	7.89E-08	3.89E-06	1.92E-08	0.00E+00
TEEN	7.33E-07	3.64E-06	3.35E-07	5.70E-07	1.24E-07	5.22E-06	3.59E-08	0.00E+00
CHILD	1.35E-06	2.38E-06	8.06E-07	9.27E-07	2.03E-07	1.00E-05	5.47E-08	0.00E+00
MEAT								
ADULT	1.17E-07	9.16E-07	1.11E-08	6.30E-08	5.26E-09	1.04E-07	1.57E-09	0.00E+00
TEEN	8.93E-08	4.93E-07	9.21E-09	4.93E-08	4.27E-09	7.50E-08	1.48E-09	0.00E+00
CHILD	1.35E-07	2.49E-07	1.70E-08	6.01E-08	5.41E-09	1.13E-07	1.74E-09	0.00E+00
COW MILK								
ADULT	1.06E-07	2.06E-07	9.58E-08	1.38E-07	5.61E-08	2.96E-06	1.33E-08	0.00E+00
TEEN	1.22E-07	2.43E-07	1.74E-07	2.42E-07	9.95E-08	4.70E-06	2.74E-08	0.00E+00
CHILD	1.52E-07	1.61E-07	4.19E-07	4.17E-07	1.65E-07	9.34E-06	4.21E-08	0.00E+00
INFANT	2.16E-07	1.42E-07	6.88E-07	8.30E-07	2.72E-07	2.27E-05	7.62E-08	0.00E+00
GOATMILK								
ADULT	2.40E-07	3.55E-08	2.73E-07	3.65E-07	1.39E-07	3.56E-06	3.98E-08	0.00E+00
TEEN	2.32E-07	4.34E-08	4.94E-07	6.44E-07	2.46E-07	5.64E-06	8.22E-08	0.00E+00
CHILD	1.89E-07	3.06E-08	1.19E-06	1.12E-06	4.09E-07	1.12E-05	1.26E-07	0.00E+00
INFANT	2.04E-07	2.82E-08	1.93E-06	2.20E-06	6.65E-07	2.72E-05	2.29E-07	0.00E+00
INHAL								
ADULT	8.93E-09	1.14E-07	5.74E-09	1.14E-08	7.58E-09	6.67E-07	1.95E-06	0.00E+00
TEEN	1.05E-08	1.44E-07	8.07E-09	1.54E-08	1.05E-08	8.59E-07	2.85E-06	0.00E+00
CHILD	1.09E-08	3.88E-07	1.10E-08	1.46E-08	9.82E-09	1.04E-06	2.31E-06	0.00E+00
INFANT	6.10E-09	3.19E-07	7.63E-09	1.14E-08	6.41E-09	9.56E-07	1.49E-06	0.00E+00

TABLE 4. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.10E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 4.28E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.86E-05	2.86E-05	2.86E-05	2.86E-05	2.86E-05	2.86E-05	2.88E-05	5.15E-05
GROUND	5.74E-05	5.74E-05	5.74E-05	5.74E-05	5.74E-05	5.74E-05	5.74E-05	6.75E-05
VEGET								
ADULT	1.11E-06	7.32E-06	4.51E-07	7.83E-07	1.73E-07	9.03E-06	4.12E-08	0.00E+00
TEEN	1.57E-06	7.80E-06	7.42E-07	1.23E-06	2.73E-07	1.21E-05	7.72E-08	0.00E+00
CHILD	2.90E-06	5.11E-06	1.79E-06	1.99E-06	4.45E-07	2.32E-05	1.17E-07	0.00E+00
MEAT								
ADULT	2.50E-07	1.96E-06	2.39E-08	1.35E-07	1.14E-08	2.41E-07	3.36E-09	0.00E+00
TEEN	1.91E-07	1.06E-06	1.99E-08	1.06E-07	9.23E-09	1.74E-07	3.18E-09	0.00E+00
CHILD	2.89E-07	5.33E-07	3.67E-08	1.29E-07	1.17E-08	2.63E-07	3.74E-09	0.00E+00
COW MILK								
ADULT	2.28E-07	4.41E-07	2.07E-07	2.97E-07	1.23E-07	6.87E-06	2.85E-08	0.00E+00
TEEN	2.63E-07	5.21E-07	3.76E-07	5.23E-07	2.18E-07	1.09E-05	5.88E-08	0.00E+00
CHILD	3.29E-07	3.46E-07	9.07E-07	8.99E-07	3.63E-07	2.17E-05	9.05E-08	0.00E+00
INFANT	4.69E-07	3.05E-07	1.49E-06	1.79E-06	5.98E-07	5.26E-05	1.64E-07	0.00E+00
GOATMILK								
ADULT	5.17E-07	7.69E-08	5.88E-07	7.86E-07	3.02E-07	8.25E-06	8.54E-08	0.00E+00
TEEN	5.01E-07	9.42E-08	1.07E-06	1.39E-06	5.35E-07	1.31E-05	1.77E-07	0.00E+00
CHILD	4.10E-07	6.65E-08	2.57E-06	2.40E-06	8.88E-07	2.60E-05	2.71E-07	0.00E+00
INFANT	4.44E-07	6.13E-08	4.16E-06	4.73E-06	1.44E-06	6.32E-05	4.91E-07	0.00E+00
INHAL								
ADULT	1.75E-08	2.24E-07	1.11E-08	2.22E-08	1.47E-08	1.29E-06	3.83E-06	0.00E+00
TEEN	2.06E-08	2.80E-07	1.57E-08	3.01E-08	2.02E-08	1.66E-06	5.61E-06	0.00E+00
CHILD	2.12E-08	7.39E-07	2.13E-08	2.84E-08	1.90E-08	2.01E-06	4.55E-06	0.00E+00
INFANT	1.19E-08	6.07E-07	1.48E-08	2.21E-08	1.24E-08	1.84E-06	2.94E-06	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017

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

ANNUAL BETA AIR DOSE = 2.99E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.87E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.93E-06	3.93E-06	3.93E-06	3.93E-06	3.93E-06	3.93E-06	3.96E-06	7.16E-06
GROUND	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.29E-03	2.69E-03
VEGET								
ADULT	3.50E-05	2.95E-04	1.27E-06	1.72E-05	1.86E-06	3.15E-04	2.57E-09	0.00E+00
TEEN	5.48E-05	3.14E-04	2.02E-06	2.63E-05	2.80E-06	4.24E-04	4.82E-09	0.00E+00
CHILD	1.10E-04	2.05E-04	4.85E-06	4.06E-05	4.45E-06	8.12E-04	7.33E-09	0.00E+00
MEAT								
ADULT	9.28E-06	7.90E-05	2.53E-08	4.24E-06	4.76E-08	8.44E-06	2.10E-10	0.00E+00
TEEN	7.36E-06	4.25E-05	2.11E-08	3.29E-06	3.87E-08	6.11E-06	1.98E-10	0.00E+00
CHILD	1.14E-05	2.15E-05	3.92E-08	3.91E-06	4.88E-08	9.22E-06	2.33E-10	0.00E+00
COW MILK								
ADULT	2.45E-06	1.75E-05	5.56E-07	1.69E-06	1.29E-06	2.38E-04	1.77E-09	0.00E+00
TEEN	4.21E-06	2.06E-05	1.01E-06	2.92E-06	2.30E-06	3.77E-04	3.66E-09	0.00E+00
CHILD	8.42E-06	1.36E-05	2.45E-06	4.80E-06	3.83E-06	7.49E-04	5.63E-09	0.00E+00
INFANT	1.41E-05	1.20E-05	5.08E-06	1.07E-05	6.66E-06	1.82E-03	1.02E-08	0.00E+00
GOATMILK								
ADULT	7.77E-07	2.35E-06	7.12E-07	1.06E-06	1.56E-06	2.86E-04	5.31E-09	0.00E+00
TEEN	1.29E-06	2.81E-06	1.29E-06	1.86E-06	2.78E-06	4.53E-04	1.10E-08	0.00E+00
CHILD	2.44E-06	1.91E-06	3.14E-06	3.22E-06	4.61E-06	8.98E-04	1.69E-08	0.00E+00
INFANT	4.37E-06	1.71E-06	6.44E-06	7.68E-06	8.02E-06	2.18E-03	3.05E-08	0.00E+00
INHAL								
ADULT	4.99E-07	8.34E-06	1.03E-07	5.17E-07	2.87E-07	3.65E-05	1.73E-04	0.00E+00
TEEN	6.68E-07	7.61E-06	1.46E-07	6.90E-07	3.96E-07	4.66E-05	2.53E-04	0.00E+00
CHILD	7.60E-07	2.91E-06	1.98E-07	6.25E-07	3.71E-07	5.56E-05	2.05E-04	0.00E+00
INFANT	4.16E-07	1.01E-06	1.57E-07	4.53E-07	2.44E-07	5.10E-05	1.31E-04	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.63E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.18E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.47E-06	3.47E-06	3.47E-06	3.47E-06	3.47E-06	3.47E-06	3.50E-06	6.32E-06
GROUND	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.69E-03	1.99E-03
VEGET								
ADULT	2.59E-05	2.18E-04	9.66E-07	1.27E-05	1.38E-06	2.34E-04	2.01E-09	0.00E+00
TEEN	4.05E-05	2.32E-04	1.54E-06	1.94E-05	2.08E-06	3.15E-04	3.76E-09	0.00E+00
CHILD	8.14E-05	1.51E-04	3.69E-06	3.00E-05	3.30E-06	6.03E-04	5.72E-09	0.00E+00
MEAT								
ADULT	6.86E-06	5.83E-05	1.90E-08	3.13E-06	3.54E-08	6.26E-06	1.64E-10	0.00E+00
TEEN	5.43E-06	3.14E-05	1.59E-08	2.43E-06	2.88E-08	4.53E-06	1.55E-10	0.00E+00
CHILD	8.44E-06	1.58E-05	2.95E-08	2.89E-06	3.62E-08	6.85E-06	1.82E-10	0.00E+00
COW MILK								
ADULT	1.81E-06	1.29E-05	4.14E-07	1.25E-06	9.58E-07	1.77E-04	1.38E-09	0.00E+00
TEEN	3.11E-06	1.52E-05	7.53E-07	2.16E-06	1.71E-06	2.80E-04	2.86E-09	0.00E+00
CHILD	6.23E-06	1.01E-05	1.83E-06	3.55E-06	2.84E-06	5.56E-04	4.40E-09	0.00E+00
INFANT	1.04E-05	8.85E-06	3.78E-06	7.95E-06	4.94E-06	1.35E-03	7.95E-09	0.00E+00
GOATMILK								
ADULT	5.77E-07	1.73E-06	5.32E-07	7.85E-07	1.16E-06	2.12E-04	4.15E-09	0.00E+00
TEEN	9.57E-07	2.07E-06	9.66E-07	1.39E-06	2.06E-06	3.36E-04	8.58E-09	0.00E+00
CHILD	1.81E-06	1.41E-06	2.35E-06	2.39E-06	3.43E-06	6.67E-04	1.32E-08	0.00E+00
INFANT	3.24E-06	1.26E-06	4.80E-06	5.71E-06	5.96E-06	1.62E-03	2.39E-08	0.00E+00
INHAL								
ADULT	3.68E-07	6.14E-06	7.77E-08	3.84E-07	2.15E-07	2.74E-05	1.27E-04	0.00E+00
TEEN	4.93E-07	5.61E-06	1.09E-07	5.11E-07	2.97E-07	3.50E-05	1.86E-04	0.00E+00
CHILD	5.62E-07	2.16E-06	1.49E-07	4.63E-07	2.78E-07	4.17E-05	1.51E-04	0.00E+00
INFANT	3.07E-07	7.59E-07	1.18E-07	3.37E-07	1.83E-07	3.83E-05	9.63E-05	0.00E+00

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TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.49E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.94E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.97E-05	1.97E-05	1.97E-05	1.97E-05	1.97E-05	1.97E-05	1.98E-05	3.58E-05
GROUND	5.28E-04	5.28E-04	5.28E-04	5.28E-04	5.28E-04	5.28E-04	5.28E-04	6.22E-04
VEGET								
ADULT	8.17E-06	6.81E-05	9.76E-07	4.07E-06	5.85E-07	1.01E-04	3.29E-09	0.00E+00
TEEN	1.28E-05	7.26E-05	1.59E-06	6.24E-06	8.84E-07	1.36E-04	6.17E-09	0.00E+00
CHILD	2.56E-05	4.75E-05	3.86E-06	9.66E-06	1.41E-06	2.60E-04	9.39E-09	0.00E+00
MEAT								
ADULT	2.15E-06	1.82E-05	1.51E-08	9.83E-07	1.56E-08	2.70E-06	2.69E-10	0.00E+00
TEEN	1.70E-06	9.81E-06	1.26E-08	7.63E-07	1.27E-08	1.96E-06	2.54E-10	0.00E+00
CHILD	2.64E-06	4.95E-06	2.36E-08	9.07E-07	1.60E-08	2.95E-06	2.99E-10	0.00E+00
COW MILK								
ADULT	6.15E-07	4.06E-06	2.15E-07	4.73E-07	4.18E-07	7.62E-05	2.27E-09	0.00E+00
TEEN	1.05E-06	4.78E-06	3.91E-07	8.22E-07	7.45E-07	1.21E-04	4.69E-09	0.00E+00
CHILD	2.07E-06	3.17E-06	9.50E-07	1.36E-06	1.24E-06	2.40E-04	7.21E-09	0.00E+00
INFANT	3.49E-06	2.79E-06	1.92E-06	3.08E-06	2.15E-06	5.82E-04	1.30E-08	0.00E+00
GOATMILK								
ADULT	2.58E-07	5.76E-07	3.14E-07	3.73E-07	5.13E-07	9.15E-05	6.81E-09	0.00E+00
TEEN	4.06E-07	6.94E-07	5.72E-07	6.60E-07	9.15E-07	1.45E-04	1.41E-08	0.00E+00
CHILD	7.30E-07	4.79E-07	1.39E-06	1.14E-06	1.52E-06	2.87E-04	2.16E-08	0.00E+00
INFANT	1.31E-06	4.33E-07	2.75E-06	2.67E-06	2.64E-06	6.98E-04	3.91E-08	0.00E+00
INHAL								
ADULT	8.11E-08	1.34E-06	2.00E-08	8.67E-08	5.18E-08	6.41E-06	2.73E-05	0.00E+00
TEEN	1.09E-07	1.27E-06	2.81E-08	1.16E-07	7.15E-08	8.18E-06	4.00E-05	0.00E+00
CHILD	1.24E-07	8.67E-07	3.82E-08	1.05E-07	6.70E-08	9.75E-06	3.24E-05	0.00E+00
INFANT	6.83E-08	5.13E-07	3.02E-08	7.77E-08	4.41E-08	8.95E-06	2.07E-05	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 7.64E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 1.50E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.01E-05	1.01E-05	1.01E-05	1.01E-05	1.01E-05	1.01E-05	1.01E-05	1.83E-05
GROUND	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.22E-05	2.61E-05
VEGET								
ADULT	3.46E-07	2.87E-06	6.28E-08	1.75E-07	2.95E-08	5.11E-06	2.25E-10	0.00E+00
TEEN	5.40E-07	3.05E-06	1.03E-07	2.67E-07	4.46E-08	6.88E-06	4.21E-10	0.00E+00
CHILD	1.08E-06	2.00E-06	2.50E-07	4.15E-07	7.12E-08	1.32E-05	6.41E-10	0.00E+00
MEAT								
ADULT	9.02E-08	7.66E-07	9.27E-10	4.14E-08	7.99E-10	1.37E-07	1.83E-11	0.00E+00
TEEN	7.15E-08	4.12E-07	7.76E-10	3.22E-08	6.51E-10	9.92E-08	1.74E-11	0.00E+00
CHILD	1.11E-07	2.08E-07	1.45E-09	3.82E-08	8.23E-10	1.50E-07	2.04E-11	0.00E+00
COW MILK								
ADULT	2.74E-08	1.71E-07	1.17E-08	2.25E-08	2.13E-08	3.86E-06	1.55E-10	0.00E+00
TEEN	4.62E-08	2.02E-07	2.14E-08	3.91E-08	3.79E-08	6.12E-06	3.20E-10	0.00E+00
CHILD	9.09E-08	1.34E-07	5.20E-08	6.53E-08	6.31E-08	1.21E-05	4.92E-10	0.00E+00
INFANT	1.54E-07	1.18E-07	1.05E-07	1.48E-07	1.10E-07	2.95E-05	8.91E-10	0.00E+00
GOATMILK								
ADULT	1.33E-08	2.52E-08	1.79E-08	1.97E-08	2.63E-08	4.64E-06	4.65E-10	0.00E+00
TEEN	2.04E-08	3.06E-08	3.27E-08	3.49E-08	4.70E-08	7.34E-06	9.61E-10	0.00E+00
CHILD	3.59E-08	2.13E-08	7.97E-08	6.05E-08	7.81E-08	1.46E-05	1.48E-09	0.00E+00
INFANT	6.41E-08	1.93E-08	1.56E-07	1.41E-07	1.35E-07	3.54E-05	2.67E-09	0.00E+00
INHAL								
ADULT	8.86E-09	1.42E-07	3.42E-09	1.05E-08	7.68E-09	8.89E-07	2.68E-06	0.00E+00
TEEN	1.18E-08	1.53E-07	4.82E-09	1.40E-08	1.06E-08	1.13E-06	3.92E-06	0.00E+00
CHILD	1.35E-08	2.54E-07	6.57E-09	1.30E-08	9.94E-09	1.35E-06	3.18E-06	0.00E+00
INFANT	7.72E-09	1.97E-07	5.13E-09	1.01E-08	6.55E-09	1.24E-06	2.04E-06	0.00E+00

TABLE 5. DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.23E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.42E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.62E-05	1.63E-05	2.95E-05
GROUND	5.29E-05	5.29E-05	5.29E-05	5.29E-05	5.29E-05	5.29E-05	5.29E-05	6.22E-05
VEGET								
ADULT	8.25E-07	6.83E-06	1.65E-07	4.18E-07	7.37E-08	1.28E-05	5.94E-10	0.00E+00
TEEN	1.29E-06	7.28E-06	2.70E-07	6.41E-07	1.11E-07	1.72E-05	1.11E-09	0.00E+00
CHILD	2.58E-06	4.76E-06	6.54E-07	9.94E-07	1.78E-07	3.30E-05	1.69E-09	0.00E+00
MEAT								
ADULT	2.15E-07	1.82E-06	2.41E-09	9.87E-08	2.01E-09	3.43E-07	4.85E-11	0.00E+00
TEEN	1.70E-07	9.81E-07	2.02E-09	7.66E-08	1.63E-09	2.48E-07	4.59E-11	0.00E+00
CHILD	2.64E-07	4.95E-07	3.78E-09	9.12E-08	2.07E-09	3.75E-07	5.39E-11	0.00E+00
COW MILK								
ADULT	6.63E-08	4.08E-07	2.99E-08	5.54E-08	5.34E-08	9.68E-06	4.10E-10	0.00E+00
TEEN	1.12E-07	4.82E-07	5.44E-08	9.65E-08	9.52E-08	1.53E-05	8.47E-10	0.00E+00
CHILD	2.19E-07	3.20E-07	1.32E-07	1.61E-07	1.58E-07	3.04E-05	1.30E-09	0.00E+00
INFANT	3.71E-07	2.82E-07	2.66E-07	3.67E-07	2.75E-07	7.39E-05	2.35E-09	0.00E+00
GOATMILK								
ADULT	3.35E-08	6.09E-08	4.60E-08	4.99E-08	6.62E-08	1.16E-05	1.23E-09	0.00E+00
TEEN	5.11E-08	7.39E-08	8.39E-08	8.83E-08	1.18E-07	1.84E-05	2.54E-09	0.00E+00
CHILD	8.94E-08	5.15E-08	2.04E-07	1.53E-07	1.96E-07	3.65E-05	3.90E-09	0.00E+00
INFANT	1.59E-07	4.69E-08	3.99E-07	3.55E-07	3.40E-07	8.87E-05	7.06E-09	0.00E+00
INHAL								
ADULT	1.55E-08	2.50E-07	5.62E-09	1.80E-08	1.28E-08	1.49E-06	4.78E-06	0.00E+00
TEEN	2.07E-08	2.64E-07	7.92E-09	2.42E-08	1.77E-08	1.90E-06	6.99E-06	0.00E+00
CHILD	2.37E-08	3.99E-07	1.08E-08	2.23E-08	1.66E-08	2.27E-06	5.67E-06	0.00E+00
INFANT	1.34E-08	3.05E-07	8.43E-09	1.72E-08	1.09E-08	2.08E-06	3.63E-06	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017

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

ANNUAL BETA AIR DOSE = 5.24E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.04E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.00E-06	7.00E-06	7.00E-06	7.00E-06	7.00E-06	7.00E-06	7.05E-06	1.27E-05
GROUND	3.69E-03	3.69E-03	3.69E-03	3.69E-03	3.69E-03	3.69E-03	3.69E-03	4.35E-03
VEGET								
ADULT	6.14E-05	4.73E-04	7.71E-06	3.50E-05	4.85E-06	3.53E-04	9.17E-07	0.00E+00
TEEN	9.23E-05	5.04E-04	1.26E-05	5.42E-05	7.57E-06	4.75E-04	1.72E-06	0.00E+00
CHILD	1.80E-04	3.30E-04	3.01E-05	8.58E-05	1.23E-05	9.09E-04	2.61E-06	0.00E+00
MEAT								
ADULT	1.54E-05	1.27E-04	5.16E-07	7.47E-06	2.78E-07	9.42E-06	7.49E-08	0.00E+00
TEEN	1.20E-05	6.84E-05	4.28E-07	5.82E-06	2.25E-07	6.82E-06	7.09E-08	0.00E+00
CHILD	1.85E-05	3.45E-05	7.89E-07	6.98E-06	2.85E-07	1.03E-05	8.33E-08	0.00E+00
COW MILK								
ADULT	7.41E-06	2.81E-05	4.74E-06	7.95E-06	3.37E-06	2.69E-04	6.34E-07	0.00E+00
TEEN	9.88E-06	3.31E-05	8.60E-06	1.39E-05	5.98E-06	4.26E-04	1.31E-06	0.00E+00
CHILD	1.55E-05	2.19E-05	2.07E-05	2.37E-05	9.94E-06	8.46E-04	2.01E-06	0.00E+00
INFANT	2.39E-05	1.93E-05	3.45E-05	4.80E-05	1.66E-05	2.06E-03	3.64E-06	0.00E+00
GOATMILK								
ADULT	1.20E-05	3.99E-06	1.31E-05	1.81E-05	7.47E-06	3.22E-04	1.90E-06	0.00E+00
TEEN	1.20E-05	4.79E-06	2.38E-05	3.18E-05	1.32E-05	5.11E-04	3.93E-06	0.00E+00
CHILD	1.07E-05	3.28E-06	5.74E-05	5.51E-05	2.20E-05	1.02E-03	6.04E-06	0.00E+00
INFANT	1.27E-05	2.95E-06	9.32E-05	1.09E-04	3.61E-05	2.47E-03	1.09E-05	0.00E+00
INHAL								
ADULT	9.44E-07	1.41E-05	2.81E-07	1.00E-06	4.68E-07	4.75E-05	2.94E-04	0.00E+00
TEEN	1.19E-06	1.29E-05	3.94E-07	1.34E-06	6.45E-07	6.12E-05	4.29E-04	0.00E+00
CHILD	1.29E-06	4.96E-06	5.35E-07	1.22E-06	6.04E-07	7.41E-05	3.48E-04	0.00E+00
INFANT	6.94E-07	1.73E-06	3.76E-07	8.80E-07	3.94E-07	6.81E-05	2.22E-04	0.00E+00

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TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.55E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.08E-06 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.40E-06	3.40E-06	3.40E-06	3.40E-06	3.40E-06	3.40E-06	3.43E-06	6.16E-06
GROUND	2.34E-03	2.34E-03	2.34E-03	2.34E-03	2.34E-03	2.34E-03	2.34E-03	2.75E-03
VEGET								
ADULT	3.88E-05	2.99E-04	4.71E-06	2.21E-05	3.03E-06	2.16E-04	5.79E-07	0.00E+00
TEEN	5.84E-05	3.19E-04	7.70E-06	3.42E-05	4.72E-06	2.90E-04	1.08E-06	0.00E+00
CHILD	1.14E-04	2.08E-04	1.84E-05	5.42E-05	7.65E-06	5.56E-04	1.65E-06	0.00E+00
MEAT								
ADULT	9.72E-06	8.04E-05	3.24E-07	4.72E-06	1.75E-07	5.76E-06	4.73E-08	0.00E+00
TEEN	7.60E-06	4.32E-05	2.69E-07	3.68E-06	1.41E-07	4.17E-06	4.48E-08	0.00E+00
CHILD	1.17E-05	2.18E-05	4.95E-07	4.41E-06	1.79E-07	6.30E-06	5.26E-08	0.00E+00
COW MILK								
ADULT	4.67E-06	1.78E-05	2.98E-06	5.01E-06	2.10E-06	1.64E-04	4.00E-07	0.00E+00
TEEN	6.23E-06	2.09E-05	5.40E-06	8.77E-06	3.73E-06	2.60E-04	8.27E-07	0.00E+00
CHILD	9.74E-06	1.39E-05	1.30E-05	1.49E-05	6.19E-06	5.17E-04	1.27E-06	0.00E+00
INFANT	1.50E-05	1.22E-05	2.16E-05	3.02E-05	1.03E-05	1.26E-03	2.30E-06	0.00E+00
GOATMILK								
ADULT	7.57E-06	2.51E-06	8.26E-06	1.14E-05	4.69E-06	1.97E-04	1.20E-06	0.00E+00
TEEN	7.55E-06	3.01E-06	1.50E-05	2.01E-05	8.30E-06	3.12E-04	2.48E-06	0.00E+00
CHILD	6.75E-06	2.06E-06	3.61E-05	3.48E-05	1.38E-05	6.21E-04	3.81E-06	0.00E+00
INFANT	7.97E-06	1.86E-06	5.86E-05	6.88E-05	2.26E-05	1.51E-03	6.90E-06	0.00E+00
INHAL								
ADULT	7.65E-07	1.15E-05	2.28E-07	8.12E-07	3.81E-07	3.88E-05	2.38E-04	0.00E+00
TEEN	9.64E-07	1.04E-05	3.20E-07	1.09E-06	5.26E-07	4.99E-05	3.48E-04	0.00E+00
CHILD	1.05E-06	3.96E-06	4.34E-07	9.93E-07	4.92E-07	6.05E-05	2.82E-04	0.00E+00
INFANT	5.62E-07	1.36E-06	3.05E-07	7.14E-07	3.21E-07	5.56E-05	1.80E-04	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.98E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 5.93E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.97E-05	3.97E-05	3.97E-05	3.97E-05	3.97E-05	3.97E-05	4.00E-05	7.19E-05
GROUND	9.24E-04	9.24E-04	9.24E-04	9.24E-04	9.24E-04	9.24E-04	9.24E-04	1.09E-03
VEGET								
ADULT	1.55E-05	1.19E-04	3.25E-06	8.98E-06	1.53E-06	1.46E-04	2.35E-07	0.00E+00
TEEN	2.33E-05	1.26E-04	5.33E-06	1.39E-05	2.38E-06	1.96E-04	4.40E-07	0.00E+00
CHILD	4.54E-05	8.27E-05	1.28E-05	2.20E-05	3.85E-06	3.75E-04	6.70E-07	0.00E+00
MEAT								
ADULT	3.85E-06	3.18E-05	1.47E-07	1.88E-06	7.90E-08	3.89E-06	1.92E-08	0.00E+00
TEEN	3.01E-06	1.71E-05	1.22E-07	1.46E-06	6.40E-08	2.82E-06	1.82E-08	0.00E+00
CHILD	4.63E-06	8.64E-06	2.26E-07	1.76E-06	8.12E-08	4.26E-06	2.13E-08	0.00E+00
COW MILK								
ADULT	1.95E-06	7.08E-06	1.36E-06	2.16E-06	1.09E-06	1.11E-04	1.62E-07	0.00E+00
TEEN	2.62E-06	8.35E-06	2.47E-06	3.79E-06	1.93E-06	1.75E-04	3.36E-07	0.00E+00
CHILD	4.12E-06	5.54E-06	5.96E-06	6.46E-06	3.21E-06	3.48E-04	5.16E-07	0.00E+00
INFANT	6.45E-06	4.88E-06	1.01E-05	1.32E-05	5.40E-06	8.45E-04	9.34E-07	0.00E+00
GOATMILK								
ADULT	3.16E-06	1.07E-06	3.58E-06	4.78E-06	2.18E-06	1.33E-04	4.87E-07	0.00E+00
TEEN	3.22E-06	1.29E-06	6.50E-06	8.44E-06	3.87E-06	2.10E-04	1.01E-06	0.00E+00
CHILD	3.03E-06	8.95E-07	1.57E-05	1.46E-05	6.43E-06	4.17E-04	1.55E-06	0.00E+00
INFANT	3.79E-06	8.13E-07	2.59E-05	2.92E-05	1.06E-05	1.01E-03	2.80E-06	0.00E+00
INHAL								
ADULT	1.58E-07	2.35E-06	5.29E-08	1.72E-07	8.94E-08	9.11E-06	4.76E-05	0.00E+00
TEEN	1.99E-07	2.24E-06	7.43E-08	2.30E-07	1.23E-07	1.17E-05	6.96E-05	0.00E+00
CHILD	2.16E-07	1.67E-06	1.01E-07	2.12E-07	1.16E-07	1.42E-05	5.64E-05	0.00E+00
INFANT	1.18E-07	1.03E-06	7.18E-08	1.55E-07	7.56E-08	1.30E-05	3.60E-05	0.00E+00

TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 1.98E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 3.95E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.65E-05	2.67E-05	4.79E-05
GROUND	5.44E-05	5.44E-05	5.44E-05	5.44E-05	5.44E-05	5.44E-05	5.44E-05	6.39E-05
VEGET								
ADULT	9.19E-07	6.99E-06	2.43E-07	5.37E-07	1.03E-07	1.08E-05	1.41E-08	0.00E+00
TEEN	1.38E-06	7.45E-06	3.99E-07	8.31E-07	1.59E-07	1.45E-05	2.63E-08	0.00E+00
CHILD	2.69E-06	4.87E-06	9.63E-07	1.32E-06	2.57E-07	2.78E-05	4.01E-08	0.00E+00
MEAT								
ADULT	2.27E-07	1.87E-06	9.36E-09	1.11E-07	5.01E-09	2.89E-07	1.15E-09	0.00E+00
TEEN	1.77E-07	1.01E-06	7.79E-09	8.62E-08	4.07E-09	2.09E-07	1.09E-09	0.00E+00
CHILD	2.73E-07	5.08E-07	1.44E-08	1.04E-07	5.16E-09	3.15E-07	1.28E-09	0.00E+00
COW MILK								
ADULT	1.19E-07	4.19E-07	8.67E-08	1.34E-07	7.33E-08	8.16E-06	9.72E-09	0.00E+00
TEEN	1.60E-07	4.94E-07	1.57E-07	2.35E-07	1.30E-07	1.29E-05	2.01E-08	0.00E+00
CHILD	2.53E-07	3.28E-07	3.81E-07	4.00E-07	2.17E-07	2.57E-05	3.09E-08	0.00E+00
INFANT	3.97E-07	2.89E-07	6.54E-07	8.26E-07	3.66E-07	6.24E-05	5.58E-08	0.00E+00
GOATMILK								
ADULT	1.93E-07	6.52E-08	2.23E-07	2.92E-07	1.41E-07	9.79E-06	2.91E-08	0.00E+00
TEEN	1.98E-07	7.94E-08	4.04E-07	5.15E-07	2.49E-07	1.55E-05	6.02E-08	0.00E+00
CHILD	1.92E-07	5.54E-08	9.76E-07	8.92E-07	4.14E-07	3.08E-05	9.26E-08	0.00E+00
INFANT	2.46E-07	5.06E-08	1.62E-06	1.79E-06	6.87E-07	7.48E-05	1.67E-07	0.00E+00
INHAL								
ADULT	1.89E-08	2.77E-07	9.44E-09	2.31E-08	1.62E-08	1.66E-06	5.01E-06	0.00E+00
TEEN	2.40E-08	3.19E-07	1.33E-08	3.12E-08	2.23E-08	2.12E-06	7.33E-06	0.00E+00
CHILD	2.64E-08	6.76E-07	1.81E-08	2.91E-08	2.09E-08	2.54E-06	5.95E-06	0.00E+00
INFANT	1.50E-08	5.43E-07	1.33E-08	2.27E-08	1.37E-08	2.34E-06	3.82E-06	0.00E+00

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TABLE 6. DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 3.68E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 7.34E-05 MILLRADS

PATHWAY	T. BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.92E-05	4.92E-05	4.92E-05	4.92E-05	4.92E-05	4.92E-05	4.95E-05	8.90E-05
GROUND	1.25E-04	1.25E-04	1.25E-04	1.25E-04	1.25E-04	1.25E-04	1.25E-04	1.47E-04
VEGET								
ADULT	2.12E-06	1.61E-05	5.71E-07	1.24E-06	2.39E-07	2.54E-05	3.24E-08	0.00E+00
TEEN	3.18E-06	1.71E-05	9.38E-07	1.92E-06	3.70E-07	3.42E-05	6.07E-08	0.00E+00
CHILD	6.18E-06	1.12E-05	2.26E-06	3.04E-06	5.99E-07	6.55E-05	9.23E-08	0.00E+00
MEAT								
ADULT	5.21E-07	4.30E-06	2.17E-08	2.55E-07	1.16E-08	6.80E-07	2.64E-09	0.00E+00
TEEN	4.08E-07	2.31E-06	1.80E-08	1.98E-07	9.43E-09	4.92E-07	2.50E-09	0.00E+00
CHILD	6.27E-07	1.17E-06	3.34E-08	2.38E-07	1.20E-08	7.43E-07	2.94E-09	0.00E+00
COW MILK								
ADULT	2.74E-07	9.64E-07	2.01E-07	3.09E-07	1.71E-07	1.93E-05	2.24E-08	0.00E+00
TEEN	3.70E-07	1.14E-06	3.65E-07	5.43E-07	3.05E-07	3.05E-05	4.63E-08	0.00E+00
CHILD	5.84E-07	7.55E-07	8.83E-07	9.26E-07	5.07E-07	6.06E-05	7.11E-08	0.00E+00
INFANT	9.19E-07	6.66E-07	1.52E-06	1.91E-06	8.55E-07	1.47E-04	1.29E-07	0.00E+00
GOATMILK								
ADULT	4.44E-07	1.51E-07	5.15E-07	6.74E-07	3.27E-07	2.31E-05	6.71E-08	0.00E+00
TEEN	4.58E-07	1.84E-07	9.35E-07	1.19E-06	5.80E-07	3.66E-05	1.39E-07	0.00E+00
CHILD	4.45E-07	1.28E-07	2.26E-06	2.06E-06	9.63E-07	7.27E-05	2.13E-07	0.00E+00
INFANT	5.73E-07	1.17E-07	3.75E-06	4.13E-06	1.60E-06	1.77E-04	3.86E-07	0.00E+00
INHAL								
ADULT	3.53E-08	5.17E-07	1.77E-08	4.33E-08	3.04E-08	3.11E-06	9.36E-06	0.00E+00
TEEN	4.49E-08	5.96E-07	2.49E-08	5.84E-08	4.20E-08	3.98E-06	1.37E-05	0.00E+00
CHILD	4.93E-08	1.26E-06	3.38E-08	5.45E-08	3.94E-08	4.77E-06	1.11E-05	0.00E+00
INFANT	2.80E-08	1.01E-06	2.48E-08	4.25E-08	2.59E-08	4.38E-06	7.14E-06	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017

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

ANNUAL BETA AIR DOSE = 1.11E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 2.23E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	1.49E-05	1.49E-05	1.49E-05	1.49E-05	1.49E-05	1.49E-05	1.51E-05	2.70E-05
GROUND	7.62E-03	7.62E-03	7.62E-03	7.62E-03	7.62E-03	7.62E-03	7.62E-03	8.97E-03
VEGET								
ADULT	1.35E-04	9.84E-04	2.52E-05	8.77E-05	1.49E-05	5.54E-04	3.21E-06	0.00E+00
TEEN	1.98E-04	1.05E-03	4.13E-05	1.36E-04	2.33E-05	7.45E-04	6.02E-06	0.00E+00
CHILD	3.78E-04	6.84E-04	9.85E-05	2.17E-04	3.74E-05	1.43E-03	9.16E-06	0.00E+00
MEAT								
ADULT	3.25E-05	2.62E-04	1.98E-06	1.70E-05	1.35E-06	1.48E-05	2.62E-07	0.00E+00
TEEN	2.52E-05	1.41E-04	1.61E-06	1.33E-05	1.06E-06	1.07E-05	2.48E-07	0.00E+00
CHILD	3.86E-05	7.11E-05	2.92E-06	1.60E-05	1.29E-06	1.62E-05	2.92E-07	0.00E+00
COW MILK								
ADULT	2.15E-05	5.97E-05	1.63E-05	2.67E-05	1.07E-05	4.18E-04	2.22E-06	0.00E+00
TEEN	2.70E-05	7.01E-05	2.93E-05	4.67E-05	1.87E-05	6.62E-04	4.59E-06	0.00E+00
CHILD	3.89E-05	4.64E-05	7.00E-05	7.90E-05	3.05E-05	1.31E-03	7.06E-06	0.00E+00
INFANT	5.65E-05	4.94E-05	1.13E-04	1.55E-04	4.88E-05	3.19E-03	1.28E-05	0.00E+00
GOATMILK								
ADULT	4.05E-05	8.71E-06	4.46E-05	6.13E-05	2.30E-05	5.02E-04	6.66E-06	0.00E+00
TEEN	3.94E-05	1.05E-05	8.09E-05	1.08E-04	4.06E-05	7.95E-04	1.38E-05	0.00E+00
CHILD	3.27E-05	7.15E-06	1.95E-04	1.87E-04	6.73E-05	1.58E-03	2.12E-05	0.00E+00
INFANT	3.55E-05	7.49E-06	3.14E-04	3.68E-04	1.09E-04	3.83E-03	3.83E-05	0.00E+00
INHAL								
ADULT	1.75E-06	2.48E-05	5.48E-07	1.90E-06	6.03E-07	4.62E-05	5.16E-04	0.00E+00
TEEN	2.12E-06	2.26E-05	7.68E-07	2.54E-06	8.24E-07	5.89E-05	7.53E-04	0.00E+00
CHILD	2.23E-06	8.84E-06	1.04E-06	2.31E-06	7.62E-07	7.03E-05	6.10E-04	0.00E+00
INFANT	1.17E-06	3.20E-06	6.74E-07	1.59E-06	4.81E-07	6.45E-05	3.89E-04	0.00E+00

TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 7.13E-06 MILLRADS
 ANNUAL GAMMA AIR DOSE = 1.43E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	9.59E-06	9.59E-06	9.59E-06	9.59E-06	9.59E-06	9.59E-06	9.66E-06	1.73E-05
GROUND	4.62E-03	4.62E-03	4.62E-03	4.62E-03	4.62E-03	4.62E-03	4.62E-03	5.44E-03
VEGET								
ADULT	8.17E-05	5.97E-04	1.55E-05	5.32E-05	9.08E-06	3.49E-04	1.95E-06	0.00E+00
TEEN	1.20E-04	6.35E-04	2.54E-05	8.27E-05	1.42E-05	4.69E-04	3.65E-06	0.00E+00
CHILD	2.29E-04	4.15E-04	6.05E-05	1.32E-04	2.28E-05	8.99E-04	5.55E-06	0.00E+00
MEAT								
ADULT	1.97E-05	1.59E-04	1.20E-06	1.03E-05	8.18E-07	9.33E-06	1.59E-07	0.00E+00
TEEN	1.53E-05	8.54E-05	9.81E-07	8.05E-06	6.41E-07	6.76E-06	1.51E-07	0.00E+00
CHILD	2.34E-05	4.31E-05	1.78E-06	9.71E-06	7.84E-07	1.02E-05	1.77E-07	0.00E+00
COW MILK								
ADULT	1.31E-05	3.62E-05	9.89E-06	1.62E-05	6.55E-06	2.64E-04	1.35E-06	0.00E+00
TEEN	1.64E-05	4.25E-05	1.78E-05	2.84E-05	1.14E-05	4.18E-04	2.78E-06	0.00E+00
CHILD	2.36E-05	2.81E-05	4.26E-05	4.80E-05	1.87E-05	8.29E-04	4.28E-06	0.00E+00
INFANT	3.44E-05	3.00E-05	6.89E-05	9.45E-05	2.99E-05	2.01E-03	7.74E-06	0.00E+00
GOATMILK								
ADULT	2.46E-05	5.30E-06	2.71E-05	3.72E-05	1.40E-05	3.16E-04	4.04E-06	0.00E+00
TEEN	2.39E-05	6.36E-06	4.92E-05	6.56E-05	2.47E-05	5.01E-04	8.35E-06	0.00E+00
CHILD	1.99E-05	4.36E-06	1.18E-04	1.14E-04	4.10E-05	9.95E-04	1.28E-05	0.00E+00
INFANT	2.16E-05	4.56E-06	1.91E-04	2.23E-04	6.66E-05	2.42E-03	2.32E-05	0.00E+00
INHAL								
ADULT	1.43E-06	2.01E-05	4.52E-07	1.56E-06	5.11E-07	3.93E-05	4.18E-04	0.00E+00
TEEN	1.73E-06	1.83E-05	6.32E-07	2.07E-06	6.99E-07	5.02E-05	6.11E-04	0.00E+00
CHILD	1.81E-06	7.10E-06	8.55E-07	1.89E-06	6.46E-07	6.02E-05	4.95E-04	0.00E+00
INFANT	9.50E-07	2.53E-06	5.57E-07	1.30E-06	4.09E-07	5.53E-05	3.16E-04	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 3.36E-05 MILLRADS
 ANNUAL GAMMA AIR DOSE = 6.74E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	4.51E-05	4.51E-05	4.51E-05	4.51E-05	4.51E-05	4.51E-05	4.55E-05	8.15E-05
GROUND	1.62E-03	1.62E-03	1.62E-03	1.62E-03	1.62E-03	1.62E-03	1.62E-03	1.90E-03
VEGET								
ADULT	2.88E-05	2.09E-04	7.05E-06	1.89E-05	3.60E-06	1.96E-04	6.91E-07	0.00E+00
TEEN	4.23E-05	2.23E-04	1.16E-05	2.94E-05	5.62E-06	2.64E-04	1.29E-06	0.00E+00
CHILD	8.07E-05	1.46E-04	2.77E-05	4.70E-05	9.02E-06	5.06E-04	1.97E-06	0.00E+00
MEAT								
ADULT	6.91E-06	5.56E-05	4.44E-07	3.63E-06	3.01E-07	5.26E-06	5.64E-08	0.00E+00
TEEN	5.36E-06	2.99E-05	3.63E-07	2.83E-06	2.36E-07	3.81E-06	5.34E-08	0.00E+00
CHILD	8.19E-06	1.51E-05	6.59E-07	3.41E-06	2.89E-07	5.75E-06	6.27E-08	0.00E+00
COW MILK								
ADULT	4.71E-06	1.27E-05	3.69E-06	5.92E-06	2.62E-06	1.48E-04	4.78E-07	0.00E+00
TEEN	5.95E-06	1.50E-05	6.65E-06	1.04E-05	4.58E-06	2.35E-04	9.87E-07	0.00E+00
CHILD	8.63E-06	9.92E-06	1.59E-05	1.75E-05	7.50E-06	4.66E-04	1.52E-06	0.00E+00
INFANT	1.27E-05	1.06E-05	2.61E-05	3.48E-05	1.21E-05	1.13E-03	2.74E-06	0.00E+00
GOATMILK								
ADULT	8.83E-06	1.94E-06	9.89E-06	1.34E-05	5.31E-06	1.78E-04	1.43E-06	0.00E+00
TEEN	8.68E-06	2.35E-06	1.79E-05	2.36E-05	9.40E-06	2.82E-04	2.96E-06	0.00E+00
CHILD	7.43E-06	1.62E-06	4.32E-05	4.09E-05	1.56E-05	5.59E-04	4.55E-06	0.00E+00
INFANT	8.36E-06	1.70E-06	7.01E-05	8.07E-05	2.54E-05	1.36E-03	8.23E-06	0.00E+00
INHAL								
ADULT	2.92E-07	4.12E-06	1.01E-07	3.25E-07	1.21E-07	9.91E-06	8.37E-05	0.00E+00
TEEN	3.55E-07	3.91E-06	1.41E-07	4.34E-07	1.66E-07	1.27E-05	1.22E-04	0.00E+00
CHILD	3.73E-07	2.81E-06	1.91E-07	3.97E-07	1.54E-07	1.51E-05	9.92E-05	0.00E+00
INFANT	1.97E-07	1.71E-06	1.27E-07	2.78E-07	9.79E-08	1.39E-05	6.33E-05	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 2.52E-05 MILLRADS
ANNUAL GAMMA AIR DOSE = 5.05E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	3.38E-05	3.38E-05	3.38E-05	3.38E-05	3.38E-05	3.38E-05	3.41E-05	6.11E-05
GROUND	1.05E-04	1.05E-04	1.05E-04	1.05E-04	1.05E-04	1.05E-04	1.05E-04	1.24E-04
VEGET								
ADULT	1.89E-06	1.36E-05	5.62E-07	1.25E-06	2.61E-07	1.75E-05	4.54E-08	0.00E+00
TEEN	2.77E-06	1.45E-05	9.22E-07	1.94E-06	4.06E-07	2.35E-05	8.51E-08	0.00E+00
CHILD	5.28E-06	9.48E-06	2.22E-06	3.11E-06	6.52E-07	4.51E-05	1.30E-07	0.00E+00
MEAT								
ADULT	4.50E-07	3.61E-06	3.04E-08	2.37E-07	2.05E-08	4.69E-07	3.71E-09	0.00E+00
TEEN	3.49E-07	1.94E-06	2.49E-08	1.85E-07	1.61E-08	3.40E-07	3.51E-09	0.00E+00
CHILD	5.33E-07	9.82E-07	4.52E-08	2.23E-07	1.97E-08	5.13E-07	4.13E-09	0.00E+00
COW MILK								
ADULT	3.15E-07	8.32E-07	2.54E-07	4.00E-07	1.91E-07	1.32E-05	3.14E-08	0.00E+00
TEEN	4.00E-07	9.80E-07	4.59E-07	7.00E-07	3.34E-07	2.09E-05	6.49E-08	0.00E+00
CHILD	5.83E-07	6.49E-07	1.10E-06	1.19E-06	5.48E-07	4.14E-05	9.98E-08	0.00E+00
INFANT	8.64E-07	6.96E-07	1.82E-06	2.37E-06	8.92E-07	1.01E-04	1.81E-07	0.00E+00
GOATMILK								
ADULT	5.89E-07	1.32E-07	6.68E-07	8.94E-07	3.71E-07	1.58E-05	9.42E-08	0.00E+00
TEEN	5.83E-07	1.60E-07	1.21E-06	1.58E-06	6.58E-07	2.51E-05	1.95E-07	0.00E+00
CHILD	5.12E-07	1.11E-07	2.92E-06	2.73E-06	1.09E-06	4.97E-05	2.99E-07	0.00E+00
INFANT	5.94E-07	1.16E-07	4.77E-06	5.41E-06	1.79E-06	1.21E-04	5.42E-07	0.00E+00
INHAL								
ADULT	3.68E-08	5.23E-07	1.77E-08	4.50E-08	2.48E-08	2.33E-06	9.42E-06	0.00E+00
TEEN	4.52E-08	6.01E-07	2.49E-08	6.04E-08	3.41E-08	2.96E-06	1.38E-05	0.00E+00
CHILD	4.81E-08	1.24E-06	3.38E-08	5.60E-08	3.18E-08	3.51E-06	1.12E-05	0.00E+00
INFANT	2.67E-08	9.92E-07	2.37E-08	4.20E-08	2.06E-08	3.22E-06	7.18E-06	0.00E+00

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TABLE 7. DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017 (Continued)

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

ANNUAL BETA AIR DOSE = 5.25E-06 MILLRADS
ANNUAL GAMMA AIR DOSE = 1.05E-05 MILLRADS

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	7.05E-06	7.05E-06	7.05E-06	7.05E-06	7.05E-06	7.05E-06	7.10E-06	1.27E-05
GROUND	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.63E-04
VEGET								
ADULT	2.47E-06	1.79E-05	5.91E-07	1.62E-06	3.05E-07	1.62E-05	5.91E-08	0.00E+00
TEEN	3.62E-06	1.91E-05	9.68E-07	2.52E-06	4.76E-07	2.18E-05	1.11E-07	0.00E+00
CHILD	6.91E-06	1.25E-05	2.32E-06	4.02E-06	7.64E-07	4.17E-05	1.69E-07	0.00E+00
MEAT								
ADULT	5.92E-07	4.76E-06	3.79E-08	3.11E-07	2.57E-08	4.33E-07	4.83E-09	0.00E+00
TEEN	4.59E-07	2.56E-06	3.10E-08	2.43E-07	2.01E-08	3.14E-07	4.57E-09	0.00E+00
CHILD	7.02E-07	1.29E-06	5.61E-08	2.93E-07	2.47E-08	4.74E-07	5.37E-09	0.00E+00
COW MLK								
ADULT	4.03E-07	1.09E-06	3.14E-07	5.06E-07	2.22E-07	1.22E-05	4.09E-08	0.00E+00
TEEN	5.08E-07	1.28E-06	5.66E-07	8.84E-07	3.87E-07	1.93E-05	8.45E-08	0.00E+00
CHILD	7.36E-07	8.49E-07	1.35E-06	1.50E-06	6.34E-07	3.84E-05	1.30E-07	0.00E+00
INFANT	1.08E-06	9.08E-07	2.22E-06	2.97E-06	1.02E-06	9.32E-05	2.35E-07	0.00E+00
GOATMLK								
ADULT	7.55E-07	1.66E-07	8.44E-07	1.15E-06	4.51E-07	1.47E-05	1.23E-07	0.00E+00
TEEN	7.41E-07	2.00E-07	1.53E-06	2.02E-06	7.99E-07	2.32E-05	2.53E-07	0.00E+00
CHILD	6.32E-07	1.38E-07	3.69E-06	3.50E-06	1.33E-06	4.60E-05	3.89E-07	0.00E+00
INFANT	7.10E-07	1.44E-07	5.98E-06	6.89E-06	2.16E-06	1.12E-04	7.05E-07	0.00E+00
INHAL								
ADULT	5.12E-08	7.22E-07	1.76E-08	5.70E-08	2.11E-08	1.74E-06	1.47E-05	0.00E+00
TEEN	6.23E-08	6.83E-07	2.47E-08	7.62E-08	2.89E-08	2.22E-06	2.15E-05	0.00E+00
CHILD	6.55E-08	4.66E-07	3.33E-08	6.95E-08	2.68E-08	2.65E-06	1.74E-05	0.00E+00
INFANT	3.46E-08	2.76E-07	2.21E-08	4.87E-08	1.71E-08	2.43E-06	1.11E-05	0.00E+00

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TABLE 8. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-MARCH 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.69E-06	: 1.69E-06	: 1.69E-06	: 1.69E-06	: 1.69E-06	: 1.69E-06	: 1.70E-06	: 3.33E-06
	: 1.39%	: 1.17%	: 1.43%	: 1.40%	: 1.45%	: 1.10%	: 1.24%	: 2.42%
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
	: 93.37%	: 78.47%	: 96.17%	: 94.02%	: 97.27%	: 73.81%	: 82.63%	: 97.58%
INHAL	: 7.80E-08	: 1.00E-06	: 3.34E-08	: 9.29E-08	: 3.20E-08	: 2.72E-06	: 2.19E-05	: 0.00E+00
	: .06%	: .69%	: .03%	: .08%	: .03%	: 1.77%	: 15.92%	: .00%
VEGET	: 3.95E-06	: 1.93E-05	: 1.13E-06	: 2.69E-06	: 4.51E-07	: 4.62E-07	: 1.15E-07	: 0.00E+00
	: 3.24%	: 13.33%	: .96%	: 2.22%	: .39%	: .30%	: .08%	: .00%
COW MILK	: 1.31E-06	: 2.50E-06	: 1.58E-06	: 2.21E-06	: 9.48E-07	: 3.48E-05	: 1.77E-07	: 0.00E+00
	: 1.07%	: 1.72%	: 1.34%	: 1.82%	: .81%	: 22.55%	: .13%	: .00%
MEAT	: 1.05E-06	: 6.68E-06	: 9.14E-08	: 5.63E-07	: 6.89E-08	: 7.34E-07	: 9.80E-09	: 0.00E+00
	: .86%	: 4.61%	: .08%	: .46%	: .06%	: .48%	: .01%	: .00%
TOTAL	: 1.22E-04	: 1.45E-04	: 1.18E-04	: 1.21E-04	: 1.17E-04	: 1.54E-04	: 1.38E-04	: 1.37E-04

TABLE 9. DOSES TO POPULATION WITHIN 50 MILES, APRIL-JUNE 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 1.47E-06	: 1.47E-06	: 1.47E-06	: 1.47E-06	: 1.47E-06	: 1.47E-06	: 1.48E-06	: 3.04E-06
	: 2.73%	: 2.34%	: 2.77%	: 2.73%	: 2.83%	: 1.63%	: 2.48%	: 4.94%
GROUND	: 4.97E-05	: 4.97E-05	: 4.97E-05	: 4.97E-05	: 4.97E-05	: 4.97E-05	: 4.97E-05	: 5.84E-05
	: 92.18%	: 79.24%	: 93.63%	: 92.24%	: 95.60%	: 55.09%	: 83.13%	: 95.06%
INHAL	: 3.74E-08	: 4.77E-07	: 2.68E-08	: 4.76E-08	: 2.83E-08	: 3.20E-06	: 8.40E-06	: 0.00E+00
	: .07%	: .76%	: .05%	: .09%	: .05%	: 3.55%	: 14.05%	: .00%
VEGET	: 1.65E-06	: 7.49E-06	: 8.14E-07	: 1.23E-06	: 2.30E-07	: 4.59E-07	: 7.61E-08	: 0.00E+00
	: 3.06%	: 11.95%	: 1.53%	: 2.28%	: .44%	: .51%	: .13%	: .00%
COW MILK	: 6.38E-07	: 9.44E-07	: 1.02E-06	: 1.21E-06	: 5.30E-07	: 3.46E-05	: 1.18E-07	: 0.00E+00
	: 1.18%	: 1.51%	: 1.92%	: 2.24%	: 1.02%	: 38.40%	: .20%	: .00%
MEAT	: 4.19E-07	: 2.63E-06	: 5.20E-08	: 2.28E-07	: 2.52E-08	: 7.36E-07	: 6.54E-09	: 0.00E+00
	: .78%	: 4.19%	: .10%	: .42%	: .05%	: .82%	: .01%	: .00%
TOTAL	: 5.39E-05	: 6.27E-05	: 5.30E-05	: 5.38E-05	: 5.19E-05	: 9.01E-05	: 5.97E-05	: 6.15E-05

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TABLE 10. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-JUNE 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.13E-06	: 3.13E-06	: 3.13E-06	: 3.13E-06	: 3.13E-06	: 3.13E-06	: 3.15E-06	: 6.28E-06
	: 1.74%	: 1.48%	: 1.79%	: 1.75%	: 1.81%	: 1.26%	: 1.57%	: 3.10%
GROUND	: 1.67E-04	: 1.67E-04	: 1.67E-04	: 1.67E-04	: 1.67E-04	: 1.67E-04	: 1.67E-04	: 1.96E-04
	: 93.16%	: 79.08%	: 95.49%	: 93.61%	: 96.85%	: 67.44%	: 83.12%	: 96.90%
INHAL	: 1.15E-07	: 1.48E-06	: 6.03E-08	: 1.40E-07	: 6.03E-08	: 5.92E-06	: 3.03E-05	: 0.00E+00
	: .06%	: .70%	: .03%	: .08%	: .03%	: 2.39%	: 15.06%	: .00%
VEGET	: 5.60E-06	: 2.68E-05	: 1.95E-06	: 3.92E-06	: 6.82E-07	: 9.18E-07	: 1.91E-07	: 0.00E+00
	: 3.13%	: 12.70%	: 1.11%	: 2.20%	: .40%	: .37%	: .10%	: .00%
COW MILK	: 1.95E-06	: 3.44E-06	: 2.61E-06	: 3.41E-06	: 1.48E-06	: 6.92E-05	: 2.95E-07	: 0.00E+00
	: 1.09%	: 1.63%	: 1.49%	: 1.91%	: .86%	: 27.94%	: .15%	: .00%
MEAT	: 1.47E-06	: 9.31E-06	: 1.44E-07	: 7.90E-07	: 9.41E-08	: 1.47E-06	: 1.64E-08	: 0.00E+00
	: .82%	: 4.41%	: .08%	: .44%	: .05%	: .59%	: .01%	: .00%
TOTAL	: 1.79E-04	: 2.11E-04	: 1.75E-04	: 1.78E-04	: 1.72E-04	: 2.48E-04	: 2.01E-04	: 2.03E-04

TABLE 11. DOSES TO POPULATION WITHIN 50 MILES, JULY-SEPTEMBER 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.33E-06	: 3.33E-06	: 3.33E-06	: 3.33E-06	: 3.33E-06	: 3.33E-06	: 3.36E-06	: 6.92E-06
	: 5.00%	: 4.35%	: 5.08%	: 5.02%	: 5.17%	: 3.60%	: 4.25%	: 8.88%
GROUND	: 6.04E-05	: 6.04E-05	: 6.04E-05	: 6.04E-05	: 6.04E-05	: 6.04E-05	: 6.04E-05	: 7.10E-05
	: 90.65%	: 78.84%	: 92.19%	: 90.98%	: 93.72%	: 65.29%	: 76.48%	: 91.12%
INHAL	: 6.21E-08	: 7.31E-07	: 4.14E-08	: 7.70E-08	: 4.58E-08	: 4.59E-06	: 1.50E-05	: 0.00E+00
	: .09%	: .95%	: .06%	: .12%	: .07%	: 4.96%	: 19.02%	: .00%
VEGET	: 1.77E-06	: 8.22E-06	: 7.59E-07	: 1.24E-06	: 2.11E-07	: 3.22E-07	: 7.28E-08	: 0.00E+00
	: 2.66%	: 10.74%	: 1.16%	: 1.86%	: .33%	: .35%	: .09%	: .00%
COW MILK	: 6.07E-07	: 1.02E-06	: 9.34E-07	: 1.11E-06	: 4.41E-07	: 2.33E-05	: 1.12E-07	: 0.00E+00
	: .91%	: 1.33%	: 1.43%	: 1.67%	: .68%	: 25.24%	: .14%	: .00%
MEAT	: 4.56E-07	: 2.90E-06	: 4.81E-08	: 2.38E-07	: 2.09E-08	: 5.12E-07	: 6.24E-09	: 0.00E+00
	: .69%	: 3.79%	: .07%	: .36%	: .03%	: .55%	: .01%	: .00%
TOTAL	: 6.66E-05	: 7.66E-05	: 6.55E-05	: 6.63E-05	: 6.44E-05	: 9.24E-05	: 7.89E-05	: 7.79E-05

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TABLE 12. DOSES TO POPULATION WITHIN 50 MILES, OCTOBER-DECEMBER 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 3.10E-06	: 3.10E-06	: 3.10E-06	: 3.10E-06	: 3.10E-06	: 3.10E-06	: 3.13E-06	: 6.57E-06
	: 3.17%	: 2.65%	: 3.29%	: 3.24%	: 3.30%	: 1.91%	: 2.76%	: 5.82%
GROUND	: 9.05E-05	: 9.05E-05	: 9.05E-05	: 9.05E-05	: 9.05E-05	: 9.05E-05	: 9.05E-05	: 1.06E-04
	: 92.57%	: 77.29%	: 96.07%	: 94.70%	: 96.28%	: 55.82%	: 79.92%	: 94.18%
INHAL	: 6.56E-08	: 9.02E-07	: 2.68E-08	: 7.19E-08	: 5.54E-08	: 7.64E-06	: 1.96E-05	: 0.00E+00
	: .07%	: .77%	: .03%	: .08%	: .06%	: 4.72%	: 17.31%	: .00%
VEGET	: 2.82E-06	: 1.53E-05	: 3.39E-07	: 1.19E-06	: 2.22E-08	: 7.47E-07	: 2.40E-09	: 0.00E+00
	: 2.88%	: 13.09%	: .36%	: 1.25%	: .02%	: .46%	: .00%	: .00%
COW MILK	: 4.90E-07	: 1.88E-06	: 2.30E-07	: 3.60E-07	: 3.17E-07	: 5.89E-05	: 3.16E-09	: 0.00E+00
	: .50%	: 1.61%	: .24%	: .38%	: .34%	: 36.33%	: .00%	: .00%
MEAT	: 7.96E-07	: 5.39E-06	: 9.81E-09	: 3.45E-07	: 7.23E-09	: 1.23E-06	: 1.87E-10	: 0.00E+00
	: .81%	: 4.60%	: .01%	: .36%	: .01%	: .76%	: .00%	: .00%
TOTAL	: 9.77E-05	: 1.17E-04	: 9.42E-05	: 9.55E-05	: 9.39E-05	: 1.62E-04	: 1.13E-04	: 1.13E-04

TABLE 13. DOSES TO POPULATION WITHIN 50 MILES, JULY-DECEMBER 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

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	: 6.17E-06	: 1.29E-05
	: 3.62%	: 3.08%	: 3.72%	: 3.67%	: 3.75%	: 2.35%	: 3.10%	: 6.58%
GROUND	: 1.56E-04	: 1.56E-04	: 1.56E-04	: 1.56E-04	: 1.56E-04	: 1.56E-04	: 1.56E-04	: 1.83E-04
	: 92.19%	: 78.53%	: 94.82%	: 93.54%	: 95.56%	: 59.92%	: 78.32%	: 93.42%
INHAL	: 1.33E-07	: 1.72E-06	: 6.81E-08	: 1.53E-07	: 1.06E-07	: 1.32E-05	: 3.67E-05	: 0.00E+00
	: .08%	: .87%	: .04%	: .09%	: .07%	: 5.08%	: 18.48%	: .00%
VEGET	: 4.59E-06	: 2.35E-05	: 1.10E-06	: 2.43E-06	: 2.33E-07	: 1.07E-06	: 7.52E-08	: 0.00E+00
	: 2.72%	: 11.88%	: .67%	: 1.46%	: .14%	: .41%	: .04%	: .00%
COW MILK	: 1.10E-06	: 2.90E-06	: 1.16E-06	: 1.47E-06	: 7.57E-07	: 8.20E-05	: 1.16E-07	: 0.00E+00
	: .65%	: 1.46%	: .71%	: .88%	: .46%	: 31.56%	: .06%	: .00%
MEAT	: 1.25E-06	: 8.28E-06	: 5.79E-08	: 5.83E-07	: 2.81E-08	: 1.74E-06	: 6.42E-09	: 0.00E+00
	: .74%	: 4.18%	: .04%	: .35%	: .02%	: .67%	: .00%	: .00%
TOTAL	: 1.69E-04	: 1.98E-04	: 1.64E-04	: 1.66E-04	: 1.63E-04	: 2.60E-04	: 1.99E-04	: 1.96E-04

TABLE 14. DOSES TO POPULATION WITHIN 50 MILES, JANUARY-DECEMBER 2017

ALARA ANNUAL INTEGRATED POPULATION DOSE SUMMARY (PERSON-REM)

PATHWAY	T.BODY	GI-TRACT	BONE	LIVER	KIDNEY	THYROID	LUNG	SKIN
PLUME	: 8.90E-06	: 8.90E-06	: 8.90E-06	: 8.90E-06	: 8.90E-06	: 8.90E-06	: 8.98E-06	: 1.85E-05
	: 2.56%	: 2.17%	: 2.62%	: 2.58%	: 2.65%	: 1.75%	: 2.24%	: 4.63%
GROUND	: 3.23E-04	: 3.23E-04	: 3.23E-04	: 3.23E-04	: 3.23E-04	: 3.23E-04	: 3.23E-04	: 3.80E-04
	: 92.79%	: 78.90%	: 95.27%	: 93.68%	: 96.32%	: 63.69%	: 80.67%	: 95.37%
INHAL	: 2.52E-07	: 3.23E-06	: 1.31E-07	: 3.00E-07	: 1.64E-07	: 1.86E-05	: 6.78E-05	: 0.00E+00
	: .07%	: .79%	: .04%	: .09%	: .05%	: 3.66%	: 16.91%	: .00%
VEGET	: 1.02E-05	: 5.04E-05	: 3.04E-06	: 6.35E-06	: 9.14E-07	: 1.99E-06	: 2.66E-07	: 0.00E+00
	: 2.93%	: 12.30%	: .90%	: 1.84%	: .27%	: .39%	: .07%	: .00%
COW MILK	: 3.04E-06	: 6.35E-06	: 3.77E-06	: 4.88E-06	: 2.23E-06	: 1.52E-04	: 4.10E-07	: 0.00E+00
	: .87%	: 1.55%	: 1.11%	: 1.41%	: .67%	: 29.87%	: .10%	: .00%
MEAT	: 2.72E-06	: 1.76E-05	: 2.01E-07	: 1.37E-06	: 1.22E-07	: 3.22E-06	: 2.28E-08	: 0.00E+00
	: .78%	: 4.29%	: .06%	: .40%	: .04%	: .63%	: .01%	: .00%
TOTAL	: 3.48E-04	: 4.10E-04	: 3.39E-04	: 3.45E-04	: 3.36E-04	: 5.07E-04	: 4.01E-04	: 3.99E-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 NRC Dose 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 2017 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 2017. 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 12.2 curies of Carbon-14 in 2017.

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/Qs. These X/Qs result in doses approximately 20% higher than those calculated with the X/Qs 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 2017

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	6.27E-03	6.27E-03	3.13E-02	6.27E-03	6.27E-03	6.27E-03	6.27E-03	6.27E-03
TEEN	1.05E-02	1.05E-02	5.24E-02	1.05E-02	1.05E-02	1.05E-02	1.05E-02	1.05E-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
MEAT								
ADULT	2.50E-03	2.50E-03	1.25E-02	2.50E-03	2.50E-03	2.50E-03	2.50E-03	2.50E-03
TEEN	2.11E-03	2.11E-03	1.06E-02	2.11E-03	2.11E-03	2.11E-03	2.11E-03	2.11E-03
CHILD	3.97E-03	3.97E-03	1.99E-02	3.97E-03	3.97E-03	3.97E-03	3.97E-03	3.97E-03
COW MILK								
ADULT	2.73E-03	2.73E-03	1.36E-02	2.73E-03	2.73E-03	2.73E-03	2.73E-03	2.73E-03
TEEN	5.03E-03	5.03E-03	2.52E-02	5.03E-03	5.03E-03	5.03E-03	5.03E-03	5.03E-03
CHILD	1.24E-02	1.24E-02	6.19E-02	1.24E-02	1.24E-02	1.24E-02	1.24E-02	1.24E-02
INFANT	2.59E-02	2.59E-02	1.21E-01	2.59E-02	2.59E-02	2.59E-02	2.59E-02	2.59E-02
GOATMILK								
ADULT	2.73E-03	2.73E-03	1.36E-02	2.73E-03	2.73E-03	2.73E-03	2.73E-03	2.73E-03
TEEN	5.03E-03	5.03E-03	2.52E-02	5.03E-03	5.03E-03	5.03E-03	5.03E-03	5.03E-03
CHILD	1.24E-02	1.24E-02	6.19E-02	1.24E-02	1.24E-02	1.24E-02	1.24E-02	1.24E-02
INFANT	2.59E-02	2.59E-02	1.21E-01	2.59E-02	2.59E-02	2.59E-02	2.59E-02	2.59E-02

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TABLE 15. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-MARCH 2017 (Continued)

SPECIAL LOCATION NO. 5A Nearest Garden
AT 2.80 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	9.48E-03	9.48E-03	4.74E-02	9.48E-03	9.48E-03	9.48E-03	9.48E-03	9.48E-03
TEEN	1.59E-02	1.59E-02	7.93E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02
CHILD	3.86E-02	3.86E-02	1.93E-01	3.86E-02	3.86E-02	3.86E-02	3.86E-02	3.86E-02
MEAT								
ADULT	3.78E-03	3.78E-03	1.89E-02	3.78E-03	3.78E-03	3.78E-03	3.78E-03	3.78E-03
TEEN	3.20E-03	3.20E-03	1.60E-02	3.20E-03	3.20E-03	3.20E-03	3.20E-03	3.20E-03
CHILD	6.01E-03	6.01E-03	3.00E-02	6.01E-03	6.01E-03	6.01E-03	6.01E-03	6.01E-03
COW MILK								
ADULT	4.13E-03	4.13E-03	2.06E-02	4.13E-03	4.13E-03	4.13E-03	4.13E-03	4.13E-03
TEEN	7.61E-03	7.61E-03	3.81E-02	7.61E-03	7.61E-03	7.61E-03	7.61E-03	7.61E-03
CHILD	1.87E-02	1.87E-02	9.36E-02	1.87E-02	1.87E-02	1.87E-02	1.87E-02	1.87E-02
INFANT	3.91E-02	3.91E-02	1.83E-01	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02
GOATMILK								
ADULT	4.13E-03	4.13E-03	2.06E-02	4.13E-03	4.13E-03	4.13E-03	4.13E-03	4.13E-03
TEEN	7.61E-03	7.61E-03	3.81E-02	7.61E-03	7.61E-03	7.61E-03	7.61E-03	7.61E-03
CHILD	1.87E-02	1.87E-02	9.36E-02	1.87E-02	1.87E-02	1.87E-02	1.87E-02	1.87E-02
INFANT	3.91E-02	3.91E-02	1.83E-01	3.91E-02	3.91E-02	3.91E-02	3.91E-02	3.91E-02

TABLE 16. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017

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	5.19E-03	5.19E-03	2.60E-02	5.19E-03	5.19E-03	5.19E-03	5.19E-03	5.19E-03
TEEN	8.69E-03	8.69E-03	4.34E-02	8.69E-03	8.69E-03	8.69E-03	8.69E-03	8.69E-03
CHILD	2.11E-02	2.11E-02	1.06E-01	2.11E-02	2.11E-02	2.11E-02	2.11E-02	2.11E-02
MEAT								
ADULT	2.07E-03	2.07E-03	1.04E-02	2.07E-03	2.07E-03	2.07E-03	2.07E-03	2.07E-03
TEEN	1.75E-03	1.75E-03	8.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03
CHILD	3.29E-03	3.29E-03	1.65E-02	3.29E-03	3.29E-03	3.29E-03	3.29E-03	3.29E-03
COW MILK								
ADULT	2.26E-03	2.26E-03	1.13E-02	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03
TEEN	4.17E-03	4.17E-03	2.09E-02	4.17E-03	4.17E-03	4.17E-03	4.17E-03	4.17E-03
CHILD	1.03E-02	1.03E-02	5.13E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02
INFANT	2.14E-02	2.14E-02	1.00E-01	2.14E-02	2.14E-02	2.14E-02	2.14E-02	2.14E-02
GOATMILK								
ADULT	2.26E-03	2.26E-03	1.13E-02	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03
TEEN	4.17E-03	4.17E-03	2.09E-02	4.17E-03	4.17E-03	4.17E-03	4.17E-03	4.17E-03
CHILD	1.03E-02	1.03E-02	5.13E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02	1.03E-02
INFANT	2.14E-02	2.14E-02	1.00E-01	2.14E-02	2.14E-02	2.14E-02	2.14E-02	2.14E-02

CS4

TABLE 16. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), APRIL-JUNE 2017 (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	1.07E-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 2017

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	1.16E-02	1.16E-02	5.81E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02
TEEN	1.94E-02	1.94E-02	9.72E-02	1.94E-02	1.94E-02	1.94E-02	1.94E-02	1.94E-02
CHILD	4.73E-02	4.73E-02	2.37E-01	4.73E-02	4.73E-02	4.73E-02	4.73E-02	4.73E-02
MEAT								
ADULT	4.64E-03	4.64E-03	2.32E-02	4.64E-03	4.64E-03	4.64E-03	4.64E-03	4.64E-03
TEEN	3.92E-03	3.92E-03	1.96E-02	3.92E-03	3.92E-03	3.92E-03	3.92E-03	3.92E-03
CHILD	7.37E-03	7.37E-03	3.68E-02	7.37E-03	7.37E-03	7.37E-03	7.37E-03	7.37E-03
COW MILK								
ADULT	5.06E-03	5.06E-03	2.53E-02	5.06E-03	5.06E-03	5.06E-03	5.06E-03	5.06E-03
TEEN	9.34E-03	9.34E-03	4.67E-02	9.34E-03	9.34E-03	9.34E-03	9.34E-03	9.34E-03
CHILD	2.30E-02	2.30E-02	1.15E-01	2.30E-02	2.30E-02	2.30E-02	2.30E-02	2.30E-02
INFANT	4.80E-02	4.80E-02	2.25E-01	4.80E-02	4.80E-02	4.80E-02	4.80E-02	4.80E-02
GOATMILK								
ADULT	5.06E-03	5.06E-03	2.53E-02	5.06E-03	5.06E-03	5.06E-03	5.06E-03	5.06E-03
TEEN	9.34E-03	9.34E-03	4.67E-02	9.34E-03	9.34E-03	9.34E-03	9.34E-03	9.34E-03
CHILD	2.30E-02	2.30E-02	1.15E-01	2.30E-02	2.30E-02	2.30E-02	2.30E-02	2.30E-02
INFANT	4.80E-02	4.80E-02	2.25E-01	4.80E-02	4.80E-02	4.80E-02	4.80E-02	4.80E-02

TABLE 17. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-JUNE 2017 (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	1.74E-02	1.74E-02	8.72E-02	1.74E-02	1.74E-02	1.74E-02	1.74E-02	1.74E-02
TEEN	2.92E-02	2.92E-02	1.46E-01	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02
CHILD	7.10E-02	7.10E-02	3.55E-01	7.10E-02	7.10E-02	7.10E-02	7.10E-02	7.10E-02
MEAT								
ADULT	6.96E-03	6.96E-03	3.48E-02	6.96E-03	6.96E-03	6.96E-03	6.96E-03	6.96E-03
TEEN	5.88E-03	5.88E-03	2.94E-02	5.88E-03	5.88E-03	5.88E-03	5.88E-03	5.88E-03
CHILD	1.11E-02	1.11E-02	5.53E-02	1.11E-02	1.11E-02	1.11E-02	1.11E-02	1.11E-02
COW MILK								
ADULT	7.59E-03	7.59E-03	3.80E-02	7.59E-03	7.59E-03	7.59E-03	7.59E-03	7.59E-03
TEEN	1.40E-02	1.40E-02	7.00E-02	1.40E-02	1.40E-02	1.40E-02	1.40E-02	1.40E-02
CHILD	3.44E-02	3.44E-02	1.72E-01	3.44E-02	3.44E-02	3.44E-02	3.44E-02	3.44E-02
INFANT	7.20E-02	7.20E-02	3.37E-01	7.20E-02	7.20E-02	7.20E-02	7.20E-02	7.20E-02
GOATMILK								
ADULT	7.59E-03	7.59E-03	3.80E-02	7.59E-03	7.59E-03	7.59E-03	7.59E-03	7.59E-03
TEEN	1.40E-02	1.40E-02	7.00E-02	1.40E-02	1.40E-02	1.40E-02	1.40E-02	1.40E-02
CHILD	3.44E-02	3.44E-02	1.72E-01	3.44E-02	3.44E-02	3.44E-02	3.44E-02	3.44E-02
INFANT	7.20E-02	7.20E-02	3.37E-01	7.20E-02	7.20E-02	7.20E-02	7.20E-02	7.20E-02

TABLE 18. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017

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	8.22E-03	8.22E-03	4.11E-02	8.22E-03	8.22E-03	8.22E-03	8.22E-03	8.22E-03
TEEN	1.37E-02	1.37E-02	6.87E-02	1.37E-02	1.37E-02	1.37E-02	1.37E-02	1.37E-02
CHILD	3.35E-02	3.35E-02	1.67E-01	3.35E-02	3.35E-02	3.35E-02	3.35E-02	3.35E-02
MEAT								
ADULT	3.28E-03	3.28E-03	1.64E-02	3.28E-03	3.28E-03	3.28E-03	3.28E-03	3.28E-03
TEEN	2.77E-03	2.77E-03	1.39E-02	2.77E-03	2.77E-03	2.77E-03	2.77E-03	2.77E-03
CHILD	5.21E-03	5.21E-03	2.61E-02	5.21E-03	5.21E-03	5.21E-03	5.21E-03	5.21E-03
COW MILK								
ADULT	3.58E-03	3.58E-03	1.79E-02	3.58E-03	3.58E-03	3.58E-03	3.58E-03	3.58E-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	1.62E-02	1.62E-02	8.12E-02	1.62E-02	1.62E-02	1.62E-02	1.62E-02	1.62E-02
INFANT	3.39E-02	3.39E-02	1.59E-01	3.39E-02	3.39E-02	3.39E-02	3.39E-02	3.39E-02
GOATMILK								
ADULT	3.58E-03	3.58E-03	1.79E-02	3.58E-03	3.58E-03	3.58E-03	3.58E-03	3.58E-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	1.62E-02	1.62E-02	8.12E-02	1.62E-02	1.62E-02	1.62E-02	1.62E-02	1.62E-02
INFANT	3.39E-02	3.39E-02	1.59E-01	3.39E-02	3.39E-02	3.39E-02	3.39E-02	3.39E-02

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TABLE 18. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-SEPTEMBER 2017 (Continued)

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

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	1.51E-02	1.51E-02	7.56E-02	1.51E-02	1.51E-02	1.51E-02	1.51E-02	1.51E-02
TEEN	2.53E-02	2.53E-02	1.26E-01	2.53E-02	2.53E-02	2.53E-02	2.53E-02	2.53E-02
CHILD	6.16E-02	6.16E-02	3.08E-01	6.16E-02	6.16E-02	6.16E-02	6.16E-02	6.16E-02
MEAT								
ADULT	6.04E-03	6.04E-03	3.02E-02	6.04E-03	6.04E-03	6.04E-03	6.04E-03	6.04E-03
TEEN	5.10E-03	5.10E-03	2.55E-02	5.10E-03	5.10E-03	5.10E-03	5.10E-03	5.10E-03
CHILD	9.59E-03	9.59E-03	4.79E-02	9.59E-03	9.59E-03	9.59E-03	9.59E-03	9.59E-03
COW MILK								
ADULT	6.59E-03	6.59E-03	3.29E-02	6.59E-03	6.59E-03	6.59E-03	6.59E-03	6.59E-03
TEEN	1.21E-02	1.21E-02	6.07E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02
CHILD	2.99E-02	2.99E-02	1.49E-01	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
INFANT	6.25E-02	6.25E-02	2.93E-01	6.25E-02	6.25E-02	6.25E-02	6.25E-02	6.25E-02
GOATMILK								
ADULT	6.59E-03	6.59E-03	3.29E-02	6.59E-03	6.59E-03	6.59E-03	6.59E-03	6.59E-03
TEEN	1.21E-02	1.21E-02	6.07E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02	1.21E-02
CHILD	2.99E-02	2.99E-02	1.49E-01	2.99E-02	2.99E-02	2.99E-02	2.99E-02	2.99E-02
INFANT	6.25E-02	6.25E-02	2.93E-01	6.25E-02	6.25E-02	6.25E-02	6.25E-02	6.25E-02

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TABLE 19. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017

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	6.25E-03	6.25E-03	3.12E-02	6.25E-03	6.25E-03	6.25E-03	6.25E-03	6.25E-03
TEEN	1.04E-02	1.04E-02	5.22E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
CHILD	2.54E-02	2.54E-02	1.27E-01	2.54E-02	2.54E-02	2.54E-02	2.54E-02	2.54E-02
MEAT								
ADULT	2.49E-03	2.49E-03	1.25E-02	2.49E-03	2.49E-03	2.49E-03	2.49E-03	2.49E-03
TEEN	2.11E-03	2.11E-03	1.05E-02	2.11E-03	2.11E-03	2.11E-03	2.11E-03	2.11E-03
CHILD	3.96E-03	3.96E-03	1.98E-02	3.96E-03	3.96E-03	3.96E-03	3.96E-03	3.96E-03
COW MILK								
ADULT	2.72E-03	2.72E-03	1.36E-02	2.72E-03	2.72E-03	2.72E-03	2.72E-03	2.72E-03
TEEN	5.02E-03	5.02E-03	2.51E-02	5.02E-03	5.02E-03	5.02E-03	5.02E-03	5.02E-03
CHILD	1.23E-02	1.23E-02	6.17E-02	1.23E-02	1.23E-02	1.23E-02	1.23E-02	1.23E-02
INFANT	2.58E-02	2.58E-02	1.21E-01	2.58E-02	2.58E-02	2.58E-02	2.58E-02	2.58E-02
GOATMILK								
ADULT	2.72E-03	2.72E-03	1.36E-02	2.72E-03	2.72E-03	2.72E-03	2.72E-03	2.72E-03
TEEN	5.02E-03	5.02E-03	2.51E-02	5.02E-03	5.02E-03	5.02E-03	5.02E-03	5.02E-03
CHILD	1.23E-02	1.23E-02	6.17E-02	1.23E-02	1.23E-02	1.23E-02	1.23E-02	1.23E-02
INFANT	2.58E-02	2.58E-02	1.21E-01	2.58E-02	2.58E-02	2.58E-02	2.58E-02	2.58E-02

TABLE 19. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), OCTOBER-DECEMBER 2017 (Continued)

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

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	1.04E-02	1.04E-02	5.18E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
TEEN	1.73E-02	1.73E-02	8.66E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02
CHILD	4.22E-02	4.22E-02	2.11E-01	4.22E-02	4.22E-02	4.22E-02	4.22E-02	4.22E-02
MEAT								
ADULT	4.13E-03	4.13E-03	2.07E-02	4.13E-03	4.13E-03	4.13E-03	4.13E-03	4.13E-03
TEEN	3.49E-03	3.49E-03	1.75E-02	3.49E-03	3.49E-03	3.49E-03	3.49E-03	3.49E-03
CHILD	6.57E-03	6.57E-03	3.28E-02	6.57E-03	6.57E-03	6.57E-03	6.57E-03	6.57E-03
COW MILK								
ADULT	4.51E-03	4.51E-03	2.25E-02	4.51E-03	4.51E-03	4.51E-03	4.51E-03	4.51E-03
TEEN	8.32E-03	8.32E-03	4.16E-02	8.32E-03	8.32E-03	8.32E-03	8.32E-03	8.32E-03
CHILD	2.05E-02	2.05E-02	1.02E-01	2.05E-02	2.05E-02	2.05E-02	2.05E-02	2.05E-02
INFANT	4.28E-02	4.28E-02	2.00E-01	4.28E-02	4.28E-02	4.28E-02	4.28E-02	4.28E-02
GOATMILK								
ADULT	4.51E-03	4.51E-03	2.25E-02	4.51E-03	4.51E-03	4.51E-03	4.51E-03	4.51E-03
TEEN	8.32E-03	8.32E-03	4.16E-02	8.32E-03	8.32E-03	8.32E-03	8.32E-03	8.32E-03
CHILD	2.05E-02	2.05E-02	1.02E-01	2.05E-02	2.05E-02	2.05E-02	2.05E-02	2.05E-02
INFANT	4.28E-02	4.28E-02	2.00E-01	4.28E-02	4.28E-02	4.28E-02	4.28E-02	4.28E-02

TABLE 20. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017

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	1.48E-02	1.48E-02	7.39E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02	1.48E-02
TEEN	2.47E-02	2.47E-02	1.24E-01	2.47E-02	2.47E-02	2.47E-02	2.47E-02	2.47E-02
CHILD	6.01E-02	6.01E-02	3.01E-01	6.01E-02	6.01E-02	6.01E-02	6.01E-02	6.01E-02
MEAT								
ADULT	5.90E-03	5.90E-03	2.95E-02	5.90E-03	5.90E-03	5.90E-03	5.90E-03	5.90E-03
TEEN	4.98E-03	4.98E-03	2.49E-02	4.98E-03	4.98E-03	4.98E-03	4.98E-03	4.98E-03
CHILD	9.36E-03	9.36E-03	4.68E-02	9.36E-03	9.36E-03	9.36E-03	9.36E-03	9.36E-03
COW MILK								
ADULT	6.43E-03	6.43E-03	3.22E-02	6.43E-03	6.43E-03	6.43E-03	6.43E-03	6.43E-03
TEEN	1.19E-02	1.19E-02	5.93E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02
CHILD	2.92E-02	2.92E-02	1.46E-01	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02
INFANT	6.10E-02	6.10E-02	2.86E-01	6.10E-02	6.10E-02	6.10E-02	6.10E-02	6.10E-02
GOATMILK								
ADULT	6.43E-03	6.43E-03	3.22E-02	6.43E-03	6.43E-03	6.43E-03	6.43E-03	6.43E-03
TEEN	1.19E-02	1.19E-02	5.93E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02	1.19E-02
CHILD	2.92E-02	2.92E-02	1.46E-01	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02
INFANT	6.10E-02	6.10E-02	2.86E-01	6.10E-02	6.10E-02	6.10E-02	6.10E-02	6.10E-02

TABLE 20. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JULY-DECEMBER 2017 (Continued)

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

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	2.59E-02	2.59E-02	1.30E-01	2.59E-02	2.59E-02	2.59E-02	2.59E-02	2.59E-02
TEEN	4.34E-02	4.34E-02	2.17E-01	4.34E-02	4.34E-02	4.34E-02	4.34E-02	4.34E-02
CHILD	1.06E-01	1.06E-01	5.28E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
MEAT								
ADULT	1.04E-02	1.04E-02	5.18E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
TEEN	8.74E-03	8.74E-03	4.37E-02	8.74E-03	8.74E-03	8.74E-03	8.74E-03	8.74E-03
CHILD	1.64E-02	1.64E-02	8.22E-02	1.64E-02	1.64E-02	1.64E-02	1.64E-02	1.64E-02
COW MILK								
ADULT	1.13E-02	1.13E-02	5.65E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
TEEN	2.08E-02	2.08E-02	1.04E-01	2.08E-02	2.08E-02	2.08E-02	2.08E-02	2.08E-02
CHILD	5.12E-02	5.12E-02	2.56E-01	5.12E-02	5.12E-02	5.12E-02	5.12E-02	5.12E-02
INFANT	1.07E-01	1.07E-01	5.02E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
GOATMILK								
ADULT	1.13E-02	1.13E-02	5.65E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
TEEN	2.08E-02	2.08E-02	1.04E-01	2.08E-02	2.08E-02	2.08E-02	2.08E-02	2.08E-02
CHILD	5.12E-02	5.12E-02	2.56E-01	5.12E-02	5.12E-02	5.12E-02	5.12E-02	5.12E-02
INFANT	1.07E-01	1.07E-01	5.02E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01

TABLE 21. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017

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	2.61E-02	2.61E-02	1.30E-01	2.61E-02	2.61E-02	2.61E-02	2.61E-02	2.61E-02
TEEN	4.36E-02	4.36E-02	2.18E-01	4.36E-02	4.36E-02	4.36E-02	4.36E-02	4.36E-02
CHILD	1.06E-01	1.06E-01	5.30E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01	1.06E-01
MEAT								
ADULT	1.04E-02	1.04E-02	5.20E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02	1.04E-02
TEEN	8.78E-03	8.78E-03	4.39E-02	8.78E-03	8.78E-03	8.78E-03	8.78E-03	8.78E-03
CHILD	1.65E-02	1.65E-02	8.26E-02	1.65E-02	1.65E-02	1.65E-02	1.65E-02	1.65E-02
COW MILK								
ADULT	1.13E-02	1.13E-02	5.67E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
TEEN	2.09E-02	2.09E-02	1.05E-01	2.09E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02
CHILD	5.14E-02	5.14E-02	2.57E-01	5.14E-02	5.14E-02	5.14E-02	5.14E-02	5.14E-02
INFANT	1.08E-01	1.08E-01	5.04E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01
GOATMILK								
ADULT	1.13E-02	1.13E-02	5.67E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
TEEN	2.09E-02	2.09E-02	1.05E-01	2.09E-02	2.09E-02	2.09E-02	2.09E-02	2.09E-02
CHILD	5.14E-02	5.14E-02	2.57E-01	5.14E-02	5.14E-02	5.14E-02	5.14E-02	5.14E-02
INFANT	1.08E-01	1.08E-01	5.04E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01	1.08E-01

TABLE 21. CARBON-14 DOSES TO MAXIMUM INDIVIDUAL (MREM), JANUARY-DECEMBER 2017 (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	3.97E-02	3.97E-02	1.99E-01	3.97E-02	3.97E-02	3.97E-02	3.97E-02	3.97E-02
TEEN	6.64E-02	6.64E-02	3.32E-01	6.64E-02	6.64E-02	6.64E-02	6.64E-02	6.64E-02
CHILD	1.62E-01	1.62E-01	8.09E-01	1.62E-01	1.62E-01	1.62E-01	1.62E-01	1.62E-01
MEAT								
ADULT	1.59E-02	1.59E-02	7.93E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02	1.59E-02
TEEN	1.34E-02	1.34E-02	6.70E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02
CHILD	2.52E-02	2.52E-02	1.26E-01	2.52E-02	2.52E-02	2.52E-02	2.52E-02	2.52E-02
COW MILK								
ADULT	1.73E-02	1.73E-02	8.65E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02
TEEN	3.19E-02	3.19E-02	1.60E-01	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02
CHILD	7.84E-02	7.84E-02	3.92E-01	7.84E-02	7.84E-02	7.84E-02	7.84E-02	7.84E-02
INFANT	1.64E-01	1.64E-01	7.68E-01	1.64E-01	1.64E-01	1.64E-01	1.64E-01	1.64E-01
GOATMILK								
ADULT	1.73E-02	1.73E-02	8.65E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02	1.73E-02
TEEN	3.19E-02	3.19E-02	1.60E-01	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02
CHILD	7.84E-02	7.84E-02	3.92E-01	7.84E-02	7.84E-02	7.84E-02	7.84E-02	7.84E-02
INFANT	1.64E-01	1.64E-01	7.68E-01	1.64E-01	1.64E-01	1.64E-01	1.64E-01	1.64E-01

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/m^3)
- The fraction of the year that the vegetables are grown (0.5)
- The fraction of the daily feed intake derived from pasture for milk and meat animals (0.5)

Other values used for input to GASPAR are default values from Regulatory Guide 1.109, Rev. 1.

TABLE 22. Values of Parameters Used to Make Dose Estimates Resulting From Liquid Discharges at Cooper Nuclear Station January-December 2017

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 2017, 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.

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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
2017 Annual Report
January 1, 2017 to December 31, 2017***

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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, 2017

Map

Map A-1: Routine Well Water Sample Locations for the Radiological Groundwater Protection Program, Nebraska Public Power District, Cooper Nuclear Station, 2017

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

Table B-1: Exposure Pathway – Water - Ground, 2017

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 2017. During that time period, analyses were performed on 70 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 278 ± 183 pCi/L to $2,640 \pm 334$ 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 2017.

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 2017.

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-90, Sr-91).

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.

Gamma spectroscopy results for each type of sample were grouped as follows:

For groundwater 19 nuclides, 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 and Th-228 were reported.

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 278 to 2,640 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

No 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	2/1/2017	5/2/2017
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	< 3.E+02	< 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

GAMMA SPECTRUM ANALYSIS:

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

No Samples collected at this locaton in 2017

H-3

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

STATION NUMBER 1D

DATE COLLECTED	6/15/2017	11/29/2017
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	< 3.E+02	< 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 1S

DATE COLLECTED	6/15/2017	11/29/2017
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	< 2.E+02	< 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 2

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	11/28/2017
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	< 3.E+02	< 2.E+02	< 2.E+02	< 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 3

DATE COLLECTED	6/13/2017	11/28/2017
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	< 3.E+02	< 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	3/20/2017	6/13/2017	9/28/2017	11/28/2017
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	< 3.E+02	< 2.E+02	< 2.E+02	< 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 4S

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	12/14/2017
GAMMA SPECTRUM ANALYSIS:				
BE-7	< 1.E+01	< 2.E+01	< 2.E+01	< 1.E+01
K-40	< 6.E+00	< 2.E+01	< 3.E+01	< 2.E+01
MN-54	< 7.E-01	< 1.E+00	< 1.E+00	< 7.E-01
CO-58	< 1.E+00	< 2.E+00	< 2.E+00	< 1.E+00
FE-59	< 3.E+00	< 5.E+00	< 4.E+00	< 3.E+00
CO-60	< 7.E-01	< 1.E+00	< 1.E+00	< 9.E-01
ZN-65	< 1.E+00	< 3.E+00	< 2.E+00	< 1.E+00
ZR-95	< 2.E+00	< 3.E+00	< 3.E+00	< 2.E+00
RU-103	< 2.E+00	< 2.E+00	< 2.E+00	< 2.E+00
RU-106	< 6.E+00	< 1.E+01	< 1.E+01	< 7.E+00
I-131	< 2.E+02	< 5.E+01	< 8.E+01	< 1.E+02
CS-134	< 6.E-01	< 1.E+00	< 1.E+00	< 8.E-01
CS-137	< 7.E-01	< 1.E+00	< 1.E+00	< 9.E-01
BA-140	< 8.E+01	< 4.E+01	< 5.E+01	< 6.E+01
LA-140	< 2.E+01	< 1.E+01	< 1.E+01	< 2.E+01
CE-141	< 4.E+00	< 5.E+00	< 5.E+00	< 4.E+00
CE-144	< 5.E+00	< 1.E+01	< 9.E+00	< 5.E+00
RA-226	< 1.E+01	< 4.E+01	< 2.E+01	< 2.E+01
TH-228	< 1.E+00	< 3.E+00	< 3.E+00	< 2.E+00
H-3	3.48E+02 ± 1.82E+02	3.96E+02 ± 1.83E+02	5.88E+02 ± 1.78E+02	5.05E+02 ± 1.91E+02

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

STATION NUMBER 5

DATE COLLECTED	06/13/17	09/28/17
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	< 2.E+02	< 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	3/20/2017	6/13/2017	9/28/2017	12/14/2017
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	< 3.E+02	< 2.E+02	< 3.E+02	< 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 7D

DATE COLLECTED	6/15/2017	11/29/2017
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	< 2.E+02	< 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	6/15/2017	11/29/2017
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	< 2.E+02	< 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	3/20/2017	6/13/2017	9/28/2017	12/14/2017
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	< 3.E+02	< 2.E+02	< 3.E+02	< 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 9

DATE COLLECTED 11/28/2017

GAMMA SPECTRUM ANALYSIS: (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 < 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 10

DATE COLLECTED 9/28/2017

GAMMA SPECTRUM ANALYSIS:

BE-7	< 2.E+01
K-40	< 4.E+01
MN-54	< 2.E+00
CO-58	< 2.E+00
FE-59	< 4.E+00
CO-60	< 1.E+00
ZN-65	< 3.E+00
ZR-95	< 3.E+00
RU-103	< 3.E+00
RU-106	< 1.E+01
I-131	< 5.E+01
CS-134	< 2.E+00
CS-137	< 1.E+00
BA-140	< 4.E+01
LA-140	< 1.E+01
CE-141	< 4.E+00
CE-144	< 8.E+00
RA-226	< 3.E+01
TH-228	< 2.E+00
H-3	5.65E+02 ± 1.76E+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	3/20/2017	6/13/2017	9/28/2017	11/28/2017
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GAMMA SPECTRUM ANALYSIS:

BE-7	< 1.E+01	< 2.E+01	< 2.E+01	< 1.E+01
K-40	< 2.E+01	< 3.E+01	< 4.E+01	< 5.E+00
MN-54	< 9.E-01	< 1.E+00	< 1.E+00	< 7.E-01
CO-58	< 1.E+00	< 2.E+00	< 2.E+00	< 1.E+00
FE-59	< 3.E+00	< 5.E+00	< 4.E+00	< 3.E+00
CO-60	< 8.E-01	< 1.E+00	< 1.E+00	< 7.E-01
ZN-65	< 1.E+00	< 3.E+00	< 3.E+00	< 1.E+00
ZR-95	< 2.E+00	< 3.E+00	< 3.E+00	< 2.E+00
RU-103	< 2.E+00	< 2.E+00	< 3.E+00	< 2.E+00
RU-106	< 8.E+00	< 1.E+01	< 1.E+01	< 6.E+00
I-131	< 2.E+02	< 6.E+01	< 5.E+01	< 4.E+02
CS-134	< 9.E-01	< 1.E+00	< 1.E+00	< 6.E-01
CS-137	< 7.E-01	< 1.E+00	< 1.E+00	< 5.E-01
BA-140	< 9.E+01	< 4.E+01	< 4.E+01	< 1.E+02
LA-140	< 3.E+01	< 1.E+01	< 1.E+01	< 4.E+01
CE-141	< 4.E+00	< 5.E+00	< 5.E+00	< 5.E+00
CE-144	< 6.E+00	< 1.E+01	< 1.E+01	< 5.E+00
RA-226	< 2.E+01	< 3.E+01	< 4.E+01	< 1.E+01
TH-228	< 2.E+00	< 3.E+00	< 3.E+00	< 1.E+00
 H-3	 3.75E+02 ± 1.86E+02	 3.12E+02 ± 1.76E+02	 7.88E+02 ± 1.92E+02	 5.71E+02 ± 1.97E+02

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

STATION NUMBER 11

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	11/28/2017
GAMMA SPECTRUM ANALYSIS:				
BE-7	< 1.E+01	< 2.E+01	< 2.E+01	< 2.E+01
K-40	< 2.E+01	< 4.E+01	< 3.E+01	< 6.E+00
MN-54	< 9.E-01	< 1.E+00	< 2.E+00	< 8.E-01
CO-58	< 1.E+00	< 2.E+00	< 2.E+00	< 1.E+00
FE-59	< 3.E+00	< 5.E+00	< 5.E+00	< 4.E+00
CO-60	< 1.E+00	< 1.E+00	< 2.E+00	< 7.E-01
ZN-65	< 2.E+00	< 3.E+00	< 4.E+00	< 2.E+00
ZR-95	< 2.E+00	< 4.E+00	< 4.E+00	< 3.E+00
RU-103	< 2.E+00	< 3.E+00	< 3.E+00	< 2.E+00
RU-106	< 8.E+00	< 1.E+01	< 2.E+01	< 7.E+00
I-131	< 2.E+02	< 6.E+01	< 5.E+01	< 5.E+02
CS-134	< 7.E-01	< 2.E+00	< 2.E+00	< 8.E-01
CS-137	< 8.E-01	< 1.E+00	< 2.E+00	< 8.E-01
BA-140	< 8.E+01	< 5.E+01	< 5.E+01	< 1.E+02
LA-140	< 1.E+01	< 1.E+01	< 1.E+01	< 3.E+01
CE-141	< 5.E+00	< 5.E+00	< 6.E+00	< 6.E+00
CE-144	< 7.E+00	< 1.E+01	< 1.E+01	< 7.E+00
RA-226	< 2.E+01	< 4.E+01	< 4.E+01	< 2.E+01
TH-228	< 1.E+00	< 2.E+00	< 3.E+00	< 1.E+00
H-3	5.54E+02 ± 1.91E+02	2.99E+02 ± 1.75E+02	3.82E+02 ± 1.61E+02	4.72E+02 ± 1.93E+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	6/15/2017	9/27/2017
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	< 2.E+02	< 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 13

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	12/14/2017
GAMMA SPECTRUM ANALYSIS:	(a)			
BE-7		< 2.E+01	< 2.E+01	< 1.E+01
K-40		< 9.E+00	< 2.E+01	< 6.E+00
MN-54		< 1.E+00	< 2.E+00	< 7.E-01
CO-58		< 2.E+00	< 2.E+00	< 1.E+00
FE-59		< 4.E+00	< 6.E+00	< 4.E+00
CO-60		< 1.E+00	< 2.E+00	< 9.E-01
ZN-65		< 2.E+00	< 3.E+00	< 2.E+00
ZR-95		< 3.E+00	< 4.E+00	< 2.E+00
RU-103		< 2.E+00	< 3.E+00	< 2.E+00
RU-106		< 1.E+01	< 1.E+01	< 7.E+00
I-131		< 5.E+01	< 5.E+01	< 1.E+02
CS-134		< 1.E+00	< 2.E+00	< 8.E-01
CS-137		< 1.E+00	< 2.E+00	< 8.E-01
BA-140		< 4.E+01	< 5.E+01	< 7.E+01
LA-140		< 1.E+01	< 1.E+01	< 2.E+01
CE-141		< 4.E+00	< 6.E+00	< 5.E+00
CE-144		< 9.E+00	< 1.E+01	< 7.E+00
RA-226		< 3.E+01	< 4.E+01	< 2.E+01
TH-228		< 3.E+00	< 3.E+00	< 1.E+00
H-3	< 3.E+02	1.56E+03 ± 2.54E+02	1.04E+03 ± 2.06E+02	2.64E+03 ± 3.34E+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	3/20/2017	6/13/2017	9/28/2017	12/14/2017
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	< 3.E+02	< 3.E+02	< 2.E+02	< 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 15

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	12/14/2017
GAMMA SPECTRUM ANALYSIS:	(a)	(a)		(a)
BE-7			L.T. 2.E+01	
K-40			L.T. 3.E+01	
MN-54			L.T. 1.E+00	
CO-58			L.T. 2.E+00	
FE-59			L.T. 5.E+00	
CO-60			L.T. 2.E+00	
ZN-65			L.T. 3.E+00	
ZR-95			L.T. 4.E+00	
RU-103			L.T. 3.E+00	
RU-106			L.T. 1.E+01	
I-131			L.T. 6.E+01	
CS-134			L.T. 2.E+00	
CS-137			L.T. 2.E+00	
BA-140			L.T. 5.E+01	
LA-140			L.T. 1.E+01	
CE-141			L.T. 6.E+00	
CE-144			L.T. 1.E+01	
RA-226			L.T. 4.E+01	
TH-228			L.T. 3.E+00	
H-3	< 3.E+02	< 2.E+02	2.78E+02 ± 1.83E+02	< 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 16

DATE COLLECTED	3/20/2017	6/13/2017	9/28/2017	12/14/2017
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	< 3.E+02	< 2.E+02	< 2.E+02	< 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 17

DATE COLLECTED	3/20/2017	6/13/2017	9/29/2017	12/14/2017
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	< 3.E+02	< 3.E+02	< 2.E+02	< 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 18

DATE COLLECTED	3/20/2017	6/13/2017	9/29/2017	12/14/2017
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	< 3.E+02	< 2.E+02	< 2.E+02	< 3.E+02

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