

DUQUESNE LIGHT COMPANY  
Beaver Valley Power Station - Units 1 & 2

**Semi-Annual  
Radioactive Effluent Release Report**  
2nd Half - 1994

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February 22, 1995  
NPD3SVP:7670

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**Subject: Beaver Valley Power Station, Unit No. 1 and No. 2**  
**BV-1 Docket No. 50-334, License No. DPR-66**  
**BV-2 Docket No. 50-412, License No. NPF-73**  
**Semi-Annual Radioactive Effluent Release Report For The Second Six Months**  
**Of 1994**

- Ref: 1) USNRC RG-1.21 Revision 1, June, 1974, Measuring, Evaluating, And Reporting Radioactivity In Solid Wastes And Releases Of Radioactive Materials In Liquid And Gaseous Effluents From Light-Water-Cooled Nuclear Power Plants
- 2) Beaver Valley Power Station Unit 1 And Unit 2 Technical Specifications 6.9.1.12 And 6.9.1.13, Semi-Annual Radioactive Effluent Release Report

Gentlemen:

The Semi-Annual Radioactive Effluent Release Report is hereby submitted in accordance with the semi-annual requirements of Reference (2). However, to permit ease of review and adequate trending of release information, the data in this report covers all of calendar year 1994. This report also contains the information required by Reference (1).

This report is considered a single submittal for the two unit site. This report combines those sections that are common to both units at the site. However, where the two units have separate radwaste systems, the report does specify the releases of radioactive material from each unit. In reference to this, Unit 1 and Unit 2 have shared radwaste systems for gaseous elevated releases and for liquid releases. The report format is summarized on the index.



The Nuclear Professionals

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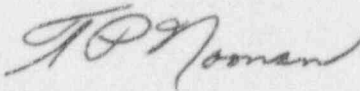
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There were no abnormal liquid or gaseous releases during the second six months of 1994.

If there are any questions concerning this report, please contact Mr. A. T. Lonnett at 412-393-5860.

Sincerely,

  
for J. E. Cross  
Sr. Vice President,  
Chief Nuclear Officer

ATL/laf

Enclosure

cc: United States Nuclear Regulatory Commission  
Regional Administrator, Region I  
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Central File

DUQUESNE LIGHT COMPANY  
Beaver Valley Power Station - Units 1 & 2

**Semi-Annual Radioactive Effluent Release Report**

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Supplemental Information Page

FACILITY: B.V.P.S. Units 1 and 2	LICENSEE: Duquesne Light Company
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<b>1. Regulatory Limits</b>	
a. Fission and activation gases:	Technical Specifications, Article 3/4.11
b. Iodines:	Technical Specifications, Article 3/4.11
c. Particulates, half-lives > 8 days:	Technical Specifications, Article 3/4.11
d. Liquid effluents:	Technical Specifications, Article 3/4.11

<b>2. Maximum Permissible Concentrations Used In Determining Allowable Release Rates Or Concentrations</b>	
a. Fission and activation gases:	10 CFR 20.1 - 20.601, Appendix B, Table II
b. Iodines:	10 CFR 20.1 - 20.601, Appendix B, Table II
c. Particulates, half-lives > 8 days:	10 CFR 20.1 - 20.601, Appendix B, Table II
d. Liquid effluents:	10 CFR 20.1 - 20.601, Appendix B, Table II

<b>3. Average Energy (Not Applicable To The BVPS ODCM)</b>
------------------------------------------------------------

<b>4. Measurements and Approximations of Total Radioactivity</b>	
The methods used to measure or approximate the total radioactivity in effluents, and the methods used to determine radionuclide composition are as follows:	
a. Fission and activation gases:	Ge Gamma Spectrometry, Liquid Scintillation Counter
b. Iodines:	Ge Gamma Spectrometry
c. Particulates, half-lives > 8 days:	Ge Gamma Spectrometry, Proportional Counter
d. Liquid effluents:	Ge Gamma Spectrometry, Proportional Counter, Liquid Scintillation

<b>5. Batch &amp; Abnormal Release Information</b>		Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>a. Liquid Batch Releases</b>							
1. Number of batch releases			26	38	30	28	122
2. Total time period for batch releases	minutes		8229	12436	12190	7351	40206
3. Maximum time period for a batch release	minutes		1220	997	2842	943	2842
4. Average time period for batch releases	minutes		317	327	406	263	330
5. Minimum time period for a batch release	minutes		59	67	60	2	2
6. Average river flow during release periods	cuft/sec		90300	58800	23600	32067	51192
<b>b. Gaseous Batch Releases</b>							
1. Number of batch releases			3	11	9	6	29
2. Total time period for batch releases	minutes		2052	13683	8223	9432	33390
3. Maximum time period for a batch release	minutes		960	6565	4304	4745	6565
4. Average time period for batch releases	minutes		684	1244	914	1572	1151
5. Minimum time period for a batch release	minutes		292	1	5	1	1
<b>c. Abnormal Liquid Releases</b>							
1. Number of releases			NONE	1	NONE	NONE	1
2. Total activity released	Curies		N/A	1.44E+00	N/A	N/A	1.44E+00
<b>d. Abnormal Gaseous Releases</b>							
1. Number of releases			NONE	NONE	NONE	NONE	NONE
2. Total activity released	Curies		N/A	N/A	N/A	N/A	0.00E+00

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Table 1A

aseous Effluents - Summation Of All Releases

	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year	Total Error, %
<b>A. Fission &amp; Activation Gases</b>							
1. Total release	CI	1.44E+01	2.02E+01	1.19E+02	5.23E+01	2.06E+02	2.65E+01
2. Average release rate for period	uCi/sec	1.83E+00	2.56E+00	1.51E+01	6.64E+00	6.52E+00	
3. Percent of applicable limit	%	N/A	N/A	N/A	N/A	N/A	
<b>B. Iodines</b>							
1. Total iodine - 131	CI	1.73E-04	1.35E-04	5.52E-05	2.88E-05	3.90E-04	2.83E+01
2. Average release rate for period	uCi/sec	2.20E-05	1.71E-05	7.00E-06	3.40E-06	1.24E-05	
3. Percent of applicable limit	%	N/A	N/A	N/A	N/A	N/A	
<b>C. Particulates</b>							
1. Particulates with half-life > 8 days	CI	5.69E-06	1.48E-04	8.33E-04	2.35E-04	1.22E-03	3.00E+01
2. Average release rate for period	uCi/sec	7.22E-07	1.85E-05	1.06E-04	2.98E-05	3.87E-05	
3. Percent of applicable limit	%	N/A	N/A	N/A	N/A	N/A	
4. Gross alpha radioactivity	CI	8.52E-07	8.15E-07	9.78E-07	8.41E-07	3.28E-06	
<b>D. Tritium</b>							
1. Total release	CI	1.01E+02	9.83E+01	7.91E+01	5.72E+01	3.36E+02	3.29E+01
2. Average release rate for period	uCi/sec	1.28E+01	1.25E+01	1.00E+01	7.26E+00	1.08E+01	
3. Percent of applicable limit	%	N/A	N/A	N/A	N/A	N/A	

N/A = Not Applicable

The amount of time (in seconds) used to calculate the release rates specified in A.2, B.2, C.2, and D.2 is the average amount of seconds per calendar quarter (7.88E+06 seconds).

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Table 1B-EB

Gaseous Effluents - Elevated Batch Releases

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-85	CI	2.23E-02	5.86E-01	4.26E-01	4.28E-01	1.46E+00
krypton-85m	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-87	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-88	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-131m	CI	LLD	5.96E-02	4.24E-02	2.58E-03	1.04E-01
xenon-133	CI	LLD	6.96E-01	3.74E-01	7.13E-03	1.08E+00
xenon-133m	CI	LLD	1.58E-04	LLD	LLD	1.58E-04
xenon-135	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-135m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-138	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	2.23E-02	1.34E+00	8.42E-01	4.38E-01	2.64E+00
<b>2. Iodines</b>						
iodine-131	CI	LLD	LLD	LLD	LLD	0.00E+00
iodine-133	CI	LLD	LLD	LLD	LLD	0.00E+00
iodine-135	CI	LLD	LLD	LLD	LLD	0.00E+00
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>3. Particulates</b>						
chromium-51	CI	LLD	LLD	LLD	LLD	0.00E+00
manganese-54	CI	LLD	LLD	LLD	LLD	0.00E+00
iron-59	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-57	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-58	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-60	CI	LLD	LLD	LLD	LLD	0.00E+00
zinc-65	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	CI	LLD	LLD	LLD	LLD	0.00E+00
molybdenum-99	CI	LLD	LLD	LLD	LLD	0.00E+00
cesium-134	CI	LLD	LLD	LLD	LLD	0.00E+00
cesium-137	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-141	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-144	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).

NR = No Batch Releases this period



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Table 1B-EC

Gaseous Effluents - Elevated Continuous Releases

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	ci	LLD	LLD	LLD	LLD	0.00E+00
krypton-85	ci	LLD	LLD	LLD	LLD	0.00E+00
krypton-85m	ci	LLD	LLD	3.51E-02	LLD	3.51E-02
krypton-87	ci	LLD	LLD	LLD	LLD	0.00E+00
krypton-88	ci	LLD	LLD	LLD	LLD	0.00E+00
xenon-131m	ci	LLD	LLD	LLD	LLD	0.00E+00
xenon-133	ci	1.40E+00	1.77E+00	5.51E+00	1.57E+00	1.03E+01
xenon-133m	ci	2.49E-02	LLD	LLD	LLD	2.49E-02
xenon-135	ci	2.25E-02	4.47E-03	6.70E-01	4.31E-02	7.40E-01
xenon-135m	ci	LLD	LLD	LLD	LLD	0.00E+00
xenon-138	ci	LLD	LLD	LLD	LLD	0.00E+00
unidentified	ci	NONE	NONE	NONE	NONE	NONE
Total for period	ci	1.45E+00	1.77E+00	6.22E+00	1.81E+00	1.11E+01
<b>2. Iodines</b>						
iodine-131	ci	3.21E-06	1.01E-06	9.76E-06	1.52E-06	2.46E-06
iodine-133	ci	LLD	LLD	LLD	LLD	0.00E+00
iodine-135	ci	LLD	LLD	LLD	LLD	0.00E+00
Total for period	ci	3.21E-06	1.01E-06	9.76E-06	1.52E-06	2.46E-06
<b>3. Particulates</b>						
chromium-51	ci	LLD	LLD	LLD	LLD	0.00E+00
manganese-54	ci	LLD	LLD	LLD	LLD	0.00E+00
iron-59	ci	LLD	LLD	LLD	LLD	0.00E+00
cobalt-57	ci	LLD	LLD	LLD	LLD	0.00E+00
cobalt-58	ci	LLD	LLD	LLD	LLD	0.00E+00
cobalt-60	ci	LLD	LLD	LLD	LLD	0.00E+00
zinc-65	ci	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	ci	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	ci	LLD	LLD	LLD	LLD	0.00E+00
molybdenum-99	ci	LLD	LLD	LLD	LLD	0.00E+00
cesium-134	ci	LLD	LLD	LLD	LLD	0.00E+00
cesium-137	ci	LLD	LLD	LLD	LLD	0.00E+00
cerium-141	ci	LLD	LLD	LLD	LLD	0.00E+00
cerium-144	ci	LLD	LLD	LLD	LLD	0.00E+00
unidentified	ci	NONE	NONE	NONE	NONE	NONE
Total for period	ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).



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Table 1C-GB1

Gaseous Effluents - Ground Level Batch Releases (Unit 1)

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-85	CI	LLD	LLD	2.98E-02	LLD	2.98E-02
krypton-85m	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-87	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-88	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-131m	CI	LLD	LLD	8.24E-04	LLD	8.24E-04
xenon-133	CI	2.02E+00	3.15E+00	1.52E+00	LLD	6.69E+00
xenon-133m	CI	5.36E-02	LLD	4.58E+00	LLD	4.61E+00
xenon-135	CI	4.43E-02	1.18E-02	LLD	LLD	5.61E-02
xenon-135m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-138	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	2.12E+00	3.16E+00	6.11E+00	0.00E+00	1.14E+01
<b>2. Iodines</b>						
iodine-131	CI	4.58E-06	1.15E-05	LLD	8.31E-09	5.73E-05
iodine-133	CI	2.48E-05	LLD	LLD	2.71E-08	2.48E-05
iodine-135	CI	LLD	LLD	LLD	LLD	0.00E+00
Total for period	CI	7.04E-05	1.15E-05	0.00E+00	3.54E-08	8.19E-05
<b>3. Particulates</b>						
chromium-51	CI	LLD	LLD	LLD	LLD	0.00E+00
manganese-54	CI	LLD	LLD	LLD	LLD	0.00E+00
iron-59	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-57	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-58	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-60	CI	LLD	LLD	LLD	LLD	0.00E+00
zinc-65	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	CI	LLD	LLD	LLD	LLD	0.00E+00
molybdenum-99	CI	LLD	LLD	LLD	LLD	0.00E+00
cesium-134	CI	LLD	LLD	LLD	LLD	0.00E+00
cesium-137	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-141	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-144	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).

NR = No Batch Releases this period

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Table 1C-GC1

Gaseous Effluents - Ground Level Continuous Releases (Unit 1)

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-85	CI	1.00E+00	1.04E+00	1.10E+00	1.32E+00	4.46E+00
krypton-85m	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-87	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-88	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-131m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-133	CI	7.84E+00	1.12E+01	1.03E+02	4.04E+01	1.82E+02
xenon-133m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-135	CI	1.45E+00	7.50E-01	9.01E-01	6.61E+00	9.71E+00
xenon-135m	CI	LLD	LLD	LLD	1.80E+00	1.80E+00
xenon-138	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	1.03E+01	1.30E+01	1.05E+02	4.99E+01	1.78E+02

## 2. Iodines

iodine-131	CI	1.24E-04	1.13E-04	4.54E-05	2.53E-05	3.08E-04
iodine-133	CI	LLD	LLD	LLD	LLD	0.00E+00
iodine-135	CI	LLD	LLD	LLD	LLD	0.00E+00
Total for period	CI	1.24E-04	1.13E-04	4.54E-05	2.53E-05	3.08E-04

## 3. Particulates

chromium-51	CI	LLD	LLD	LLD	LLD	0.00E+00
manganese-54	CI	LLD	LLD	LLD	LLD	0.00E+00
iron-59	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-57	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-58	CI	LLD	LLD	LLD	3.21E-06	3.21E-06
cobalt-60	CI	LLD	LLD	LLD	LLD	0.00E+00
zinc-65	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	CI	LLD	LLD	LLD	LLD	0.00E+00
technetium-99m	CI	LLD	LLD	1.26E-05	LLD	1.26E-05
cesium-134	CI	LLD	8.54E-05	3.99E-04	1.08E-04	5.92E-04
cesium-137	CI	LLD	8.02E-05	4.21E-04	1.24E-04	6.05E-04
cerium-141	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-144	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	0.00E+00	1.46E-04	8.33E-04	2.35E-04	1.21E-03

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).



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Table 1C-GB2

Gaseous Effluents - Ground Level Batch Releases (Unit 2)

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	CI	NR	LLD	NR	NR	0.00E+00
krypton-85	CI	NR	LLD	NR	NR	0.00E+00
krypton-85m	CI	NR	LLD	NR	NR	0.00E+00
krypton-87	CI	NR	LLD	NR	NR	0.00E+00
krypton-88	CI	NR	LLD	NR	NR	0.00E+00
xenon-131m	CI	NR	LLD	NR	NR	0.00E+00
xenon-133	CI	NR	6.05E-02	NR	NR	6.05E-02
xenon-133m	CI	NR	LLD	NR	NR	0.00E+00
xenon-135	CI	NR	LLD	NR	NR	0.00E+00
xenon-135m	CI	NR	LLD	NR	NR	0.00E+00
xenon-136	CI	NR	LLD	NR	NR	0.00E+00
unidentified	CI	NR	NONE	NR	NR	NONE
Total for period	CI	0.00E+00	6.05E-02	0.00E+00	0.00E+00	6.05E-02
<b>2. Iodines</b>						
iodine-131	CI	NR	LLD	NR	NR	0.00E+00
iodine-133	CI	NR	LLD	NR	NR	0.00E+00
iodine-135	CI	NR	LLD	NR	NR	0.00E+00
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>3. Particulates</b>						
chromium-51	CI	NR	LLD	NR	NR	0.00E+00
manganese-54	CI	NR	LLD	NR	NR	0.00E+00
iron-59	CI	NR	LLD	NR	NR	0.00E+00
cobalt-67	CI	NR	LLD	NR	NR	0.00E+00
cobalt-58	CI	NR	LLD	NR	NR	0.00E+00
cobalt-60	CI	NR	LLD	NR	NR	0.00E+00
zinc-65	CI	NR	LLD	NR	NR	0.00E+00
strontium-89	CI	NR	LLD	NR	NR	0.00E+00
strontium-90	CI	NR	LLD	NR	NR	0.00E+00
molybdenum-99	CI	NR	LLD	NR	NR	0.00E+00
cesium-134	CI	NR	LLD	NR	NR	0.00E+00
cesium-137	CI	NR	LLD	NR	NR	0.00E+00
cerium-141	CI	NR	LLD	NR	NR	0.00E+00
cerium-144	CI	NR	LLD	NR	NR	0.00E+00
unidentified	CI	NR	NONE	NR	NR	NONE
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).

NR = No Batch Releases this period

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Table 1C-GC2

Gaseous Effluents - Ground Level Continuous Releases (Unit 2)

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission gases</b>						
argon-41	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-85	CI	5.38E-01	3.75E-01	5.03E-01	3.23E-01	1.74E+00
krypton-85m	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-87	CI	LLD	LLD	LLD	LLD	0.00E+00
krypton-88	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-131m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-133	CI	LLD	4.82E-01	LLD	LLD	4.82E-01
xenon-133m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-135	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-135m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-138	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	5.38E-01	8.37E-01	5.03E-01	3.23E-01	2.20E+00
<b>2. Iodines</b>						
iodine-131	CI	LLD	LLD	LLD	LLD	0.00E+00
iodine-133	CI	LLD	LLD	LLD	LLD	0.00E+00
iodine-135	CI	LLD	LLD	LLD	LLD	0.00E+00
Total for period	CI	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>3. Particulates</b>						
chromium-51	CI	LLD	LLD	LLD	LLD	0.00E+00
manganese-54	CI	LLD	LLD	LLD	LLD	0.00E+00
iron-59	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-57	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-58	CI	LLD	LLD	LLD	LLD	0.00E+00
cobalt-60	CI	LLD	LLD	LLD	LLD	0.00E+00
zinc-65	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	CI	LLD	LLD	LLD	LLD	0.00E+00
technetium-99m	CI	1.47E-06	LLD	LLD	LLD	1.47E-06
cesium-134	CI	LLD	LLD	LLD	LLD	0.00E+00
cesium-137	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-141	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-144	CI	4.22E-06	LLD	LLD	LLD	4.22E-06
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	5.69E-06	0.00E+00	0.00E+00	0.00E+00	5.69E-06

LLD = Below the Lower Limit of Detectability, in uCi/cc (Table 4).



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Table 2A

Liquid Effluents - Summation Of All Releases

	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year	Total Error, %
<b>A. Fission &amp; activation products</b>							
1. Total release (excl. H-3, gas & alpha)	CI	6.10E-02	8.32E-02	2.93E-02	3.22E-02	2.06E-01	2.60E+01
2. Average diluted concentration	uCi/ml	1.13E-07	7.78E-08	2.14E-08	5.03E-08	5.69E-08	
3. Percent of applicable limit	%	2.44E+00	3.33E+00	1.17E+00	1.29E+00	2.06E+00	
<b>B. Tritium</b>							
1. Total release	CI	5.81E+01	1.10E+02	1.05E+02	9.35E+01	3.67E+02	2.50E+01
2. Average diluted concentration	uCi/ml	1.08E-04	1.03E-04	7.70E-05	1.46E-04	1.01E-04	
3. Percent of applicable limit	%	3.59E+00	3.43E+00	2.57E+00	4.86E+00	3.38E+00	
<b>C. Dissolved and entrained gases</b>							
1. Total release	CI	2.58E-03	1.99E-03	9.32E-03	4.60E-03	1.85E-02	2.70E+01
2. Average diluted concentration	uCi/ml	4.79E-09	1.86E-09	6.83E-09	7.17E-09	5.12E-09	
3. Percent of applicable limit	%	2.39E-03	9.32E-04	3.42E-03	3.59E-03	2.56E-03	
<b>D. Gross alpha radioactivity (total release)</b>							
	CI	LLD	LLD	LLD	LLD	LLD	2.89E+01
<b>E. Volume of waste released (prior to dilution)</b>							
	liters	1.52E+06	1.75E+06	1.51E+06	1.26E+06	6.04E+06	1.12E+01
<b>F. Volume of dilution water used</b>							
	liters	5.37E+08	1.07E+09	1.36E+09	6.40E+08	3.61E+09	2.29E+01

3 is based on a PA-DER limit of 10 Ci/yr

LLD = Below the Lower Limit of Detectability, in uCi/ml (Table 4)

3 is based on a limit of 3.00E-3 uCi/ml

C.3 is based on a limit of 2.00E-04 uCi/ml

The values listed at F. are the volumes during actual liquid waste discharge periods. The total dilution volume for a continuous calendar quarter is approximately 1E+10 liters for BVPS-1 & 2 (ie; ~ 22,800 gpm is the total dilution flowrate from the site)

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Table 2B-B

Liquid Effluents - Batch Releases

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission and activation products</b>						
beryllium-7	CI	LLD	LLD	LLD	LLD	0.00E+00
sodium-24	CI	7.46E-06	4.75E-05	5.04E-05	2.96E-06	1.05E-04
chromium-51	CI	2.35E-04	2.10E-04	1.32E-03	LLD	1.77E-03
manganese-54	CI	3.24E-04	1.04E-03	1.82E-04	4.07E-04	1.95E-03
iron-55	CI	1.70E-02	4.72E-02	1.36E-02	2.02E-02	9.80E-02
iron-59	CI	6.70E-04	1.71E-04	LLD	LLD	8.40E-04
cobalt-57	CI	5.88E-05	4.85E-05	LLD	1.12E-05	1.18E-04
cobalt-58	CI	1.05E-02	5.86E-03	1.88E-03	1.73E-03	2.00E-02
cobalt-60	CI	6.62E-03	9.02E-03	3.77E-03	5.68E-03	2.51E-02
zinc-65	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-89	CI	LLD	LLD	LLD	LLD	0.00E+00
strontium-90	CI	LLD	LLD	LLD	LLD	0.00E+00
zirconium/niobium-95	CI	7.78E-04	7.79E-04	1.12E-04	8.97E-05	1.76E-03
niobium-97	CI	5.35E-03	6.29E-03	5.80E-04	7.99E-04	1.30E-02
molybdenum-99	CI	LLD	4.18E-05	2.03E-04	LLD	2.45E-04
technetium-99m	CI	1.21E-04	2.08E-04	2.78E-04	7.99E-05	6.87E-04
ruthenium-103	CI	LLD	LLD	LLD	LLD	0.00E+00
silver-110m	CI	6.90E-03	6.37E-03	4.63E-04	6.51E-04	1.44E-02
antimony-124	CI	2.13E-03	1.92E-03	2.22E-03	LLD	6.27E-03
antimony-125	CI	9.20E-03	1.83E-03	2.11E-03	4.83E-04	1.36E-02
iodine-131	CI	4.51E-04	5.51E-04	6.59E-04	7.09E-04	2.37E-03
iodine-133	CI	2.90E-04	6.71E-04	4.18E-04	5.93E-04	1.97E-03
cesium-134	CI	3.45E-05	4.15E-04	5.35E-04	1.59E-04	1.14E-03
cesium-137	CI	3.16E-04	5.48E-04	8.79E-04	6.34E-04	2.38E-03
barium/lanthanum-140	CI	LLD	LLD	LLD	LLD	0.00E+00
cerium-141	CI	3.50E-06	LLD	LLD	LLD	3.50E-06
cerium-144	CI	LLD	LLD	LLD	LLD	0.00E+00
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	6.10E-02	8.32E-02	2.93E-02	3.22E-02	2.06E-01

## 2. Dissolved and entrained gases

argon-41	CI	3.09E-05	LLD	LLD	LLD	3.09E-05
krypton-85	CI	2.18E-03	LLD	1.47E-03	3.85E-03	7.50E-03
xenon-131m	CI	LLD	LLD	2.29E-04	LLD	2.29E-04
xenon-133	CI	3.40E-04	1.91E-03	7.58E-03	7.31E-04	1.06E-02
xenon-133m	CI	LLD	LLD	LLD	LLD	0.00E+00
xenon-135	CI	2.56E-05	8.36E-05	3.91E-05	1.49E-05	1.63E-04
unidentified	CI	NONE	NONE	NONE	NONE	NONE
Total for period	CI	2.58E-03	1.99E-03	9.32E-03	4.60E-03	1.85E-02

LLD = Below the Lower Limit of Detectability, in uCi/ml (Table 4)

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Table 2B-C

Liquid Effluents - Continuous Releases

Nuclides released	Unit	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Calendar Year
<b>1. Fission and activation products</b>						
beryllium-7	Cl	N/A	N/A	N/A	N/A	N/A
sodium-24	Cl	N/A	N/A	N/A	N/A	N/A
chromium-51	Cl	N/A	N/A	N/A	N/A	N/A
manganese-54	Cl	N/A	N/A	N/A	N/A	N/A
iron-55	Cl	N/A	N/A	N/A	N/A	N/A
iron-59	Cl	N/A	N/A	N/A	N/A	N/A
cobalt-57	Cl	N/A	N/A	N/A	N/A	N/A
cobalt-58	Cl	N/A	N/A	N/A	N/A	N/A
cobalt-60	Cl	N/A	N/A	N/A	N/A	N/A
zinc-65	Cl	N/A	N/A	N/A	N/A	N/A
strontium-89	Cl	N/A	N/A	N/A	N/A	N/A
strontium-90	Cl	N/A	N/A	N/A	N/A	N/A
zirconium/niobium-95	Cl	N/A	N/A	N/A	N/A	N/A
niobium-97	Cl	N/A	N/A	N/A	N/A	N/A
molybdenum-99	Cl	N/A	N/A	N/A	N/A	N/A
technetium-99m	Cl	N/A	N/A	N/A	N/A	N/A
ruthenium-103	Cl	N/A	N/A	N/A	N/A	N/A
silver-110m	Cl	N/A	N/A	N/A	N/A	N/A
antimony-124	Cl	N/A	N/A	N/A	N/A	N/A
antimony-125	Cl	N/A	N/A	N/A	N/A	N/A
iodine-131	Cl	N/A	N/A	N/A	N/A	N/A
iodine-133	Cl	N/A	N/A	N/A	N/A	N/A
cesium-134	Cl	N/A	N/A	N/A	N/A	N/A
cesium-137	Cl	N/A	N/A	N/A	N/A	N/A
barium/lanthanum-140	Cl	N/A	N/A	N/A	N/A	N/A
cerium-141	Cl	N/A	N/A	N/A	N/A	N/A
cerium-144	Cl	N/A	N/A	N/A	N/A	N/A
unidentified	Cl	N/A	N/A	N/A	N/A	N/A
Total for period	Cl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<b>2. Dissolved and entrained gases</b>						
argon-41	Cl	N/A	N/A	N/A	N/A	N/A
xenon-133	Cl	N/A	N/A	N/A	N/A	N/A
xenon-133m	Cl	N/A	N/A	N/A	N/A	N/A
xenon-135	Cl	N/A	N/A	N/A	N/A	N/A
unidentified	Cl	N/A	N/A	N/A	N/A	N/A
Total for period	Cl	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

LD = Below the Lower Limit of Detectability, in uCi/ml (Table 4)

N/A = Not Applicable (liquids not discharged in a continuous mode during this period)



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Table 3A

Solid Waste And Irradiated Fuel Shipments (Part 1 of 3)

A. Solid Waste Shipped Offsite For Burial Or Disposal (Not irradiated fuel)				
1. Type of Waste (Spent resins, Filter Sludges, Evaporator Bottoms, Oil)	1st Half	2nd Half	Calendar Year	Estimated Total Error
a. Volume Shipped	5.62E+01 m3	1.47E+01 m3	7.09E+01 m3	0.00E+00 % (1)
b. Volume Buried	6.96E+01 m3	0.00E+00 m3	6.96E+01 m3	0.00E+00 % (1)
c. Total Activity	2.27E+02 Ci	4.40E-02 Ci	2.27E+02 Ci	3.00E+01 %
2. Estimate of Major Nuclide Composition by Type of Waste On This Table (2)	Percent (%)	Percent (%)	Percent (%)	
H-3	0.41 %	98.90 %	49.65 %	
C-14	0.49 %	0.96 %	0.68 %	
Mn-54	0.07 %	0.00 %	0.07 %	
Fe-55	44.50 %	0.00 %	22.25 %	
Co-57	0.10 %	0.00 %	0.10 %	
Co-58	3.24 %	0.00 %	1.62 %	
Co-60	21.00 %	0.20 %	10.60 %	
Ni-59	0.33 %	0.00 %	0.33 %	
Ni-63	27.70 %	0.00 %	27.70 %	
Nb-94	0.03 %	0.00 %	0.03 %	
Nb-95	0.01 %	0.00 %	0.01 %	
Ag-110m	0.01 %	0.00 %	0.01 %	
Sb-124	0.02 %	0.00 %	0.02 %	
Sb-125	0.06 %	0.00 %	0.06 %	
Cs-134	0.62 %	0.00 %	0.31 %	
Cs-137	1.25 %	0.01 %	0.63 %	
Pu-241	0.03 %	0.00 %	0.03 %	
3. Number of Shipments	8	2	10	
a. Type of Container Used	LSA	8	2	10
	Type A	0	0	0
	Type B	0	0	0
	Large Quantity	0	0	0
b. Solidification Agent Used	Cement	0	0	0
	Urea Formaldehyde	0	0	0
	None	8	2	10
c. Mode of Transport	Truck	8	2	10
	Rail	0	0	0
d. Final Destination	Barnwell, SC	6	0	6
	Oak Ridge, TN	2	2	4
e. Waste Class per 10 CFR Part 61	Class A	6	2	8
	Class B	0	0	0
	Class C	2	0	2
	> Class C	0	0	0

(1) Since container volumes are provided by the burial site, a calculational error of zero is assumed.

(2) Percent values for any nuclide that are <0.01 % are not shown on this table. Data is available upon request.



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Table 3B

Solid Waste And Irradiated Fuel Shipments (Part 2 of 3)

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## A. Solid Waste Shipped Offsite For Burial Or Disposal (Not irradiated fuel)

1. Type of Waste (Dry Compressible Waste, Contaminated Equipment, etc.)	1st Half	2nd Half	Calendar Year	Estimated Total Error
a. Volume Shipped	1.47E+02 m3	1.17E+02 m3	2.64E+02 m3	0.00E+00 % (1)
b. Volume Buried	1.71E+01 m3	0.00E+00 m3	1.71E+01 m3	0.00E+00 % (1)
c. Total Activity	4.37E-01 Ci	4.65E-01 Ci	9.02E-01 Ci	3.00E+01 %
2. Estimate of Major Nuclide Composition by Type of Waste On This Table (2)	Percent (%)	Percent (%)	Percent (%)	
H-3	1.01 %	0.64 %	0.82 %	
C-14	0.16 %	0.16 %	0.16 %	
P-32	0.08 %	0.03 %	0.05 %	
Cr-51	0.06 %	0.82 %	0.44 %	
Mn-54	0.61 %	0.37 %	0.49 %	
Fe-55	18.00 %	38.70 %	28.35 %	
Fe-59	0.01 %	0.00 %	0.01 %	
Co-57	0.16 %	0.07 %	0.12 %	
Co-58	28.90 %	9.41 %	19.16 %	
Co-60	13.70 %	10.50 %	12.10 %	
Ni-59	2.12 %	0.94 %	1.53 %	
Ni-63	9.71 %	11.20 %	10.46 %	
Nb-94	0.00 %	0.01 %	0.01 %	
Nb-95	0.87 %	0.59 %	0.73 %	
Zr-95	0.38 %	0.33 %	0.36 %	
Tc-99	0.17 %	0.13 %	0.15 %	
Ag-110m	0.67 %	0.12 %	0.39 %	
Sn-113	0.00 %	0.03 %	0.03 %	
Sb-124	0.00 %	0.12 %	0.12 %	
Sb-125	1.40 %	0.45 %	0.92 %	
I-129	0.88 %	0.67 %	0.77 %	
I-131	0.05 %	0.00 %	0.02 %	
Cs-134	3.51 %	9.79 %	6.65 %	
Cs-137	17.10 %	14.70 %	15.90 %	
Pu-241	0.37 %	0.16 %	0.26 %	
3. Number of Shipments	3	5	8	
a. Type of Container Used	LSA	3	5	8
	Type A	0	0	0
b. Solidification Agent Used	Cement	0	0	0
	None	3	5	8
c. Mode of Transport	Truck	3	5	8
	Rail	0	0	0
d. Final Destination	Oak Ridge, TN	3	5	8
	Wampum, PA	0	0	0
e. Waste Class per 10 CFR Part 61	Class A	3	5	8
	Class B	0	0	0
	Class C	0	0	0
	> Class C	0	0	0

(1) Since container volumes are provided by the burial site, a calculational error of zero is assumed.

(2) Percent values for any nuclide that are <0.01 % are not shown on this table. Data is available upon request.

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Table 3C

Solid Waste And Irradiated Fuel Shipments (Part 1 of 3)

A. Solid Waste Shipped Offsite For Burial Or Disposal (Not irradiated fuel)					
1. Type of Waste (Irradiated components, Control Rods, etc)		1st Half	2nd Half	Calendar Year	Estimated Total Error
a. Volume Shipped		0.00E+00 m3	0.00E+00 m3	0.00E+00 m3	0.00E+00 % (1)
b. Volume Buried		0.00E+00 m3	0.00E+00 m3	0.00E+00 m3	0.00E+00 % (1)
c. Total Activity		0.00E+00 Ci	0.00E+00 Ci	0.00E+00 Ci	3.00E+01 %
2. Estimate of Major Nuclide Composition by Type of Waste On This Table (2)		Percent (%)	Percent (%)	Percent (%)	
H-3		0.00 %	0.00 %	0.00 %	
3. Number of Shipments		0	0	0	
a. Type of Container Used	LSA	0	0	0	
	Type A	0	0	0	
	Type B	0	0	0	
	Large Quantity	0	0	0	
b. Solidification Agent Used	Cement	0	0	0	
	Urea Formaldehyde	0	0	0	
	None	0	0	0	
c. Mode of Transport	Truck	0	0	0	
	Rail	0	0	0	
d. Final Destination	Barnwell, SC	0	0	0	
	Other	0	0	0	
e. Waste Class per 10 CFR Part 61	Class A	0	0	0	
	Class B	0	0	0	
	Class C	0	0	0	
	> Class C	0	0	0	
B. No Irradiated Fuel Shipments					

(1) Since container volumes are provided by the burial site, a calculational error of zero is assumed.

(2) Percent values for any nuclide that are <0.01 % are not shown on this table. Data is available upon request.

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Table 4

Lower Limits Of Detectability (LLD)

Nuclide	RWDA-G 1000 cc Gas Grab Sample		RWDA-L 1000 ml Liquid Grab Sample		Filter Paper / Charcoal Continuous Effluent Sample	
	(4) Calculated LLD (uCi/cc)	RETS Required LLD (uCi/cc)	(4) Calculated LLD (uCi/ml)	RETS Required LLD (uCi/ml)	(4) Calculated (2) LLD (uCi/cc)	RETS Required LLD (uCi/cc)
H-3	1.00E-06	1E-06	1.00E-06	1E-06		
Na-24	1.17E-07	1E-04	2.45E-08	5E-07	1.33E-13	1E-11
Ar-41	1.29E-07	1E-04	2.72E-08	5E-07		
Cr-51	5.66E-07	1E-04	1.18E-07	5E-07	7.23E-13	1E-11
Mn-54	1.28E-07	1E-04	2.81E-08	5E-07	8.49E-14	1E-11
Fe-55			(1) 1.00E-06	1E-06		
Fe-59	1.71E-07	1E-04	3.59E-08	5E-07	3.34E-13	1E-11
Co-57	6.17E-08	1E-04	1.40E-08	5E-07	4.88E-14	1E-11
Co-58	6.19E-08	1E-04	1.28E-08	5E-07	8.31E-14	1E-11
Co-60	1.67E-07	1E-04	3.51E-08	5E-07	1.16E-13	1E-11
Zn-65	1.39E-07	1E-04	2.92E-08	5E-07	1.92E-13	1E-11
Kr-85	(3) 2.23E-05	1E-04	8.01E-06	1E-06		
Kr-85m	6.79E-08	1E-04	1.50E-08	1E-06		
Kr-87	1.28E-07	1E-04	2.65E-08	1E-06		
Kr-88	2.28E-07	1E-04	4.89E-08	1E-06		
Sr-89			(1) 5.00E-08	5E-08	(1) 1.00E-13	1E-11
Sr-90			(1) 5.00E-08	5E-08	(1) 1.00E-14	1E-11
Sr-92	7.55E-08	1E-04	1.59E-08	5E-07	1.49E-13	1E-11
Nb-95	5.85E-08	1E-04	1.21E-08	5E-07	1.36E-13	1E-11
Nb-97	9.14E-08	1E-04	1.88E-08	5E-07	1.21E-13	1E-11
Zr-95	1.05E-07	1E-04	2.17E-08	5E-07	1.40E-13	1E-11
Mo-99	5.88E-08	1E-04	1.31E-08	5E-07	4.44E-14	1E-11
Tc-99m	5.73E-08	1E-04	1.29E-08	5E-07	4.32E-14	1E-11
Ag-110m	8.68E-08	1E-04	1.78E-08	5E-07	1.25E-13	1E-11
Sb-124	9.19E-08	1E-04	1.88E-08	5E-07	9.12E-14	1E-11
Sb-126	2.44E-07	1E-04	5.03E-08	5E-07	4.18E-13	1E-11
I-131	6.07E-08	1E-04	1.26E-08	1E-06	1.15E-13	1E-12
I-133	8.65E-08	1E-04	1.77E-08	5E-07	8.64E-14	1E-10
I-135	2.19E-07	1E-04	4.62E-08	5E-07	7.92E-13	1E-11
Xe-131m	2.81E-06	1E-04	6.19E-07	1E-06		
Xe-133	1.99E-07	1E-04	4.89E-08	1E-06		
Xe-133m	5.89E-07	1E-04	1.28E-07	1E-06		
Xe-135	8.68E-08	1E-04	1.41E-08	1E-06		
Xe-135m	8.37E-08	1E-04	1.72E-08	1E-06		
Xe-137	2.12E-07	1E-04	4.35E-08	1E-06		
Xe-138	2.15E-07	1E-04	4.55E-08	1E-06		
Ce-134	1.16E-07	1E-04	2.38E-08	5E-07	9.18E-14	1E-11
Ce-137	1.30E-07	1E-04	2.66E-08	5E-07	2.28E-13	1E-11
Ba-138	3.00E-07	1E-04	6.60E-08	5E-07	3.32E-13	1E-11
Ba-140	3.02E-07	1E-04	6.20E-08	5E-07	3.94E-13	1E-11
La-140	8.05E-08	1E-04	1.69E-08	5E-07	1.58E-13	1E-11
Ce-141	1.19E-07	1E-04	2.84E-08	5E-07	1.03E-13	1E-11
Ce-144	4.41E-07	1E-04	9.92E-08	5E-07	4.13E-13	1E-11
Gross Alpha			(1) 1.00E-07	1E-07	3.51E-15	1E-11

(1) Sample analyses performed by a contractor laboratory.

(2) These LLD calculations contain a default weekly continuous sample volume of 2.85E+8 cc. Therefore, grab sample LLD values reflect a different volume (ie; 10 cuft or 2.83E+5 cc).

(3) This is the LLD for in-house counting. The LLD for analyses performed by a contractor laboratory is 1E-10 uCi/cc.

(4) The calculated LLD's, except those denoted by (1), are from a recent counter/detector calibration. These values are typical for other counter/detectors used for effluent counting at BVPS.



# Semi-Annual Radioactive Effluent Release Report

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Table 5A

Assessment Of Radiation Doses

Unit 1 Liquid Effluents										
Batch Releases	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Calendar Year	
	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit
Bone	7.62E-03	0.1524	9.23E-03	0.1846	1.19E-02	0.2380	8.47E-03	0.1694	3.72E-02	0.3722
Liver	1.09E-02	0.2180	1.46E-02	0.2920	2.03E-02	0.4060	1.36E-02	0.2720	5.94E-02	0.5940
Total Body	7.25E-03	0.4833	7.03E-03	0.4687	1.48E-02	0.9867	9.67E-03	0.6447	3.87E-02	1.2917
Thyroid	2.74E-03	0.0548	2.18E-03	0.0436	1.96E-03	0.0392	2.18E-03	0.0436	9.06E-03	0.0906
Kidney	3.97E-03	0.0794	4.84E-03	0.0968	7.07E-03	0.1414	4.90E-03	0.0980	2.08E-02	0.2078
Lung	2.95E-03	0.0590	3.01E-03	0.0602	3.02E-03	0.0604	2.32E-03	0.0464	1.13E-02	0.1130
GI-LLI	5.34E-02	1.0680	5.60E-02	1.1200	6.70E-03	0.1340	6.72E-03	0.1344	1.23E-01	1.2282

Unit 1 Gaseous Effluents										
Batch & Continuous Releases	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Calendar Year	
	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit
Beta Air	4.69E-02	0.4690	4.20E-02	0.4200	1.25E-01	1.2500	4.90E-02	0.4900	2.63E-01	1.3145
Gamma Air	1.98E-02	0.3960	1.56E-02	0.3120	2.01E-02	0.4020	1.98E-02	0.3960	7.53E-02	0.7530
Bone	2.20E-05	0.0003	7.24E-06	0.0001	8.04E-03	0.1072	5.30E-03	0.0707	1.34E-02	0.0891
Liver	1.48E-01	1.9733	7.32E-02	0.9760	9.04E-02	1.2053	1.02E-01	1.3600	4.14E-01	2.7573
Total Body	1.48E-01	1.9733	7.32E-02	0.9760	8.46E-02	1.1280	9.86E-02	1.3147	4.04E-01	2.6960
Thyroid	1.55E-01	2.0667	7.38E-02	0.9840	8.76E-02	1.1680	9.81E-02	1.3080	4.15E-01	2.7633
Kidney	1.48E-01	1.9733	7.32E-02	0.9760	8.56E-02	1.1413	9.92E-02	1.3227	4.06E-01	2.7067
Lung	1.48E-01	1.9733	7.32E-02	0.9760	8.41E-02	1.1213	9.84E-02	1.3120	4.04E-01	2.6913
GI-LLI	1.48E-01	1.9733	7.32E-02	0.9760	8.33E-02	1.1107	9.79E-02	1.3053	4.02E-01	2.6827

1) These doses are listed in mrem; they are calculated for the maximum individual for all batch liquid effluents

2) These doses are listed in mrad; they are calculated at the site boundary for batch & continuous gaseous effluents (0.4 mi NW)

3) These doses are listed in mrem; they are calculated for the most likely exposed real individual (child) via all real pathways at 0.89 mi NW.

Limits used for calculation of percent (%) are from RETS LCO's 3.11.1.2, 3.11.2.1, 3.11.2.2 and 3.11.2.3 (considered to be the Design Objectives).



# Semi-Annual Radioactive Effluent Release Report

2nd Half - 1994

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Table 5B

Assessment Of Radiation Doses

Unit 2 Liquid Effluents											
		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Calendar Year	
Batch Releases		Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit
O R G A N I	Bone	7.62E-03	0.1524	9.23E-03	0.1846	1.19E-02	0.2380	8.47E-03	0.1694	3.72E-02	0.3722
	Liver	1.09E-02	0.2180	1.46E-02	0.2920	2.03E-02	0.4060	1.36E-02	0.2720	5.94E-02	0.5940
	Total Body	7.25E-03	0.4833	7.03E-03	0.4687	1.48E-02	0.9867	9.67E-03	0.6447	3.87E-02	1.2917
	Thyroid	2.74E-03	0.0548	2.18E-03	0.0436	1.96E-03	0.0392	2.18E-03	0.0436	9.06E-03	0.0906
	Kidney	3.97E-03	0.0794	4.84E-03	0.0968	7.07E-03	0.1414	4.90E-03	0.0980	2.08E-02	0.2078
	Lung	2.95E-03	0.0590	3.01E-03	0.0602	3.02E-03	0.0604	2.32E-03	0.0464	1.13E-02	0.1130
	GI-LLI	5.34E-02	1.0680	5.60E-02	1.1200	6.70E-03	0.1340	6.72E-03	0.1344	1.23E-01	1.2282

Unit 2 Gaseous Effluents											
		1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Calendar Year	
Batch & Continuous Releases		Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit	Dose	% of RETS Limit
2)	Beta Air	4.83E-03	0.0483	3.30E-03	0.0330	1.66E-02	0.1660	2.10E-03	0.0210	2.69E-02	0.1345
2)	Gamma Air	1.00E-04	0.0020	9.98E-05	0.0020	4.83E-04	0.0097	3.35E-05	0.0007	7.16E-04	0.0072
O R G A N I	Bone	2.35E-05	0.0003	1.92E-09	0.0000	1.43E-08	0.0000	5.96E-10	0.0000	2.35E-05	0.0002
	Liver	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067
	Total Body	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067
	Thyroid	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067
	Kidney	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067
	Lung	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067
	GI-LLI	2.34E-01	3.1200	2.14E-01	2.8533	2.26E-01	3.0133	1.67E-01	2.2267	8.41E-01	5.6067

- 1) These doses are listed in mrem; they are calculated for the maximum individual for all batch liquid effluents
- 2) These doses are listed in mrad; they are calculated at the site boundary for batch & continuous gaseous effluents (0.4 mi NW)
- 3) These doses are listed in mrem; they are calculated for the most likely exposed real individual (child) via all real pathways at 0.89 mi NW.

Limits used for calculation of percent (%) are from RETS LCO's 3.11.1.2, 3.11.2.1, 3.11.2.2 and 3.11.2.3 (considered to be the Design Objectives).

## Semi-Annual Radioactive Effluent Release Report

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Table 6

### Effluent Monitoring Instrumentation Channels Not Returned To Operable Status Within 30 Days

#### (2HVS-RQ109) - Unit 2 Rx Containment/SLCRS Vent Gaseous Effluent Monitoring Instrumentation

Noble Gas Activity Effluent Monitors (2HVS-RQ109B,C&D), along with the Sampler and Process Flowrate Monitors were declared INOPERABLE on October 17, 1994 due to failure of the Cadmium Telluride (CdTe) detector and power supply while performing the 18 month calibration using MSP. 2.43.33. Specifically, the "C" Channel solid state CdTe detector would respond to source checks, but would not pass linearity checks (ie; low count rate). The 30 day criteria was exceeded because replacement detectors also exhibited a low response count rate. The detectors and appropriate sources were subsequently shipped to the vendor for recalibration and certification. The detector concerns were resolved and the monitors were returned to OPERABLE status on November 18, 1994. Corrective Actions Taken To Prevent Recurrence are detailed in Beaver Valley Power Station Problem Report No. 2-94-221.

As required by LCO 3.3.3.1 (Table 3.3-6, Action Statement No. 36) and LCO 3.3.3.10 (Table 3.3-13, Action Statement 29) grab gas samples were obtained from this effluent pathway at least once per 8 hours, and were analyzed for radioactivity within 24 hours during the period of inoperability.

#### (2MSS-RQ101) - Unit 2 Main Steam Discharge Gaseous Effluent Monitoring Instrumentation

Noble Gas Activity Effluent Monitors (2MSS-RQ101A,B&C) were declared INOPERABLE on September 19, 1994 due to closure of valve 2MSS-SOV120. Specifically, the valve drifted closed due to an overheated coil, switches and terminals. The 30 day criteria was exceeded because of problems encountered in reopening the valve. Prior to this date, a problem was encountered with this valve on June 10, 1994. At that time, it was realized that the valve needed replacement so MWR No. 32135 was initiated and was scheduled for work during 2R05. Due to the scope of work involved with replacement, these monitors will not be returned to OPERABLE status until 2R05 is completed. Concerns associated with the valve are detailed in Beaver Valley Power Station Problem Report No. 2-94-175.

As required by LCO 3.3.3.1 (Table 3.3-6, Action Statement No. 36) the preplanned alternate method of monitoring was in-place during the period of inoperability. This includes a weekly calculation of activity released VIA the Main Steam Effluent pathway (RCM Form 6.25 of the HPM).

## Semi-Annual Radioactive Effluent Release Report

2nd Half - 1994

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Table 7

40 CFR 190.10(a) - Environmental Doses

1994 Total Dose Commitment From All Facility Releases			
Organ	(1) Effluent Dose (mrem)	(2) Direct Radiation Dose (mrem)	% of RETS Limit
Bone	8.78E-02	3.22E+00	0.35%
Liver	1.37E+00		5.48%
Total Body	1.40E+00		18.48%
Thyroid	1.27E+00		1.69%
Kidney	1.29E+00		5.16%
Lung	1.27E+00		5.08%
GI-LLI	1.49E+00		5.96%

- (1) The cumulative dose contributions from liquid and gaseous effluents were determined in accordance with the applicable LCO's & SURVEILLANCE REQUIREMENTS listed in the RETS. The dose commitment limits for MEMBER(S) OF THE PUBLIC (RETS LCO 3.11.4.1) are as follows:

- a) < or = 25 mrem / calendar year (for the total body, or any organ except the thyroid)
- b) < or = 75 mrem / calendar year (for the thyroid)

- (2) The dose contribution listed for the total body is for Direct Radiation. This was calculated by comparing offsite TLD exposure to TLD exposure at a control location.

Note: An assessment of radiation doses from radioactive effluents to MEMBER(S) OF THE PUBLIC, due to their activities inside the site boundary, is not applicable.



## Semi-Annual Radioactive Effluent Release Report

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Table 8

### Technical Specification Surveillance Deficiencies

There were no  
Surveillance Deficiencies  
(as required by the Radiological Effluent Technical Specifications)  
during this report period.  
  
This is regarding  
monitoring, sampling & analysis and dose determination.

## Semi-Annual Radioactive Effluent Release Report

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Table 9

### Unit 1 and 2 Offsite Dose Calculation Manual Changes (Description)

There were no changes made to the  
Unit 1 and 2 Offsite Dose Calculation Manual  
during this report period.

DUQUESNE LIGHT COMPANY  
Beaver Valley Power Station - Units 1 & 2

**Semi-Annual  
Radioactive Effluent Release Report**  
2nd Half - 1994

Attachment 1  
Joint Frequency Distribution Tables



TABLE 1. BEAVER VALLEY METEOROLOGICAL TOWER DATA RECOVERY  
THIRD QUARTER 1994 (7/1/94 - 9/30/94)

Parameter	Recovery (Percent)
Wind Speed 35 ft	100.0
Wind Speed 150 ft	99.8
Wind Speed 500 ft	100.0
Wind Direction 35 ft	100.0
Wind Direction 150 ft	98.3
Wind Direction 500 ft	98.3
Delta Temperature 150-35 1P	98.3
Delta Temperature 500-35 2P	98.3
Temperature 35	98.3
Precipitation	98.4
<u>Composite</u>	
Wind Speed and Direction 35, Delta Temperature 1P	98.3
Wind Speed and Direction 150, Delta Temperature 1P	98.3
Wind Speed and Direction 500, Delta Temperature 2P	98.3

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

1 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: A DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	4	14	14	0	0	0	32
NNE	4	14	3	0	0	0	21
NE	5	7	3	0	0	0	15
ENE	2	13	5	0	0	0	20
E	2	7	2	0	0	0	11
ESE	0	4	4	0	0	0	8
SE	2	11	3	0	0	0	16
SSE	1	8	3	0	0	0	12
S	2	9	9	0	0	0	20
SSW	1	8	9	0	0	0	18
SW	4	7	8	0	0	0	19
WSW	5	25	24	1	0	0	55
W	1	51	30	3	0	0	85
WNW	2	26	13	0	0	0	41
NW	6	11	2	1	0	0	20
NNW	3	18	10	0	0	0	31
TOTAL	44	233	142	5	0	0	424

PERIODS OF CALM(HOURS): 21  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

2 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: B DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	2	2	0	0	0	5
NNE	2	2	1	0	0	0	5
NE	0	3	0	0	0	0	3
ENE	1	2	0	0	0	0	3
E	0	0	0	0	0	0	0
ESE	3	1	0	0	0	0	4
SE	2	0	0	0	0	0	2
SSE	0	1	0	0	0	0	1
S	0	4	3	0	0	0	7
SSW	1	1	2	0	0	0	4
SW	0	5	2	2	0	0	9
WSW	0	4	6	1	0	0	11
W	3	12	4	1	0	0	20
WNW	2	6	4	1	0	0	13
NW	0	2	1	0	0	0	3
NNW	2	3	0	0	0	0	5
TOTAL	17	48	25	5	0	0	95

PERIODS OF CALM(HOURS): 21  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38



THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

## HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: C DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

## WIND SPEED (MPH)

WIND DIRECTION	1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	1	3	3	0	0	0	7
NNE	2	3	0	0	0	0	5
NE	2	0	1	0	0	0	3
ENE	0	1	0	0	0	0	1
E	1	0	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	1	0	0	1	0	0	2
SSE	0	0	0	0	0	0	0
S	2	1	0	0	0	0	3
SSW	0	0	1	0	0	0	1
SW	2	3	4	1	0	0	10
WSW	1	1	2	0	0	0	4
W	1	8	4	1	0	0	14
WNW	2	6	0	0	0	0	8
NW	0	2	4	0	0	0	6
NNW	2	0	2	0	0	0	4
TOTAL	18	28	21	3	0	0	70

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

4 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: D DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	15	7	6	0	0	0	28
NNE	9	10	2	0	0	0	21
NE	17	7	2	0	0	0	27
ENE	11	10	3	0	0	0	24
E	7	3	0	0	0	0	10
ESE	7	3	0	0	0	0	10
SE	4	2	0	0	0	0	7
SSE	5	5	2	0	0	0	12
S	3	3	5	0	0	0	11
SSW	4	13	12	0	0	0	30
SW	12	20	33	3	0	0	68
WSW	15	25	19	0	0	0	59
W	10	27	23	4	0	0	64
WNW	11	19	8	1	0	0	40
NW	7	11	1	0	0	0	19
NNW	5	11	3	0	0	0	19
TOTAL	142	176	119	8	0	0	449

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

5 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: E DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	15	8	0	0	0	0	23
NNE	20	2	0	0	0	0	24
NE	36	9	0	0	0	0	45
ENE	38	21	1	0	0	0	60
E	27	6	0	0	0	0	33
ESE	12	2	0	0	0	0	14
SE	12	6	3	0	0	0	21
SSE	9	6	2	0	0	0	17
S	20	18	3	0	0	0	41
SSW	28	29	3	0	0	0	61
SW	27	18	15	1	0	0	61
WSW	15	13	7	0	0	0	35
W	8	14	12	0	0	0	34
WNW	11	20	1	0	0	0	32
W	14	10	0	0	0	0	24
NNW	3	11	0	0	0	0	14
TOTAL	295	193	47	1	0	0	539

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

6 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: F DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	20	1	0	0	0	0	24
NNE	59	2	0	0	0	0	61
NE	61	6	0	0	0	0	68
ENE	27	9	0	0	0	0	36
E	14	1	0	0	0	0	15
ESE	8	1	0	0	0	0	9
SE	4	3	1	0	0	0	9
SSE	7	0	0	0	0	0	8
S	25	8	3	0	0	0	37
SSW	26	17	0	0	0	0	43
SW	23	14	1	0	0	0	38
WSW	13	4	0	0	0	0	18
W	2	0	0	0	0	0	2
WNW	1	2	0	0	0	0	3
NW	4	1	0	0	0	0	5
NNW	3	1	0	0	0	0	6
TOTAL	297	70	5	0	0	0	382

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

7 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: G DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	13	0	0	0	0	0	14
NNE	32	3	0	0	0	0	36
NE	22	6	0	0	0	0	28
ENE	9	6	0	0	0	0	16
E	3	0	0	0	0	0	3
ESE	3	0	0	0	0	0	3
SE	5	1	0	0	0	0	6
SSE	6	1	0	0	0	0	7
S	13	7	0	0	0	0	20
SSW	25	16	0	0	0	0	41
SW	11	1	0	0	0	0	12
WSW	6	0	0	0	0	0	6
W	1	0	0	0	0	0	2
WNW	5	0	0	0	0	0	5
NW	4	0	0	0	0	0	4
NNW	7	1	0	0	0	0	8
TOTAL	165	42	0	0	0	0	211

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 150 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

8 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: ALL DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	69	35	25	0	0	0	133
NNE	128	36	6	0	0	0	173
NE	143	38	6	0	0	0	189
ENE	88	62	9	0	0	0	160
E	54	17	2	0	0	0	73
ESE	34	11	4	0	0	0	49
SE	30	23	7	1	0	0	63
SSE	28	21	7	0	0	0	57
S	65	50	23	0	0	0	139
SSW	85	84	27	0	0	0	198
SW	79	68	63	7	0	0	217
WSW	55	72	58	2	0	0	188
W	26	112	73	9	0	0	221
WNW	34	79	26	2	0	0	142
NW	35	37	8	1	0	0	81
NNW	25	45	15	0	0	0	87
TOTAL	978	790	359	22	0	0	2170

PERIODS OF CALM(HOURS): 21

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

1 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: A DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM(HOURS): 2

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

2 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: B DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	1	1	0	0	0	2
E	0	2	0	0	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	4	1	0	0	0	5

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

3 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: C DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	2	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	3	2	0	0	0	5
ESE	1	1	2	0	0	0	4
SE	0	0	1	0	0	0	1
SSE	0	3	0	0	0	0	3
S	0	1	1	0	0	0	2
SSW	0	0	2	0	0	0	2
SW	0	1	0	0	0	0	1
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	1	9	11	0	0	0	21

PERIODS OF CALM(HOURS): 2

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

4 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: D DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	14	39	7	0	0	65
NNE	6	12	6	0	0	0	24
NE	11	11	5	1	0	0	28
ENE	3	15	8	2	0	0	28
E	13	16	7	0	0	0	36
ESE	9	10	6	0	0	0	25
SE	6	16	5	2	0	0	29
SSE	3	14	7	1	0	0	25
S	5	7	21	3	1	0	37
SSW	8	16	29	13	0	0	66
SW	5	14	45	34	10	0	108
WSW	6	38	63	34	2	0	143
W	6	38	60	42	7	0	153
WNW	5	18	26	15	3	0	67
NW	6	9	19	5	0	0	39
NNW	3	12	35	6	1	0	57
TOTAL	100	260	381	165	24	0	930

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

5 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: E DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	10	1	16	8	0	0	35
NNE	9	12	8	0	0	0	29
NE	17	15	4	1	0	0	37
ENE	14	19	11	3	0	0	47
E	20	29	7	3	0	0	60
ESE	22	8	6	0	0	0	36
SE	11	10	8	1	1	0	31
SSE	13	5	4	5	0	0	27
S	7	18	6	5	0	0	36
SSW	15	15	9	14	1	0	54
SW	13	26	34	29	8	0	110
WSW	25	56	22	2	1	0	106
W	28	53	25	10	0	0	116
WNW	15	19	13	3	0	0	50
NW	13	10	16	7	0	0	46
NNW	8	5	12	1	0	0	26
TOTAL	240	301	201	92	11	0	846

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

6 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: F DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	7	5	1	2	0	0	16
NNE	15	7	1	0	0	0	23
NE	9	11	0	0	0	0	20
ENE	9	8	3	0	0	0	20
E	9	14	1	0	0	0	24
ESE	10	5	0	0	0	0	15
SE	6	2	3	1	0	0	12
SSE	6	5	1	4	0	0	16
S	14	7	5	5	1	0	32
SSW	8	9	10	4	0	0	31
SW	17	12	7	3	1	0	40
WSW	30	17	3	0	0	0	50
W	11	7	7	0	0	0	25
WNW	12	15	2	0	0	0	29
NW	1	3	1	0	0	0	5
NNW	3	4	1	0	0	0	8
TOTAL	167	131	46	19	2	0	366

PERIODS OF CALM(HOURS): 42  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

7 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24

STABILITY CLASS: G DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	1	1	0	0	0	0	2

PERIODS OF CALM(HOURS): 2

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 500 FT CONTINUOUS RELEASE  
THIRD QUARTER 1994 (JULY 1, 1994 THROUGH SEPTEMBER 30, 1994)

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HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94093024 HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	22	20	58	17	0	0	118
NNE	30	31	15	0	0	0	76
NE	37	37	9	2	0	0	85
ENE	26	43	23	5	0	0	97
E	42	64	17	3	0	0	127
ESE	42	25	14	0	0	0	81
SE	23	29	17	4	1	0	74
SSE	22	27	12	10	0	0	71
S	26	33	33	13	2	0	107
SSW	31	40	50	31	1	0	153
SW	36	53	86	66	19	0	260
WSW	61	111	89	36	3	0	300
W	45	98	92	52	7	0	294
WNW	32	52	41	18	3	0	146
NW	20	22	36	12	0	0	90
NNW	14	21	48	7	1	0	91
TOTAL	509	706	640	276	37	0	2170

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 38

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

1 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24

STABILITY CLASS: A DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
TOTAL	2	0	0	0	0	0	2

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

2 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24  
STABILITY CLASS: B DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	1	1	0	0	0	0	2

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

3 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24

STABILITY CLASS: C DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	1	0	0	2

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

4 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24  
STABILITY CLASS: D DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	2	0	1	0	0	0	3
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	2	0	0	0	0	2
WSW	1	0	1	0	0	0	2
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	4	4	2	0	0	0	10

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
 THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

5 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24

STABILITY CLASS: E DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	2	0	0	0	0	0	2
ESE	1	1	0	0	0	0	2
SE	1	0	0	0	0	0	1
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	8	1	0	0	0	0	9

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

6 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24  
STABILITY CLASS: F DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	1	0	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	2	0	0	0	0	0	2

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

7 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24  
STABILITY CLASS: G DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	2
ENE	2	0	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	4	0	0	0	0	0	4

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION 100 FT LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

8 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070406-94081820 HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
ENE	2	0	0	0	0	0	2
E	3	0	0	0	0	0	3
ESE	1	2	0	0	0	0	3
SE	1	0	0	1	0	0	2
SSE	3	0	1	0	0	0	4
S	2	0	0	0	0	0	2
SSW	1	1	0	0	0	0	2
SW	1	2	0	0	0	0	3
WSW	1	1	2	0	0	0	4
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
TOTAL	21	6	3	1	0	0	31

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

1 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: A DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES 2 of 8  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: B DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES 3 of 8  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: C DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	1	0	0	0	1
SW	0	0	0	2	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

4 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: D DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	0	0	0	0	1
NNE	3	1	0	0	0	0	4
NE	3	2	0	0	0	0	5
ENE	0	2	0	0	0	0	2
E	3	0	0	0	0	0	3
ESE	3	0	0	0	0	0	3
SE	1	2	0	0	0	0	3
SSE	1	2	1	0	0	0	4
S	1	1	4	0	1	0	7
SSW	1	4	6	0	0	0	11
SW	1	2	7	5	3	0	18
WSW	0	1	8	6	1	0	16
W	0	0	2	1	1	0	4
WNW	0	0	0	1	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	1	0	0	0	1
TOTAL	17	18	29	13	6	0	83

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

HOURS AT EACH WIND SPEED AND DIRECTION  
 PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
 STABILITY CLASS: E DT/DZ  
 ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	2	0	0	0	0	0	2
E	1	0	0	0	0	0	1
ESE	2	0	0	0	0	0	2
SE	2	1	0	0	0	0	3
SSE	0	2	1	1	0	0	4
S	1	1	0	0	0	0	2
SSW	2	3	1	4	0	0	10
SW	5	5	4	8	3	0	25
WSW	4	2	2	0	0	0	8
W	5	5	0	2	0	0	12
WNW	1	0	1	0	0	0	2
NW	1	0	0	0	0	0	1
NNW	0	1	0	0	0	0	1
TOTAL	28	20	9	15	3	0	75

PERIODS OF CALM(HOURS): 0  
 VARIABLE DIRECTION 0  
 HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

6 of 8

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: F DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	2	1	0	0	0	0	3
SE	1	0	0	0	0	0	1
SSE	1	1	0	1	0	0	3
S	1	1	1	0	0	0	3
SSW	1	3	2	2	0	0	8
SW	4	0	0	0	0	0	4
WSW	2	0	0	0	0	0	2
W	1	0	0	0	0	0	1
WNW	1	0	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	14	6	3	3	0	0	26

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

7 of 8

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94070101-94081413 HOUR RANGE = 01 - 24

STABILITY CLASS: G DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED(MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION ELEVATED LEVEL BATCH RELEASES 8 of 8  
THIRD QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = S4070101-94081413 HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	0	0	0	0	2
NNE	4	1	0	0	0	0	5
NE	3	2	0	0	0	0	5
ENE	2	2	0	0	0	0	4
E	4	0	0	0	0	0	4
ESE	7	1	0	0	0	0	8
SE	4	3	0	0	0	0	7
SSE	2	5	2	2	0	0	11
S	3	3	5	0	1	0	12
SSW	4	10	10	6	0	0	30
SW	10	7	11	13	6	0	47
WSW	6	3	10	6	1	0	26
W	6	5	2	3	1	0	17
WNW	2	0	1	1	0	0	4
NW	1	0	0	0	0	0	1
NNW	0	1	1	0	0	0	2
TOTAL	59	44	42	31	9	0	185

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

TABLE 1. BEAVER VALLEY METEOROLOGICAL TOWER DATA RECOVERY  
FOURTH QUARTER 1994 (10/1/94 -12/31/94)

Parameter	Recovery (Percent)
Wind Speed 35 ft	99.6
Wind Speed 150 ft	99.6
Wind Speed 500 ft	99.6
Wind Direction 35 ft	99.6
Wind Direction 150 ft	99.6
Wind Direction 500 ft	99.6
Delta Temperature 150-35 1P	99.4
Delta Temperature 500-35 2P	99.4
Temperature 35	99.4
Precipitation	99.2
<u>Composite</u>	
Wind Speed and Direction 35, Delta Temperature 1P	99.4
Wind Speed and Direction 150, Delta Temperature 1P	99.4
Wind Speed and Direction 500, Delta Temperature 2P	99.4



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94100101-94123124    HOUR RANGE = 01 - 24  
STABILITY CLASS: A    DT/DZ  
ELEVATION:    SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	6	8	0	0	0	14
NNE	0	12	4	1	0	0	17
NE	0	9	7	0	0	0	16
ENE	1	15	2	0	0	0	18
E	0	11	5	0	0	0	16
ESE	0	1	5	0	0	0	6
SE	0	0	0	0	0	0	0
SSE	0	1	4	0	0	0	5
S	1	2	4	1	0	0	8
SSW	1	3	1	1	0	0	6
SW	0	4	3	1	0	0	8
WSW	0	3	2	1	0	0	6
W	1	2	6	5	0	0	14
WNW	0	3	3	3	0	0	9
NW	0	0	0	0	0	0	0
NNW	0	1	0	0	0	0	1
TOTAL	4	73	54	13	0	0	144

PERIODS OF CALM (HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94100101-94123124      HOUR RANGE = 01 - 24  
STABILITY CLASS: B      DT/DZ  
ELEVATION:      SPEED:SP150P      DIRECTION:DI150P      LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	2	1	0	0	0	3
NNE	0	2	1	0	0	0	3
NE	1	0	1	0	0	0	2
ENE	0	4	0	0	0	0	4
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	2	0	0	0	0	2
SSW	0	1	2	1	0	0	4
SW	0	1	1	0	0	0	2
WSW	0	0	0	1	0	0	1
W	0	1	5	2	0	0	8
WNW	0	3	2	1	0	0	6
NW	0	2	0	0	0	0	2
NNW	0	1	0	0	0	0	1
TOTAL	1	20	13	5	0	0	39

PERIODS OF CALM (HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: C DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	1	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	2	0	0	0	0	2
ENE	0	1	2	0	0	0	3
E	1	0	2	0	0	0	3
ESE	1	0	0	0	0	0	1
SE	0	2	0	0	0	0	2
SSE	0	1	1	0	0	0	2
S	0	2	1	0	0	0	3
SSW	2	2	0	0	0	0	4
SW	0	1	3	0	0	0	4
WSW	0	2	0	2	0	0	4
W	1	5	7	2	1	0	16
WNW	3	3	3	0	0	0	9
NW	1	0	3	0	0	0	4
NNW	0	1	1	0	0	0	2
TOTAL	9	23	24	4	1	0	61

PERIODS OF CALM(HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94100101-94123124      HOUR RANGE = 01 - 24  
STABILITY CLASS: D      DT/DZ  
ELEVATION:      SPEED:SP150P      DIRECTION:DI150P      LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	23	20	0	0	0	46
NNE	8	13	2	1	0	0	24
NE	10	8	3	0	0	0	21
ENE	6	15	7	0	0	0	28
E	3	8	8	0	0	0	19
ESE	2	5	6	0	0	0	13
SE	4	6	0	0	0	0	10
SSE	0	4	1	1	0	0	6
S	7	10	3	1	0	0	21
SSW	3	13	15	2	0	0	33
SW	5	11	35	8	0	0	59
WSW	10	10	25	9	7	0	61
W	8	21	35	33	8	0	105
WNW	6	41	37	3	0	0	87
NW	3	17	5	0	0	0	25
NNW	6	14	13	0	0	0	33
TOTAL	84	219	215	58	15	0	591

PERIODS OF CALM(HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CCNTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: E DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	9	16	7	0	0	0	32
NNE	20	14	3	0	1	0	38
NE	28	45	3	0	0	0	76
ENE	14	38	19	0	0	0	71
E	7	25	3	0	0	0	35
ESE	9	7	0	0	0	0	16
SE	3	3	1	0	0	0	7
SSE	1	5	3	0	0	0	9
S	5	12	11	0	0	0	28
SSW	16	11	4	4	0	0	35
SW	25	22	34	4	1	0	86
WSW	11	15	7	11	0	0	44
W	4	32	24	16	0	0	76
WNW	6	33	4	0	0	0	43
NW	3	18	0	0	0	0	21
NNW	11	9	0	0	0	0	21
TOTAL	172	305	123	35	2	0	638

PERIODS OF CALM(HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: F DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	16	6	2	0	0	0	24
NNE	28	11	0	0	0	0	39
NE	33	23	0	0	0	0	56
ENE	12	24	0	0	0	0	36
E	6	8	0	0	0	0	14
ESE	6	3	1	0	0	0	10
SE	2	0	0	0	0	0	2
SSE	3	1	0	0	0	0	4
S	12	7	1	0	0	0	20
SSW	13	13	1	0	0	0	27
SW	16	12	2	0	0	0	30
WSW	7	7	0	0	0	0	14
W	4	3	0	0	0	0	7
WNW	4	7	0	0	0	0	11
NW	5	2	0	0	0	0	7
NNW	4	3	0	0	0	0	7
TOTAL	171	130	7	0	0	0	308
PERIODS OF CALM(HOURS): 1							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 14							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24

STABILITY CLASS: G DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	20	4	0	0	0	0	24
NNE	62	35	0	0	0	0	97
NE	41	35	1	0	0	0	77
ENE	14	10	1	0	0	0	25
E	2	4	0	0	0	0	✓
ESE	2	2	0	0	0	0	4
SE	3	5	0	0	0	0	8
SSE	4	3	0	0	0	0	7
S	9	8	2	0	0	0	19
SSW	23	12	0	0	0	0	35
SW	26	11	0	0	0	0	37
WSW	15	9	0	0	0	0	24
W	11	5	0	0	0	0	16
WNW	11	4	0	0	0	0	15
NW	5	2	0	0	0	0	7
NNW	11	1	0	0	0	0	12
TOTAL	259	150	4	0	0	0	413

PERIODS OF CALM(HOURS): 1

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
150 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	48	58	39	0	0	0	145
NNE	118	87	10	2	1	0	218
NE	113	122	15	0	0	0	250
ENE	47	107	31	0	0	0	185
E	19	57	18	0	0	0	94
ESE	20	18	12	0	0	0	50
SE	12	16	1	0	0	0	29
SSE	8	15	9	1	0	0	33
S	34	43	22	2	0	0	101
SSW	58	55	23	8	0	0	144
SW	72	62	78	13	1	0	226
WSW	43	46	34	24	7	0	154
W	29	61	77	58	9	0	242
WNW	30	94	49	7	0	0	180
NW	17	41	8	0	0	0	66
NNW	32	30	14	0	0	0	77
TOTAL	700	920	440	115	18	0	2194

PERIODS OF CALM (HOURS): 1  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: A DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM (HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: B DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	2	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	1	3	0	0	0	4

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: C DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	2	0	0	0	2
NNE	0	0	1	0	0	0	1
NE	0	0	3	0	0	0	3
ENE	0	1	3	0	0	0	4
E	0	0	3	0	0	0	3
ESE	0	0	1	1	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	4	0	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	1	17	1	0	0	19

PERIODS OF CALM (HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: D DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	8	12	66	19	0	0	105
NNE	2	6	9	3	1	1	22
NE	5	9	8	2	1	0	25
ENE	6	15	19	10	0	0	50
E	4	29	24	6	0	0	63
ESE	1	19	29	17	0	0	66
SE	2	8	2	10	1	1	24
SSE	2	5	3	1	2	0	13
S	2	11	15	4	1	0	33
SSW	4	13	17	9	8	0	51
SW	5	13	28	49	24	1	120
WSW	6	9	23	34	14	8	94
W	7	14	34	56	29	11	151
WNW	3	18	64	37	17	5	144
NW	2	7	34	6	0	0	49
NNW	4	8	34	7	0	0	53
TOTAL	63	196	409	270	98	27	1063

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: E DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	8	5	10	6	1	0	30
NNE	8	8	1	3	0	0	20
NE	11	8	7	1	0	0	28
ENE	14	20	16	3	0	0	53
E	8	29	21	4	0	0	62
ESE	6	25	23	5	1	0	60
SE	5	11	8	9	3	0	36
SSE	9	8	8	6	1	0	32
S	6	4	9	7	1	0	27
SSW	5	6	9	21	1	1	43
SW	4	3	14	23	14	0	58
WSW	9	9	15	3	1	0	37
W	5	16	29	8	2	0	60
WNW	5	17	12	0	0	0	34
NW	6	3	18	2	0	0	29
NNW	7	4	6	1	0	0	18
TOTAL	116	176	206	102	25	1	627

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: F DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	7	1	1	0	0	14
NNE	3	3	3	0	0	0	9
NE	7	7	1	0	0	0	15
ENE	6	14	17	1	0	0	38
E	12	13	8	0	0	0	33
ESE	7	24	13	1	0	0	45
SE	3	6	9	1	0	0	19
SSE	3	11	7	1	0	0	22
S	3	11	12	6	1	0	33
SSW	5	10	3	3	1	0	22
SW	5	8	7	17	4	0	41
WSW	4	5	2	0	0	0	11
W	8	6	24	5	0	0	43
WNW	5	9	5	0	0	0	19
NW	5	4	1	0	0	0	10
NNW	1	2	0	0	0	0	4
TOTAL	82	140	113	36	6	0	378

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: G DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	4	3	1	0	0	0	8
E	2	1	0	0	0	0	3
ESE	0	1	0	0	0	0	1
SE	2	3	0	0	0	0	5
SSE	1	5	0	0	0	0	6
S	0	9	12	0	0	0	21
SSW	1	10	9	0	0	0	20
SW	0	4	1	11	6	0	22
WSW	2	5	2	0	0	0	9
W	0	0	4	0	0	0	4
WNW	2	0	0	0	0	0	2
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	16	41	29	11	6	0	103

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
500 FT CONTINUOUS RELEASE  
FOURTH QUARTER 1994 (OCTOBER 1, 1994 THROUGH DECEMBER 31, 1994)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94100101-94123124 HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	21	24	80	26	1	0	152
NNE	14	17	14	6	1	1	53
NE	24	24	21	3	1	0	74
ENE	30	54	56	14	0	0	154
E	26	72	56	10	0	0	164
ESE	14	69	66	24	1	0	174
SE	12	28	19	20	4	1	84
SSE	15	29	18	8	3	0	73
S	11	35	52	17	3	0	118
SSW	15	39	38	33	10	1	136
SW	14	28	50	100	48	1	241
WSW	21	28	42	37	15	8	151
W	20	36	91	69	31	11	258
WNW	15	44	81	37	17	5	199
NW	13	14	53	8	0	0	88
NNW	12	14	40	8	0	0	75
TOTAL	277	555	777	420	135	28	2194

PERIODS OF CALM(HOURS): 2  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 14



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: A    DT/DZ  
ELEVATION: SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1

PERIODS OF CALM (HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: B    DT/DZ  
ELEVATION: SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: C    DT/DZ  
ELEVATION:    SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM(HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813 HOUR RANGE = 01 - 24  
STABILITY CLASS: D DT/DZ  
ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	1	0	0	0	1

PERIODS OF CALM (HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813 HOUR RANGE = 01 - 24

STABILITY CLASS: E DT/DZ

ELEVATION: SPEED:SP150P DIRECTION:DI150P LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0
PERIODS OF CALM(HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: F    DT/DZ  
ELEVATION: SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0
PERIODS OF CALM (HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION  
PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: G    DT/DZ  
ELEVATION: SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0
PERIODS OF CALM(HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
100 FT LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIOD)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94122811-94122813    HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL    DT/DZ  
ELEVATION:        SPEED:SP150P    DIRECTION:DI150P    LAPSE:DT1-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	2	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	3	0	0	0	3
PERIODS OF CALM (HOURS):        0							
VARIABLE DIRECTION        0							
HOURS OF MISSING DATA:        0							



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
STABILITY CLASS: A    DT/DZ  
ELEVATION: SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM (HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
 STABILITY CLASS: B    DT/DZ  
 ELEVATION:    SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEFD (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0

PERIODS OF CALM (HOURS): 0  
 VARIABLE DIRECTION 0  
 HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
STABILITY CLASS: C    DT/DZ  
ELEVATION:    SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0
PERIODS OF CALM(HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
STABILITY CLASS: D    DT/DZ  
ELEVATION:    SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	2	0	0	0	4
NNE	1	2	0	0	0	0	3
NE	1	2	0	0	0	0	3
ENE	1	1	0	0	0	0	2
E	0	4	0	0	0	0	4
ESE	1	7	2	0	0	0	10
SE	1	1	0	0	0	0	2
SSE	2	4	0	0	0	0	6
S	1	5	1	0	0	0	7
SSW	0	7	2	0	0	0	9
SW	2	4	3	0	1	0	10
WSW	0	1	0	0	0	0	1
W	2	0	3	0	0	0	5
WNW	0	4	5	3	0	0	12
NW	1	1	2	1	0	0	5
NNW	0	0	6	0	0	0	6
TOTAL	14	44	26	4	1	0	89

PERIODS OF CALM(HOURS): 0  
VARIABLE DIRECTION 0  
HOURS OF MISSING DATA: 0



BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905 HOUR RANGE = 01 - 24

STABILITY CLASS: E DT/DZ

ELEVATION: SPEED:SP500P DIRECTION:DI500P LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	7	1	0	0	0	0	8
NNE	1	2	0	0	0	0	3
NE	5	2	0	0	0	0	7
ENE	3	9	2	0	0	0	14
E	1	3	0	0	0	0	4
ESE	2	4	0	0	0	0	6
SE	0	2	2	1	0	0	5
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	2	0	0	0	0	0	2
W	2	0	0	0	0	0	2
WNW	1	1	0	0	0	0	2
NW	3	0	3	0	0	0	6
NNW	3	1	0	0	0	0	4
TOTAL	32	25	7	1	0	0	65

PERIODS OF CALM (HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
STABILITY CLASS: F    DT/DZ  
ELEVATION: SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	3	0	0	0	0	3
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	1	1	0	0	0	2
SE	0	0	1	1	0	0	2
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	5	3	1	0	0	9
PERIODS OF CALM(HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
 STABILITY CLASS: G    DT/DZ  
 ELEVATION:    SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	2	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
TOTAL	0	2	0	0	0	0	2
PERIODS OF CALM (HOURS): 0							
VARIABLE DIRECTION 0							
HOURS OF MISSING DATA: 0							

BEAVER VALLEY JOINT FREQUENCY DISTRIBUTION  
ELEVATED LEVEL BATCH RELEASES  
FOURTH QUARTER 1994 (SPECIFIC DATE PERIODS)

HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD = 94101612-94122905    HOUR RANGE = 01 - 24  
STABILITY CLASS: ALL DT/DZ  
ELEVATION: SPEED:SP500P    DIRECTION:DI500P    LAPSE:DT2-P

WIND DIRECTION	WIND SPEED (MPH)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	8	2	2	0	0	0	12
NNE	2	4	0	0	0	0	6
NE	6	7	0	0	0	0	13
ENE	4	12	2	0	0	0	18
E	1	7	1	0	0	0	9
ESE	3	12	3	0	0	0	18
SE	1	3	3	2	0	0	9
SSE	3	5	0	0	0	0	8
S	2	5	1	0	0	0	8
SSW	0	7	2	0	0	0	9
SW	2	4	3	0	1	0	10
WSW	2	1	0	0	0	0	3
W	4	0	3	0	0	0	7
WNW	1	5	5	3	0	0	14
NW	4	1	5	1	0	0	11
NNW	3	1	6	0	0	0	10
TOTAL	46	76	36	6	1	0	165

PERIODS OF CALM (HOURS): 0

VARIABLE DIRECTION 0

HOURS OF MISSING DATA: 0