



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402

April 30, 2014

10 CFR 50.4
10 CFR 50.36a

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

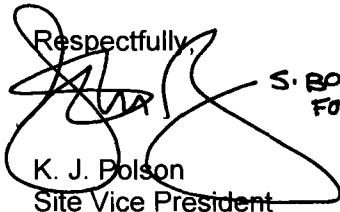
Browns Ferry Nuclear Plant, Units 1, 2, and 3
Facility Operating License Nos. DPR-33, DPR-52, and DPR-68
NRC Docket Nos. 50-259, 50-260, and 50-296

Subject: 2013 Annual Radioactive Effluent Release Report

In accordance with the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, Technical Specification Section 5.6.3, the Tennessee Valley Authority is submitting the BFN Annual Radioactive Effluent Release Report for the period January through December 2013. This document is in conformance with Title 10 of the Code of Federal Regulations (10 CFR) 50.36a and 10 CFR Part 50, Appendix I Section IV.B.1.

Attachment 1 to the Enclosure documents deviations which have occurred from Offsite Dose Calculation Manual (ODCM) controls and surveillance requirements. Attachment 2 to the Enclosure provides information on radiological effluent instrumentation inoperable for greater than 30 days. There were no revisions to the ODCM during 2013.

There are no new regulatory commitments contained in this letter. Should you have any questions concerning this submittal, please contact J. L. Paul at (256) 729-2636.

Respectfully,

S. BONO
FOR K. POLSON.
K. J. Polson
Site Vice President

Enclosure: Browns Ferry Nuclear Plant, Units 1, 2, and 3, 2013 Annual Radioactive Effluent Release Report

IE48
MRR

ENCLOSURE

**Browns Ferry Nuclear Plant
Units 1, 2, and 3**

2013 Annual Radioactive Effluent Release Report

See Enclosed

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

TABLE OF CONTENTS

<u>Section Title</u>	<u>Page Number</u>
Supplemental Information	E-3 — E-10
Gaseous Effluents	E-11 — E-17
Liquid Effluents	E-18 — E-21
Solid Waste	E-22 — E-29
Radiological Impact	E-30 — E-46
Meteorological Data	E-47 — E-176
Attachment 1 - Deviations from ODCM Controls and Surveillance Requirements	E-177
Attachment 2 - Inoperable Radiological Effluent Instrumentation Report	E-178
<u>Tables</u>	<u>Page Number</u>
Table 1A, Gaseous Effluents - Summation of All Releases	E-11
Table 1B, Gaseous Effluents - Elevated Releases	E-12 — E-13
Table 1C, Gaseous Effluents - Ground Level Releases	E-14 — E-15
Table 1D, Gaseous Effluents - Mixed Mode Releases	E-16 — E-17
Table 2A, Liquid Effluents - Summation of All Releases	E-18
Table 2B, Liquid Effluents	E-19 — E-21
Table 3, Solid Waste and Irradiated Fuel Shipments	E-22 — E-29
Table 4, Radiological Impact, Doses from Airborne Effluents	E-37 — E-40
Table 5, Radiological Impact, Doses from Liquid Effluents	E-41 — E-44
Table 5A, Radiological Impact, Total Doses from I-131 Water Ingestion Pathway	E-45
Table 6, Radiological Impact, Total Dose from Fuel Cycle	E-46
Table 7A, Meteorological Data, Joint Frequency Distribution Ground Level Releases, First Quarter	E-47 — E-54

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

TABLE OF CONTENTS

<u>Tables</u>	<u>Page Number</u>
Table 7B, Meteorological Data, Joint Frequency Distribution Ground Level Releases, Second Quarter	E-55 — E-64
Table 7C, Meteorological Data, Joint Frequency Distribution Ground Level Releases, Third Quarter	E-65 — E-72
Table 7D, Meteorological Data, Joint Frequency Distribution Ground Level Releases, Fourth Quarter	E-73 — E-80
Table 8A, Meteorological Data, Joint Frequency Distribution Split Level Releases, First Quarter	E-81 — E-95
Table 8B, Meteorological Data, Joint Frequency Distribution Split Level Releases, Second Quarter	E-96 — E-112
Table 8C, Meteorological Data, Joint Frequency Distribution Split Level Releases, Third Quarter	E-113 — E-127
Table 8D, Meteorological Data, Joint Frequency Distribution Split Level Releases, Fourth Quarter	E-128 — E-142
Table 9A, Meteorological Data, Joint Frequency Distribution Elevated Releases, First Quarter	E-143 — E-150
Table 9B, Meteorological Data, Joint Frequency Distribution Elevated Level Releases, Second Quarter	E-151 — E-160
Table 9C, Meteorological Data, Joint Frequency Distribution Elevated Level Releases, Third Quarter	E-161 — E-168
Table 9D, Meteorological Data, Joint Frequency Distribution Elevated Level Releases, Fourth Quarter	E-169 — E-176

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

1. Regulatory and BFN ODCM Limits

a. Fission and Activation Gases in Gaseous Effluent:

The release of fission and activation gases is regulated by the dose limits of Title 10 of the Code of Federal Regulations (10 CFR) 50 Appendix I and Browns Ferry Nuclear Plant (BFN) Offsite Dose Calculation Manual (ODCM). The air dose to areas at and beyond the site boundary due to noble gases released in gaseous effluents per unit shall be limited during any calendar quarter to ≤ 5 millirad (mrad) for gamma radiation and ≤ 10 mrad for beta radiation; and during any calendar year to ≤ 10 mrad for gamma radiation and ≤ 20 mrad for beta radiation.

b. Iodines and Particulates with Half-Lives Greater than Eight Days in Gaseous Effluents:

The release of iodines and particulates in gaseous effluent is regulated by the dose limits of 10 CFR 50 Appendix I and the BFN ODCM. The dose to a member of the public from radioiodines, radioactive materials in particulate form, and radionuclides other than noble gases with half-lives greater than eight days in gaseous effluent released per unit to areas at and beyond the site boundary shall be limited to any organ during any calendar quarter to ≤ 7.5 millirem (mrem), and during any calendar year to ≤ 15 mrem.

c. Liquid Effluents:

The release of radioactive liquid effluents is regulated by the dose limits of 10 CFR 50 Appendix I and the BFN ODCM. The doses or dose commitment to a member of the public from radioactive materials in liquid effluents released from each unit to unrestricted areas shall be limited during any calendar quarter to ≤ 1.5 mrem to the total body and ≤ 5 mrem to any organ and during any calendar year to ≤ 3 mrem to the total body and ≤ 10 mrem to any organ.

2. Limitation on Dose Rate

a. Fission and Activation Gases in Gaseous Effluent:

1. The instantaneous release rate of fission and activation gases is based on the dose rate limits of 10 CFR 20.1301 and the BFN ODCM. The dose rate at any time to areas at and beyond the site boundary due to noble gases released in gaseous effluents from the site shall be limited to ≤ 500 mrem per year to the total body and ≤ 3000 mrem per year to the skin.
2. The BFN ODCM Section 7.2 determines the maximum noble gas release rate.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

2. Limitation on Dose Rate (Continued)

b. Iodines and Particulates with Half-Lives Greater than Eight Days in Gaseous Effluents:

1. The instantaneous release rate of particulates and iodines is regulated by the dose rate limits of the BFN ODCM. The dose rate at any time to areas at and beyond the site boundary, due to I-131, I-133, H-3, and particulates with half-lives greater than eight days in gaseous effluent released from the site, shall be limited to ≤ 1500 mrem per year to any organ.
2. The BFN ODCM Section 7.3 determines the maximum particulate and iodine dose rates.

c. Liquid Effluents:

1. The concentration of radionuclides in liquid effluents released at any time from the site to unrestricted areas shall be limited to the concentrations specified in 10 CFR 20.1001-20.2402, Appendix B, Table 2, Column 2 for radionuclides other than dissolved or entrained noble gases
2. For dissolved or entrained noble gases, the concentration shall be limited to $2E-4$ μ Ci per milliliter (ml) total activity.

3. Average Energy

The BFN ODCM limits the dose equivalent rates due to the release of noble gases to less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin. The use of dose rate is in accordance with NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants." Since the release rate is not used for effluent control, the average beta and gamma energies (E) for gaseous effluents discussed in Regulatory Guide 1.21, "Measuring, Evaluation, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," are not applicable and not included in this report.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

4. Measurements and Approximations of Total Radioactivity

a. Fission and activation gases:

1. Noble gases in the building vent and stack (elevated) gaseous effluents are continuously monitored. The flow rate of the stack is continuously monitored and the building vent effluent flow rates are calculated once a shift based on the configuration of operating exhaust fans. The vent flow is calculated for each release. Gas grab samples of the stack are taken and analyzed weekly. Gas grab samples of in-service vents are taken and analyzed monthly. The specific noble gas activity concentrations and total volume of the gases are used to calculate the total Curies of noble gases released.
2. The tritium concentration is determined by the analysis of a monthly grab sample for each release point.

b. Iodines and Particulates:

1. Iodines and particulates are continuously sampled on impregnated charcoal filters and particulate filters, respectively. The charcoal and particulate samples are replaced at least weekly and analyzed to determine specific activity concentrations. The specific activity concentrations and vent flow rate data are used weekly to verify that release rate limits were not exceeded. The specific activity concentrations and total volume of gaseous effluent are used on a monthly basis to determine the total curies of each particulate and iodine released during the month.
2. The gross alpha concentration is determined by analysis of a monthly particulate filter composite sample, and strontium-89 and strontium-90 are determined by analysis of a quarterly particulate filter composite sample for each release point.

c. Liquid effluents:

1. The gamma ray emitting radionuclide concentrations are determined for each batch by gamma ray spectroscopy analysis of a grab sample. The allowable release rate is calculated for each batch based upon the known dilution flow. The flow rate of the liquid effluent is continuously monitored and the total volume released in each batch is determined. The total gamma activity released in each batch is determined by multiplying the radionuclide concentrations by the total volume discharged. The total gamma activity released during the month is then determined by summing the gamma activity content of each batch discharged during the month.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

4. Measurements and Approximations of Total Radioactivity (Continued)

c. Liquid effluents (Continued):

2. The gross alpha and tritium concentrations are measured on a monthly composite sample. The strontium-89, strontium-90, and iron-55 are measured on a quarterly composite sample.

d. The Radioactive Gaseous and Liquid Waste Monitoring Sampling and Analysis Program is specified in ODCM Sections 1/2.2.1 and 1/2.2.2. No liquid or gaseous concentration or dose limits were exceeded.

5. Batch Releases

		<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	
A.	<u>Liquid</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	
	<u>Units</u>					
1.	Number of batches released	Each	324**	174**	4	3
2.	Total time for batches released	Minutes	69172.00	30879.00	1251.00	855.00
3.	Maximum time period for a batch release	Minutes	2730.00	400.00	380.00	355.00
4.	Average time period for a batch release	Minutes	213.49	177.47	312.75	285.00
5.	Minimum time period for a batch release	Minutes	100.00	110.00	241.00	180.00
6.	Average BFN beach flow during period of release into the river stream	ft ³ /sec	100077	67684	56208	50773

B. Gaseous

None

** Batch releases include the releases from tanks other than the established plant Radwaste discharge tanks. An explanation of these tanks are documented on Attachment 1

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

6. Abnormal Releases

a. Liquid

1. Number of releases: 3
2. Total activity released ($\mu\text{Ci/ml}$):

<u>Destination</u>	<u>Nuclide</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
Leak to River	H-3	6.37E-01	4.90E-01	5.61E-01	9.24E-02

b. Gaseous

1. Number of releases: 2
2. Total activity released ($\mu\text{Ci/ci}$):

<u>Destination</u>	<u>Nuclide</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
Air	H-3	-	6.92E-02	7.89E-04	-
	I-131	-	-	9.00E-09	-

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

6. Abnormal Releases (Continued)

Summary of Abnormal/Unplanned Releases

The release of radioactive material to the environment from BFN has been a small fraction of the 10 CFR 20 Appendix B and 10 CFR 50 Appendix I limits. There were no limits exceeded as specified in 10 CFR 20 Appendix B and 10 CFR 50 Appendix I.

Three abnormal liquid releases occurred in 2013.

1. Throughout the year tritium was detected and released through the U1, U2, and U3 Station Sumps. The probable source was the Turbine Building Air Wash System from April through September and the U3 Roughing Cooler for U3 Station Sump from October to December (PER 707675 and PER 830901).

Due to the increased incidences of Tritium identified in BFN Station Sumps, PER 619986 was initiated to include Station Sumps in the ODCM as a normal permitted discharge point rather than continuing to report in the ARERR as an abnormal release.

2. The Sedimentation Pond was sampled on April 2, 2013 with a tritium concentration of 1.36E-06 uCi/ml. The Sedimentation Pond was resampled on April 3, 2013 with a tritium concentration of < LLD. (PER 707649)
3. The Sedimentation Pond was sampled on October 18, 2013 with a tritium concentration of 1.45E-06 uCi/ml. (PER 869822)

Two abnormal gaseous releases occurred in 2013.

1. Unit 1 USST 1A phase A bus link panel was found missing bolts in the top corner and the buss link panel was loose. The bus duct air could be heard blowing out of it. Panel was blown out approximately 1 inch. (PER 763270)
2. On April 1, 2013 at 1315, Auxiliary Decay Heat Removal (ADHR) sample showed a tritium concentration of 2.67E-06 uCi/ml. (PER 707641)

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

6. Abnormal Releases (Continued)

Ground Water Monitoring

Onsite groundwater monitoring locations were sampled during the year. These locations were not part of the BFN Radiological Environmental Monitoring Program (REMP). The purpose of these shallow wells was to monitor for potential leaks from plant equipment. Trace levels of tritium were detected in several of these monitoring locations. In the early 2000's, BFN initiated a groundwater study to identify the source of the tritium. Results from a groundwater study completed in June 2006 suggest the source of the tritiated groundwater is associated with the Radwaste/Condensate Transfer Tunnel. Water that may leak into the tunnel could egress via expansion joints and/or cracks through the tunnel wall. These joints and/or cracks were grouted during 2008 with several more leaks grouted in 2010. Groundwater and surface water level measurements during the study indicated the return channel and subsequently the Tennessee River will ultimately be recipient to tritiated groundwater discharge from the site. The highest concentration identified in the groundwater for the year 2013, was 5772 pCi/L (Dewat A). The estimated groundwater/channel water dilution ratio is 1:20,000 at a rate of approximately 0.5 gpm. The tritium concentrations obtained in 2013 from these non-REMP wells are listed below.

<u>Well ID</u>	<u>Date</u>	<u>Activity in pCi/L</u>	<u>Well ID</u>	<u>Date</u>	<u>Activity in pCi/L</u>
R1 (1305)	2/20/2013	325	DEWAT A(1311)	2/21/2013	1023
R1 (1305)	3/13/2013	241	DEWAT A(1311)	3/13/2013	854
R2 (1306)	6/18/2013	217	DEWAT A(1311)	4/12/2013	1309
R2 (1306)	6/20/2013	219	DEWAT A(1311)	5/22/2013	281
R-3 (1307)	2/20/2013	511	DEWAT A(1311)	7/18/2013	2970
R-3 (1307)	3/13/2013	563	DEWAT A(1311)	8/15/2013	717
R-3 (1307)	5/22/2013	556	DEWAT A(1311)	10/10/2013	470
			DEWAT E(1312)		
			(PER 624796 and		
			679394)	1/21/2013	2795
R-3 (1307)	7/18/2013	390	DEWAT E(1312)	2/21/2013	2950
R3 (1307)	10/10/2013	386	DEWAT E(1312)	3/13/2013	2664
BH25(1309)	1/21/2013	579	DEWAT E(1312)	4/12/2013	2409
BH25(1309)	2/20/2013	479	DEWAT E(1312)	5/22/2013	2311
BH25(1309)	3/13/2013	356	DEWAT E(1312)	7/18/2013	260
BH25(1309)	4/12/2013	312	DEWAT E(1312)	8/15/2013	668
BH25(1309)	5/22/2013	347	DEWAT E(1312)	10/10/2013	577
BH25(1309)	7/18/2013	270			
BH25 (1309)	10/10/2013	310			
DEWAT A(1311)					
(PER 624796					
and 679394)	1/21/2013	5772	DSN13C-1	10/10/2013	228

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SUPPLEMENTAL INFORMATION

6. Abnormal Releases (Continued)

Liquid Radwaste or Temporary Storage Tanks

During the reporting period, January 1, 2013 through December 31, 2013, BFN utilized 7 temporary outside liquid radwaste (FRAC) tanks from January through May of 2013. These tanks were used to process batch releases to the river from the excess water in the radwaste basement. All releases were permitted and documented by performance of surveillance 0-SI-4.8.A.1-1(a) in accordance with ODCM requirements (Reference PER 662887)

Changes to the Radwaste System and Changes to the Process Control Program

In calendar year 2013, BFN had no permanent changes to the Radwaste System or the Process Control Program. The previous paragraph documents the Temporary Storage Tanks brought on-site due to Radwaste basement water increase from CCW leaks. These temporary tanks were removed from service in May, 2013 when the plant Liquid Radwaste Treatment System resumed all processing operations.

Missed Compensatory Samples

During the reporting period, January 1, 2013 through December 31, 2013, there were no missed compensatory samples.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

GASEOUS EFFLUENTS

**TABLE 1A
Page 1 of 1
Gaseous Effluents - Summation of All Releases**

	<u>Units</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>	<u>Error %</u>
A. Fission and Activation Gases						
1. Total Releases	Curies	**	**	**	**	45
2. Average Release Rate for Period	μCi/sec	**	**	**	**	
3. Percent of Applicable Limit	%	****	****	****	****	
B. Iodines						
1. Total Iodine-131	Curies	1.12E-03	1.08E-03	1.58E-03*	1.23E-03	36
2. Average Release Rate for Period	μCi/sec	1.44E-04	1.38E-04	1.99E-04	1.55E-04	
3. Percent of Applicable Limit	%	****	****	****	****	
C. Particulates						
1. Particulates with half-lives > eight days	Curies	1.26E-03	9.41E-04	2.41E-02	1.74E-02	35
2. Average Release Rate for Period	μCi/sec	1.62E-04	1.20E-04	3.03E-03	2.19E-03	
3. Percent of Applicable Limit	%	****	****	****	****	
4. Gross Alpha Radioactivity	Curies	**	**	**	**	
D. Tritium						
1. Total Release	Curies	4.93E+01	2.36E+01*	1.03E+02*	1.11E+02	21
2. Average Release Rate for Period	μCi/sec	6.35E+00	3.00E+00	1.29E+01	1.40E+01	
3. Percent of Applicable Limit	%	****	****	****	****	
E. Carbon-14***						
1. Total Release	Curies	8.25E+00	8.78E+00	1.02E+01	9.88E+00	
2. Total as CO ₂	Curies	7.84E+00	8.34E+00	9.66E+00	9.39E+00	

* - Includes Activity from Abnormal Release

** - Not Detected.

*** - Estimated using EPRI methodology provided in EPRI Report 1021106.

**** - Applicable Limits are expressed in terms of dose. See Enclosure 1.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1B
Page 1 of 2
Gaseous Effluents - Elevated Releases**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1. Fission Gases				
Kr-85m	*	*	*	*
Kr-85	*	*	*	*
Kr-87	*	*	*	*
Kr-88	*	*	*	*
Xe-133	*	*	*	*
Xe-135m	*	*	*	*
Xe-135	*	*	*	*
Xe-138	*	*	*	*
Others (N-13)	*	*	*	*
<u>Total for Period</u>	*	*	*	*
2. Iodines				
I-131	3.82E-04	2.80E-04	3.32E-04	1.75E-04
I-135	*	*	*	*
I-133	1.33E-03	7.54E-04	7.36E-04	3.96E-04
<u>Total for Period</u>	<u>1.71E-03</u>	<u>1.03E-03</u>	<u>1.07E-03</u>	<u>5.71E-04</u>

* - Not Detected.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1B (Continued)
Page 2 of 2**

Gaseous Effluents - Elevated Releases

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates*				
Sr-89	1.87E-04	1.77E-04	1.11E-04	9.69E-05
Sr-90	**	**	**	**
Sr-91	2.72E-03	3.80E-03	2.07E-03	1.35E-03
Cs-134	**	**	**	**
Cs-137	**	**	**	**
Ba-140	2.83E-04	3.24E-04	1.78E-04	1.51E-04
La-140	1.76E-04	2.17E-04	1.14E-04	9.82E-05
Te-132	**	**	**	**
Zn-69m	3.38E-06	**	5.22E-06	**
Others (Au-199)	**	7.02E-06	**	**
Rb-88	**	2.63E-02	**	**
Rb-89	**	1.02E-01	**	**
Y-91m	1.95E-03	2.50E-03	1.27E-03	9.46E-04
Cs-138	**	3.28E-02	8.45E-03	**
Ce-144	**	3.62E-06	**	**
Ba-139	2.16E-01	2.73E-01	1.52E-01	1.09E-01
<u>Total for Period*</u>	<u>2.22E-01</u>	<u>4.42E-01</u>	<u>1.64E-01</u>	<u>1.12E-01</u>
4. Tritium	1.16E+00	1.01E+00	6.97E+00	6.09E+00
5. Carbon-14***	7.84E+00	8.34E+00	9.66E+00	9.39E+00

* - Includes all nuclides, even those with less than an eight day half-life.

** - Not Detected.

*** - Estimated using EPRI methodology provided in EPRI Report 1021106.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1C
Page 1 of 2
Gaseous Effluents - Ground Level Releases**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1. Fission Gases				
Kr-85m	*	*	*	*
Kr-85	*	*	*	*
Kr-87	*	*	*	*
Kr-88	*	*	*	*
Xe-133	*	*	*	*
Xe-135m	*	*	*	*
Xe-135	*	*	*	*
Xe-138	*	*	*	*
Ar-41	*	*	*	*
Other (specify)	*	*	*	*
<u>Total for Period</u>	*	*	*	*
2. Iodines				
I-131	3.48E-04	3.60E-04	4.38E-04**	4.06E-04
I-132	*	*	*	*
I-133	1.48E-03	1.57E-03	1.60E-03	1.70E-03
<u>Total for Period</u>	<u>1.83E-03</u>	<u>1.93E-03</u>	<u>2.04E-03</u>	<u>2.11E-03</u>

* - Not Detected.

** - Activity from Abnormal Release.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1C (Continued)
Page 2 of 2
Gaseous Effluents - Ground Level Releases**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates*				
Co-60	3.60E-06	**	**	3.62E-07
Sr-89	5.90E-06	7.42E-08	**	2.52E-05
Sr-90	**	**	**	**
Cs-134	**	**	**	**
Cs-137	**	**	**	**
Ba-140	1.20E-05	3.35E-06	5.21E-06	3.93E-05
La-140	**	**	**	2.71E-05
Sr-91	5.80E-05	**	**	1.64E-04
Sr-92	**	7.87E-05	**	**
Y-91m	3.85E-04	2.69E-04	1.88E-04	6.17E-04
Cs-138	6.33E-02	4.36E-03	4.27E-03	3.36E-03
Ba-139	1.79E-02	1.69E-02	6.57E-03	6.92E-03
<u>Total for Period*</u>	<u>8.16E-02</u>	<u>2.16E-02</u>	<u>1.10E-02</u>	<u>1.11E-02</u>
4. Tritium	<u>8.05E+00</u>	<u>4.33E+00***</u>	<u>1.14E+01***</u>	<u>1.75E+01</u>

* - Include all nuclides even those with less than an eight day half-life.

** - Not Detected.

*** - Includes Activity from Abnormal Release.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1D
Page 1 of 2
Gaseous Effluents - Mixed Mode Releases**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1. Fission Gases				
Kr-85m	**	**	**	**
Kr-85	**	**	**	**
Kr-87	**	**	**	**
Kr-88	**	**	**	**
Xe-133	**	**	**	**
Xe-135m	**	**	**	**
Xe-135	**	**	**	**
Xe-138	**	**	**	**
Other (specify)	**	**	**	**
<u>Total for Period</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>—</u>
2. Iodines				
I-131	3.86E-04	4.44E-04	8.08E-04	6.50E-04
I-132	**	**	5.83E-05	3.56E-04
I-133	1.76E-03	2.30E-03	4.50E-03	3.49E-03
<u>Total for Period</u>	<u>2.15E-03</u>	<u>2.74E-03</u>	<u>5.37E-03</u>	<u>4.49E-03</u>

* - The Reactor Building and Radwaste Building are treated as split-level releases.
** - Not Detected.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**GASEOUS EFFLUENTS
(Continuous Mode Only)**

**TABLE 1D (Continued)
Page 2 of 2
Gaseous Effluents - Mixed Mode Releases**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates**				
Sr-89	3.82E-05	3.60E-05	5.07E-05	8.53E-05
Ce-141	1.59E-06	***	***	***
Cs-137	9.60E-05	7.03E-05	1.69E-04	7.03E-06
Ba-140	1.90E-04	1.24E-04	2.31E-04	3.59E-04
La-140	1.02E-04	8.90E-05	1.01E-04	2.07E-04
Na-24	***	***	***	8.75E-06
Mn-54	1.45E-05	1.69E-05	***	***
Mn-56	***	5.71E-04	2.92E-05	***
Co-57	8.91E-07	***	***	***
Co-58	8.95E-06	***	***	2.66E-06
Co-60	4.06E-04	1.79E-04	5.34E-04	1.78E-04
Zn-65	9.30E-06	***	***	***
Y-91m	1.73E-03	1.78E-03	2.52E-03	3.93E-03
Sr-91	1.71E-03	7.27E-04	1.02E-03	5.37E-03
Sr-92	3.91E-04	***	***	2.45E-04
Cs-138	5.56E-04	9.81E-03	4.66E-03	1.37E-02
Ba-139	6.66E-02	1.16E-01	1.14E-01	1.45E-01
Y-92	***	***	***	1.05E-03
Total for Period**	<u>7.19E-02</u>	<u>1.30E-01</u>	<u>1.23E-01</u>	<u>1.71E-01</u>
4. Tritium	<u>4.01E+01</u>	<u>1.82E+01</u>	<u>8.42E+01</u>	<u>8.73E+01</u>

* - The Reactor Building and Radwaste Building are treated as split-level releases.

** - Includes all nuclides, even those with less than an eight day half-life.

*** - Not Detected.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

**LIQUID EFFLUENTS
(Batch Mode Only)**

**TABLE 2A
Page 1 of 1
Liquid Effluents - Summation of All Releases**

	<u>Units</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>	<u>Error %</u>
A. Fission and Activation Products (Does not include tritium, gases, alpha)						
1. Total Release	Curies	6.93E-01	5.47E-01	2.36E-02	1.06E-04	9
2. Average Diluted Concentration Released During the Period	μCi/ml	4.54E-09	7.80E-09	8.31E-09	8.16E-11	
3. Percent of Applicable Limit	%	***	***	***	***	
B. Tritium						
1. Total Releases	Curies	4.47E+01**	3.61E+01**	4.29E+00**	2.82E+00**	6
2. Average Diluted Concentration Released During Period	μCi/ml	2.93E-07	5.15E-07	1.51E-06	2.18E-06	
3. Percent of Applicable Limit	%	***	***	***	***	
C. Dissolved and Entrained Noble Gases						
1. Total Releases	Curies	1.56E-03	7.56E-04	*	2.21E-05	8
2. Average Diluted Concentration Released During Period	μCi/ml	1.02E-11	1.07E-11	*	1.71E-11	
3. Percent of Applicable Limit	%	***	***	***	***	
D. Gross Alpha Radioactivity						
1. Total Releases	Curies	*	*	*	*	48
2. Average Diluted Concentration Released During Period	μCi/ml	*	*	*	*	
E. Volume of Liquid Waste to Discharge						
Canal (Prior to dilution)	Liters	2.82E+07	1.51E+07	4.55E+05	2.88E+05	3
F. Volume of Dilution Water for Period						
	Liters	1.52E+11	7.01E+10	2.84E+09	1.29E+09	10
G. Total CCW						
	Gigagal	2.30E+02	2.31E+02	2.66E+02	2.37E+02	

* - Not Detected.

** - Includes activity from abnormal releases. Dilution flow was not determined for the abnormal releases.

*** - The applicable limit is expressed in terms of dose. See Radiological Impact Report.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

LIQUID EFFLUENTS

**TABLE 2B
Page 1 of 3
Liquid Effluents**

	<u>Isotope in Curies</u> (Required by Regulatory (REG) Guide 1.21)	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1.	Ba-140	2.89E-02	2.29E-03	*	*
2.	Ce-141	8.75E-06	*	*	*
3.	Co-58	1.76E-02	1.67E-02	2.00E-04	*
4.	Co-60	1.83E-01	2.48E-01	1.21E-02	3.50E-05
5.	Cr-51	1.06E-03	3.89E-04	*	*
6.	Cs-134	6.87E-03	3.55E-03	2.74E-04	1.47E-06
7.	Cs-137	2.23E-01	1.35E-01	8.46E-03	6.42E-05
8.	Fe-59	1.44E-03	*	*	*
9.	I-131	6.96E-04	6.78E-04	*	*
10.	La-140	1.19E-02	4.50E-04	*	*
11.	Mn-54	4.14E-02	7.22E-02	7.81E-04	2.83E-06
12.	Mo-99	4.00E-04	2.07E-03	*	*
13.	Nb-95	2.78E-06	2.88E-05	*	*
14.	Sr-89	5.06E-02	2.17E-02	1.59E-04	*
15.	Sr-90	2.29E-03	1.16E-03	4.82E-06	*
16.	Tc-99m	3.59E-04	1.22E-03	*	*
17.	Xe-133	6.97E-04	5.55E-04	*	1.24E-05
18.	Xe-135	8.38E-04	1.60E-04	*	9.76E-06
19.	Zn-65	2.88E-02	5.65E-03	3.24E-04	*
20.	Zr-95	*	*	*	*

* - Not Detected.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

LIQUID EFFLUENTS

**TABLE 2B (Continued)
Page 2 of 3
Liquid Effluents**

<u>Isotope Others In Curies</u> (Not Required by REG Guide 1.21)		<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1.	F-18	4.15E-02	2.00E-02	8.95E-05	2.17E-06
2.	Fe-55	5.65E-03	3.06E-03	2.35E-04	*
3.	Mn-56	7.89E-04	*	*	*
4.	Zn-69m	1.20E-03	4.26E-06	*	*
5.	Nb-97	4.29E-05	4.77E-12	*	*
6.	Ag-110m	4.54E-03	4.10E-04	1.36E-04	*
7.	Sb-122	6.08E-05	1.75E-05	*	*
8.	I-133	6.25E-04	1.60E-03	*	*
9.	As-76	3.00E-04	5.69E-05	*	*
10.	Na-24	2.87E-02	1.04E-02	8.54E-04	*
11.	Y-91m	3.49E-03	5.85E-04	*	*
12.	Ba-139	1.80E-04	*	*	*
13.	Br-84	4.03E-05	*	*	*
14.	Co-57	5.37E-06	*	*	*
15.	Cs-138	*	8.71E-06	*	*
16.	I-134	6.03E-05	*	*	*
17.	La-142	6.42E-06	*	*	*
18.	Ni-65	1.46E-05	9.15E-06	*	*
19.	Rb-89	5.70E-05	*	*	*
20.	Sb-124	9.40E-04	2.19E-04	*	*
21.	Sr-91	5.49E-03	1.55E-04	*	*
22.	Sr-92	2.99E-04	8.73E-05	1.13E-05	*
23.	Tc-101	2.69E-05	*	*	*
24.	Te-132	3.48E-06	*	*	*

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

LIQUID EFFLUENTS

**TABLE 2B (Continued)
Page 3 of 3
Liquid Effluents**

<u>Isotope Others In Curies</u> (Not Required by REG Guide 1.21)	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
25. Zr-97	1.07E-05	*	*	*
26. Ar-41	4.43E-06	2.87E-06	*	*
27. Kr-87	7.83E-06	*	*	*
28. Xe-135m	7.56E-06	3.75E-05	*	*
29. Be-7	4.06E-05	*	*	*

* - Not Detected.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3
Page 1 of 8
Solid Waste and Irradiated Fuel Shipments**

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

1. Type of Waste	Unit	Jan - Jun 2013	July-Dec 2013	Error %
a. Spent resins, filters, sludges, evaporator bottoms, etc.	m ³	1.23E+02	4.00E+01	+/- 25%
	Ci	6.35E+02	3.90E+01	+/- 25%
b. Dry Active Waste, Compressible Waste Contaminated Equipment, etc.	m ³	1.44E+03	6.15E+02	+/- 25%
	Ci	2.46E+00	1.96E-01	+/- 25%
c. Irradiated Components, Control Rods & LPRMs with fission chambers	m ³	1.49E+00	2.08E-01	+/- 25%
	Ci	8.04E+04	4.78E+01	+/- 25%
d. Other - Combined Packages HIC RWCU 2002	m ³	1.10E+02	1.18E+02	+/- 25%
	Ci	8.50E+00	2.69E+00	+/- 25%

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
Page 2 of 8
Solid Waste and Irradiated Fuel Shipment**

2. Estimate of Major Nuclide Composition

**a. Spent resins, filters, sludges,
evaporator bottoms, etc.**

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	H-3	5.82E-02	3.92E-01
2)	C-14	6.23E-02	4.20E-01
3)	Cr-51	1.04E-01	6.99E-01
4)	Mn-54	2.21E+00	1.49E+01
5)	Fe-55	1.93E+01	1.30E+02
6)	Fe-59	1.68E-01	1.13E+00
7)	Co-57	9.54E-05	6.43E-04
8)	Co-58	4.39E-01	2.96E+00
9)	Co-60	3.49E+01	2.35E+02
10)	Ni-63	1.43E+00	9.66E+00
11)	Cu-64	1.27E-06	8.54E-06
12)	Zn-65	1.18E+00	7.96E+00
13)	Zn-69m	4.44E-12	2.99E-11
14)	Sr-89	1.69E-04	1.14E-03
15)	Sr-90	8.19E-02	5.52E-01
16)	Zr-95	2.75E-04	1.85E-03
17)	Tc-99	9.41E-02	6.34E-01
18)	Ag-110m	3.16E-01	2.13E+00
19)	SB-124	5.33E-04	3.59E-03
20)	SB-125	4.75E-04	3.20E-03
21)	I-131	4.14E-02	2.79E-01
22)	I-133	5.77E-08	3.89E-07
23)	CS-134	2.66E+00	1.79E+01
24)	CS-136	3.03E-44	2.04E-43
25)	CS-137	3.68E+01	2.48E+02

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
Page 3 of 8
Solid Waste and Irradiated Fuel Shipment**

2. Estimate of Major Nuclide Composition (Continued)

a. Spent resins, filters, sludges, evaporator bottoms, etc. (Continued)

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
26)	BA-140	4.56E-02	3.07E-01
27)	LA-140	2.94E-04	1.98E-03
28)	CE-141	1.63E-02	1.10E-01
29)	CE-144	8.29E-02	5.59E-01
30)	PU-238	5.79E-04	3.90E-03
31)	PU-239	3.34E-05	2.25E-04
32)	PU-240	3.34E-05	2.25E-04
33)	PU-241	4.27E-02	2.88E-01
34)	AM-241	5.34E-04	3.60E-03
35)	CM-242	4.70E-05	3.17E-04
36)	CM-243	3.77E-04	2.54E-03
37)	CM-244	3.40E-04	2.29E-03

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
Page 4 of 8
Solid Waste and Irradiated Fuel Shipments**

2. Estimate of Major Nuclide Composition (Continued)

**b. Dry Active Waste, Compressible Waste
Contaminated Equipment, etc.**

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	H-3	2.00E-02	5.30E-04
2)	C-14	3.20E-02	8.49E-04
3)	CR-51	7.39E-01	1.96E-02
4)	MN-54	4.97E+00	1.32E-01
5)	FE-55	2.59E+01	6.88E-01
6)	FE-59	1.20E-01	3.18E-03
7)	CO-58	6.33E-01	1.68E-02
8)	CO-60	4.07E+01	1.08E+00
9)	NI-63	1.14E+00	3.02E-02
10)	ZN-65	7.16E+00	1.90E-01
11)	SR-89	1.21E-01	3.20E-03
12)	SR-90	3.72E-02	9.86E-04
13)	ZR-95	9.87E-03	2.62E-04
14)	NB-95	2.26E-04	5.99E-06
15)	TC-99	1.61E-02	4.27E-04
16)	AG-110m	1.70E+00	4.50E-02
17)	SN-113	0.00E+00	0.00E+00
18)	SB-124	2.01E-02	5.32E-04
19)	SB-125	0.00E+00	0.00E+00
20)	I-131	2.95E-03	7.83E-05
21)	CS-134	2.23E+00	5.91E-02
22)	CS-137	1.44E+01	3.81E-01
23)	BA-140	1.51E-02	4.01E-04
24)	LA-140	2.97E-12	7.88E-14
25)	CE-141	2.59E-02	6.88E-04
26)	CE-144	1.49E-02	3.95E-04
27)	PU-238	6.82E-05	1.81E-06
28)	PU-241	3.10E-03	8.22E-05
29)	AM-241	6.14E-05	1.63E-06
30)	CM-242	1.18E-07	3.12E-09
31)	CM-243	6.03E-05	1.60E-06
32)	CM-244	6.03E-05	1.60E-06

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
Page 5 of 8
Solid Waste and Irradiated Fuel Shipments**

2. Estimate of Major Nuclide Composition (Continued)

c. Irradiated Components, Control Rods, etc.

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	H-3	5.14E-03	4.13E+00
2)	C-14	1.26E-02	1.01E+01
3)	MN-54	2.62E-01	2.11E+02
4)	FE-55	3.38E+01	2.72E+04
5)	CO-60	5.86E+01	4.71E+04
6)	NI-59	3.68E-02	2.96E+01
7)	NI-63	7.24E+00	5.82E+03
8)	NB-94	1.49E-04	1.20E-01
9)	TC-99	5.41E-05	4.35E-02
10)	CS-137	1.24E-04	1.00E-01
11)	CE-144	7.54E-07	6.06E-04
12)	HF-181	6.89E-03	5.54E+00
13)	TA-182	2.70E-02	2.17E+01
14)	U-235	2.51E-10	2.02E-07
15)	NP-237	6.52E-09	5.24E-06
16)	PU-238	9.39E-05	7.55E-02
17)	PU-239	7.75E-08	6.23E-05
18)	PU-240	1.12E-07	9.04E-05
19)	PU-241	1.85E-05	1.49E-02
20)	AM-241	2.00E-07	1.61E-04
21)	AM-243	6.65E-09	5.35E-06
22)	CM-242	6.52E-08	5.24E-05
23)	CM-243	6.14E-09	4.94E-06
24)	CM-244	1.46E-06	1.17E-03

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
Page 6 of 8
Solid Waste and Irradiated Fuel Shipments**

2. Estimate of Major Nuclide Composition (Continued)

d Other (Combined Packages)

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	H-3	9.29E-04	1.04E-04
2)	C-14	3.71E-02	4.15E-03
3)	K-40	1.45E-02	1.62E-03
4)	CR-51	1.75E-01	1.96E-02
5)	MN-54	6.41E+00	7.17E-01
6)	FE-55	4.00E+01	4.48E+00
7)	FE-59	1.16E-01	1.30E-02
8)	CO-57	8.93E-04	1.00E-04
9)	CO-58	7.07E-01	7.91E-02
10)	CO-60	3.55E+01	3.97E+00
11)	NI-63	5.76E-01	6.45E-02
12)	ZN-65	4.18E+00	4.68E-01
13)	SR-89	3.55E-02	3.97E-03
14)	SR-90	3.00E-02	3.36E-03
15)	ZR-95	2.29E-02	2.56E-03
16)	NB-95	3.12E-02	3.49E-03
17)	TC-99	1.00E-03	1.12E-04
18)	AG-110M	1.78E+00	1.99E-01
19)	SN-113	2.46E-04	2.75E-05
20)	SB-124	2.93E-02	3.28E-03
21)	SB-125	4.45E-03	4.98E-04
22)	I-131	2.42E-02	2.71E-03
23)	CS-134	2.64E+00	2.96E-01
24)	CS-137	7.53E+00	8.43E-01
25)	BA-140	1.70E-02	1.90E-03
26)	LA-140	7.26E-04	8.13E-05
27)	CE-141	3.39E-02	3.79E-03
28)	CE-144	1.03E-01	1.15E-02

**BROWNS FERRY NUCLEAR PLANT
 UNITS 1, 2, AND 3
 2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
 Page 7 of 8
 Solid Waste and Irradiated Fuel Shipments**

2. Estimate of Major Nuclide Composition (Continued)

d Other (Combined Packages)

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
29)	PU-238	5.16E-05	5.78E-06
30)	PU-239	1.90E-05	2.13E-06
31)	PU-240	1.85E-05	2.07E-06
32)	PU-241	1.16E-02	1.30E-03
33)	AM-241	1.27E-04	1.42E-05
34)	CM-242	8.67E-05	9.71E-06
35)	CM-243	1.11E-04	1.24E-05
36)	CM-244	1.08E-04	1.21E-05

**BROWNS FERRY NUCLEAR PLANT
 UNITS 1, 2, AND 3
 2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

Solid Waste

**TABLE 3 (Continued)
 Page 8 of 8
 Solid Waste and Irradiated Fuel Shipments**

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
21	HIC/Cask, Sole Use Truck	Barnwell Processing Facility Barnwell, SC
14	HIC/Cask, Sole Use Truck	Waste Control Specialist Andrews, TX
71	53 - Truck 18 - HIC/Cask Sole Use Truck	Duratek Oak Ridge, TN
14	14 - Sole/Non Sole Use Truck	Toxco, Inc. Oak Ridge, TN

B. Irradiated Fuel Shipments

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
8	HIC/Cask Sole Use	Waste Control Specialist Andrews, TX

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

1. Introduction

Potential doses to the "maximum exposed individual" and the population around Browns Ferry Nuclear Plant (BFN) are calculated for each quarter as required in Section 5.2 of the Offsite Dose Calculation Manual (ODCM). The methodology used to estimate dose for determining plant releases for the reporting period is specified in Sections 6 and 7 of the ODCM. Dispersion of radioactive effluents in the environment is estimated using meteorological data and river flow measured during the period. In this report, the doses resulting from releases are described and compared to limits established for BFN.

2. Dose Limits

The ODCM specifies limits for the release of radioactive effluents, as well as limits for doses to the general public from the release of radioactive effluents. These limits are set well below the Technical Specification limits which govern the concentrations of radioactivity and doses permissible in unrestricted areas. This ensures that radioactive effluent releases are As Low As Reasonably Achievable.

The air dose limits in areas at and beyond the Site Boundary due to noble gases released in gaseous effluents per unit are:

≤ 5 mrad per quarter and
 ≤ 10 mrad per year for gamma radiation.
- and -
 ≤ 10 mrad per quarter and
 ≤ 20 mrad per year for beta radiation.

The dose limits to a member of the public in an unrestricted area from radioiodines, radioactive materials in particulate form, and radionuclides other than noble gases with half-lives > 8 days released in gaseous effluents for each unit are:

≤ 7.5 mrem per quarter and
 ≤ 15 mrem per year to any organ.

The dose or dose commitment to a member of the public from radioactive material in liquid effluents released to unrestricted areas are:

≤ 1.5 mrem per quarter and
 ≤ 3 mrem per year to the total body,
- and -
 ≤ 5 mrem per quarter and
 ≤ 10 mrem per year to any organ.

The limit for the total effective dose equivalent to an individual member of the public inside the site boundary is:

100 mrem per year.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

2. Dose Limits (Continued)

The Environmental Protection Agency limits for total dose to any member of the public in the vicinity of a nuclear power plant, established in the Environmental Dose Standard of 40 CFR 190, are:

≤ 25 mrem per year to the whole body,
≤ 75 mrem per year to the thyroid,
- and -
≤ 25 mrem per year to any other organ.

3. Dose Calculations

Estimated doses to members of the public are determined using computer models (the Gaseous Effluent Licensing Code, and the Quarterly Water Dose Assessment Code (QWATA)). These models are based on guidance provided by the Nuclear Regulatory Commission (NRC) for determining the potential dose to individuals and populations living in the vicinity of the plant. The area around the plant is analyzed to determine the pathways through which the public may receive a dose. The doses calculated are a representation of the dose to a "maximum exposed individual." Some of the factors used in these calculations (such as ingestion rates) are maximum values to ensure conservative reporting data. The values chosen will tend to overestimate the dose. The expected dose to actual individuals is lower. The calculated doses are presented in Tables 4, 5, and 6.

4. Doses From Airborne Effluents

For airborne effluents, members of the public can be exposed to radiation from several sources: direct radiation from the radioactivity in the air, direct radiation from radioactivity deposited on the ground, inhalation of airborne radioactivity, ingestion of vegetation which contains radioactivity deposited from the atmosphere, and ingestion of milk and beef which contains radioactivity deposited from the atmosphere onto vegetation and subsequently consumed by animals.

a. Airborne Release Points

There are four monitored release points from BFN: the turbine building, the radwaste building, the reactor building, and the stack.

Releases from the turbine building are considered ground-level releases. The ground-level Joint Frequency Distribution (JFD) is derived from wind speeds and directions measured 10.5 meters above the ground and from the vertical temperature difference between 10.03 and 45.30 meters, and are presented for each quarter in the 2013 Meteorological Data Tables 7A, 7B, 7C, and 7D.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

4. Doses From Airborne Effluents (Continued)

a. Airborne Release Points (Continued)

Releases from the radwaste and reactor buildings are considered split-level releases. Portions of the release are treated as ground-level while other portions are considered elevated depending on the ratio of the vertical exit velocity to the horizontal wind speed. The split-level dispersion approach is implemented using a model that requires two complete quarterly JFDs for each effluent vent, one for the ground-level releases and one for the elevated releases. The ground-level portion of the split-level JFD is based on wind speeds and directions measured 10.5 meters above ground-level and from the vertical temperature difference between 10.03 and 45.30 meters. The elevated portion of the split-level JFD is based on wind speeds and direction measurements at the 45.74 meter level and the vertical temperature difference between 10.03 and 89.59 meters. Both of these JFDs are given for each quarter in the 2013 Meteorological Data Tables 8A, 8B, 8C, and 8D.

Releases from the stack are considered to be elevated releases. The JFDs for elevated releases are based on wind directions and wind speeds measured at 90.29 meters and the vertical temperature difference between 10.03 and 89.59 meters, and are given for each quarter in the 2013 Meteorological Data Tables 9A, 9B, 9C, 9D.

b. Meteorological Data

Meteorological variables at BFN are measured continuously. Measurements collected include wind speed and wind direction at heights of 10.5, 45.74, and 90.29 meters above the ground, and temperature at heights of 10.03, 45.30, and 89.59 meters above the ground. Quarterly JFDs are calculated for each release point using the appropriate levels of meteorological data. A quarterly JFD gives the percentage of the time that the wind is blowing out of a particular upwind compass sector in a particular range of wind speeds for a given stability class A through G. The wind speeds are divided into nine wind speed ranges. Calms are distributed by direction in proportion to the distribution of noncalm wind directions less than 1.6 m/s (3.5 mph). Stability classes are determined from the vertical temperature difference between two measurement levels.

The generally open terrain around BFN does not cause any significant effects on the transport and dispersion of gaseous effluents from the plant. Within 30 kilometers of BFN, the terrain is mostly gently rolling hills (30-60 meters). Between 30 and 80 kilometers, the hills become larger to the north and south and mountainous to the east and northeast. The Tennessee River/Wheeler Lake may have a minor effect on transport and dispersion in the immediate vicinity of BFN during periods of winds with a southerly component, overcast skies, and relatively high wind speeds. Also, the lower layer (10-45 meters) stability class tends to be more stable. However, during this infrequent condition, dose estimates will be conservative.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

4. Doses From Airborne Effluents (Continued)

c. External Exposure Dose

Dose calculated for maximum external air dose (gamma-air and beta-air) are made for points at and beyond the unrestricted area boundary as described in the BFN ODCM. The highest of these doses is then selected.

d. Submersion Dose

External doses to the skin and total body, due to submersion in a cloud of noble gases, are calculated for the nearest residence in each sector. The residence with the highest dose is then selected from all sectors.

e. Organ Dose

Dose to an organ due to releases of airborne effluents are estimated for the inhalation, ground contamination, and ingestion pathways. The ingestion pathway is further divided into three possible contributing pathways: ingestion of cow/goat milk, ingestion of beef, and ingestion of vegetables. Doses from applicable pathways are calculated for each receptor location identified in the most recent land use survey. To determine the maximum organ dose, the doses from the pathways are summed for each receptor. However, for the ingestion dose, only those pathways that exist for each receptor are considered in the sum, e.g., milk ingestion doses are included only for locations where milk was consumed without commercial preparation and vegetable ingestion is included only for those locations where a garden was identified. To conservatively account for beef ingestion, a beef ingestion dose equal to that for the highest unrestricted area boundary location is added to each identified receptor. For ground contamination, the dose added to the organ dose being calculated is the total body dose calculated for that location, i.e., it is assumed that the dose to an individual organ is equal to the total body dose.

The maximum organ dose, thyroid dose, and total body dose from airborne effluents are presented in Table 4.

5. Doses From Liquid Effluents

For liquid effluents, the public can be exposed to radiation from three sources: the ingestion of water from the Tennessee River, the ingestion of fish caught in the Tennessee River, and direct exposure from radioactive material deposited on the river shoreline sediment (recreation).

The concentration of radionuclides in the Tennessee River is calculated by a computer model which uses measured hydraulic data downstream of BFN. Parameters used to determine the doses are based on guidance given by the NRC for maximum ingestion rates, exposure times, etc.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

5. Doses From Liquid Effluents (Continued)

Wherever possible, parameters used in the dose calculation are site specific. The models that are used to estimate doses, as well as the parameters input to the models, are described in detail in the BFN ODCM.

a. Liquid Release Points and River Data

Radionuclide concentrations in the Tennessee River are calculated assuming that releases in liquid effluents are continuous. When necessary, liquid releases from BFN, located at Tennessee River Mile 294, are made through diffusers which extend into the Tennessee River. It is assumed that releases to the river through these diffusers will initially be entrained in one-fifth of the water which flows past the plant. The QWATA code makes the assumption that this mixing condition holds true until the water is completely mixed at the first downstream dam (Wheeler Dam), at Tennessee River Mile 283.

Doses are calculated for locations within a 50 mile radius downstream of the plant site. The maximum potential recreation dose is calculated for a location immediately downstream from the plant's release point. The maximum exposed individual dose from ingestion of fish is assumed to be that calculated for the consumption of fish caught anywhere between the plant and the first downstream dam. The maximum exposed individual dose from drinking water is assumed to be that calculated at the nearest downstream public water supply [West Morgan - East Lawrence (WMEL)]. This could be interpreted as indicating that the maximum exposed individual, as assumed for liquid releases from BFN, is an individual who obtains all of his drinking water at WMEL, consumes fish caught from the Tennessee River between BFN and Wheeler Dam, and spends 500 hours per year on the shoreline just downstream of the plant's release point. Doses calculated for the maximum exposed individual due to liquid effluents for each quarter in the period are presented in Table 5 along with the average river flows past the plant site for the periods.

6. Population Doses

Population doses due to airborne effluents are calculated for an estimated 778,266 people living within a 50-mile radius of the plant site. Doses from external pathways and inhalation are based on the 50-mile human population distribution. Ingestion population doses are calculated assuming that each individual consumed milk, vegetables, and meat produced within the sector in which the individual resides.

Population doses due to liquid effluents are calculated for the entire downstream Tennessee River population. Water ingestion population doses are calculated using actual population figures for downstream public water supplies. Fish ingestion population doses are calculated assuming that all sport fish caught in the Tennessee River are consumed by the Tennessee River population. Recreation population doses are calculated using historical recreational data on the number of shoreline visits at downstream locations.

Population doses calculated for airborne and liquid effluents are presented in Tables 4 and 5.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

7. Offsite Direct Radiation Dose

External gamma radiation levels were measured by environmental dosimeters deployed around BFN as part of the offsite Radiological Environmental Monitoring Program (REMP). The quarterly gamma radiation levels determined from these dosimeters during this reporting period averaged approximately 18 mrem/quarter at onsite (at or near the site boundary) stations and approximately 15 mrem/quarter at offsite stations or approximately 2.5 mrem/quarter higher onsite than at offsite stations. This difference is consistent with levels measured for pre-operation and construction phases of the Tennessee Valley Authority nuclear plants where the average radiation levels onsite were generally 2-6 mrem/quarter higher than the levels offsite. This may be attributable to natural variations in environmental radiation levels, earth moving activities onsite, the mass of concrete employed in the construction of the plants, or other undetermined influences. Fluctuations in natural background dose rates and in dosimeter readings tend to mask any small increments which may be due to plant operations. Thus, there was no identifiable increase in dose rate levels attributable to direct radiation from plant equipment and/or gaseous effluents.

8. Dose To A Member Of The Public Inside The Site Boundary

Pursuant to ODCM Section 7.7.5, a review was performed to determine the highest dose to a member of the public in the site boundary. The dose to a member of the public consists of the sum of dose commitments from effluent releases as well as any direct radiation dose. The gaseous effluent dose commitment is negligible compared to the direct radiation dose.

The direct radiation dose was determined from area environmental dosimeters located onsite. It consisted of gamma dose from the plume, ground contamination, and from equipment sources (i.e., tanks, turbine shine, radioactive material storage areas, etc.). The critical location was determined to be a Thermoluminescent Dosimeter near the Livewell Center (Training Center). The direct radiation dose accounting for background and occupancy was 0.00 mrem during 2013.

The total annual dose commitment to a member of the public for 2013 is 0.00 mrem. It can be concluded that the dose limit for a member of the public at the site boundary as specified in 10 CFR 20.1301 was not exceeded.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

9. Total Dose

To determine compliance with 40 CFR 190, annual total dose contributions to the maximum exposed individual from BFN radioactive effluents and all other nearby uranium fuel cycle sources are considered.

The annual dose to any organ other than the thyroid for the maximum exposed individual is conservatively calculated by summing the following doses: the total body air submersion dose for each quarter, the critical organ dose (for any organ other than the thyroid) from airborne effluents for each quarter from ground contamination, inhalation and ingestion, the total body dose from liquid effluents for each quarter, the maximum organ dose (for any organ other than the thyroid) from liquid effluents for each quarter, and any identifiable increase in direct radiation dose levels as measured by the REMP. This dose is compared to the 40 CFR 190 limit for total body or any organ dose (other than the thyroid) to determine compliance.

The annual thyroid dose to the maximum exposed individual is conservatively estimated by summing the following doses: the total body air submersion dose for each quarter, the thyroid dose from airborne effluents for each quarter, the total body dose from liquid effluents for each quarter, the thyroid dose from liquid effluents for each quarter, and any identifiable increase in direct radiation dose levels as measured by the REMP. This dose is compared to the 40 CFR 190 limit for thyroid dose to determine compliance.

Total dose from the fuel cycle is presented in Table 6.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**TABLE 4
Page 1 of 4
Doses from Airborne Effluents**

First Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	1.41E-10 mrad	5 mrad	< 1 %	NNW/1650 meters
Beta Air	4.31E-10 mrad	10 mrad	< 1 %	NNW/1650 meters
Submersion				
Total Body	1.32E-03 mrem	NA	NA	ESE/1750 meters
Skin	1.55E-03 mrem	NA	NA	ESE/1750 meters
Organ Doses				
Child/Bone	1.62E-02 mrem	7.5 mrem	< 1 %	N/2540 meters
Child/Thyroid	1.18E-02 mrem	7.5 mrem	< 1 %	N/2540 meters
Child/Total Body	9.42E-03 mrem	7.5 mrem	< 1 %	N/2540 meters

Population Doses

Total Body Dose 1.24E-01 man-rem

Maximum Organ Dose (organ) 4.97E-01 man-rem (Bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**TABLE 4 (Continued)
Page 2 of 4
Doses from Airborne Effluents**

Second Quarter*

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	3.09E-10 mrad	5 mrad	< 1 %	NNW/1650 meters
Beta Air	9.45E-10 mrad	10 mrad	< 1 %	NNW/1650 meters
Submersion				
Total Body	4.97E-04 mrem	NA	NA	NNW/1650 meters
Skin	5.83E-04 mrem	NA	NA	NNW/1650 meters
Organ Doses				
Child/Bone	1.89E-02 mrem	7.5 mrem	< 1 %	NNW/2800 meters
Child/Thyroid	1.02E-02 mrem	7.5 mrem	< 1 %	N/2540 meters
Child/Total Body	6.73E-03 mrem	7.5 mrem	< 1 %	N/2540 meters

Population Doses

Total Body Dose 1.23E-01 man-rem

Maximum Organ Dose (organ) 5.41E-01 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**TABLE 4 (Continued)
Page 3 of 4
Doses from Airborne Effluents**

Third Quarter*

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	1.89-10 mrad	5 mrad	< 1 %	S/2250 meters
Beta Air	5.77E-10 mrad	10 mrad	< 1 %	S/2250 meters
Submersion				
Total Body	1.65E-03 mrem	NA	NA	NNW/1650 meters
Skin	1.94E-03 mrem	NA	NA	NNW/1650 meters
Organ Doses				
Child/Bone	3.72E-02 mrem	7.5 mrem	< 1 %	NNW/2800 meters
Child/Thyroid	1.90E-02 mrem	7.5 mrem	2.5 %	NNW/2680 meters
Child/Total Body	1.61E-02 mrem	7.5 mrem	2.1 %	NNW/2680 meters

Population Doses

Total Body Dose 2.07E-01 man-rem

Maximum Organ Dose (organ) 7.81E-01 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**TABLE 4 (Continued)
Page 4 of 4
Doses from Airborne Effluents**

Fourth Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	2.81E-10 mrad	5 mrad	< 1 %	S/2250 meters
Beta Air	8.59E-10 mrad	10 mrad	< 1 %	S/2250 meters
Submersion				
Total Body	3.27E-04 mrem	NA	NA	NNW/1639 meters
Skin	3.84E-04 mrem	NA	NA	NNW/1639 meters
Organ Doses				
Child/ Bone	2.96E-02 mrem	7.5 mrem	< 1 %	NNW/2680 meters
Child/Thyroid	2.18E-02 mrem	7.5 mrem	< 1 %	NNW/2680 meters
Child /Total Body	1.86E-02 mrem	7.5 mrem	< 1 %	NNW/2680 meters

Population Doses

Total Body Dose 1.84E-01 man-rem

Maximum Organ Dose (organ) 6.07E-01 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 5
Page 1 of 4
Doses from Liquid Effluents**

First Quarter*

Individual Doses (mrem)

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	Fish Ingestion	2.6E-02		
		Recreation	4.7E-03		
		Water Ingestion	7.4E-04		
		Total	3.1E-02	1.5 mrem	2 %
Child	Bone	Fish Ingestion	3.9E-02		
		Recreation	4.7E-03		
		Water Ingestion	3.6E-03		
		Total	4.7E-02	5 mrem	< 1 %
Child	Thyroid	Fish Ingestion	3.9E-05		
		Recreation	4.7E-03		
		Water Ingestion	2.5E-04		
		Total	5.0E-03	5 mrem	< 1 %

Average Riverflow past BFN (cubic feet per second): 100077

Population Doses

Total Body Dose 2.2E-01 man-rem

Maximum Organ Dose (organ) 3.2E-01 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 5 (Continued)
Page 2 of 4
Doses from Liquid Effluents**

Second Quarter*

Individual Doses (mrem)

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	Fish Ingestion	2.3E-02		
		Recreation	7.6E-03		
		Water Ingestion	7.0E-04		
		Total	3.1E-02	1.5 mrem	2 %
Child	Bone	Fish Ingestion	3.4E-02		
		Recreation	7.6E-03		
		Water Ingestion	2.8E-03		
		Total	4.4E-02	5 mrem	< 1 %
Infant	Thyroid	Fish Ingestion	0.00E+00		
		Recreation	7.6E-03		
		Water Ingestion	3.8E-04		
		Total	8.0E-03	5 mrem	< 1 %

Average Riverflow past BFN (cubic feet per second): 67684

Population Doses

Total Body Dose 3.8E-01 man-rem

Maximum Organ Dose (organ) 4.7E-01 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 5 (Continued)
Page 3 of 4
Doses from Liquid Effluents**

Third Quarter*

Individual Doses (mrem)

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	Fish Ingestion	1.7E-03		
		Recreation	4.7E-04		
		Water Ingestion	5.6E-05		
		Total	2.2E-03	1.5 mrem	< 1 %
Teen	Liver	Fish Ingestion	2.7E-03		
		Recreation	4.7E-04		
		Water Ingestion	6.1E-05		
		Total	3.2E-03	5 mrem	< 1 %
Child	Thyroid	Fish Ingestion	3.7E-07		
		Recreation	4.7E-04		
		Water Ingestion	2.9E-05		
		Total	5.0E-04	5 mrem	< 1 %

Average Riverflow past BFN (cubic feet per second): 56208

Population Doses

Total Body Dose 3.2E-02 man-rem

Maximum Organ Dose (organ) 4.1E-02 man-rem (liver)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 5 (Continued)
Page 4 of 4
Doses from Liquid Effluents**

Fourth Quarter*

Individual Doses (mrem)

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	Fish Ingestion	1.5E-05		
		Recreation	2.1E-06		
		Water Ingestion	1.6E-05		
		Total	3.3E-05	1.5 mrem	< 1 %
Child	Bone	Fish Ingestion	2.1E-05		
		Recreation	2.1E-06		
		Water Ingestion	2.2E-05		
		Total	4.5E-05	5 mrem	< 1 %
Child	Thyroid	Fish Ingestion	2.6E-07		
		Recreation	2.1E-06		
		Water Ingestion	2.1E-05		
		Total	2.3E-05	5 mrem	< 1 %

Average Riverflow past BFN (cubic feet per second): 50773

Population Doses

Total Body Dose 4.9E-04 man-rem

Maximum Organ Dose (organ) 5.4E-04 man-rem (bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 70,044 man-rem/year (based on 90 mrem/yr for natural background).

* Includes dose from abnormal releases.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 5A
Page 1 of 1
Total Dose from I-131 Water Ingestion Pathway**

Quarter	1	2	3	4	Totals
I-131 Ci	7.0E-04	6.8E-04	0.00E+00	0.00E+00	1.4E-03
Infant/Thyroid (mrem)	1.1E-04	1.5E-04	0.00E+00	0.00E+00	2.6E-04
Population/Thyroid (mrem)	9.1E-04	1.2E-03	0.00E+00	0.00E+00	2.1E-03

Doses from I-131 Water Ingestion Pathway

The REMP requirements as specified in Table 3.12-1 from NUREG 1302, "Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors," dated April 1991, requires an I-131 specific analysis for drinking water pathway samples if the annual dose from I-131 is greater than 1 mrem. In order to evaluate the need for implementation of this additional analysis, the drinking water pathway dose from I-131 to the maximum organ and age group was calculated. The results reported here confirm that the drinking water pathway dose from I-131 was less than the 1 mrem limit and that the performance of the I-131 specific analysis is not required for BFN REMP drinking water samples.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

RADIOLOGICAL IMPACT

**Table 6
Page 1 of 1
Total Dose from Fuel Cycle**

Dose	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
Total Body or any Organ (except thyroid)					
Total body air submersion	1.3E-03	5.0E-04	1.7E-03	3.3E-04	
Critical organ dose (air)	1.6E-02	1.9E-02	3.7E-02	3.0E-02	
Total body dose (liquid)	3.1E-02	3.0E-02	2.2E-03	3.3E-05	
Maximum organ dose (liquid)	4.7E-02	4.4E-02	3.2E-03	4.5E-05	
Direct Radiation Dose	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Total	9.5E-02	9.4E-02	4.4E-02	3.0E-02	
Cumulative Total Dose (mrem) (Total body or any other organ)					2.6E-01
Annual Dose Limit (mrem)					2.5E+01
Percent of Limit					1%
Thyroid Dose (mrem)					
Total body air submersion	1.3E-03	5.0E-04	1.7E-03	3.3E-04	
Thyroid dose (airborne)	1.2E-02	1.0E-02	1.9E-02	2.2E-02	
Total body dose (liquid)	3.1E-02	3.0E-02	2.2E-03	3.3E-05	
Thyroid dose (liquid)	5.0E-03	8.0E-03	5.0E-04	2.3E-05	
Direct Radiation Dose	0.0E+00	0.0E+00	0.0E+00	0.0E+00	
Total	4.9E-02	4.9E-02	2.3E-02	2.2E-02	
Cumulative Total Dose (Thyroid) mrem					1.4E-01
Annual Dose Limit (mrem)					7.5E+01
Percent of Limit					< 1%

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 7A

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR GROUND LEVEL RELEASES

FIRST QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.280	0.000	0.000	0.000	0.280
NNE	0.000	0.000	0.000	0.000	0.000	0.234	0.000	0.000	0.000	0.234
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
E	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.000	0.747	0.093	0.000	0.000	0.000	0.000	0.841
SSE	0.000	0.000	0.047	0.420	0.000	0.000	0.000	0.000	0.000	0.467
S	0.000	0.000	0.140	0.607	0.140	0.093	0.000	0.000	0.000	0.981
SSW	0.000	0.000	0.093	0.420	0.047	0.000	0.000	0.000	0.000	0.560
SW	0.000	0.000	0.000	0.280	0.000	0.047	0.000	0.000	0.000	0.327
WSW	0.000	0.000	0.000	0.140	0.000	0.047	0.000	0.000	0.000	0.187
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.234	0.280	0.000	0.000	0.514
NW	0.000	0.000	0.000	0.000	0.000	0.047	0.327	0.000	0.000	0.374
NNW	0.000	0.000	0.000	0.000	0.000	0.140	0.093	0.000	0.000	0.234
SUBTOTAL	0.000	0.000	0.280	2.709	0.374	1.168	0.701	0.000	0.000	5.231

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS A	112
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	112
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 6.82

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.093
NNE	0.000	0.000	0.000	0.000	0.374	0.000	0.000	0.000	0.000	0.374
NE	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
ENE	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
E	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
ESE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
SE	0.000	0.000	0.047	0.140	0.000	0.000	0.000	0.000	0.000	0.187
SSE	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140
S	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.187
SSW	0.000	0.000	0.140	0.234	0.000	0.000	0.000	0.000	0.000	0.374
SW	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
WSW	0.000	0.000	0.000	0.093	0.047	0.047	0.000	0.000	0.000	0.187
W	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
WNW	0.000	0.000	0.000	0.000	0.047	0.701	0.187	0.000	0.000	0.934
NW	0.000	0.000	0.000	0.000	0.000	0.374	0.093	0.000	0.000	0.467
NNW	0.000	0.000	0.000	0.000	0.047	0.140	0.047	0.000	0.000	0.234
SUBTOTAL	0.000	0.000	0.420	0.607	0.747	1.355	0.327	0.000	0.000	3.456

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS B	74
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	74
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 7.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.187	0.000	0.093	0.000	0.000	0.000	0.280
NNE	0.000	0.000	0.000	0.187	0.047	0.187	0.000	0.000	0.000	0.420
NE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
ESE	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.047	0.140	0.000	0.000	0.000	0.000	0.000	0.187
SSE	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
S	0.000	0.000	0.047	0.093	0.000	0.000	0.000	0.000	0.000	0.140
SSW	0.000	0.000	0.093	0.140	0.000	0.000	0.000	0.000	0.000	0.234
SW	0.000	0.000	0.093	0.140	0.047	0.000	0.000	0.000	0.000	0.280
WSW	0.000	0.000	0.000	0.093	0.140	0.047	0.000	0.000	0.000	0.280
W	0.000	0.000	0.000	0.093	0.140	0.140	0.047	0.000	0.000	0.420
WNW	0.000	0.000	0.000	0.047	0.140	0.514	0.187	0.047	0.000	0.934
NW	0.000	0.000	0.000	0.000	0.093	0.514	0.374	0.000	0.000	0.981
NNW	0.000	0.000	0.000	0.047	0.093	0.234	0.047	0.000	0.000	0.420
SUBTOTAL	0.000	0.000	0.374	1.261	0.794	1.728	0.654	0.047	0.000	4.858

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS C	104
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	104
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 7.76

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.187	0.934	1.261	0.887	0.000	0.000	0.000	3.270
NNE	0.000	0.000	0.467	1.028	0.467	0.327	0.000	0.000	0.000	2.289
NE	0.000	0.000	0.607	0.934	0.420	0.140	0.000	0.000	0.000	2.102
ENE	0.000	0.000	0.374	0.467	0.327	0.000	0.000	0.000	0.000	1.168
E	0.000	0.000	0.420	0.887	0.187	0.000	0.000	0.000	0.000	1.495
ESE	0.000	0.047	0.327	0.794	0.467	0.280	0.000	0.000	0.000	1.915
SE	0.000	0.000	0.280	0.794	0.327	0.140	0.000	0.000	0.000	1.541
SSE	0.000	0.047	0.794	0.093	0.000	0.000	0.000	0.000	0.000	0.934
S	0.000	0.000	0.514	0.047	0.093	0.000	0.000	0.000	0.000	0.654
SSW	0.000	0.000	0.701	0.234	0.140	0.000	0.000	0.000	0.000	1.074
SW	0.000	0.000	0.607	0.047	0.327	0.047	0.000	0.000	0.000	1.028
WSW	0.000	0.000	0.560	0.701	0.654	0.187	0.000	0.000	0.000	2.102
W	0.000	0.000	0.093	0.654	0.841	0.467	0.140	0.047	0.000	2.242
WNW	0.000	0.000	0.047	0.514	0.607	1.308	1.074	0.607	0.000	4.157
NW	0.000	0.000	0.093	0.560	0.747	2.849	2.008	0.280	0.047	6.586
NNW	0.000	0.000	0.000	0.607	1.214	1.074	0.420	0.000	0.000	3.316
SUBTOTAL	0.000	0.093	6.072	9.295	8.080	7.707	3.643	0.934	0.047	35.871

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS D	768
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	768
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 7.19

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.234	0.981	0.934	0.747	0.140	0.000	0.000	0.000	3.036
NNE	0.000	0.093	0.701	1.261	0.187	0.140	0.000	0.000	0.000	2.382
NE	0.000	0.000	0.327	0.701	0.374	0.234	0.000	0.000	0.000	1.635
ENE	0.000	0.093	0.280	0.374	0.000	0.047	0.000	0.000	0.000	0.794
E	0.000	0.093	0.374	0.420	0.093	0.000	0.000	0.000	0.000	0.981
ESE	0.000	0.093	0.747	1.121	0.187	0.000	0.000	0.000	0.000	2.149
SE	0.000	0.047	0.841	1.401	0.701	0.047	0.000	0.000	0.000	3.036
SSE	0.000	0.093	1.448	0.467	0.047	0.000	0.000	0.000	0.000	2.055
S	0.000	0.093	1.541	0.514	0.747	0.327	0.000	0.000	0.000	3.223
SSW	0.000	0.234	0.981	0.234	0.047	0.280	0.000	0.000	0.000	1.775
SW	0.000	0.140	0.514	0.234	0.047	0.047	0.000	0.000	0.000	0.981
WSW	0.000	0.047	1.028	0.234	0.093	0.000	0.000	0.000	0.000	1.401
W	0.000	0.047	0.327	0.280	0.234	0.047	0.093	0.000	0.000	1.028
WNW	0.000	0.047	0.187	0.093	0.140	0.187	0.140	0.093	0.000	0.887
NW	0.000	0.093	0.374	0.187	0.701	0.467	0.093	0.000	0.000	1.915
NNW	0.000	0.047	0.701	1.355	0.747	0.841	0.000	0.000	0.000	3.690
SUBTOTAL	0.000	1.495	11.350	9.809	5.091	2.802	0.327	0.093	0.000	30.967

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS E	663
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	663
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 4.41

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.047	0.981	0.467	0.000	0.000	0.000	0.000	0.000	1.495
NNE	0.000	0.000	0.280	0.140	0.000	0.000	0.000	0.000	0.000	0.420
NE	0.000	0.093	0.327	0.093	0.000	0.000	0.000	0.000	0.000	0.514
ENE	0.000	0.047	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.280
E	0.000	0.093	0.467	0.047	0.000	0.000	0.000	0.000	0.000	0.607
ESE	0.000	0.093	0.701	0.093	0.000	0.000	0.000	0.000	0.000	0.887
SE	0.000	0.047	0.701	0.374	0.093	0.093	0.000	0.000	0.000	1.308
SSE	0.000	0.187	0.794	0.234	0.000	0.000	0.000	0.000	0.000	1.214
S	0.000	0.093	0.794	1.121	0.327	0.327	0.000	0.000	0.000	2.662
SSW	0.000	0.047	0.420	0.187	0.047	0.000	0.000	0.000	0.000	0.701
SW	0.000	0.000	0.234	0.140	0.000	0.000	0.000	0.000	0.000	0.374
WSW	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140
W	0.000	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.140
WNW	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.047	0.000	0.140
NW	0.000	0.187	0.234	0.047	0.000	0.000	0.000	0.000	0.000	0.467
NNW	0.000	0.000	0.560	0.374	0.187	0.000	0.000	0.000	0.000	1.121
SUBTOTAL	0.000	0.981	7.053	3.316	0.654	0.420	0.000	0.047	0.000	12.471

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS F	267
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	267
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 3.30

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.093	0.607	0.000	0.000	0.000	0.000	0.000	0.000	0.701
NNE	0.000	0.047	0.140	0.047	0.000	0.000	0.000	0.000	0.000	0.234
NE	0.000	0.047	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.187
ENE	0.000	0.047	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.280
E	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.187	0.747	0.000	0.047	0.000	0.000	0.000	0.000	0.981
SSE	0.000	0.234	1.074	0.187	0.000	0.000	0.000	0.000	0.000	1.495
S	0.000	0.000	1.214	0.420	0.374	0.000	0.000	0.000	0.000	2.008
SSW	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SW	0.000	0.047	0.047	0.000	0.047	0.000	0.000	0.000	0.000	0.140
WSW	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.093
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NW	0.000	0.140	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.280
NNW	0.000	0.093	0.280	0.047	0.000	0.000	0.000	0.000	0.000	0.420
SUBTOTAL	0.000	1.074	4.904	0.701	0.467	0.000	0.000	0.000	0.000	7.146

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS G	153
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	153
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 2.54

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 7B

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR GROUND LEVEL RELEASES

SECOND QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.051	0.051	0.255	0.000	0.000	0.000	0.357
NNE	0.000	0.000	0.000	0.000	0.000	0.306	0.000	0.000	0.000	0.306
NE	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.051
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
ESE	0.000	0.000	0.153	0.153	0.051	0.153	0.000	0.000	0.000	0.510
SE	0.000	0.000	0.459	1.173	0.051	0.000	0.000	0.000	0.000	1.683
SSE	0.000	0.000	1.071	0.357	0.000	0.000	0.000	0.000	0.000	1.428
S	0.000	0.000	1.122	0.204	0.000	0.000	0.000	0.000	0.000	1.326
SSW	0.000	0.000	0.255	0.204	0.051	0.000	0.000	0.000	0.000	0.510
SW	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
WSW	0.000	0.000	0.000	0.102	0.000	0.000	0.000	0.000	0.000	0.102
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.051	0.000	0.102	0.000	0.000	0.000	0.153
NW	0.000	0.000	0.000	0.000	0.000	0.153	0.153	0.000	0.000	0.306
NNW	0.000	0.000	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.051
SUBTOTAL	0.000	0.000	3.060	2.397	0.204	1.071	0.153	0.000	0.000	6.884

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS A	137
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	135
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 4.66

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.153	0.153	0.000	0.000	0.000	0.306
NNE	0.000	0.000	0.000	0.000	0.102	0.153	0.000	0.000	0.000	0.255
NE	0.000	0.000	0.000	0.000	0.000	0.102	0.000	0.000	0.000	0.102
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.255	0.000	0.051	0.000	0.000	0.000	0.306
SE	0.000	0.000	0.459	0.204	0.000	0.000	0.000	0.000	0.000	0.663
SSE	0.000	0.000	0.153	0.102	0.000	0.000	0.000	0.000	0.000	0.255
S	0.000	0.000	0.408	0.153	0.000	0.000	0.000	0.000	0.000	0.561
SSW	0.000	0.000	0.153	0.102	0.000	0.000	0.000	0.000	0.000	0.255
SW	0.000	0.000	0.204	0.102	0.000	0.000	0.000	0.000	0.000	0.306
WSW	0.000	0.000	0.051	0.306	0.102	0.000	0.000	0.000	0.000	0.459
W	0.000	0.000	0.000	0.000	0.102	0.102	0.000	0.000	0.000	0.204
WNW	0.000	0.000	0.000	0.051	0.051	0.255	0.204	0.000	0.000	0.561
NW	0.000	0.000	0.000	0.000	0.000	0.816	0.000	0.000	0.000	0.816
NNW	0.000	0.000	0.000	0.000	0.102	0.102	0.000	0.000	0.000	0.204
SUBTOTAL	0.000	0.000	1.428	1.275	0.612	1.734	0.204	0.000	0.000	5.252

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS B	106
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	103
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 6.12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.102	0.204	0.204	0.000	0.000	0.000	0.510
NNE	0.000	0.000	0.051	0.051	0.153	0.102	0.000	0.000	0.000	0.357
NE	0.000	0.000	0.000	0.000	0.000	0.153	0.000	0.000	0.000	0.153
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
ESE	0.000	0.000	0.204	0.051	0.153	0.051	0.000	0.000	0.000	0.459
SE	0.000	0.000	0.408	0.153	0.000	0.000	0.000	0.000	0.000	0.561
SSE	0.000	0.000	0.357	0.102	0.000	0.000	0.000	0.000	0.000	0.459
S	0.000	0.000	0.357	0.153	0.051	0.000	0.000	0.000	0.000	0.561
SSW	0.000	0.000	0.357	0.255	0.000	0.000	0.000	0.000	0.000	0.612
SW	0.000	0.000	0.255	0.051	0.000	0.000	0.000	0.000	0.000	0.306
WSW	0.000	0.000	0.255	0.204	0.000	0.000	0.000	0.000	0.000	0.459
W	0.000	0.000	0.000	0.306	0.306	0.306	0.000	0.000	0.000	0.918
WNW	0.000	0.000	0.000	0.255	0.255	0.408	0.000	0.000	0.000	0.918
NW	0.000	0.000	0.000	0.000	0.051	0.255	0.051	0.000	0.000	0.357
NNW	0.000	0.000	0.000	0.000	0.051	0.153	0.000	0.000	0.000	0.204
SUBTOTAL	0.000	0.000	2.244	1.734	1.224	1.632	0.051	0.000	0.000	6.884

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS C	135
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	135
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 5.41

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.051	0.102	0.612	0.255	0.000	0.000	0.000	0.000	1.020
NNE	0.000	0.000	0.051	0.255	0.663	0.306	0.000	0.000	0.000	1.275
NE	0.000	0.000	0.306	0.306	0.408	0.255	0.000	0.000	0.000	1.275
ENE	0.000	0.000	0.204	0.204	0.102	0.102	0.000	0.000	0.000	0.612
E	0.000	0.000	0.408	0.000	0.000	0.000	0.000	0.000	0.000	0.408
ESE	0.000	0.000	0.561	1.224	0.459	0.204	0.000	0.000	0.000	2.448
SE	0.000	0.000	1.479	0.204	0.000	0.000	0.000	0.000	0.000	1.683
SSE	0.000	0.051	2.040	0.051	0.000	0.000	0.000	0.000	0.000	2.142
S	0.000	0.000	2.448	0.459	0.255	0.000	0.000	0.000	0.000	3.162
SSW	0.000	0.000	1.530	0.459	0.102	0.000	0.000	0.000	0.000	2.091
SW	0.000	0.153	1.071	0.102	0.000	0.000	0.000	0.000	0.000	1.326
WSW	0.000	0.000	0.918	1.020	0.102	0.000	0.000	0.000	0.000	2.040
W	0.000	0.000	0.765	1.683	0.867	0.459	0.000	0.000	0.000	3.774
WNW	0.000	0.000	0.051	0.357	0.969	1.683	0.255	0.000	0.000	3.315
NW	0.000	0.000	0.000	0.918	0.765	1.071	0.153	0.000	0.000	2.907
NNW	0.000	0.051	0.204	0.459	0.204	0.408	0.000	0.000	0.000	1.326
SUBTOTAL	0.000	0.306	12.137	8.312	5.150	4.488	0.408	0.000	0.000	30.801

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS D	609
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	604
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 4.77

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.051	0.714	0.306	0.153	0.051	0.000	0.000	0.000	1.275
NNE	0.000	0.153	0.408	0.612	0.255	0.102	0.000	0.000	0.000	1.530
NE	0.000	0.102	0.255	0.102	0.408	0.102	0.000	0.000	0.000	0.969
ENE	0.000	0.306	0.357	0.408	0.204	0.000	0.000	0.000	0.000	1.275
E	0.000	0.255	2.244	0.816	0.561	0.000	0.000	0.000	0.000	3.876
ESE	0.000	0.102	1.785	1.581	0.255	0.000	0.000	0.000	0.000	3.723
SE	0.000	0.408	1.683	0.204	0.000	0.000	0.000	0.000	0.000	2.295
SSE	0.000	0.306	1.071	0.000	0.000	0.000	0.000	0.000	0.000	1.377
S	0.000	0.357	2.142	0.459	0.102	0.000	0.000	0.000	0.000	3.060
SSW	0.000	0.255	0.765	0.153	0.102	0.000	0.000	0.000	0.000	1.275
SW	0.000	0.153	0.612	0.051	0.051	0.000	0.000	0.000	0.000	0.867
WSW	0.000	0.102	0.816	0.153	0.051	0.000	0.000	0.000	0.000	1.122
W	0.000	0.204	1.071	0.663	0.255	0.000	0.000	0.000	0.000	2.193
WNW	0.000	0.000	0.408	0.204	0.102	0.255	0.051	0.000	0.000	1.020
NW	0.000	0.051	0.051	0.153	0.153	0.153	0.051	0.000	0.000	0.612
NNW	0.000	0.000	0.612	0.663	0.357	0.102	0.000	0.000	0.000	1.734
SUBTOTAL	0.000	2.805	14.992	6.527	3.009	0.765	0.102	0.000	0.000	28.200

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS E	564
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	553
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 3.34

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.006	0.306	0.918	0.051	0.102	0.000	0.000	0.000	0.000	1.382
NNE	0.002	0.204	0.204	0.255	0.102	0.000	0.000	0.000	0.000	0.767
NE	0.001	0.153	0.153	0.000	0.051	0.000	0.000	0.000	0.000	0.358
ENE	0.005	0.408	0.765	0.153	0.000	0.000	0.000	0.000	0.000	1.331
E	0.007	0.510	1.020	0.306	0.000	0.000	0.000	0.000	0.000	1.843
ESE	0.004	0.408	0.510	0.051	0.000	0.000	0.000	0.000	0.000	0.973
SE	0.005	0.714	0.306	0.000	0.000	0.000	0.000	0.000	0.000	1.025
SSE	0.005	0.306	0.765	0.000	0.000	0.000	0.000	0.000	0.000	1.076
S	0.007	0.255	1.377	0.306	0.000	0.000	0.000	0.000	0.000	1.945
SSW	0.002	0.102	0.306	0.051	0.000	0.000	0.000	0.000	0.000	0.461
SW	0.001	0.153	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.307
WSW	0.000	0.051	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.102
W	0.001	0.102	0.102	0.051	0.000	0.000	0.000	0.000	0.000	0.256
WNW	0.000	0.051	0.051	0.102	0.000	0.000	0.153	0.000	0.000	0.357
NW	0.001	0.153	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.256
NNW	0.002	0.102	0.357	0.255	0.051	0.000	0.000	0.000	0.000	0.767
SUBTOTAL	0.051	3.978	7.139	1.581	0.306	0.000	0.153	0.000	0.000	13.208

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS F	259
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	259
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 2.40

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.408	0.561	0.102	0.000	0.000	0.000	0.000	0.000	1.071
NNE	0.000	0.102	0.153	0.102	0.000	0.000	0.000	0.000	0.000	0.357
NE	0.000	0.408	0.204	0.051	0.000	0.000	0.000	0.000	0.000	0.663
ENE	0.000	0.051	0.408	0.102	0.051	0.000	0.000	0.000	0.000	0.612
E	0.000	0.510	0.153	0.102	0.000	0.000	0.000	0.000	0.000	0.765
ESE	0.000	0.255	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.357
SE	0.000	0.408	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.561
SSE	0.000	1.020	0.612	0.000	0.000	0.000	0.000	0.000	0.000	1.632
S	0.000	0.204	0.612	0.000	0.000	0.000	0.000	0.000	0.000	0.816
SSW	0.000	0.204	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.306
SW	0.000	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.153
WSW	0.000	0.051	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.102
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102
NW	0.000	0.051	0.102	0.000	0.000	0.000	0.000	0.000	0.000	0.153
NNW	0.000	0.561	0.561	0.000	0.000	0.000	0.000	0.000	0.000	1.122
SUBTOTAL	0.000	4.488	3.774	0.459	0.051	0.000	0.000	0.000	0.000	8.771

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS G	172
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	172
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 1.71

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED

BY WIND DIRECTION DISREGARDING STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.003	0.881	2.134	1.113	0.928	0.649	0.000	0.000	0.000	5.708
NNE	0.001	0.649	0.928	1.160	1.160	0.881	0.000	0.000	0.000	4.779
NE	0.001	0.788	0.928	0.464	1.160	0.603	0.000	0.000	0.000	3.944
ENE	0.002	0.788	1.670	0.974	0.417	0.093	0.000	0.000	0.000	3.945
E	0.005	1.206	4.128	1.531	0.557	0.000	0.000	0.000	0.000	7.426
ESE	0.003	0.696	3.293	3.803	2.180	0.649	0.000	0.000	0.000	10.625
SE	0.005	1.577	4.870	2.041	0.046	0.000	0.000	0.000	0.000	8.540
SSE	0.006	1.670	5.659	0.696	0.000	0.000	0.000	0.000	0.000	8.030
S	0.007	0.788	8.071	1.716	0.371	0.000	0.000	0.000	0.000	10.954
SSW	0.003	0.510	3.340	1.345	0.232	0.000	0.000	0.000	0.000	5.430
SW	0.002	0.557	2.134	0.371	0.046	0.000	0.000	0.000	0.000	3.110
WSW	0.002	0.186	1.948	1.623	0.232	0.000	0.000	0.000	0.000	3.991
W	0.002	0.278	1.763	2.458	1.438	0.928	0.000	0.000	0.000	6.866
WNW	0.001	0.139	0.557	0.928	1.252	2.551	0.835	0.000	0.000	6.262
NW	0.000	0.232	0.232	0.974	0.881	2.226	0.417	0.000	0.000	4.963
NNW	0.002	0.696	1.623	1.391	0.835	0.881	0.000	0.000	0.000	5.429
SUBTOTAL	0.046	11.642	43.275	22.588	11.735	9.462	1.252	0.000	0.000	100.000

TOTAL HOURS OF VALID WIND OBSERVATIONS	2156
TOTAL HOURS OF OBSERVATIONS	2184
RECOVERABILITY PERCENTAGE	98.7
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 3.95

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND SPEED (MPH)	STABILITY CLASS						
	A	B	C	D	E	F	G
CALM	0.000	0.000	0.000	0.000	0.000	0.051	0.000
0.6- 1.4	0.000	0.000	0.000	0.306	2.805	3.978	4.488
1.5- 3.4	3.060	1.428	2.244	12.137	14.992	7.139	3.774
3.5- 5.4	2.397	1.275	1.734	8.312	6.527	1.581	0.459
5.5- 7.4	0.204	0.612	1.224	5.150	3.009	0.306	0.051
7.5-12.4	1.071	1.734	1.632	4.488	0.765	0.000	0.000
12.5-18.4	0.153	0.204	0.051	0.408	0.102	0.153	0.000
18.5-24.4	0.000	0.000	0.000	0.000	0.000	0.000	0.000
>=24.5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTAL	6.884	5.252	6.884	30.801	28.200	13.208	8.771

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1961
TOTAL HOURS OF OBSERVATIONS	2184
JOINT RECOVERABILITY PERCENTAGE	89.8

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/08/12

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 7C

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR GROUND LEVEL RELEASES

THIRD QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.046	0.091	0.000	0.000	0.000	0.137
NNE	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.091
NE	0.000	0.000	0.000	0.000	0.000	0.137	0.000	0.000	0.000	0.137
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.091	0.503	0.274	0.000	0.000	0.000	0.000	0.869
SE	0.000	0.000	0.960	1.235	0.000	0.000	0.000	0.000	0.000	2.195
SSE	0.000	0.000	1.372	0.503	0.000	0.000	0.000	0.000	0.000	1.875
S	0.000	0.000	0.960	0.137	0.000	0.000	0.000	0.000	0.000	1.097
SSW	0.000	0.000	0.183	0.091	0.000	0.000	0.000	0.000	0.000	0.274
SW	0.000	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.137
WSW	0.000	0.000	0.000	0.137	0.000	0.000	0.000	0.000	0.000	0.137
W	0.000	0.000	0.000	0.046	0.274	0.046	0.000	0.000	0.000	0.366
WNW	0.000	0.000	0.000	0.046	0.046	0.229	0.046	0.000	0.000	0.366
NW	0.000	0.000	0.000	0.000	0.000	0.137	0.000	0.000	0.000	0.137
NNW	0.000	0.000	0.000	0.000	0.091	0.183	0.000	0.000	0.000	0.274
SUBTOTAL	0.000	0.000	3.658	2.789	0.732	0.914	0.046	0.000	0.000	8.139

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS A	179
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	178
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 4.41

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.091	0.046	0.274	0.000	0.000	0.000	0.412
NNE	0.000	0.000	0.000	0.000	0.183	0.274	0.000	0.000	0.000	0.457
NE	0.000	0.000	0.000	0.046	0.000	0.091	0.000	0.000	0.000	0.137
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.000	0.366	0.091	0.000	0.000	0.000	0.000	0.457
SE	0.000	0.000	0.412	0.183	0.000	0.000	0.000	0.000	0.000	0.594
SSE	0.000	0.000	0.457	0.046	0.000	0.000	0.000	0.000	0.000	0.503
S	0.000	0.000	0.274	0.046	0.000	0.000	0.000	0.000	0.000	0.320
SSW	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.183
W	0.000	0.000	0.000	0.183	0.183	0.000	0.000	0.000	0.000	0.366
WNW	0.000	0.000	0.000	0.000	0.046	0.137	0.000	0.000	0.000	0.183
NW	0.000	0.000	0.000	0.046	0.229	0.320	0.000	0.000	0.000	0.594
NNW	0.000	0.000	0.000	0.000	0.229	0.183	0.000	0.000	0.000	0.412
SUBTOTAL	0.000	0.000	1.235	1.280	1.006	1.280	0.000	0.000	0.000	4.801

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS B	105
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	105
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 5.58

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.229	0.183	0.091	0.000	0.000	0.000	0.503
NNE	0.000	0.000	0.000	0.091	0.274	0.091	0.000	0.000	0.000	0.457
NE	0.000	0.000	0.000	0.091	0.046	0.046	0.000	0.000	0.000	0.183
ENE	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.137	0.229	0.137	0.000	0.000	0.000	0.000	0.503
SE	0.000	0.000	0.594	0.091	0.000	0.000	0.000	0.000	0.000	0.686
SSE	0.000	0.000	0.549	0.000	0.000	0.000	0.000	0.000	0.000	0.549
S	0.000	0.000	0.960	0.046	0.000	0.000	0.000	0.000	0.000	1.006
SSW	0.000	0.000	0.183	0.137	0.000	0.000	0.000	0.000	0.000	0.320
SW	0.000	0.000	0.137	0.046	0.000	0.000	0.000	0.000	0.000	0.183
WSW	0.000	0.000	0.229	0.366	0.000	0.000	0.000	0.000	0.000	0.594
W	0.000	0.000	0.000	0.777	0.137	0.046	0.000	0.000	0.000	0.960
WNW	0.000	0.000	0.000	0.137	0.091	0.229	0.000	0.000	0.000	0.457
NW	0.000	0.000	0.000	0.137	0.000	0.137	0.000	0.000	0.000	0.274
NNW	0.000	0.000	0.000	0.183	0.366	0.183	0.000	0.000	0.000	0.732
SUBTOTAL	0.000	0.000	2.789	2.652	1.280	0.823	0.000	0.000	0.000	7.545

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS C	165
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	165
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 4.55

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.640	0.412	0.183	0.000	0.000	0.000	1.326
NNE	0.000	0.000	0.320	0.777	0.274	0.274	0.000	0.000	0.000	1.646
NE	0.000	0.000	0.457	0.229	0.183	0.091	0.000	0.000	0.000	0.960
ENE	0.000	0.000	0.412	0.777	0.046	0.000	0.000	0.000	0.000	1.235
E	0.000	0.046	1.097	2.835	0.320	0.046	0.000	0.000	0.000	4.344
ESE	0.000	0.000	1.738	2.103	0.823	0.091	0.000	0.000	0.000	4.755
SE	0.000	0.183	1.692	0.091	0.000	0.000	0.000	0.000	0.000	1.966
SSE	0.000	0.091	1.555	0.091	0.000	0.000	0.000	0.000	0.000	1.738
S	0.000	0.137	1.875	0.000	0.000	0.000	0.000	0.000	0.000	2.012
SSW	0.000	0.091	2.286	0.091	0.000	0.000	0.000	0.000	0.000	2.469
SW	0.000	0.137	0.640	0.183	0.000	0.000	0.000	0.000	0.000	0.960
WSW	0.000	0.000	1.555	0.594	0.000	0.000	0.000	0.000	0.000	2.149
W	0.000	0.000	0.823	1.417	0.320	0.091	0.000	0.000	0.000	2.652
WNW	0.000	0.000	0.091	0.320	0.412	0.183	0.000	0.000	0.000	1.006
NW	0.000	0.000	0.091	0.457	0.229	0.183	0.046	0.000	0.000	1.006
NNW	0.000	0.000	0.137	0.320	0.320	0.091	0.000	0.000	0.000	0.869
SUBTOTAL	0.000	0.686	14.861	10.928	3.338	1.235	0.046	0.000	0.000	31.093

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS D	680
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	680
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 3.82

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.183	1.326	0.732	0.000	0.000	0.000	0.000	0.000	2.241
NNE	0.000	0.000	1.052	1.097	0.412	0.000	0.000	0.000	0.000	2.561
NE	0.000	0.274	0.412	0.503	0.274	0.046	0.000	0.000	0.000	1.509
ENE	0.000	0.183	1.555	0.457	0.000	0.000	0.000	0.000	0.000	2.195
E	0.000	0.137	2.881	2.835	0.091	0.000	0.000	0.000	0.000	5.944
ESE	0.000	0.549	1.692	1.692	0.091	0.000	0.000	0.000	0.000	4.024
SE	0.000	0.457	1.189	0.000	0.000	0.000	0.000	0.000	0.000	1.646
SSE	0.000	0.457	0.457	0.046	0.000	0.000	0.000	0.000	0.000	0.960
S	0.000	0.503	0.823	0.046	0.046	0.000	0.000	0.000	0.000	1.417
SSW	0.000	0.457	0.549	0.046	0.000	0.000	0.000	0.000	0.000	1.052
SW	0.000	0.594	0.457	0.000	0.000	0.000	0.000	0.000	0.000	1.052
WSW	0.000	0.320	0.549	0.046	0.000	0.000	0.000	0.000	0.000	0.914
W	0.000	0.091	0.412	0.366	0.046	0.046	0.000	0.000	0.000	0.960
WNW	0.000	0.000	0.274	0.137	0.000	0.091	0.000	0.000	0.000	0.503
NW	0.000	0.091	0.412	0.046	0.046	0.000	0.046	0.000	0.000	0.640
NNW	0.000	0.091	1.006	0.686	0.046	0.046	0.000	0.000	0.000	1.875
SUBTOTAL	0.000	4.390	15.043	8.733	1.052	0.229	0.046	0.000	0.000	29.492

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS E	645
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	645
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 2.94

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.320	1.875	0.732	0.000	0.000	0.000	0.000	0.000	2.926
NNE	0.000	0.137	1.006	0.594	0.183	0.000	0.000	0.000	0.000	1.920
NE	0.000	0.183	0.412	0.183	0.000	0.000	0.000	0.000	0.000	0.777
ENE	0.000	0.137	1.463	0.549	0.000	0.000	0.000	0.000	0.000	2.149
E	0.000	0.137	1.646	0.366	0.000	0.000	0.000	0.000	0.000	2.149
ESE	0.000	0.091	0.320	0.046	0.000	0.000	0.000	0.000	0.000	0.457
SE	0.000	0.274	0.320	0.000	0.000	0.000	0.000	0.000	0.000	0.594
SSE	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.137
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.320	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.320
SW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.137
W	0.000	0.091	0.183	0.046	0.000	0.000	0.000	0.000	0.000	0.320
WNW	0.000	0.274	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.320
NW	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.183
NNW	0.000	0.137	0.457	0.046	0.000	0.000	0.000	0.000	0.000	0.640
SUBTOTAL	0.000	2.241	8.093	2.561	0.183	0.000	0.000	0.000	0.000	13.077

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS F	286
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	286
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 2.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.009	0.457	0.640	0.091	0.000	0.000	0.000	0.000	0.000	1.198
NNE	0.010	0.457	0.732	0.091	0.000	0.000	0.000	0.000	0.000	1.290
NE	0.009	0.640	0.457	0.000	0.000	0.000	0.000	0.000	0.000	1.106
ENE	0.005	0.137	0.412	0.091	0.000	0.000	0.000	0.000	0.000	0.645
E	0.002	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.000	0.184
ESE	0.001	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SE	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.001	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.138
S	0.001	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SSW	0.001	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.001	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
NNW	0.006	0.457	0.320	0.000	0.000	0.000	0.000	0.000	0.000	0.784
SUBTOTAL	0.046	2.698	2.835	0.274	0.000	0.000	0.000	0.000	0.000	5.853

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS G	128
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	128
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 1.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 7D

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR GROUND LEVEL RELEASES

FOURTH QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.045	0.181	0.000	0.000	0.227
NNE	0.000	0.000	0.000	0.000	0.091	0.272	0.000	0.000	0.000	0.363
NE	0.000	0.000	0.000	0.000	0.045	0.091	0.045	0.000	0.000	0.181
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.136	0.045	0.000	0.000	0.000	0.000	0.181
SE	0.000	0.000	0.408	0.318	0.227	0.000	0.000	0.000	0.000	0.953
SSE	0.000	0.000	0.998	0.454	0.000	0.000	0.000	0.000	0.000	1.452
S	0.000	0.000	0.681	0.181	0.000	0.000	0.000	0.000	0.000	0.862
SSW	0.000	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.181
SW	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.136	0.000	0.000	0.000	0.136
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	2.178	1.225	0.408	0.544	0.227	0.000	0.000	4.583

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS A	101
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	101
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 4.86

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.045	0.318	0.045	0.000	0.000	0.408
NNE	0.000	0.000	0.000	0.000	0.181	0.181	0.000	0.000	0.000	0.363
NE	0.000	0.000	0.000	0.000	0.181	0.045	0.045	0.000	0.000	0.272
ENE	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.000	0.136
SE	0.000	0.000	0.227	0.181	0.045	0.000	0.000	0.000	0.000	0.454
SSE	0.000	0.000	0.318	0.000	0.000	0.000	0.000	0.000	0.000	0.318
S	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SSW	0.000	0.000	0.091	0.045	0.000	0.000	0.000	0.000	0.000	0.136
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
WNW	0.000	0.000	0.000	0.000	0.000	0.091	0.091	0.000	0.000	0.181
NW	0.000	0.000	0.000	0.000	0.000	0.045	0.136	0.000	0.000	0.181
NNW	0.000	0.000	0.000	0.000	0.000	0.227	0.000	0.000	0.000	0.227
SUBTOTAL	0.000	0.000	0.817	0.363	0.544	0.907	0.318	0.000	0.000	2.949

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS B	65
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	65
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 6.80

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.045	0.045	0.363	0.045	0.000	0.000	0.499
NNE	0.000	0.000	0.000	0.136	0.181	0.136	0.045	0.000	0.000	0.499
NE	0.000	0.000	0.000	0.091	0.045	0.091	0.000	0.000	0.000	0.227
ENE	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
ESE	0.000	0.000	0.045	0.136	0.227	0.000	0.000	0.000	0.000	0.408
SE	0.000	0.000	0.227	0.136	0.000	0.000	0.000	0.000	0.000	0.363
SSE	0.000	0.000	0.454	0.045	0.000	0.000	0.000	0.000	0.000	0.499
S	0.000	0.000	0.272	0.091	0.000	0.000	0.000	0.000	0.000	0.363
SSW	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SW	0.000	0.000	0.136	0.136	0.000	0.000	0.000	0.000	0.000	0.272
WSW	0.000	0.000	0.000	0.181	0.045	0.000	0.000	0.000	0.000	0.227
W	0.000	0.000	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.181
WNW	0.000	0.000	0.000	0.000	0.000	0.136	0.000	0.000	0.000	0.136
NW	0.000	0.000	0.000	0.045	0.000	0.318	0.091	0.000	0.000	0.454
NNW	0.000	0.000	0.000	0.000	0.000	0.272	0.000	0.000	0.000	0.272
SUBTOTAL	0.000	0.000	1.225	1.270	0.635	1.316	0.181	0.000	0.000	4.628

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS C	102
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	102
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 6.04

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.227	0.681	0.998	1.951	0.136	0.000	0.000	3.993
NNE	0.000	0.045	0.272	0.681	0.907	0.998	0.045	0.000	0.000	2.949
NE	0.000	0.000	0.227	0.272	0.499	0.136	0.000	0.000	0.000	1.134
ENE	0.000	0.000	0.454	0.091	0.227	0.000	0.000	0.000	0.000	0.771
E	0.000	0.000	0.363	0.635	0.136	0.000	0.000	0.000	0.000	1.134
ESE	0.000	0.000	0.998	1.180	0.499	0.045	0.000	0.000	0.000	2.722
SE	0.000	0.045	1.316	0.363	0.045	0.000	0.000	0.000	0.000	1.770
SSE	0.000	0.000	1.044	0.181	0.000	0.000	0.000	0.000	0.000	1.225
S	0.000	0.000	1.180	0.181	0.045	0.000	0.000	0.000	0.000	1.407
SSW	0.000	0.000	1.452	0.045	0.091	0.000	0.000	0.000	0.000	1.588
SW	0.000	0.091	0.590	0.181	0.000	0.000	0.000	0.000	0.000	0.862
WSW	0.000	0.000	0.454	0.318	0.000	0.000	0.000	0.000	0.000	0.771
W	0.000	0.000	0.181	1.044	0.408	0.091	0.000	0.000	0.000	1.724
WNW	0.000	0.000	0.227	0.408	0.590	0.771	0.045	0.000	0.000	2.042
NW	0.000	0.000	0.045	0.408	0.544	1.679	0.817	0.000	0.000	3.494
NNW	0.000	0.000	0.272	0.635	0.907	1.906	0.499	0.000	0.000	4.220
SUBTOTAL	0.000	0.181	9.301	7.305	5.898	7.577	1.543	0.000	0.000	31.806

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS D	701
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	701
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 5.84

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.681	0.499	0.499	0.363	0.000	0.000	0.000	2.042
NNE	0.000	0.091	0.363	0.726	0.363	0.045	0.000	0.000	0.000	1.588
NE	0.000	0.136	0.181	0.181	0.726	0.045	0.000	0.000	0.000	1.270
ENE	0.000	0.136	0.272	0.318	0.091	0.000	0.000	0.000	0.000	0.817
E	0.000	0.091	1.316	0.544	0.045	0.000	0.000	0.000	0.000	1.996
ESE	0.000	0.181	1.588	1.633	0.408	0.000	0.000	0.000	0.000	3.811
SE	0.000	0.227	1.633	0.635	0.045	0.000	0.000	0.000	0.000	2.541
SSE	0.000	0.454	1.497	0.000	0.000	0.000	0.000	0.000	0.000	1.951
S	0.000	0.227	1.543	0.272	0.227	0.045	0.000	0.000	0.000	2.314
SSW	0.000	0.091	0.635	0.091	0.091	0.091	0.000	0.000	0.000	0.998
SW	0.000	0.181	0.408	0.000	0.000	0.045	0.000	0.000	0.000	0.635
WSW	0.000	0.000	0.363	0.136	0.045	0.045	0.000	0.000	0.000	0.590
W	0.000	0.045	0.499	0.590	0.227	0.000	0.000	0.000	0.000	1.361
WNW	0.000	0.045	0.318	0.136	0.000	0.136	0.000	0.000	0.000	0.635
NW	0.000	0.091	0.136	0.363	0.181	0.227	0.045	0.000	0.000	1.044
NNW	0.000	0.045	0.181	0.726	0.817	0.181	0.045	0.000	0.000	1.996
SUBTOTAL	0.000	2.042	11.615	6.851	3.766	1.225	0.091	0.000	0.000	25.590

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS E	564
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	564
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 3.71

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < DELTA T <= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.045	1.316	0.771	0.227	0.000	0.000	0.000	0.000	2.359
NNE	0.000	0.272	0.681	0.318	0.091	0.000	0.000	0.000	0.000	1.361
NE	0.000	0.091	0.544	0.136	0.000	0.000	0.000	0.000	0.000	0.771
ENE	0.000	0.181	1.361	0.318	0.000	0.000	0.000	0.000	0.000	1.860
E	0.000	0.408	1.770	0.363	0.000	0.000	0.000	0.000	0.000	2.541
ESE	0.000	0.136	0.817	0.181	0.000	0.000	0.000	0.000	0.000	1.134
SE	0.000	0.318	0.862	0.091	0.000	0.000	0.000	0.000	0.000	1.270
SSE	0.000	0.272	0.771	0.091	0.000	0.000	0.000	0.000	0.000	1.134
S	0.000	0.408	1.270	0.544	0.227	0.045	0.000	0.000	0.000	2.495
SSW	0.000	0.045	0.091	0.045	0.000	0.000	0.000	0.000	0.000	0.181
SW	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.045
NW	0.000	0.136	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.227
NNW	0.000	0.181	0.726	0.590	0.227	0.000	0.000	0.000	0.000	1.724
SUBTOTAL	0.000	2.586	10.299	3.448	0.771	0.045	0.000	0.000	0.000	17.151

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS F	378
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	378
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 2.76

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.011	1.407	1.497	0.363	0.000	0.000	0.000	0.000	0.000	3.278
NNE	0.007	0.681	1.134	0.091	0.000	0.000	0.000	0.000	0.000	1.913
NE	0.005	0.454	0.953	0.000	0.000	0.000	0.000	0.000	0.000	1.412
ENE	0.003	0.181	0.681	0.181	0.000	0.000	0.000	0.000	0.000	1.047
E	0.002	0.136	0.363	0.045	0.000	0.000	0.000	0.000	0.000	0.546
ESE	0.001	0.136	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SE	0.001	0.136	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.228
SSE	0.007	0.454	1.270	0.045	0.000	0.000	0.000	0.000	0.000	1.776
S	0.002	0.091	0.499	0.272	0.136	0.136	0.000	0.000	0.000	1.137
SSW	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.001	0.272	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.364
NNW	0.005	0.862	0.408	0.000	0.000	0.000	0.000	0.000	0.000	1.275
SUBTOTAL	0.045	4.946	7.033	0.998	0.136	0.136	0.000	0.000	0.000	13.294

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS G	293
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	293
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND SPEED AND DIRECTION MEASURED AT 10.50 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 2.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 8A

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR SPLIT LEVEL RELEASES

(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)

FIRST QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.049	0.000	0.000	0.000	0.049
NNE	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.033
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
E	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.005
ESE	0.000	0.000	0.000	0.000	0.008	0.008	0.000	0.000	0.000	0.017
SE	0.000	0.000	0.000	0.088	0.018	0.000	0.000	0.000	0.000	0.106
SSE	0.000	0.000	0.001	0.019	0.000	0.000	0.000	0.000	0.000	0.021
S	0.000	0.000	0.007	0.034	0.041	0.072	0.000	0.000	0.000	0.154
SSW	0.000	0.000	0.000	0.017	0.008	0.000	0.000	0.000	0.000	0.025
SW	0.000	0.000	0.000	0.010	0.000	0.009	0.000	0.000	0.000	0.019
WSW	0.000	0.000	0.000	0.009	0.000	0.008	0.000	0.000	0.000	0.018
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.039	0.063	0.000	0.000	0.101
NW	0.000	0.000	0.000	0.000	0.000	0.008	0.067	0.000	0.000	0.076
NNW	0.000	0.000	0.000	0.000	0.000	0.021	0.019	0.000	0.000	0.039
SUBTOTAL	0.000	0.000	0.008	0.183	0.080	0.248	0.149	0.000	0.000	0.667

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS A 16.110
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 14.290

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.009
NNE	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.031
NE	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.004
ENE	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
E	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001
ESE	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.008
SE	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.006
SSE	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.007
SW	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.009
WSW	0.000	0.000	0.000	0.006	0.005	0.008	0.000	0.000	0.000	0.019
W	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.005
WNW	0.000	0.000	0.000	0.000	0.003	0.105	0.045	0.000	0.000	0.154
NW	0.000	0.000	0.000	0.000	0.000	0.058	0.018	0.000	0.000	0.077
NNW	0.000	0.000	0.000	0.000	0.002	0.022	0.009	0.000	0.000	0.034
SUBTOTAL	0.000	0.000	0.007	0.020	0.068	0.207	0.073	0.000	0.000	0.375

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS B 26.010
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 8.020

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.018
NNE	0.000	0.000	0.000	0.000	0.001	0.029	0.000	0.000	0.000	0.031
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.003
ESE	0.000	0.000	0.000	0.006	0.007	0.000	0.000	0.000	0.000	0.013
SE	0.000	0.000	0.004	0.012	0.000	0.000	0.000	0.000	0.000	0.016
SSE	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.007
S	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002
SSW	0.000	0.000	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.008
SW	0.000	0.000	0.000	0.003	0.009	0.000	0.000	0.000	0.000	0.013
WSW	0.000	0.000	0.000	0.000	0.023	0.008	0.000	0.000	0.000	0.032
W	0.000	0.000	0.000	0.000	0.011	0.021	0.039	0.000	0.000	0.071
WNW	0.000	0.000	0.000	0.000	0.009	0.063	0.062	0.030	0.000	0.164
NW	0.000	0.000	0.000	0.000	0.003	0.078	0.075	0.000	0.000	0.157
NNW	0.000	0.000	0.000	0.000	0.009	0.031	0.010	0.000	0.000	0.050
SUBTOTAL	0.000	0.000	0.012	0.031	0.075	0.249	0.185	0.030	0.000	0.583

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS C 70.070
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 12.480

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.051	0.158	0.160	0.000	0.000	0.000	0.369
NNE	0.000	0.000	0.000	0.046	0.052	0.060	0.000	0.000	0.000	0.158
NE	0.000	0.000	0.000	0.042	0.039	0.019	0.000	0.000	0.000	0.099
ENE	0.000	0.000	0.001	0.026	0.037	0.000	0.000	0.000	0.000	0.064
E	0.000	0.000	0.008	0.056	0.024	0.000	0.000	0.000	0.000	0.088
ESE	0.000	0.000	0.009	0.092	0.078	0.174	0.000	0.000	0.000	0.353
SE	0.000	0.000	0.012	0.149	0.076	0.111	0.000	0.000	0.000	0.348
SSE	0.000	0.000	0.054	0.008	0.000	0.000	0.000	0.000	0.000	0.062
S	0.000	0.000	0.028	0.010	0.051	0.000	0.000	0.000	0.000	0.089
SSW	0.000	0.000	0.009	0.020	0.026	0.000	0.000	0.000	0.000	0.054
SW	0.000	0.000	0.007	0.008	0.059	0.010	0.000	0.000	0.000	0.084
WSW	0.000	0.000	0.002	0.058	0.097	0.036	0.000	0.000	0.000	0.192
W	0.000	0.000	0.000	0.020	0.096	0.079	0.090	0.045	0.000	0.330
WNW	0.000	0.000	0.000	0.001	0.040	0.210	0.332	0.534	0.000	1.117
NW	0.000	0.000	0.000	0.017	0.072	0.495	0.586	0.234	0.047	1.450
NNW	0.000	0.000	0.000	0.020	0.134	0.173	0.188	0.000	0.000	0.514
SUBTOTAL	0.000	0.000	0.129	0.623	1.039	1.526	1.196	0.813	0.047	5.372

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS D 983.600
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 115.010

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.057	0.099	0.113	0.024	0.000	0.000	0.000	0.292
NNE	0.000	0.000	0.028	0.126	0.026	0.025	0.000	0.000	0.000	0.205
NE	0.000	0.000	0.007	0.071	0.048	0.040	0.000	0.000	0.000	0.165
ENE	0.000	0.000	0.008	0.043	0.000	0.008	0.000	0.000	0.000	0.059
E	0.000	0.000	0.021	0.050	0.015	0.000	0.000	0.000	0.000	0.087
ESE	0.000	0.002	0.041	0.171	0.050	0.000	0.000	0.000	0.000	0.265
SE	0.000	0.000	0.076	0.306	0.292	0.021	0.000	0.000	0.000	0.696
SSE	0.000	0.003	0.152	0.200	0.047	0.000	0.000	0.000	0.000	0.401
S	0.000	0.000	0.163	0.157	0.269	0.262	0.000	0.000	0.000	0.851
SSW	0.000	0.004	0.057	0.036	0.009	0.141	0.000	0.000	0.000	0.247
SW	0.000	0.000	0.014	0.033	0.008	0.047	0.000	0.000	0.000	0.102
WSW	0.000	0.000	0.029	0.023	0.018	0.000	0.000	0.000	0.000	0.070
W	0.000	0.000	0.001	0.020	0.033	0.008	0.053	0.000	0.000	0.115
WNW	0.000	0.000	0.002	0.009	0.015	0.030	0.069	0.086	0.000	0.211
NW	0.000	0.000	0.004	0.020	0.089	0.081	0.025	0.000	0.000	0.219
NNW	0.000	0.000	0.013	0.141	0.106	0.152	0.000	0.000	0.000	0.411
SUBTOTAL	0.000	0.009	0.672	1.505	1.138	0.839	0.148	0.086	0.000	4.397

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS E 750.570
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 94.130

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.058	0.065	0.000	0.000	0.000	0.000	0.000	0.123
NNE	0.000	0.000	0.004	0.017	0.000	0.000	0.000	0.000	0.000	0.021
NE	0.000	0.000	0.021	0.013	0.000	0.000	0.000	0.000	0.000	0.034
ENE	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
E	0.000	0.007	0.029	0.005	0.000	0.000	0.000	0.000	0.000	0.041
ESE	0.000	0.000	0.065	0.015	0.000	0.000	0.000	0.000	0.000	0.080
SE	0.000	0.000	0.111	0.070	0.028	0.086	0.000	0.000	0.000	0.296
SSE	0.000	0.015	0.149	0.056	0.000	0.000	0.000	0.000	0.000	0.220
S	0.000	0.006	0.143	0.408	0.273	0.304	0.000	0.000	0.000	1.135
SSW	0.000	0.007	0.052	0.033	0.019	0.000	0.000	0.000	0.000	0.111
SW	0.000	0.000	0.014	0.024	0.000	0.000	0.000	0.000	0.000	0.039
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.047
NW	0.000	0.004	0.003	0.007	0.000	0.000	0.000	0.000	0.000	0.014
NNW	0.000	0.000	0.018	0.049	0.030	0.000	0.000	0.000	0.000	0.097
SUBTOTAL	0.000	0.038	0.675	0.761	0.351	0.390	0.000	0.047	0.000	2.263

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS F 232.500
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 48.450

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.035
NNE	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.005
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.002	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.017
E	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.009
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.019	0.116	0.000	0.039	0.000	0.000	0.000	0.000	0.174
SSE	0.000	0.034	0.240	0.100	0.000	0.000	0.000	0.000	0.000	0.375
S	0.000	0.000	0.316	0.295	0.350	0.000	0.000	0.000	0.000	0.961
SSW	0.000	0.000	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.016
SW	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.000	0.025
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.010
SUBTOTAL	0.000	0.056	0.753	0.405	0.414	0.000	0.000	0.000	0.000	1.628

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF GROUND LEVEL RELEASE 327.230
TOTAL HOURS OF STABILITY CLASS G 62.140
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 34.850

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.038
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.047	0.000	0.038	0.000	0.000	0.085

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS A 16.110
TOTAL HOURS OF ELEVATED STABILITY CLASS A 1.820

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.040
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
SE	0.000	0.000	0.000	0.000	0.043	0.041	0.038	0.000	0.000	0.122
SSE	0.000	0.000	0.000	0.093	0.047	0.000	0.000	0.000	0.000	0.140
S	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SSW	0.000	0.000	0.000	0.047	0.000	0.080	0.038	0.000	0.000	0.165
SW	0.000	0.000	0.000	0.047	0.000	0.042	0.000	0.000	0.000	0.088
WSW	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.000	0.043
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.149	0.000	0.000	0.149
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.234	0.178	0.203	0.226	0.000	0.000	0.840

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS B 26.010
TOTAL HOURS OF ELEVATED STABILITY CLASS B 17.990

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.119	0.151	0.000	0.000	0.270
NNE	0.000	0.000	0.000	0.000	0.000	0.163	0.000	0.000	0.000	0.163
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.042
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.115	0.000	0.000	0.115
SE	0.000	0.000	0.000	0.047	0.000	0.165	0.039	0.000	0.000	0.251
SSE	0.000	0.000	0.047	0.047	0.000	0.125	0.039	0.000	0.000	0.257
S	0.000	0.000	0.000	0.280	0.046	0.040	0.037	0.000	0.011	0.415
SSW	0.000	0.000	0.000	0.047	0.000	0.000	0.038	0.000	0.000	0.085
SW	0.000	0.000	0.000	0.047	0.000	0.042	0.038	0.000	0.000	0.127
WSW	0.000	0.000	0.000	0.000	0.044	0.084	0.038	0.000	0.000	0.167
W	0.000	0.000	0.000	0.000	0.000	0.161	0.000	0.000	0.000	0.161
WNW	0.000	0.000	0.000	0.000	0.000	0.080	0.151	0.069	0.000	0.300
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.226	0.035	0.000	0.260
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.000	0.000	0.077
SUBTOTAL	0.000	0.000	0.047	0.467	0.091	1.021	0.950	0.103	0.011	2.690

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS C 70.070
TOTAL HOURS OF ELEVATED STABILITY CLASS C 57.590

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.093	0.187	0.625	2.171	1.065	0.000	0.000	4.142
NNE	0.000	0.000	0.047	0.701	0.989	1.245	0.344	0.036	0.000	3.362
NE	0.000	0.000	0.093	0.467	0.539	0.759	0.000	0.000	0.000	1.858
ENE	0.000	0.000	0.140	0.280	0.448	0.250	0.039	0.000	0.000	1.157
E	0.000	0.000	0.000	0.374	0.708	0.376	0.000	0.000	0.000	1.457
ESE	0.000	0.000	0.000	0.093	0.267	1.026	0.152	0.000	0.000	1.538
SE	0.000	0.000	0.093	0.374	0.362	0.859	0.836	0.134	0.020	2.678
SSE	0.000	0.000	0.093	0.420	0.185	0.285	0.265	0.000	0.000	1.249
S	0.000	0.000	0.280	0.140	0.044	0.121	0.226	0.024	0.014	0.850
SSW	0.000	0.000	0.280	0.327	0.319	0.202	0.227	0.000	0.000	1.356
SW	0.000	0.000	0.420	0.607	0.316	0.206	0.380	0.037	0.000	1.966
WSW	0.000	0.000	0.047	0.420	0.315	0.853	0.420	0.000	0.000	2.055
W	0.000	0.000	0.234	0.374	0.718	0.812	0.382	0.076	0.017	2.611
WNW	0.000	0.000	0.000	0.467	0.490	1.837	1.058	0.497	0.030	4.380
NW	0.000	0.000	0.047	0.280	0.669	1.626	2.995	0.676	0.022	6.314
NNW	0.000	0.000	0.047	0.093	0.544	1.883	0.872	0.158	0.000	3.596
SUBTOTAL	0.000	0.000	1.915	5.605	7.539	14.510	9.260	1.638	0.103	40.569

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS D 983.600
TOTAL HOURS OF ELEVATED STABILITY CLASS D 868.590

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.047	0.000	0.187	0.455	1.146	0.231	0.000	0.000	2.066
NNE	0.000	0.000	0.140	0.374	0.541	1.451	0.193	0.000	0.000	2.699
NE	0.000	0.047	0.140	0.514	0.221	1.075	0.116	0.000	0.000	2.113
ENE	0.000	0.000	0.187	0.234	0.178	0.577	0.116	0.000	0.000	1.291
E	0.000	0.000	0.093	0.187	0.225	0.376	0.000	0.000	0.000	0.880
ESE	0.000	0.000	0.000	0.327	0.445	1.020	0.114	0.000	0.000	1.906
SE	0.000	0.000	0.187	0.140	0.179	1.260	1.517	0.394	0.010	3.687
SSE	0.000	0.000	0.047	0.234	0.313	0.981	0.382	0.302	0.027	2.285
S	0.000	0.000	0.280	0.093	0.316	0.844	0.720	0.433	0.026	2.714
SSW	0.000	0.000	0.047	0.140	0.314	0.532	0.454	0.213	0.011	1.712
SW	0.000	0.000	0.000	0.327	0.551	1.014	0.193	0.000	0.000	2.085
WSW	0.000	0.000	0.140	0.374	0.450	0.249	0.153	0.000	0.000	1.366
W	0.000	0.000	0.140	0.374	0.270	0.209	0.037	0.015	0.000	1.045
WNW	0.000	0.000	0.187	0.327	0.228	0.243	0.037	0.021	0.007	1.049
NW	0.000	0.000	0.047	0.093	0.274	0.567	0.421	0.000	0.000	1.402
NNW	0.000	0.000	0.047	0.280	0.000	1.498	0.536	0.000	0.000	2.361
SUBTOTAL	0.000	0.093	1.681	4.204	4.960	13.043	5.220	1.378	0.081	30.660

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS E 750.570
TOTAL HOURS OF ELEVATED STABILITY CLASS E 656.440

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.047	0.000	0.092	0.286	0.000	0.000	0.000	0.425
NNE	0.000	0.000	0.047	0.047	0.090	0.165	0.000	0.000	0.000	0.348
NE	0.000	0.000	0.047	0.047	0.091	0.121	0.000	0.000	0.000	0.306
ENE	0.000	0.000	0.000	0.187	0.045	0.043	0.000	0.000	0.000	0.275
E	0.000	0.000	0.093	0.187	0.314	0.000	0.000	0.000	0.000	0.594
ESE	0.000	0.000	0.047	0.093	0.135	0.166	0.000	0.000	0.000	0.442
SE	0.000	0.000	0.047	0.000	0.179	0.574	0.342	0.037	0.021	1.199
SSE	0.000	0.047	0.000	0.140	0.183	0.166	0.832	0.317	0.011	1.696
S	0.000	0.000	0.000	0.000	0.044	0.602	0.647	0.194	0.037	1.525
SSW	0.000	0.000	0.000	0.093	0.090	0.126	0.000	0.000	0.000	0.309
SW	0.000	0.000	0.093	0.140	0.045	0.039	0.039	0.000	0.000	0.356
WSW	0.000	0.000	0.093	0.234	0.046	0.000	0.000	0.000	0.000	0.373
W	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.093
WNW	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.091
NW	0.000	0.000	0.000	0.140	0.046	0.084	0.000	0.000	0.000	0.270
NNW	0.000	0.000	0.000	0.000	0.047	0.246	0.000	0.000	0.000	0.293
SUBTOTAL	0.000	0.047	0.560	1.355	1.538	2.619	1.860	0.548	0.069	8.596

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS F 232.500
TOTAL HOURS OF ELEVATED STABILITY CLASS F 184.050

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
NNE	0.000	0.000	0.000	0.047	0.089	0.043	0.000	0.000	0.000	0.178
NE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.047	0.000	0.043	0.000	0.000	0.000	0.000	0.090
SE	0.000	0.000	0.000	0.000	0.089	0.000	0.000	0.000	0.000	0.089
SSE	0.000	0.000	0.000	0.047	0.046	0.000	0.037	0.045	0.000	0.175
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.044
SW	0.000	0.000	0.047	0.000	0.046	0.000	0.000	0.000	0.000	0.093
WSW	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
W	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
WNW	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.093
NW	0.000	0.000	0.047	0.000	0.044	0.000	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.047	0.093	0.000	0.000	0.000	0.000	0.000	0.140
SUBTOTAL	0.000	0.000	0.234	0.420	0.496	0.043	0.037	0.045	0.000	1.275

TOTAL HOURS OF VALID OBSERVATIONS 2141.000
TOTAL HOURS OF ELEVATED RELEASES 1813.770
TOTAL HOURS OF STABILITY CLASS G 62.140
TOTAL HOURS OF ELEVATED STABILITY CLASS G 27.290

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/05/22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 8B

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR SPLIT LEVEL RELEASES

(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)

SECOND QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.007	0.041	0.000	0.000	0.000	0.047
NNE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
NE	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.006
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003
ESE	0.000	0.000	0.022	0.023	0.008	0.092	0.000	0.000	0.000	0.145
SE	0.000	0.000	0.057	0.130	0.010	0.000	0.000	0.000	0.000	0.198
SSE	0.000	0.000	0.064	0.022	0.000	0.000	0.000	0.000	0.000	0.086
S	0.000	0.000	0.147	0.051	0.000	0.000	0.000	0.000	0.000	0.198
SSW	0.000	0.000	0.025	0.029	0.009	0.000	0.000	0.000	0.000	0.063
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.007
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.017
NW	0.000	0.000	0.000	0.000	0.000	0.024	0.030	0.000	0.000	0.054
NNW	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.006
SUBTOTAL	0.000	0.000	0.315	0.265	0.033	0.233	0.030	0.000	0.000	0.877

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE 205.480
TOTAL HOURS OF STABILITY CLASS A 33.960
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 17.280

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.017	0.023	0.000	0.000	0.000	0.040
NNE	0.000	0.000	0.000	0.000	0.011	0.023	0.000	0.000	0.000	0.034
NE	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.016
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.026	0.000	0.030	0.000	0.000	0.000	0.056
SE	0.000	0.000	0.015	0.033	0.000	0.000	0.000	0.000	0.000	0.048
SSE	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.011
S	0.000	0.000	0.031	0.029	0.000	0.000	0.000	0.000	0.000	0.060
SSW	0.000	0.000	0.008	0.020	0.000	0.000	0.000	0.000	0.000	0.027
SW	0.000	0.000	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.020
WSW	0.000	0.000	0.001	0.025	0.014	0.000	0.000	0.000	0.000	0.040
W	0.000	0.000	0.000	0.000	0.011	0.017	0.000	0.000	0.000	0.027
WNW	0.000	0.000	0.000	0.000	0.004	0.039	0.039	0.000	0.000	0.082
NW	0.000	0.000	0.000	0.000	0.000	0.111	0.000	0.000	0.000	0.111
NNW	0.000	0.000	0.000	0.000	0.009	0.013	0.000	0.000	0.000	0.022
SUBTOTAL	0.000	0.000	0.064	0.154	0.065	0.272	0.039	0.000	0.000	0.594

TOTAL HOURS OF VALID OBSERVATIONS	1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE	205.480
TOTAL HOURS OF STABILITY CLASS B	25.730
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B	11.710

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.004	0.019	0.033	0.000	0.000	0.000	0.056
NNE	0.000	0.000	0.000	0.000	0.013	0.016	0.000	0.000	0.000	0.029
NE	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.024
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.011	0.007	0.036	0.035	0.000	0.000	0.000	0.088
SE	0.000	0.000	0.013	0.018	0.000	0.000	0.000	0.000	0.000	0.030
SSE	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.006
S	0.000	0.000	0.016	0.017	0.031	0.000	0.000	0.000	0.000	0.065
SSW	0.000	0.000	0.015	0.028	0.000	0.000	0.000	0.000	0.000	0.043
SW	0.000	0.000	0.001	0.010	0.000	0.000	0.000	0.000	0.000	0.010
WSW	0.000	0.000	0.002	0.013	0.000	0.000	0.000	0.000	0.000	0.015
W	0.000	0.000	0.000	0.012	0.025	0.053	0.000	0.000	0.000	0.090
WNW	0.000	0.000	0.000	0.002	0.018	0.058	0.000	0.000	0.000	0.078
NW	0.000	0.000	0.000	0.000	0.004	0.033	0.010	0.000	0.000	0.047
NNW	0.000	0.000	0.000	0.000	0.005	0.025	0.000	0.000	0.000	0.030
SUBTOTAL	0.000	0.000	0.057	0.116	0.151	0.278	0.010	0.000	0.000	0.612

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE 205.480
TOTAL HOURS OF STABILITY CLASS C 79.770
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 12.060

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.003	0.020	0.033	0.000	0.000	0.000	0.000	0.056
NNE	0.000	0.000	0.000	0.010	0.086	0.052	0.000	0.000	0.000	0.148
NE	0.000	0.000	0.000	0.009	0.039	0.037	0.000	0.000	0.000	0.085
ENE	0.000	0.000	0.007	0.009	0.008	0.017	0.000	0.000	0.000	0.040
E	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.013
ESE	0.000	0.000	0.052	0.195	0.126	0.161	0.000	0.000	0.000	0.534
SE	0.000	0.000	0.109	0.033	0.000	0.000	0.000	0.000	0.000	0.143
SSE	0.000	0.002	0.117	0.041	0.000	0.000	0.000	0.000	0.000	0.160
S	0.000	0.000	0.176	0.196	0.095	0.000	0.000	0.000	0.000	0.467
SSW	0.000	0.000	0.090	0.071	0.019	0.000	0.000	0.000	0.000	0.180
SW	0.000	0.000	0.033	0.017	0.000	0.000	0.000	0.000	0.000	0.050
WSW	0.000	0.000	0.025	0.065	0.014	0.000	0.000	0.000	0.000	0.104
W	0.000	0.000	0.002	0.083	0.103	0.078	0.000	0.000	0.000	0.265
WNW	0.000	0.000	0.000	0.009	0.074	0.255	0.051	0.000	0.000	0.388
NW	0.000	0.000	0.000	0.016	0.063	0.161	0.042	0.000	0.000	0.282
NNW	0.000	0.000	0.002	0.015	0.024	0.077	0.000	0.000	0.000	0.118
SUBTOTAL	0.000	0.002	0.629	0.788	0.682	0.839	0.092	0.000	0.000	3.032

TOTAL HOURS OF VALID OBSERVATIONS	1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE	205.480
TOTAL HOURS OF STABILITY CLASS D	868.390
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D	59.770

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
 WIND DIRECTION MEASURED AT 10.50 METER LEVEL
 WIND SPEED MEASURED AT 10.50 METER LEVEL
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.026	0.035	0.025	0.010	0.000	0.000	0.000	0.096
NNE	0.000	0.006	0.017	0.061	0.038	0.016	0.000	0.000	0.000	0.138
NE	0.000	0.000	0.004	0.011	0.056	0.018	0.000	0.000	0.000	0.089
ENE	0.000	0.013	0.007	0.032	0.028	0.000	0.000	0.000	0.000	0.080
E	0.000	0.012	0.187	0.101	0.075	0.000	0.000	0.000	0.000	0.375
ESE	0.000	0.016	0.177	0.270	0.046	0.000	0.000	0.000	0.000	0.508
SE	0.000	0.023	0.186	0.067	0.000	0.000	0.000	0.000	0.000	0.277
SSE	0.000	0.017	0.120	0.000	0.000	0.000	0.000	0.000	0.000	0.136
S	0.000	0.007	0.322	0.246	0.101	0.000	0.000	0.000	0.000	0.676
SSW	0.000	0.010	0.081	0.049	0.070	0.000	0.000	0.000	0.000	0.210
SW	0.000	0.000	0.050	0.009	0.025	0.000	0.000	0.000	0.000	0.083
WSW	0.000	0.000	0.047	0.007	0.010	0.000	0.000	0.000	0.000	0.064
W	0.000	0.000	0.019	0.054	0.035	0.000	0.000	0.000	0.000	0.109
WNW	0.000	0.000	0.002	0.015	0.008	0.049	0.010	0.000	0.000	0.083
NW	0.000	0.002	0.002	0.009	0.019	0.026	0.010	0.000	0.000	0.068
NNW	0.000	0.000	0.038	0.074	0.054	0.018	0.000	0.000	0.000	0.184
SUBTOTAL	0.000	0.105	1.283	1.040	0.591	0.136	0.020	0.000	0.000	3.175

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE 205.480
TOTAL HOURS OF STABILITY CLASS E 626.240
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 62.580

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.005	0.076	0.007	0.017	0.000	0.000	0.000	0.000	0.104
NNE	0.000	0.008	0.022	0.037	0.016	0.000	0.000	0.000	0.000	0.082
NE	0.000	0.002	0.015	0.000	0.009	0.000	0.000	0.000	0.000	0.026
ENE	0.000	0.025	0.046	0.014	0.000	0.000	0.000	0.000	0.000	0.085
E	0.001	0.040	0.088	0.037	0.000	0.000	0.000	0.000	0.000	0.165
ESE	0.000	0.028	0.042	0.008	0.000	0.000	0.000	0.000	0.000	0.078
SE	0.000	0.051	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.096
SSE	0.001	0.024	0.099	0.000	0.000	0.000	0.000	0.000	0.000	0.123
S	0.001	0.037	0.250	0.092	0.000	0.000	0.000	0.000	0.000	0.380
SSW	0.000	0.007	0.046	0.013	0.000	0.000	0.000	0.000	0.000	0.067
SW	0.000	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.018
WSW	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
W	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002
WNW	0.000	0.000	0.000	0.003	0.000	0.000	0.030	0.000	0.000	0.033
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.024	0.039	0.009	0.000	0.000	0.000	0.000	0.072
SUBTOTAL	0.005	0.237	0.762	0.250	0.051	0.000	0.030	0.000	0.000	1.335

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE 205.480
TOTAL HOURS OF STABILITY CLASS F 265.620
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 26.320

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.004	0.030	0.014	0.000	0.000	0.000	0.000	0.000	0.048
NNE	0.000	0.003	0.012	0.016	0.000	0.000	0.000	0.000	0.000	0.030
NE	0.000	0.014	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.028
ENE	0.000	0.000	0.028	0.016	0.009	0.000	0.000	0.000	0.000	0.053
E	0.000	0.041	0.007	0.012	0.000	0.000	0.000	0.000	0.000	0.059
ESE	0.000	0.030	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.040
SE	0.000	0.051	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.073
SSE	0.000	0.165	0.101	0.000	0.000	0.000	0.000	0.000	0.000	0.266
S	0.000	0.026	0.112	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SSW	0.000	0.014	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.023
SW	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.015
WSW	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.003	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.022
SUBTOTAL	0.000	0.366	0.358	0.067	0.009	0.000	0.000	0.000	0.000	0.800

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF GROUND LEVEL RELEASE 205.480
TOTAL HOURS OF STABILITY CLASS G 71.290
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 15.760

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED

BY WIND DIRECTION DISREGARDING STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.007	0.128	0.072	0.115	0.102	0.000	0.000	0.000	0.425
NNE	0.000	0.021	0.048	0.113	0.149	0.140	0.000	0.000	0.000	0.471
NE	0.000	0.027	0.026	0.027	0.151	0.092	0.000	0.000	0.000	0.323
ENE	0.000	0.042	0.087	0.089	0.051	0.015	0.000	0.000	0.000	0.284
E	0.000	0.090	0.321	0.178	0.076	0.000	0.000	0.000	0.000	0.665
ESE	0.000	0.067	0.301	0.592	0.438	0.359	0.000	0.000	0.000	1.758
SE	0.001	0.123	0.439	0.271	0.009	0.000	0.000	0.000	0.000	0.843
SSE	0.001	0.189	0.470	0.086	0.000	0.000	0.000	0.000	0.000	0.746
S	0.001	0.064	1.002	0.593	0.207	0.000	0.000	0.000	0.000	1.867
SSW	0.000	0.028	0.270	0.233	0.089	0.000	0.000	0.000	0.000	0.620
SW	0.000	0.021	0.101	0.049	0.023	0.000	0.000	0.000	0.000	0.194
WSW	0.000	0.003	0.071	0.106	0.035	0.000	0.000	0.000	0.000	0.215
W	0.000	0.000	0.019	0.138	0.163	0.158	0.000	0.000	0.000	0.478
WNW	0.000	0.000	0.006	0.025	0.094	0.398	0.166	0.000	0.000	0.689
NW	0.000	0.002	0.001	0.023	0.078	0.324	0.093	0.000	0.000	0.520
NNW	0.000	0.003	0.076	0.124	0.109	0.144	0.000	0.000	0.000	0.456
SUBTOTAL	0.004	0.687	3.365	2.718	1.788	1.733	0.259	0.000	0.000	10.555

TOTAL HOURS OF VALID OBSERVATIONS 2166.000
TOTAL HOURS OF OBSERVATIONS 2184.000
RECOVERABILITY PERCENTAGE 99.176
TOTAL HOURS OF GROUND LEVEL RELEASE 228.620

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.147	0.180	0.000	0.000	0.000	0.327
SSE	0.000	0.000	0.000	0.000	0.000	0.179	0.165	0.000	0.000	0.344
S	0.000	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.082
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.043
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.051	0.147	0.401	0.248	0.000	0.000	0.846

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF ELEVATED RELEASES 1765.520
TOTAL HOURS OF STABILITY CLASS A 33.960
TOTAL HOURS OF ELEVATED STABILITY CLASS A 16.680

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.044	0.084	0.000	0.000	0.128
NNE	0.000	0.000	0.000	0.000	0.000	0.043	0.042	0.000	0.000	0.085
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.097	0.183	0.000	0.000	0.000	0.280
SSE	0.000	0.000	0.000	0.000	0.000	0.088	0.041	0.000	0.000	0.129
S	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.045
SSW	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.045
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.097	0.447	0.167	0.000	0.000	0.711

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF ELEVATED RELEASES 1765.520
TOTAL HOURS OF STABILITY CLASS B 25.730
TOTAL HOURS OF ELEVATED STABILITY CLASS B 14.020

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.051	0.000	0.218	0.000	0.000	0.000	0.269
NNE	0.000	0.000	0.000	0.051	0.000	0.350	0.000	0.000	0.000	0.400
NE	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.045
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.203	0.290	0.364	0.082	0.027	0.000	0.966
SSE	0.000	0.000	0.000	0.254	0.099	0.000	0.000	0.024	0.000	0.377
S	0.000	0.000	0.000	0.051	0.098	0.131	0.083	0.000	0.000	0.363
SSW	0.000	0.000	0.000	0.101	0.000	0.045	0.000	0.000	0.000	0.147
SW	0.000	0.000	0.000	0.000	0.097	0.000	0.000	0.000	0.000	0.097
WSW	0.000	0.000	0.000	0.051	0.150	0.047	0.000	0.000	0.000	0.248
W	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
WNW	0.000	0.000	0.000	0.051	0.000	0.000	0.208	0.000	0.000	0.259
NW	0.000	0.000	0.000	0.000	0.000	0.088	0.082	0.000	0.000	0.170
NNW	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.000	0.000	0.863	0.735	1.332	0.455	0.051	0.000	3.435

TOTAL HOURS OF VALID OBSERVATIONS	1971.000
TOTAL HOURS OF ELEVATED RELEASES	1765.520
TOTAL HOURS OF STABILITY CLASS C	79.770
TOTAL HOURS OF ELEVATED STABILITY CLASS C	67.710

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL
 WIND SPEED MEASURED AT 45.74 METER LEVEL
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.051	0.101	0.443	0.797	0.126	0.035	0.000	1.554
NNE	0.000	0.051	0.000	0.304	0.196	1.108	0.293	0.000	0.000	1.951
NE	0.000	0.000	0.000	0.304	0.146	0.667	0.211	0.000	0.000	1.328
ENE	0.000	0.000	0.051	0.152	0.192	0.223	0.042	0.000	0.000	0.659
E	0.000	0.000	0.000	0.051	0.050	0.179	0.000	0.000	0.000	0.280
ESE	0.000	0.000	0.203	0.101	0.193	0.261	0.084	0.000	0.000	0.842
SE	0.000	0.000	0.304	0.660	0.730	1.693	1.030	0.143	0.029	4.589
SSE	0.000	0.000	0.609	0.304	0.490	1.520	0.829	0.114	0.022	3.888
S	0.000	0.000	0.355	0.558	0.925	1.250	0.994	0.312	0.000	4.394
SSW	0.000	0.000	0.609	0.710	0.587	0.757	0.911	0.039	0.000	3.613
SW	0.000	0.000	0.609	0.964	0.730	0.627	0.083	0.000	0.000	3.012
WSW	0.000	0.000	0.152	0.812	0.584	0.632	0.083	0.000	0.000	2.263
W	0.000	0.000	0.406	0.507	0.925	1.385	0.331	0.000	0.000	3.554
WNW	0.000	0.000	0.101	0.457	0.837	1.911	0.952	0.040	0.000	4.298
NW	0.000	0.000	0.000	0.355	0.242	1.874	0.706	0.029	0.000	3.206
NNW	0.000	0.000	0.101	0.152	0.542	0.592	0.208	0.000	0.000	1.595
SUBTOTAL	0.000	0.051	3.551	6.494	7.811	15.475	6.881	0.711	0.051	41.026

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF ELEVATED RELEASES 1765.520
TOTAL HOURS OF STABILITY CLASS D 868.390
TOTAL HOURS OF ELEVATED STABILITY CLASS D 808.620

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.051	0.203	0.097	0.987	0.251	0.000	0.000	1.589
NNE	0.000	0.051	0.000	0.051	0.385	0.398	0.000	0.000	0.000	0.884
NE	0.000	0.000	0.152	0.101	0.245	0.531	0.041	0.000	0.000	1.071
ENE	0.000	0.000	0.203	0.101	0.145	0.090	0.000	0.000	0.000	0.539
E	0.000	0.000	0.101	0.152	0.145	0.267	0.000	0.000	0.000	0.666
ESE	0.000	0.000	0.000	0.355	0.246	1.155	0.166	0.000	0.000	1.922
SE	0.000	0.000	0.051	0.304	0.681	1.169	0.784	0.091	0.000	3.081
SSE	0.000	0.000	0.000	0.304	0.778	1.167	1.356	0.155	0.015	3.776
S	0.000	0.000	0.051	0.304	0.875	1.799	1.573	0.450	0.017	5.068
SSW	0.000	0.000	0.051	0.558	0.098	0.669	0.124	0.082	0.000	1.582
SW	0.000	0.000	0.304	0.660	0.386	0.363	0.000	0.000	0.000	1.713
WSW	0.000	0.000	0.355	0.558	0.399	0.046	0.000	0.000	0.000	1.358
W	0.000	0.000	0.101	0.812	0.443	0.366	0.000	0.000	0.000	1.723
WNW	0.000	0.000	0.051	0.355	0.438	0.225	0.284	0.000	0.000	1.353
NW	0.000	0.000	0.051	0.254	0.343	0.138	0.125	0.040	0.000	0.950
NNW	0.000	0.000	0.101	0.152	0.242	0.659	0.168	0.000	0.000	1.323
SUBTOTAL	0.000	0.051	1.624	5.226	5.945	10.029	4.873	0.818	0.032	28.598

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF ELEVATED RELEASES 1765.520
TOTAL HOURS OF STABILITY CLASS E 626.240
TOTAL HOURS OF ELEVATED STABILITY CLASS E 563.660

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.101	0.051	0.097	0.405	0.042	0.000	0.000	0.697
NNE	0.000	0.000	0.000	0.051	0.047	0.179	0.084	0.000	0.000	0.361
NE	0.000	0.000	0.000	0.000	0.098	0.661	0.000	0.000	0.000	0.758
ENE	0.000	0.000	0.000	0.051	0.049	0.221	0.084	0.000	0.000	0.405
E	0.000	0.000	0.051	0.152	0.097	0.446	0.000	0.000	0.000	0.747
ESE	0.000	0.000	0.000	0.101	0.191	0.631	0.000	0.000	0.000	0.924
SE	0.000	0.000	0.000	0.203	0.394	0.366	0.042	0.000	0.000	1.004
SSE	0.000	0.000	0.000	0.101	0.150	0.610	0.496	0.033	0.000	1.391
S	0.000	0.000	0.000	0.152	0.144	1.012	0.622	0.079	0.000	2.010
SSW	0.000	0.000	0.101	0.304	0.193	0.533	0.084	0.000	0.000	1.216
SW	0.000	0.000	0.000	0.355	0.191	0.047	0.000	0.000	0.000	0.593
WSW	0.000	0.051	0.051	0.152	0.099	0.000	0.000	0.000	0.000	0.353
W	0.000	0.000	0.051	0.355	0.096	0.000	0.000	0.000	0.000	0.502
WNW	0.000	0.000	0.101	0.203	0.098	0.046	0.000	0.000	0.000	0.449
NW	0.000	0.000	0.051	0.152	0.048	0.047	0.000	0.000	0.000	0.298
NNW	0.000	0.051	0.051	0.152	0.049	0.132	0.000	0.000	0.000	0.435
SUBTOTAL	0.000	0.101	0.558	2.537	2.042	5.336	1.454	0.113	0.000	12.141

TOTAL HOURS OF VALID OBSERVATIONS	1971.000
TOTAL HOURS OF ELEVATED RELEASES	1765.520
TOTAL HOURS OF STABILITY CLASS F	265.620
TOTAL HOURS OF ELEVATED STABILITY CLASS F	239.300

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.051	0.000	0.088	0.000	0.000	0.000	0.139
NNE	0.000	0.000	0.000	0.101	0.000	0.091	0.000	0.000	0.000	0.192
NE	0.000	0.000	0.152	0.000	0.098	0.000	0.000	0.000	0.000	0.250
ENE	0.000	0.000	0.000	0.203	0.197	0.046	0.042	0.000	0.000	0.489
E	0.000	0.000	0.000	0.051	0.048	0.133	0.000	0.000	0.000	0.232
ESE	0.000	0.000	0.000	0.051	0.000	0.043	0.000	0.000	0.000	0.094
SE	0.000	0.000	0.101	0.101	0.000	0.000	0.000	0.000	0.000	0.203
SSE	0.000	0.051	0.000	0.051	0.000	0.045	0.289	0.040	0.000	0.475
S	0.000	0.000	0.000	0.000	0.000	0.085	0.206	0.000	0.000	0.292
SSW	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.101
W	0.000	0.051	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.051
NW	0.000	0.000	0.000	0.051	0.000	0.046	0.000	0.000	0.000	0.096
NNW	0.000	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.051
SUBTOTAL	0.000	0.152	0.355	0.812	0.343	0.577	0.538	0.040	0.000	2.817

TOTAL HOURS OF VALID OBSERVATIONS 1971.000
TOTAL HOURS OF ELEVATED RELEASES 1765.520
TOTAL HOURS OF STABILITY CLASS G 71.290
TOTAL HOURS OF ELEVATED STABILITY CLASS G 55.530

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED

BY WIND DIRECTION DISREGARDING STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.323	0.462	0.580	2.559	0.458	0.031	0.000	4.414
NNE	0.000	0.092	0.000	0.508	0.572	1.972	0.381	0.000	0.000	3.525
NE	0.000	0.000	0.277	0.416	0.622	1.934	0.306	0.000	0.000	3.554
ENE	0.000	0.000	0.231	0.462	0.531	0.767	0.152	0.000	0.000	2.143
E	0.000	0.000	0.139	0.369	0.353	1.096	0.000	0.000	0.000	1.957
ESE	0.000	0.000	0.185	0.693	0.836	2.743	0.721	0.000	0.000	5.177
SE	0.000	0.000	0.462	1.524	2.614	4.131	2.625	0.249	0.026	11.631
SSE	0.000	0.046	0.646	0.970	1.513	3.445	2.891	0.334	0.034	9.878
S	0.000	0.000	0.369	1.108	1.858	4.415	3.428	0.765	0.015	11.958
SSW	0.000	0.046	0.739	1.616	0.844	1.946	1.284	0.110	0.000	6.584
SW	0.000	0.000	0.831	1.847	1.277	0.943	0.076	0.000	0.000	4.973
WSW	0.000	0.046	0.554	1.524	1.121	0.659	0.075	0.000	0.000	3.980
W	0.000	0.046	0.554	1.616	1.421	1.673	0.415	0.000	0.000	5.724
WNW	0.000	0.000	0.277	0.970	1.295	1.986	1.535	0.036	0.000	6.099
NW	0.000	0.000	0.139	0.739	0.622	2.034	0.867	0.063	0.000	4.464
NNW	0.000	0.046	0.231	0.508	0.759	1.460	0.380	0.000	0.000	3.384
SUBTOTAL	0.000	0.323	5.956	15.328	16.818	33.762	15.594	1.589	0.075	89.445

TOTAL HOURS OF VALID OBSERVATIONS 2166.000
TOTAL HOURS OF OBSERVATIONS 2184.000
RECOVERABILITY PERCENTAGE 99.176
TOTAL HOURS OF ELEVATED RELEASES 1937.380

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/08/12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 8C

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR SPLIT LEVEL RELEASES

(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)

THIRD QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.001	0.015	0.000	0.000	0.000	0.016
NNE	0.000	0.000	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.015
NE	0.000	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.021
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.009
ESE	0.000	0.000	0.008	0.070	0.043	0.000	0.000	0.000	0.000	0.121
SE	0.000	0.000	0.031	0.103	0.000	0.000	0.000	0.000	0.000	0.134
SSE	0.000	0.000	0.044	0.016	0.000	0.000	0.000	0.000	0.000	0.059
S	0.000	0.000	0.034	0.006	0.000	0.000	0.000	0.000	0.000	0.040
SSW	0.000	0.000	0.012	0.005	0.000	0.000	0.000	0.000	0.000	0.018
SW	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
WSW	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003
W	0.000	0.000	0.000	0.004	0.020	0.005	0.000	0.000	0.000	0.028
WNW	0.000	0.000	0.000	0.000	0.004	0.036	0.009	0.000	0.000	0.049
NW	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.019
NNW	0.000	0.000	0.000	0.000	0.010	0.027	0.000	0.000	0.000	0.037
SUBTOTAL	0.000	0.000	0.133	0.216	0.077	0.137	0.009	0.000	0.000	0.572

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS A 22.530
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 12.500

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.003	0.044	0.000	0.000	0.000	0.048
NNE	0.000	0.000	0.000	0.000	0.016	0.044	0.000	0.000	0.000	0.060
NE	0.000	0.000	0.000	0.001	0.000	0.011	0.000	0.000	0.000	0.013
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.035	0.016	0.000	0.000	0.000	0.000	0.052
SE	0.000	0.000	0.019	0.016	0.000	0.000	0.000	0.000	0.000	0.035
SSE	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
S	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.002
W	0.000	0.000	0.000	0.007	0.012	0.000	0.000	0.000	0.000	0.019
WNW	0.000	0.000	0.000	0.000	0.004	0.018	0.000	0.000	0.000	0.021
NW	0.000	0.000	0.000	0.000	0.017	0.042	0.000	0.000	0.000	0.059
NNW	0.000	0.000	0.000	0.000	0.026	0.023	0.000	0.000	0.000	0.049
SUBTOTAL	0.000	0.000	0.023	0.062	0.094	0.182	0.000	0.000	0.000	0.362

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS B 43.100
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 7.910

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.002	0.018	0.014	0.000	0.000	0.000	0.034
NNE	0.000	0.000	0.000	0.002	0.026	0.012	0.000	0.000	0.000	0.040
NE	0.000	0.000	0.000	0.000	0.004	0.006	0.000	0.000	0.000	0.011
ENE	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001
E	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
ESE	0.000	0.000	0.015	0.012	0.021	0.000	0.000	0.000	0.000	0.049
SE	0.000	0.000	0.009	0.005	0.000	0.000	0.000	0.000	0.000	0.014
SSE	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.011
S	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.010
SSW	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.007
W	0.000	0.000	0.000	0.009	0.011	0.008	0.000	0.000	0.000	0.027
WNW	0.000	0.000	0.000	0.003	0.008	0.032	0.000	0.000	0.000	0.043
NW	0.000	0.000	0.000	0.001	0.000	0.017	0.000	0.000	0.000	0.018
NNW	0.000	0.000	0.000	0.002	0.029	0.027	0.000	0.000	0.000	0.058
SUBTOTAL	0.000	0.000	0.051	0.043	0.122	0.117	0.000	0.000	0.000	0.332

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS C 105.650
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 7.270

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.023	0.052	0.031	0.000	0.000	0.000	0.106
NNE	0.000	0.000	0.000	0.039	0.031	0.045	0.000	0.000	0.000	0.115
NE	0.000	0.000	0.000	0.004	0.016	0.011	0.000	0.000	0.000	0.031
ENE	0.000	0.000	0.000	0.029	0.007	0.000	0.000	0.000	0.000	0.036
E	0.000	0.000	0.043	0.271	0.041	0.008	0.000	0.000	0.000	0.363
ESE	0.000	0.000	0.134	0.297	0.192	0.040	0.000	0.000	0.000	0.662
SE	0.000	0.000	0.099	0.007	0.000	0.000	0.000	0.000	0.000	0.106
SSE	0.000	0.000	0.052	0.005	0.000	0.000	0.000	0.000	0.000	0.058
S	0.000	0.005	0.075	0.000	0.000	0.000	0.000	0.000	0.000	0.081
SSW	0.000	0.000	0.055	0.009	0.000	0.000	0.000	0.000	0.000	0.064
SW	0.000	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.007
WSW	0.000	0.000	0.012	0.016	0.000	0.000	0.000	0.000	0.000	0.028
W	0.000	0.000	0.000	0.045	0.033	0.015	0.000	0.000	0.000	0.092
WNW	0.000	0.000	0.000	0.003	0.031	0.024	0.000	0.000	0.000	0.058
NW	0.000	0.000	0.000	0.013	0.019	0.022	0.026	0.000	0.000	0.080
NNW	0.000	0.000	0.000	0.010	0.037	0.016	0.000	0.000	0.000	0.063
SUBTOTAL	0.000	0.007	0.477	0.769	0.459	0.213	0.026	0.000	0.000	1.951

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS D 999.570
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 42.660

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.049	0.086	0.000	0.000	0.000	0.000	0.000	0.135
NNE	0.000	0.000	0.054	0.133	0.059	0.000	0.000	0.000	0.000	0.247
NE	0.000	0.005	0.010	0.047	0.039	0.007	0.000	0.000	0.000	0.108
ENE	0.000	0.007	0.043	0.035	0.000	0.000	0.000	0.000	0.000	0.085
E	0.000	0.000	0.226	0.340	0.015	0.000	0.000	0.000	0.000	0.581
ESE	0.000	0.005	0.120	0.254	0.017	0.000	0.000	0.000	0.000	0.396
SE	0.000	0.007	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.061
SSE	0.000	0.005	0.024	0.009	0.000	0.000	0.000	0.000	0.000	0.038
S	0.000	0.004	0.033	0.002	0.008	0.000	0.000	0.000	0.000	0.047
SSW	0.000	0.005	0.023	0.006	0.000	0.000	0.000	0.000	0.000	0.034
SW	0.000	0.003	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.022
WSW	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.004
W	0.000	0.000	0.005	0.014	0.005	0.007	0.000	0.000	0.000	0.031
WNW	0.000	0.000	0.001	0.005	0.000	0.016	0.000	0.000	0.000	0.022
NW	0.000	0.000	0.008	0.001	0.005	0.000	0.009	0.000	0.000	0.024
NNW	0.000	0.000	0.040	0.062	0.005	0.007	0.000	0.000	0.000	0.114
SUBTOTAL	0.000	0.042	0.710	0.999	0.153	0.037	0.009	0.000	0.000	1.950

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS E 691.200
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 42.640

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.002	0.160	0.093	0.000	0.000	0.000	0.000	0.000	0.255
NNE	0.000	0.004	0.048	0.091	0.032	0.000	0.000	0.000	0.000	0.175
NE	0.000	0.002	0.005	0.022	0.000	0.000	0.000	0.000	0.000	0.028
ENE	0.000	0.004	0.055	0.059	0.000	0.000	0.000	0.000	0.000	0.118
E	0.000	0.000	0.081	0.047	0.000	0.000	0.000	0.000	0.000	0.128
ESE	0.000	0.000	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.011
SE	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.011
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.005
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
NNW	0.000	0.000	0.017	0.005	0.000	0.000	0.000	0.000	0.000	0.022
SUBTOTAL	0.000	0.012	0.385	0.325	0.032	0.000	0.000	0.000	0.000	0.754

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS F 283.200
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 16.500

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.037	0.013	0.000	0.000	0.000	0.000	0.000	0.050
NNE	0.000	0.000	0.033	0.014	0.000	0.000	0.000	0.000	0.000	0.047
NE	0.000	0.002	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.010
ENE	0.000	0.000	0.016	0.007	0.000	0.000	0.000	0.000	0.000	0.023
E	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
SUBTOTAL	0.000	0.002	0.103	0.034	0.000	0.000	0.000	0.000	0.000	0.139

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF GROUND LEVEL RELEASE 132.510
TOTAL HOURS OF STABILITY CLASS G 41.750
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 3.030

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.038
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.079	0.000	0.000	0.000	0.079
SSE	0.000	0.000	0.000	0.000	0.132	0.000	0.000	0.000	0.000	0.132
S	0.000	0.000	0.000	0.000	0.087	0.041	0.000	0.000	0.000	0.128
SSW	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.044
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.038
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.263	0.120	0.076	0.000	0.000	0.459

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS A 22.530
TOTAL HOURS OF ELEVATED STABILITY CLASS A 10.030

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.046	0.045	0.283	0.000	0.000	0.000	0.374
SSE	0.000	0.000	0.000	0.183	0.357	0.124	0.075	0.000	0.000	0.739
S	0.000	0.000	0.000	0.046	0.175	0.120	0.000	0.000	0.000	0.341
SSW	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.080
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.039
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.037
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.274	0.578	0.646	0.112	0.000	0.000	1.609

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS B 43.100
TOTAL HOURS OF ELEVATED STABILITY CLASS B 35.190

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.091	0.045	0.200	0.000	0.000	0.000	0.336
NNE	0.000	0.000	0.000	0.000	0.045	0.235	0.000	0.000	0.000	0.281
NE	0.000	0.000	0.000	0.000	0.000	0.080	0.037	0.000	0.000	0.117
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.412	0.175	0.648	0.113	0.000	0.000	1.348
SSE	0.000	0.000	0.046	0.137	0.045	0.165	0.000	0.000	0.000	0.393
S	0.000	0.000	0.000	0.229	0.135	0.081	0.000	0.000	0.000	0.445
SSW	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
SW	0.000	0.000	0.000	0.046	0.087	0.000	0.000	0.000	0.000	0.133
WSW	0.000	0.000	0.000	0.183	0.091	0.000	0.000	0.000	0.000	0.274
W	0.000	0.000	0.000	0.091	0.262	0.166	0.000	0.000	0.000	0.519
WNW	0.000	0.000	0.000	0.000	0.046	0.081	0.038	0.000	0.000	0.165
NW	0.000	0.000	0.000	0.000	0.000	0.201	0.038	0.000	0.000	0.239
NNW	0.000	0.000	0.000	0.000	0.000	0.158	0.000	0.000	0.000	0.158
SUBTOTAL	0.000	0.000	0.046	1.280	0.931	2.015	0.226	0.000	0.000	4.498

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS C 105.650
TOTAL HOURS OF ELEVATED STABILITY CLASS C 98.380

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.046	0.320	0.622	1.249	0.188	0.000	0.000	2.425
NNE	0.000	0.000	0.091	0.366	0.439	1.001	0.227	0.000	0.000	2.125
NE	0.000	0.000	0.183	0.183	0.310	0.286	0.000	0.000	0.000	0.962
ENE	0.000	0.000	0.229	0.274	0.180	0.000	0.000	0.000	0.000	0.683
E	0.000	0.046	0.046	0.366	0.310	0.408	0.038	0.000	0.000	1.213
ESE	0.000	0.000	0.320	0.274	0.787	1.902	0.000	0.000	0.000	3.283
SE	0.000	0.046	0.457	1.280	1.240	1.888	1.450	0.239	0.000	6.600
SSE	0.000	0.000	0.960	1.463	1.005	2.409	0.602	0.000	0.000	6.439
S	0.000	0.000	0.869	1.189	1.111	0.844	0.187	0.000	0.000	4.199
SSW	0.000	0.000	0.823	0.960	0.444	0.571	0.000	0.000	0.000	2.798
SW	0.000	0.000	1.097	0.823	0.355	0.084	0.000	0.000	0.000	2.359
WSW	0.000	0.046	0.503	1.189	0.574	0.163	0.000	0.000	0.000	2.474
W	0.000	0.000	0.320	1.417	1.193	0.404	0.038	0.000	0.000	3.372
WNW	0.000	0.000	0.091	0.412	0.356	0.854	0.075	0.000	0.000	1.787
NW	0.000	0.000	0.091	0.274	0.437	0.726	0.000	0.000	0.000	1.528
NNW	0.000	0.000	0.229	0.274	0.355	0.648	0.000	0.000	0.000	1.506
SUBTOTAL	0.000	0.137	6.356	11.065	9.715	13.437	2.805	0.239	0.000	43.754

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS D 999.570
TOTAL HOURS OF ELEVATED STABILITY CLASS D 956.910

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.046	0.137	0.274	0.392	0.893	0.000	0.000	0.000	1.742
NNE	0.000	0.000	0.091	0.412	0.351	1.362	0.226	0.000	0.000	2.442
NE	0.000	0.000	0.229	0.320	0.262	0.925	0.000	0.000	0.000	1.736
ENE	0.000	0.000	0.137	0.229	0.176	0.203	0.000	0.000	0.000	0.745
E	0.000	0.000	0.229	0.274	0.579	0.621	0.000	0.000	0.000	1.703
ESE	0.000	0.000	0.091	0.457	1.008	2.504	0.038	0.000	0.000	4.098
SE	0.000	0.000	0.229	0.640	0.832	1.728	0.340	0.000	0.000	3.769
SSE	0.000	0.000	0.503	1.052	0.835	1.051	0.186	0.000	0.000	3.627
S	0.000	0.046	0.412	0.869	0.710	0.449	0.037	0.000	0.000	2.523
SSW	0.000	0.046	0.366	0.686	0.445	0.081	0.000	0.000	0.000	1.624
SW	0.000	0.000	0.366	0.640	0.046	0.042	0.000	0.000	0.000	1.093
WSW	0.000	0.000	0.320	0.412	0.134	0.000	0.000	0.000	0.000	0.866
W	0.000	0.000	0.091	0.412	0.264	0.041	0.037	0.000	0.000	0.846
WNW	0.000	0.046	0.229	0.366	0.396	0.000	0.038	0.000	0.000	1.075
NW	0.000	0.000	0.091	0.320	0.130	0.163	0.037	0.020	0.000	0.761
NNW	0.000	0.000	0.046	0.366	0.310	0.284	0.000	0.000	0.000	1.006
SUBTOTAL	0.000	0.183	3.567	7.727	6.873	10.346	0.940	0.020	0.000	29.655

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS E 691.200
TOTAL HOURS OF ELEVATED STABILITY CLASS E 648.560

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.137	0.134	0.803	0.000	0.000	0.000	1.165
NNE	0.000	0.046	0.000	0.046	0.353	1.393	0.189	0.000	0.000	2.026
NE	0.000	0.000	0.091	0.274	0.482	0.861	0.076	0.000	0.000	1.785
ENE	0.000	0.000	0.183	0.046	0.311	0.283	0.000	0.000	0.000	0.823
E	0.000	0.046	0.091	0.137	0.131	0.363	0.000	0.000	0.000	0.768
ESE	0.000	0.046	0.046	0.229	0.262	0.371	0.000	0.000	0.000	0.953
SE	0.000	0.046	0.229	0.229	0.573	0.326	0.000	0.000	0.000	1.402
SSE	0.000	0.046	0.183	0.320	0.089	0.000	0.000	0.000	0.000	0.637
S	0.000	0.000	0.457	0.274	0.000	0.042	0.000	0.000	0.000	0.774
SSW	0.000	0.000	0.183	0.091	0.000	0.000	0.000	0.000	0.000	0.274
SW	0.000	0.091	0.274	0.046	0.000	0.000	0.000	0.000	0.000	0.412
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.091	0.091	0.090	0.038	0.000	0.000	0.000	0.311
WNW	0.000	0.046	0.046	0.046	0.045	0.000	0.000	0.000	0.000	0.182
NW	0.000	0.000	0.183	0.229	0.090	0.000	0.000	0.000	0.000	0.501
NNW	0.000	0.000	0.000	0.091	0.090	0.000	0.000	0.000	0.000	0.182
SUBTOTAL	0.000	0.366	2.149	2.286	2.649	4.480	0.265	0.000	0.000	12.195

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS F 283.200
TOTAL HOURS OF ELEVATED STABILITY CLASS F 266.700

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.137
NNE	0.000	0.000	0.000	0.046	0.045	0.079	0.000	0.000	0.000	0.170
NE	0.000	0.000	0.046	0.000	0.000	0.040	0.000	0.000	0.000	0.086
ENE	0.000	0.000	0.046	0.000	0.044	0.205	0.000	0.000	0.000	0.295
E	0.000	0.000	0.046	0.091	0.046	0.078	0.000	0.000	0.000	0.261
ESE	0.000	0.000	0.000	0.046	0.044	0.000	0.000	0.000	0.000	0.090
SE	0.000	0.000	0.137	0.137	0.000	0.000	0.000	0.000	0.000	0.274
SSE	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.091
S	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.091
SSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.046	0.732	0.412	0.179	0.402	0.000	0.000	0.000	1.770

TOTAL HOURS OF VALID OBSERVATIONS 2187.000
TOTAL HOURS OF ELEVATED RELEASES 2054.490
TOTAL HOURS OF STABILITY CLASS G 41.750
TOTAL HOURS OF ELEVATED STABILITY CLASS G 38.720

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2013/11/15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 8D

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR SPLIT LEVEL RELEASES

(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)

FOURTH QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.006	0.104	0.000	0.000	0.110
NNE	0.000	0.000	0.000	0.000	0.007	0.046	0.000	0.000	0.000	0.053
NE	0.000	0.000	0.000	0.000	0.005	0.016	0.009	0.000	0.000	0.030
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.022	0.008	0.000	0.000	0.000	0.000	0.030
SE	0.000	0.000	0.029	0.015	0.058	0.000	0.000	0.000	0.000	0.102
SSE	0.000	0.000	0.067	0.027	0.000	0.000	0.000	0.000	0.000	0.094
S	0.000	0.000	0.067	0.003	0.000	0.000	0.000	0.000	0.000	0.070
SSW	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.024
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.170	0.067	0.078	0.092	0.113	0.000	0.000	0.520

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS A 24.630
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 11.450

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.003	0.046	0.027	0.000	0.000	0.075
NNE	0.000	0.000	0.000	0.000	0.017	0.027	0.000	0.000	0.000	0.044
NE	0.000	0.000	0.000	0.000	0.017	0.007	0.009	0.000	0.000	0.032
ENE	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.003
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.005
SE	0.000	0.000	0.002	0.005	0.027	0.000	0.000	0.000	0.000	0.034
SSE	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.030
S	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
SSW	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.006
WNW	0.000	0.000	0.000	0.000	0.000	0.015	0.017	0.000	0.000	0.033
NW	0.000	0.000	0.000	0.000	0.000	0.009	0.027	0.000	0.000	0.036
NNW	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.000	0.037
SUBTOTAL	0.000	0.000	0.053	0.010	0.071	0.141	0.080	0.000	0.000	0.355

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS B 23.920
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 7.820

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.005	0.061	0.029	0.000	0.000	0.094
NNE	0.000	0.000	0.000	0.001	0.012	0.020	0.010	0.000	0.000	0.042
NE	0.000	0.000	0.000	0.002	0.001	0.012	0.000	0.000	0.000	0.016
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.010	0.045	0.000	0.000	0.000	0.000	0.055
SE	0.000	0.000	0.001	0.023	0.000	0.000	0.000	0.000	0.000	0.024
SSE	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.008
S	0.000	0.000	0.016	0.009	0.000	0.000	0.000	0.000	0.000	0.025
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.007
W	0.000	0.000	0.000	0.004	0.010	0.000	0.000	0.000	0.000	0.013
WNW	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.020
NW	0.000	0.000	0.000	0.000	0.000	0.055	0.018	0.000	0.000	0.073
NNW	0.000	0.000	0.000	0.000	0.000	0.043	0.000	0.000	0.000	0.043
SUBTOTAL	0.000	0.000	0.025	0.049	0.079	0.210	0.057	0.000	0.000	0.421

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS C 70.860
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 9.270

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.018	0.123	0.374	0.061	0.000	0.000	0.576
NNE	0.000	0.000	0.000	0.016	0.092	0.192	0.017	0.000	0.000	0.317
NE	0.000	0.000	0.000	0.007	0.040	0.020	0.000	0.000	0.000	0.067
ENE	0.000	0.000	0.000	0.003	0.019	0.000	0.000	0.000	0.000	0.022
E	0.000	0.000	0.006	0.043	0.022	0.000	0.000	0.000	0.000	0.071
ESE	0.000	0.000	0.059	0.143	0.156	0.019	0.000	0.000	0.000	0.377
SE	0.000	0.000	0.102	0.060	0.019	0.000	0.000	0.000	0.000	0.181
SSE	0.000	0.000	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.034
S	0.000	0.000	0.080	0.016	0.043	0.000	0.000	0.000	0.000	0.139
SSW	0.000	0.000	0.089	0.000	0.081	0.000	0.000	0.000	0.000	0.170
SW	0.000	0.000	0.004	0.008	0.000	0.000	0.000	0.000	0.000	0.011
WSW	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.015
W	0.000	0.000	0.002	0.036	0.047	0.016	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.000	0.004	0.033	0.114	0.009	0.000	0.000	0.160
NW	0.000	0.000	0.000	0.010	0.048	0.273	0.191	0.000	0.000	0.521
NNW	0.000	0.000	0.000	0.020	0.100	0.322	0.173	0.000	0.000	0.615
SUBTOTAL	0.000	0.000	0.376	0.399	0.823	1.329	0.451	0.000	0.000	3.377

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS D 870.600
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 74.440

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.031	0.064	0.085	0.079	0.000	0.000	0.000	0.259
NNE	0.000	0.000	0.011	0.082	0.056	0.008	0.000	0.000	0.000	0.157
NE	0.000	0.000	0.001	0.012	0.096	0.007	0.000	0.000	0.000	0.116
ENE	0.000	0.007	0.008	0.028	0.010	0.000	0.000	0.000	0.000	0.054
E	0.000	0.002	0.083	0.069	0.006	0.000	0.000	0.000	0.000	0.160
ESE	0.000	0.006	0.125	0.266	0.075	0.000	0.000	0.000	0.000	0.472
SE	0.000	0.013	0.164	0.137	0.010	0.000	0.000	0.000	0.000	0.324
SSE	0.000	0.013	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.195
S	0.000	0.016	0.186	0.103	0.127	0.045	0.000	0.000	0.000	0.476
SSW	0.000	0.000	0.062	0.019	0.019	0.088	0.000	0.000	0.000	0.188
SW	0.000	0.004	0.021	0.000	0.000	0.009	0.000	0.000	0.000	0.034
WSW	0.000	0.000	0.024	0.016	0.007	0.014	0.000	0.000	0.000	0.061
W	0.000	0.000	0.007	0.054	0.031	0.000	0.000	0.000	0.000	0.093
WNW	0.000	0.000	0.000	0.014	0.000	0.022	0.000	0.000	0.000	0.036
NW	0.000	0.008	0.004	0.034	0.026	0.040	0.009	0.000	0.000	0.121
NNW	0.000	0.000	0.005	0.075	0.123	0.034	0.009	0.000	0.000	0.246
SUBTOTAL	0.000	0.069	0.914	0.973	0.671	0.346	0.018	0.000	0.000	2.991

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS E 725.700
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 65.920

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.094	0.105	0.039	0.000	0.000	0.000	0.000	0.238
NNE	0.000	0.000	0.027	0.042	0.015	0.000	0.000	0.000	0.000	0.084
NE	0.000	0.000	0.025	0.015	0.000	0.000	0.000	0.000	0.000	0.041
ENE	0.000	0.004	0.054	0.026	0.000	0.000	0.000	0.000	0.000	0.084
E	0.000	0.013	0.114	0.044	0.000	0.000	0.000	0.000	0.000	0.171
ESE	0.000	0.000	0.075	0.028	0.000	0.000	0.000	0.000	0.000	0.103
SE	0.000	0.027	0.072	0.016	0.000	0.000	0.000	0.000	0.000	0.115
SSE	0.000	0.022	0.111	0.044	0.000	0.000	0.000	0.000	0.000	0.177
S	0.000	0.029	0.223	0.148	0.128	0.045	0.000	0.000	0.000	0.574
SSW	0.000	0.000	0.013	0.009	0.000	0.000	0.000	0.000	0.000	0.022
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.007
NNW	0.000	0.001	0.048	0.086	0.039	0.000	0.000	0.000	0.000	0.175
SUBTOTAL	0.000	0.096	0.864	0.563	0.222	0.045	0.000	0.000	0.000	1.791

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS F 358.090
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 39.480

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.001	0.070	0.041	0.000	0.000	0.000	0.000	0.000	0.112
NNE	0.000	0.000	0.026	0.009	0.000	0.000	0.000	0.000	0.000	0.035
NE	0.000	0.005	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.017
ENE	0.000	0.008	0.018	0.013	0.000	0.000	0.000	0.000	0.000	0.039
E	0.000	0.005	0.022	0.005	0.000	0.000	0.000	0.000	0.000	0.031
ESE	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
SE	0.000	0.019	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.034
SSE	0.000	0.059	0.269	0.011	0.000	0.000	0.000	0.000	0.000	0.339
S	0.000	0.006	0.092	0.104	0.112	0.135	0.000	0.000	0.000	0.449
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.003	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.027
SUBTOTAL	0.000	0.113	0.549	0.182	0.112	0.135	0.000	0.000	0.000	1.092

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF GROUND LEVEL RELEASE 232.440
TOTAL HOURS OF STABILITY CLASS G 130.200
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 24.060

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS
WIND DIRECTION MEASURED AT 10.50 METER LEVEL
WIND SPEED MEASURED AT 10.50 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.039
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.037
SSE	0.000	0.000	0.000	0.000	0.172	0.080	0.148	0.000	0.000	0.401
S	0.000	0.000	0.000	0.000	0.000	0.122	0.000	0.000	0.000	0.122
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.172	0.202	0.185	0.039	0.000	0.598

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF ELEVATED RELEASES 1971.560
TOTAL HOURS OF STABILITY CLASS A 24.630
TOTAL HOURS OF ELEVATED STABILITY CLASS A 13.180

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
 UNITS 1, 2, AND 3
 2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
 SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9< DELTA T<=-1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.025
NNE	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.000	0.038
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.045	0.000	0.110	0.021	0.000	0.177
SSE	0.000	0.000	0.000	0.000	0.044	0.079	0.037	0.000	0.000	0.160
S	0.000	0.000	0.000	0.045	0.044	0.197	0.000	0.000	0.000	0.286
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.091	0.132	0.314	0.147	0.046	0.000	0.730

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
 TOTAL HOURS OF ELEVATED RELEASES 1971.560
 TOTAL HOURS OF STABILITY CLASS B 23.920
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 16.100

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL
 WIND SPEED MEASURED AT 45.74 METER LEVEL
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.043	0.351	0.038	0.015	0.000	0.446
NNE	0.000	0.000	0.000	0.000	0.084	0.202	0.298	0.000	0.000	0.585
NE	0.000	0.000	0.000	0.000	0.000	0.039	0.037	0.000	0.000	0.075
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.136	0.131	0.118	0.112	0.000	0.000	0.497
SSE	0.000	0.000	0.000	0.000	0.088	0.042	0.000	0.000	0.000	0.129
S	0.000	0.000	0.000	0.272	0.088	0.039	0.000	0.000	0.000	0.399
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.136	0.000	0.000	0.000	0.000	0.000	0.136
WSW	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.040
W	0.000	0.000	0.000	0.000	0.000	0.080	0.000	0.000	0.000	0.080
WNW	0.000	0.000	0.000	0.000	0.000	0.038	0.111	0.000	0.000	0.149
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.221	0.000	0.000	0.221
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.037
SUBTOTAL	0.000	0.000	0.000	0.544	0.433	0.949	0.853	0.015	0.000	2.794

TOTAL HOURS OF VALID OBSERVATIONS	2204.000
TOTAL HOURS OF ELEVATED RELEASES	1971.560
TOTAL HOURS OF STABILITY CLASS C	70.860
TOTAL HOURS OF ELEVATED STABILITY CLASS C	61.590

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.363	0.349	1.381	2.100	0.275	0.000	4.559
NNE	0.000	0.000	0.045	0.590	0.921	1.469	0.553	0.120	0.000	3.698
NE	0.000	0.000	0.091	0.091	0.523	0.611	0.038	0.000	0.000	1.353
ENE	0.000	0.000	0.045	0.181	0.216	0.082	0.000	0.000	0.000	0.525
E	0.000	0.045	0.045	0.227	0.265	0.326	0.000	0.000	0.000	0.908
ESE	0.000	0.000	0.136	0.272	0.219	0.568	0.075	0.000	0.000	1.270
SE	0.000	0.000	0.227	1.089	0.520	0.677	1.138	0.316	0.000	3.966
SSE	0.000	0.045	0.771	0.544	0.438	0.794	0.558	0.000	0.000	3.151
S	0.000	0.000	0.363	0.408	0.433	0.634	0.481	0.033	0.012	2.365
SSW	0.000	0.000	0.318	0.454	0.265	0.399	0.113	0.000	0.003	1.550
SW	0.000	0.091	0.318	0.544	0.353	0.040	0.038	0.000	0.000	1.383
WSW	0.000	0.000	0.272	0.318	0.131	0.201	0.000	0.000	0.000	0.922
W	0.000	0.000	0.000	0.681	0.790	0.559	0.037	0.000	0.000	2.066
WNW	0.000	0.045	0.181	0.227	0.303	0.796	0.335	0.000	0.000	1.888
NW	0.000	0.000	0.045	0.136	0.443	1.113	1.248	0.158	0.000	3.144
NNW	0.000	0.000	0.000	0.318	0.392	1.455	0.961	0.248	0.000	3.374
SUBTOTAL	0.000	0.227	2.949	6.443	6.561	11.103	7.675	1.151	0.015	36.123

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF ELEVATED RELEASES 1971.560
TOTAL HOURS OF STABILITY CLASS D 870.600
TOTAL HOURS OF ELEVATED STABILITY CLASS D 796.160

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.045	0.227	0.437	1.045	0.746	0.000	0.000	2.500
NNE	0.000	0.000	0.136	0.227	0.431	1.069	0.188	0.000	0.000	2.052
NE	0.000	0.000	0.136	0.136	0.218	0.795	0.038	0.000	0.000	1.323
ENE	0.000	0.091	0.181	0.091	0.043	0.240	0.000	0.000	0.000	0.647
E	0.000	0.000	0.363	0.272	0.433	0.403	0.000	0.000	0.000	1.471
ESE	0.000	0.000	0.045	0.227	0.569	0.964	0.075	0.000	0.000	1.880
SE	0.000	0.000	0.363	0.544	0.608	1.983	0.847	0.093	0.000	4.438
SSE	0.000	0.000	0.136	0.499	0.744	1.423	1.664	0.187	0.000	4.653
S	0.000	0.045	0.181	0.272	0.476	0.999	0.740	0.158	0.020	2.892
SSW	0.000	0.000	0.136	0.227	0.264	0.720	0.404	0.127	0.000	1.877
SW	0.000	0.000	0.318	0.227	0.445	0.240	0.037	0.000	0.000	1.266
WSW	0.000	0.000	0.136	0.181	0.221	0.078	0.037	0.032	0.000	0.685
W	0.000	0.000	0.045	0.136	0.221	0.364	0.000	0.000	0.000	0.766
WNW	0.000	0.000	0.045	0.136	0.218	0.245	0.112	0.000	0.000	0.757
NW	0.000	0.045	0.000	0.091	0.044	0.358	0.112	0.000	0.000	0.650
NNW	0.000	0.000	0.000	0.227	0.170	1.381	0.299	0.000	0.000	2.077
SUBTOTAL	0.000	0.181	2.269	3.721	5.540	12.308	5.299	0.598	0.020	29.936

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF ELEVATED RELEASES 1971.560
TOTAL HOURS OF STABILITY CLASS E 725.700
TOTAL HOURS OF ELEVATED STABILITY CLASS E 659.780

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.227	0.136	0.260	0.480	0.000	0.000	0.000	1.103
NNE	0.000	0.000	0.136	0.091	0.262	0.876	0.113	0.000	0.000	1.478
NE	0.000	0.000	0.136	0.091	0.305	0.207	0.000	0.000	0.000	0.740
ENE	0.000	0.000	0.136	0.091	0.304	0.240	0.000	0.000	0.000	0.770
E	0.000	0.000	0.045	0.227	0.304	0.160	0.000	0.000	0.000	0.736
ESE	0.000	0.045	0.227	0.499	0.565	0.365	0.038	0.000	0.000	1.740
SE	0.000	0.045	0.272	0.635	0.831	0.841	0.038	0.000	0.000	2.662
SSE	0.000	0.000	0.091	0.181	0.304	0.352	0.551	0.238	0.000	1.716
S	0.000	0.045	0.136	0.091	0.088	0.440	0.556	0.193	0.011	1.559
SSW	0.000	0.045	0.091	0.091	0.045	0.077	0.038	0.000	0.000	0.387
SW	0.000	0.000	0.045	0.091	0.000	0.000	0.000	0.000	0.000	0.136
WSW	0.000	0.091	0.091	0.045	0.087	0.000	0.000	0.000	0.000	0.314
W	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
WNW	0.000	0.045	0.045	0.045	0.044	0.000	0.000	0.000	0.000	0.180
NW	0.000	0.000	0.091	0.045	0.042	0.000	0.000	0.000	0.000	0.178
NNW	0.000	0.000	0.136	0.136	0.130	0.159	0.150	0.000	0.000	0.711
SUBTOTAL	0.000	0.318	1.951	2.495	3.571	4.197	1.482	0.431	0.011	14.456

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF ELEVATED RELEASES 1971.560
TOTAL HOURS OF STABILITY CLASS F 358.090
TOTAL HOURS OF ELEVATED STABILITY CLASS F 318.610

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**
SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.045	0.000	0.157	0.000	0.000	0.000	0.293
NNE	0.000	0.000	0.091	0.136	0.133	0.164	0.000	0.000	0.000	0.524
NE	0.000	0.000	0.181	0.181	0.171	0.082	0.000	0.000	0.000	0.616
ENE	0.000	0.045	0.136	0.045	0.000	0.121	0.000	0.000	0.000	0.348
E	0.000	0.000	0.272	0.045	0.045	0.000	0.000	0.000	0.000	0.363
ESE	0.000	0.000	0.136	0.272	0.091	0.039	0.000	0.000	0.000	0.539
SE	0.000	0.000	0.363	0.363	0.131	0.000	0.000	0.000	0.000	0.857
SSE	0.000	0.000	0.136	0.091	0.043	0.000	0.110	0.000	0.000	0.379
S	0.000	0.000	0.045	0.000	0.044	0.000	0.037	0.000	0.000	0.127
SSW	0.000	0.045	0.181	0.000	0.000	0.000	0.000	0.000	0.000	0.227
SW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.045
W	0.000	0.000	0.136	0.136	0.000	0.000	0.000	0.000	0.000	0.272
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.091
NNW	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
SUBTOTAL	0.000	0.136	1.906	1.407	0.657	0.564	0.147	0.000	0.000	4.816

TOTAL HOURS OF VALID OBSERVATIONS 2204.000
TOTAL HOURS OF ELEVATED RELEASES 1971.560
TOTAL HOURS OF STABILITY CLASS G 130.200
TOTAL HOURS OF ELEVATED STABILITY CLASS G 106.140

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND DIRECTION MEASURED AT 45.74 METER LEVEL
WIND SPEED MEASURED AT 45.74 METER LEVEL
EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2014/02/25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 9A

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR ELEVATED RELEASES

FIRST QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL	
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.047
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.047	0.000	0.047	0.000	0.000	0.000	0.093

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS A	2
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	2
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 10.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.000	0.093	0.000	0.047	0.047	0.000	0.000	0.187
SSE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.047	0.000	0.047	0.093	0.000	0.000	0.187
SW	0.000	0.000	0.000	0.047	0.000	0.047	0.000	0.000	0.000	0.093
WSW	0.000	0.000	0.000	0.047	0.000	0.047	0.000	0.000	0.000	0.093
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.140	0.000	0.187
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.280	0.047	0.280	0.187	0.140	0.000	0.934

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS B	20
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	20
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 11.07

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7< DELTA T<=-1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.093	0.234	0.047	0.000	0.374
NNE	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.140
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
ESE	0.000	0.000	0.000	0.047	0.000	0.000	0.093	0.047	0.000	0.187
SE	0.000	0.000	0.047	0.000	0.000	0.187	0.093	0.000	0.000	0.327
SSE	0.000	0.000	0.000	0.093	0.047	0.093	0.000	0.000	0.000	0.234
S	0.000	0.000	0.000	0.280	0.000	0.047	0.047	0.000	0.047	0.420
SSW	0.000	0.000	0.000	0.093	0.000	0.000	0.047	0.000	0.000	0.140
SW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.047	0.000	0.093
WSW	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.047	0.000	0.187
W	0.000	0.000	0.000	0.000	0.000	0.093	0.140	0.000	0.000	0.234
WNW	0.000	0.000	0.000	0.000	0.000	0.047	0.234	0.280	0.000	0.560
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.093
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.093
SUBTOTAL	0.000	0.000	0.047	0.514	0.047	0.934	1.028	0.514	0.047	3.129

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS C	67
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	67
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 12.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.047	0.140	0.607	1.962	1.868	0.280	0.000	4.904
NNE	0.000	0.000	0.000	0.420	0.560	1.775	0.514	0.093	0.000	3.363
NE	0.000	0.000	0.093	0.234	0.280	1.028	0.093	0.000	0.000	1.728
ENE	0.000	0.000	0.047	0.140	0.327	0.701	0.093	0.000	0.000	1.308
E	0.000	0.000	0.047	0.140	0.187	0.981	0.234	0.000	0.000	1.588
ESE	0.000	0.000	0.000	0.093	0.374	1.028	0.934	0.327	0.093	2.849
SE	0.000	0.000	0.140	0.093	0.327	0.420	0.747	0.327	0.560	2.616
SSE	0.000	0.000	0.047	0.234	0.140	0.327	0.187	0.234	0.000	1.168
S	0.000	0.000	0.140	0.140	0.140	0.047	0.187	0.187	0.093	0.934
SSW	0.000	0.000	0.234	0.187	0.280	0.187	0.280	0.140	0.000	1.308
SW	0.000	0.000	0.327	0.374	0.280	0.467	0.374	0.234	0.000	2.055
WSW	0.000	0.000	0.280	0.467	0.234	0.607	1.028	0.187	0.000	2.802
W	0.000	0.000	0.000	0.280	0.514	1.121	1.168	0.420	0.420	3.923
WNW	0.000	0.000	0.093	0.234	0.607	1.728	1.775	1.308	0.981	6.726
NW	0.000	0.000	0.000	0.140	0.280	1.448	3.176	1.401	0.560	7.006
NNW	0.000	0.000	0.000	0.140	0.280	1.588	0.747	0.374	0.234	3.363
SUBTOTAL	0.000	0.000	1.495	3.456	5.418	15.413	13.405	5.511	2.943	47.641

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS D	1020
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	1020
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 12.78

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.047	1.074	1.168	0.000	0.000	2.289
NNE	0.000	0.000	0.000	0.047	0.140	1.308	1.121	0.047	0.000	2.662
NE	0.000	0.047	0.047	0.047	0.234	0.841	0.934	0.047	0.000	2.195
ENE	0.000	0.000	0.187	0.234	0.187	0.374	0.654	0.093	0.000	1.728
E	0.000	0.000	0.140	0.327	0.187	0.327	0.280	0.047	0.000	1.308
ESE	0.000	0.000	0.000	0.093	0.093	0.607	0.794	0.140	0.000	1.728
SE	0.000	0.000	0.093	0.140	0.140	0.607	1.775	1.121	0.467	4.344
SSE	0.000	0.000	0.000	0.093	0.047	0.747	0.981	0.560	0.514	2.943
S	0.000	0.000	0.000	0.093	0.234	0.560	1.541	0.981	0.747	4.157
SSW	0.000	0.000	0.047	0.047	0.047	0.560	0.701	0.327	0.187	1.915
SW	0.000	0.000	0.000	0.093	0.047	1.028	1.214	0.000	0.000	2.382
WSW	0.000	0.000	0.000	0.140	0.280	1.214	0.234	0.000	0.000	1.868
W	0.000	0.000	0.047	0.047	0.327	0.467	0.140	0.047	0.093	1.168
WNW	0.000	0.047	0.000	0.140	0.374	0.327	0.047	0.047	0.093	1.074
NW	0.000	0.000	0.047	0.047	0.093	0.514	0.841	0.140	0.000	1.681
NNW	0.000	0.000	0.047	0.093	0.140	0.374	1.775	0.187	0.000	2.616
SUBTOTAL	0.000	0.093	0.654	1.681	2.616	10.929	14.199	3.783	2.102	36.058

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS E	772
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	772
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 13.65

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.047	0.280	0.000	0.000	0.327
NNE	0.000	0.000	0.000	0.093	0.000	0.187	0.187	0.000	0.000	0.467
NE	0.000	0.000	0.000	0.000	0.047	0.140	0.140	0.000	0.000	0.327
ENE	0.000	0.000	0.000	0.000	0.093	0.187	0.047	0.000	0.000	0.327
E	0.000	0.000	0.000	0.047	0.140	0.140	0.000	0.000	0.000	0.327
ESE	0.000	0.000	0.000	0.140	0.187	0.187	0.093	0.000	0.000	0.607
SE	0.000	0.000	0.000	0.000	0.000	0.374	0.514	0.234	0.140	1.261
SSE	0.000	0.000	0.047	0.000	0.047	0.187	1.214	0.887	0.607	2.989
S	0.000	0.000	0.047	0.000	0.000	0.327	0.981	0.280	0.420	2.055
SSW	0.000	0.000	0.047	0.000	0.000	0.093	0.327	0.000	0.000	0.467
SW	0.000	0.000	0.000	0.093	0.000	0.093	0.093	0.000	0.000	0.280
WSW	0.000	0.000	0.047	0.047	0.093	0.234	0.093	0.000	0.000	0.514
W	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.093
WNW	0.000	0.000	0.000	0.093	0.000	0.093	0.000	0.000	0.000	0.187
NW	0.000	0.000	0.000	0.000	0.000	0.093	0.093	0.000	0.000	0.187
NNW	0.000	0.000	0.000	0.000	0.093	0.093	0.187	0.000	0.000	0.374
SUBTOTAL	0.000	0.000	0.187	0.514	0.701	2.569	4.250	1.401	1.168	10.789

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS F	231
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	231
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 15.12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JAN 1, 2013 - MAR 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.047	0.000	0.093	0.000	0.000	0.000	0.140
NNE	0.000	0.000	0.047	0.000	0.047	0.047	0.047	0.000	0.000	0.187
NE	0.000	0.000	0.000	0.000	0.093	0.047	0.000	0.000	0.000	0.140
ENE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
SSE	0.000	0.000	0.000	0.000	0.000	0.187	0.000	0.093	0.047	0.327
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
WSW	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
W	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
WNW	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.093
NW	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NNW	0.000	0.000	0.000	0.047	0.000	0.047	0.000	0.000	0.000	0.093
SUBTOTAL	0.000	0.000	0.187	0.093	0.187	0.701	0.047	0.093	0.047	1.355

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2141
TOTAL HOURS OF STABILITY CLASS G	29
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	29
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2141
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/05/22

MEAN WIND SPEED = 9.23

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 9B

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR ELEVATED RELEASES

SECOND QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL	
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.101	0.050	0.000	0.000	0.000	0.151
SE	0.000	0.000	0.000	0.000	0.050	0.151	0.000	0.000	0.000	0.000	0.202
SSE	0.000	0.000	0.000	0.000	0.000	0.151	0.151	0.101	0.000	0.000	0.404
S	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.101
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.050
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.050	0.050	0.404	0.303	0.151	0.000	0.000	0.959

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS A	19
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	19
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 12.52

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.050	0.151	0.000	0.000	0.202
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.050
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.101	0.202	0.000	0.000	0.000	0.303
SSE	0.000	0.000	0.000	0.000	0.000	0.101	0.000	0.050	0.000	0.151
S	0.000	0.000	0.000	0.000	0.000	0.101	0.000	0.000	0.000	0.101
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.101	0.454	0.202	0.050	0.000	0.807

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS B	16
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	16
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 11.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7< DELTA T<=-1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.101	0.151	0.000	0.000	0.252
NNE	0.000	0.000	0.000	0.050	0.000	0.252	0.202	0.000	0.000	0.505
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.151	0.101	0.000	0.000	0.000	0.252
SE	0.000	0.000	0.000	0.202	0.252	0.303	0.101	0.050	0.101	1.009
SSE	0.000	0.000	0.000	0.202	0.050	0.000	0.000	0.000	0.000	0.252
S	0.000	0.000	0.000	0.050	0.101	0.101	0.101	0.050	0.000	0.404
SSW	0.000	0.000	0.000	0.050	0.000	0.000	0.050	0.000	0.000	0.101
SW	0.000	0.000	0.000	0.000	0.000	0.151	0.050	0.000	0.000	0.202
WSW	0.000	0.000	0.000	0.000	0.050	0.202	0.000	0.000	0.000	0.252
W	0.000	0.000	0.000	0.101	0.000	0.000	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.000	0.000	0.000	0.050	0.252	0.050	0.000	0.353
NW	0.000	0.000	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.101
NNW	0.000	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.101
SUBTOTAL	0.000	0.000	0.000	0.656	0.656	1.362	0.959	0.151	0.101	3.885

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS C	77
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	77
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 10.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.050	0.050	0.353	0.656	0.605	0.000	0.000	1.715
NNE	0.000	0.000	0.000	0.252	0.101	0.959	0.858	0.000	0.000	2.170
NE	0.000	0.000	0.101	0.202	0.050	0.404	0.555	0.000	0.000	1.312
ENE	0.000	0.000	0.050	0.050	0.151	0.252	0.151	0.050	0.000	0.706
E	0.000	0.000	0.050	0.050	0.050	0.050	0.252	0.000	0.000	0.454
ESE	0.000	0.000	0.151	0.252	0.202	0.303	0.202	0.151	0.050	1.312
SE	0.000	0.000	0.555	0.404	0.404	1.514	1.211	0.706	0.454	5.247
SSE	0.000	0.000	0.353	0.151	0.252	1.867	0.908	0.505	0.252	4.289
S	0.000	0.000	0.202	0.202	0.404	1.615	1.514	0.404	0.404	4.743
SSW	0.000	0.000	0.303	0.505	0.252	1.060	1.060	0.454	0.000	3.633
SW	0.000	0.000	0.555	0.353	0.454	1.312	0.757	0.050	0.000	3.481
WSW	0.000	0.000	0.353	0.605	0.353	1.110	0.505	0.101	0.000	3.027
W	0.000	0.000	0.202	0.353	0.555	1.816	1.009	0.454	0.000	4.390
WNW	0.000	0.000	0.101	0.404	0.908	1.816	1.867	0.151	0.000	5.247
NW	0.000	0.000	0.000	0.151	0.303	1.362	0.555	0.151	0.000	2.523
NNW	0.000	0.000	0.101	0.050	0.353	0.757	0.303	0.101	0.000	1.665
SUBTOTAL	0.000	0.000	3.128	4.036	5.146	16.852	12.311	3.280	1.160	45.913

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS D	910
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	910
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 11.12

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5< DELTA T<= 1.5 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.202	0.605	1.009	0.050	0.000	1.867
NNE	0.000	0.000	0.000	0.101	0.000	0.404	0.454	0.000	0.000	0.959
NE	0.000	0.000	0.050	0.252	0.101	0.353	0.404	0.050	0.000	1.211
ENE	0.000	0.000	0.000	0.101	0.050	0.151	0.101	0.000	0.000	0.404
E	0.000	0.000	0.000	0.000	0.050	0.252	0.555	0.000	0.000	0.858
ESE	0.000	0.000	0.050	0.050	0.252	0.303	0.505	0.303	0.000	1.463
SE	0.000	0.000	0.000	0.101	0.404	1.060	0.959	0.858	0.101	3.481
SSE	0.000	0.000	0.050	0.101	0.303	1.968	1.413	1.362	0.303	5.499
S	0.000	0.000	0.000	0.151	0.101	1.413	2.523	1.261	0.303	5.752
SSW	0.000	0.000	0.000	0.050	0.252	0.656	0.505	0.050	0.101	1.615
SW	0.000	0.000	0.000	0.151	0.151	0.858	0.505	0.000	0.000	1.665
WSW	0.000	0.050	0.000	0.252	0.252	0.807	0.101	0.000	0.000	1.463
W	0.000	0.000	0.101	0.404	0.252	1.211	0.101	0.050	0.000	2.119
WNW	0.000	0.000	0.101	0.202	0.605	0.505	0.101	0.303	0.000	1.816
NW	0.000	0.000	0.000	0.050	0.151	0.353	0.151	0.101	0.000	0.807
NNW	0.000	0.000	0.101	0.000	0.101	0.202	0.757	0.000	0.000	1.160
SUBTOTAL	0.000	0.050	0.454	1.968	3.229	11.100	10.141	4.390	0.807	32.139

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS E	637
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	637
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 12.70

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.050	0.050	0.050	0.252	0.101	0.000	0.000	0.505
NNE	0.000	0.000	0.000	0.000	0.050	0.151	0.151	0.101	0.000	0.454
NE	0.000	0.000	0.050	0.000	0.000	0.050	0.505	0.202	0.000	0.807
ENE	0.000	0.000	0.000	0.101	0.000	0.151	0.303	0.151	0.000	0.706
E	0.000	0.000	0.000	0.000	0.050	0.101	0.101	0.000	0.000	0.252
ESE	0.000	0.000	0.000	0.050	0.151	0.353	0.555	0.050	0.000	1.160
SE	0.000	0.050	0.050	0.101	0.050	0.706	0.101	0.000	0.000	1.060
SSE	0.000	0.000	0.050	0.000	0.000	0.353	1.009	0.454	0.000	1.867
S	0.000	0.000	0.000	0.050	0.050	0.303	1.564	0.202	0.000	2.170
SSW	0.000	0.000	0.000	0.101	0.101	0.303	0.757	0.101	0.000	1.362
SW	0.000	0.000	0.000	0.050	0.050	0.252	0.353	0.000	0.000	0.706
WSW	0.000	0.000	0.000	0.000	0.050	0.252	0.101	0.000	0.000	0.404
W	0.000	0.050	0.101	0.101	0.050	0.303	0.000	0.000	0.000	0.605
WNW	0.000	0.000	0.050	0.050	0.101	0.252	0.000	0.000	0.000	0.454
NW	0.000	0.000	0.101	0.050	0.050	0.101	0.000	0.000	0.000	0.303
NNW	0.000	0.000	0.000	0.101	0.050	0.050	0.202	0.050	0.000	0.454
SUBTOTAL	0.000	0.101	0.454	0.807	0.858	3.935	5.802	1.312	0.000	13.269

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS F	263
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	263
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 12.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050
NNE	0.000	0.000	0.000	0.000	0.000	0.151	0.050	0.000	0.000	0.202
NE	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050
ENE	0.000	0.000	0.050	0.000	0.101	0.000	0.101	0.050	0.000	0.303
E	0.000	0.000	0.050	0.000	0.101	0.101	0.101	0.000	0.000	0.353
ESE	0.000	0.000	0.151	0.050	0.252	0.000	0.101	0.000	0.000	0.555
SE	0.000	0.000	0.151	0.000	0.000	0.000	0.000	0.000	0.000	0.151
SSE	0.000	0.000	0.050	0.000	0.000	0.000	0.252	0.202	0.000	0.505
S	0.000	0.000	0.000	0.000	0.000	0.050	0.202	0.151	0.000	0.404
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.050	0.151	0.000	0.000	0.000	0.202
W	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050
NNW	0.000	0.000	0.000	0.050	0.000	0.050	0.000	0.000	0.000	0.101
SUBTOTAL	0.000	0.000	0.505	0.303	0.505	0.505	0.807	0.404	0.000	3.027

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF STABILITY CLASS G	60
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	60
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 10.51

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED

BY WIND DIRECTION DISREGARDING STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.092	0.138	0.551	1.700	1.883	0.046	0.000	4.410
NNE	0.000	0.000	0.000	0.367	0.138	1.746	1.608	0.092	0.000	3.950
NE	0.000	0.000	0.184	0.459	0.138	0.919	1.470	0.367	0.000	3.537
ENE	0.000	0.000	0.092	0.230	0.276	0.551	0.643	0.413	0.000	2.205
E	0.000	0.000	0.092	0.046	0.276	0.551	0.919	0.000	0.000	1.883
ESE	0.000	0.000	0.322	0.413	1.056	1.516	2.848	1.194	0.046	7.395
SE	0.000	0.046	0.735	0.735	1.378	4.088	2.389	1.837	0.643	11.851
SSE	0.000	0.000	0.505	0.459	0.689	4.318	3.445	2.435	0.505	12.356
S	0.000	0.000	0.230	0.413	0.643	3.491	5.972	2.067	0.643	13.459
SSW	0.000	0.000	0.276	0.643	0.597	2.021	2.389	0.643	0.092	6.661
SW	0.000	0.000	0.505	0.505	0.597	2.343	1.516	0.046	0.000	5.512
WSW	0.000	0.046	0.367	0.873	0.689	2.297	0.643	0.092	0.000	5.007
W	0.000	0.046	0.413	0.919	0.827	3.124	1.148	0.551	0.000	7.028
WNW	0.000	0.000	0.230	0.643	1.470	2.480	2.067	0.643	0.000	7.533
NW	0.000	0.000	0.138	0.276	0.505	1.700	0.781	0.276	0.000	3.675
NNW	0.000	0.000	0.230	0.230	0.551	1.148	1.240	0.138	0.000	3.537
SUBTOTAL	0.000	0.138	4.410	7.350	10.381	33.992	30.960	10.841	1.929	100.000

TOTAL HOURS OF VALID WIND OBSERVATIONS	2177
TOTAL HOURS OF OBSERVATIONS	2184
RECOVERABILITY PERCENTAGE	99.7
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

MEAN WIND SPEED = 11.95

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY STABILITY CLASS

Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data

APR 1, 2013 - JUN 30, 2013

WIND SPEED (MPH)	STABILITY CLASS						
	A	B	C	D	E	F	G
CALM	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0.6- 1.4	0.000	0.000	0.000	0.000	0.050	0.101	0.000
1.5- 3.4	0.000	0.000	0.000	3.128	0.454	0.454	0.505
3.5- 5.4	0.050	0.000	0.656	4.036	1.968	0.807	0.303
5.5- 7.4	0.050	0.101	0.656	5.146	3.229	0.858	0.505
7.5-12.4	0.404	0.454	1.362	16.852	11.100	3.935	0.505
12.5-18.4	0.303	0.202	0.959	12.311	10.141	5.802	0.807
18.5-24.4	0.151	0.050	0.151	3.280	4.390	1.312	0.404
>=24.5	0.000	0.000	0.101	1.160	0.807	0.000	0.000
TOTAL	0.959	0.807	3.885	45.913	32.139	13.269	3.027

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	1982
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1982
TOTAL HOURS OF OBSERVATIONS	2184
JOINT RECOVERABILITY PERCENTAGE	90.8

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant STA 52 D - Validated Edited Data
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/08/12

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 9C

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR ELEVATED RELEASES

THIRD QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.091
SSE	0.000	0.000	0.000	0.000	0.137	0.046	0.000	0.000	0.000	0.183
S	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.091
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.137	0.229	0.137	0.000	0.000	0.503

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS A	11
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	11
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 10.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.091
SE	0.000	0.000	0.000	0.046	0.091	0.412	0.046	0.000	0.000	0.594
SSE	0.000	0.000	0.000	0.091	0.366	0.091	0.000	0.046	0.000	0.594
S	0.000	0.000	0.000	0.000	0.046	0.183	0.046	0.000	0.000	0.274
SSW	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.091
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.137	0.503	0.823	0.229	0.046	0.000	1.738

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS B	38
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	38
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 9.23

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.091	0.183	0.046	0.000	0.000	0.320
NNE	0.000	0.000	0.000	0.000	0.091	0.183	0.137	0.000	0.000	0.412
NE	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.091
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.091	0.503	0.183	0.000	0.000	0.777
SE	0.000	0.000	0.046	0.229	0.320	0.366	0.046	0.000	0.000	1.006
SSE	0.000	0.000	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.183
S	0.000	0.000	0.000	0.000	0.183	0.091	0.000	0.000	0.000	0.274
SSW	0.000	0.000	0.000	0.046	0.137	0.000	0.000	0.000	0.000	0.183
SW	0.000	0.000	0.000	0.046	0.000	0.091	0.000	0.000	0.000	0.137
WSW	0.000	0.000	0.000	0.137	0.137	0.000	0.000	0.000	0.000	0.274
W	0.000	0.000	0.000	0.000	0.274	0.274	0.000	0.000	0.000	0.549
WNW	0.000	0.000	0.000	0.000	0.000	0.137	0.137	0.000	0.000	0.274
NW	0.000	0.000	0.000	0.000	0.046	0.137	0.000	0.000	0.000	0.183
NNW	0.000	0.000	0.000	0.000	0.000	0.137	0.046	0.000	0.000	0.183
SUBTOTAL	0.000	0.000	0.046	0.640	1.372	2.149	0.640	0.000	0.000	4.847

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS C	107
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	106
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 8.86

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.274	0.549	1.143	0.549	0.046	0.000	2.652
NNE	0.000	0.000	0.137	0.229	0.229	1.052	0.686	0.000	0.000	2.332
NE	0.000	0.000	0.137	0.183	0.274	0.274	0.046	0.000	0.000	0.914
ENE	0.000	0.000	0.183	0.320	0.183	0.000	0.000	0.000	0.000	0.686
E	0.000	0.000	0.183	0.183	0.274	0.686	0.320	0.000	0.000	1.646
ESE	0.000	0.000	0.320	0.366	0.457	1.783	1.555	0.091	0.000	4.572
SE	0.000	0.000	0.457	0.823	0.777	1.646	2.012	0.914	0.046	6.676
SSE	0.000	0.046	0.640	1.097	0.777	2.332	1.509	0.091	0.000	6.493
S	0.000	0.000	0.412	0.777	0.960	1.097	0.412	0.046	0.000	3.704
SSW	0.000	0.000	0.640	0.640	0.594	0.823	0.091	0.000	0.000	2.789
SW	0.000	0.000	0.732	0.640	0.503	0.457	0.091	0.000	0.000	2.423
WSW	0.000	0.000	0.412	1.052	0.777	0.732	0.000	0.000	0.000	2.972
W	0.000	0.000	0.274	0.732	1.097	1.189	0.183	0.000	0.000	3.475
WNW	0.000	0.000	0.091	0.503	0.412	1.189	0.137	0.000	0.000	2.332
NW	0.000	0.000	0.137	0.229	0.274	0.503	0.046	0.000	0.000	1.189
NNW	0.000	0.000	0.183	0.229	0.183	0.960	0.183	0.046	0.000	1.783
SUBTOTAL	0.000	0.046	5.030	8.276	8.322	15.866	7.819	1.235	0.046	46.639

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS D	1020
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	1020
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 8.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.046	0.137	0.274	0.549	0.686	0.000	0.000	1.692
NNE	0.000	0.000	0.046	0.046	0.137	0.732	1.326	0.091	0.000	2.378
NE	0.000	0.000	0.091	0.137	0.137	0.960	0.549	0.137	0.000	2.012
ENE	0.000	0.000	0.046	0.183	0.000	0.183	0.229	0.000	0.000	0.640
E	0.000	0.000	0.046	0.091	0.137	0.366	0.137	0.000	0.000	0.777
ESE	0.000	0.000	0.137	0.274	0.320	1.920	2.149	0.000	0.000	4.801
SE	0.000	0.046	0.046	0.366	0.686	2.103	1.417	0.046	0.000	4.710
SSE	0.000	0.046	0.274	0.686	1.006	1.509	0.503	0.091	0.000	4.115
S	0.000	0.000	0.137	0.274	0.777	1.052	0.137	0.000	0.000	2.378
SSW	0.000	0.000	0.137	0.320	0.412	0.777	0.091	0.000	0.000	1.738
SW	0.000	0.091	0.183	0.503	0.366	0.320	0.000	0.000	0.000	1.463
WSW	0.000	0.000	0.137	0.183	0.274	0.137	0.046	0.000	0.000	0.777
W	0.000	0.000	0.000	0.274	0.320	0.366	0.046	0.000	0.000	1.006
WNW	0.000	0.000	0.046	0.274	0.229	0.412	0.000	0.046	0.046	1.052
NW	0.000	0.000	0.046	0.091	0.412	0.412	0.046	0.000	0.000	1.006
NNW	0.000	0.000	0.046	0.274	0.183	0.412	0.046	0.000	0.000	0.960
SUBTOTAL	0.000	0.183	1.463	4.115	5.670	12.209	7.407	0.412	0.046	31.504

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS E	689
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	689
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 9.54

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.091	0.046	0.686	0.000	0.000	0.823
NNE	0.000	0.000	0.000	0.091	0.137	0.274	1.280	0.320	0.000	2.103
NE	0.003	0.000	0.091	0.046	0.046	0.366	0.823	0.137	0.000	1.512
ENE	0.002	0.000	0.046	0.000	0.091	0.594	0.503	0.000	0.000	1.236
E	0.000	0.000	0.000	0.091	0.046	0.274	0.091	0.000	0.000	0.503
ESE	0.003	0.000	0.091	0.183	0.183	0.183	0.229	0.000	0.000	0.872
SE	0.002	0.000	0.046	0.274	0.137	0.686	0.229	0.000	0.000	1.373
SSE	0.009	0.091	0.183	0.274	0.320	0.503	0.046	0.000	0.000	1.427
S	0.003	0.000	0.091	0.229	0.091	0.091	0.000	0.000	0.000	0.506
SSW	0.011	0.046	0.274	0.091	0.183	0.000	0.000	0.000	0.000	0.605
SW	0.005	0.046	0.091	0.320	0.091	0.000	0.000	0.000	0.000	0.553
WSW	0.002	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.093
W	0.000	0.000	0.000	0.091	0.000	0.091	0.046	0.000	0.000	0.229
WNW	0.005	0.000	0.137	0.091	0.046	0.137	0.000	0.000	0.000	0.416
NW	0.002	0.000	0.046	0.046	0.274	0.137	0.000	0.000	0.000	0.505
NNW	0.000	0.000	0.000	0.046	0.091	0.046	0.000	0.000	0.000	0.183
SUBTOTAL	0.046	0.183	1.143	1.920	1.829	3.429	3.932	0.457	0.000	12.940

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS F	283
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	283
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 9.72

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JUL 1, 2013 - SEP 30, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
NNE	0.000	0.000	0.000	0.046	0.000	0.000	0.046	0.000	0.000	0.091
NE	0.000	0.000	0.046	0.000	0.000	0.000	0.091	0.000	0.000	0.137
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.046	0.000	0.091	0.091	0.000	0.000	0.229
ESE	0.000	0.000	0.091	0.137	0.046	0.046	0.000	0.000	0.000	0.320
SE	0.000	0.000	0.046	0.137	0.000	0.000	0.000	0.000	0.000	0.183
SSE	0.000	0.000	0.046	0.091	0.137	0.091	0.000	0.000	0.000	0.366
S	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.091
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.091
WSW	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.091
W	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SUBTOTAL	0.000	0.000	0.549	0.594	0.229	0.229	0.229	0.000	0.000	1.829

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2188
TOTAL HOURS OF STABILITY CLASS G	40
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	40
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2187
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2013/11/15

MEAN WIND SPEED = 6.28

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

BROWNS FERRY NUCLEAR PLANT

2013 METEOROLOGICAL DATA

TABLE 9D

JOINT FREQUENCY DISTRIBUTION IN PERCENT

FOR ELEVATED RELEASES

FOURTH QUARTER

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.091
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.045
SSE	0.000	0.000	0.000	0.000	0.091	0.181	0.136	0.045	0.000	0.454
S	0.000	0.000	0.000	0.000	0.000	0.091	0.045	0.000	0.000	0.136
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.091	0.272	0.227	0.045	0.091	0.726

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS A	16
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	16
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 13.74

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.045	0.091
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.091
SE	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.045	0.045	0.136
SSE	0.000	0.000	0.000	0.000	0.091	0.045	0.091	0.000	0.000	0.227
S	0.000	0.000	0.000	0.000	0.045	0.181	0.045	0.000	0.000	0.272
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.227	0.227	0.272	0.045	0.091	0.862

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS B	19
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	19
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 13.13

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < DELTA T <= -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.000	0.000	0.000	0.272	0.227	0.000	0.045	0.544
NNE	0.000	0.000	0.000	0.000	0.000	0.318	0.363	0.045	0.000	0.726
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.045	0.091	0.000	0.000	0.136
SE	0.000	0.000	0.000	0.045	0.181	0.091	0.091	0.000	0.000	0.408
SSE	0.000	0.000	0.045	0.000	0.045	0.136	0.000	0.000	0.000	0.227
S	0.000	0.000	0.000	0.227	0.045	0.045	0.000	0.000	0.000	0.318
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.000	0.000	0.091
WSW	0.000	0.000	0.000	0.000	0.045	0.000	0.045	0.000	0.000	0.091
W	0.000	0.000	0.000	0.000	0.000	0.045	0.045	0.000	0.000	0.091
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.181	0.000	0.000	0.181
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.272	0.045	0.000	0.318
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.045
SUBTOTAL	0.000	0.000	0.045	0.318	0.363	0.953	1.361	0.091	0.045	3.176

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS C	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 11.56

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5< DELTA T<=-0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.045	0.136	0.590	1.180	2.450	1.044	0.181	5.626
NNE	0.000	0.000	0.045	0.272	0.726	1.543	0.726	0.454	0.000	3.766
NE	0.000	0.000	0.091	0.091	0.272	0.817	0.045	0.000	0.000	1.316
ENE	0.000	0.000	0.136	0.227	0.227	0.136	0.000	0.000	0.000	0.726
E	0.000	0.000	0.045	0.091	0.091	0.408	0.227	0.000	0.000	0.862
ESE	0.000	0.000	0.227	0.318	0.181	0.635	0.408	0.136	0.000	1.906
SE	0.000	0.000	0.454	0.590	0.318	0.499	1.134	0.907	0.272	4.174
SSE	0.000	0.091	0.318	0.363	0.499	0.817	0.817	0.091	0.000	2.995
S	0.000	0.000	0.318	0.272	0.227	0.817	0.862	0.091	0.136	2.722
SSW	0.000	0.045	0.272	0.091	0.227	0.272	0.318	0.000	0.091	1.316
SW	0.000	0.000	0.318	0.408	0.272	0.590	0.136	0.000	0.000	1.724
WSW	0.000	0.000	0.227	0.318	0.136	0.227	0.136	0.000	0.000	1.044
W	0.000	0.045	0.091	0.590	0.544	0.953	0.272	0.045	0.000	2.541
WNW	0.000	0.045	0.181	0.136	0.318	0.998	0.726	0.091	0.000	2.495
NW	0.000	0.045	0.000	0.045	0.318	1.044	1.407	0.998	0.000	3.857
NNW	0.000	0.000	0.045	0.136	0.318	1.044	1.361	0.590	0.045	3.539
SUBTOTAL	0.000	0.272	2.813	4.083	5.263	11.978	11.025	4.446	0.726	40.608

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS D	895
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	895
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 11.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.045	0.045	0.227	0.771	1.497	0.181	0.000	2.768
NNE	0.000	0.000	0.045	0.045	0.136	0.771	0.953	0.181	0.000	2.132
NE	0.000	0.045	0.000	0.136	0.136	0.454	0.726	0.091	0.000	1.588
ENE	0.000	0.000	0.136	0.045	0.136	0.136	0.227	0.000	0.000	0.681
E	0.000	0.045	0.045	0.091	0.045	0.318	0.227	0.000	0.000	0.771
ESE	0.000	0.091	0.091	0.045	0.000	0.681	0.544	0.181	0.000	1.633
SE	0.000	0.000	0.227	0.318	0.318	1.180	1.497	0.681	0.000	4.220
SSE	0.000	0.000	0.136	0.181	0.681	2.269	2.495	0.862	0.000	6.624
S	0.000	0.000	0.136	0.227	0.272	1.679	0.953	0.363	0.454	4.083
SSW	0.000	0.000	0.091	0.181	0.181	0.771	0.726	0.454	0.000	2.405
SW	0.000	0.045	0.000	0.091	0.091	0.726	0.181	0.091	0.000	1.225
WSW	0.000	0.000	0.000	0.000	0.272	0.272	0.181	0.045	0.000	0.771
W	0.000	0.000	0.136	0.136	0.091	0.181	0.363	0.000	0.000	0.907
WNW	0.000	0.000	0.000	0.091	0.045	0.499	0.227	0.045	0.000	0.907
NW	0.000	0.000	0.045	0.045	0.000	0.408	0.272	0.000	0.000	0.771
NNW	0.000	0.000	0.000	0.136	0.045	0.544	1.361	0.091	0.000	2.178
SUBTOTAL	0.000	0.227	1.134	1.815	2.677	11.661	12.432	3.267	0.454	33.666

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS E	742
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	742
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 12.36

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5< DELTA T<= 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED(MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.000	0.000	0.181	0.091	0.136	0.227	0.454	0.000	0.000	1.089
NNE	0.000	0.045	0.091	0.045	0.136	0.363	0.681	0.136	0.000	1.497
NE	0.000	0.000	0.091	0.136	0.181	0.544	0.181	0.000	0.000	1.134
ENE	0.000	0.000	0.091	0.091	0.227	0.272	0.272	0.000	0.000	0.953
E	0.000	0.000	0.091	0.181	0.136	0.272	0.045	0.000	0.000	0.726
ESE	0.000	0.000	0.091	0.091	0.272	0.408	0.181	0.000	0.000	1.044
SE	0.000	0.000	0.318	0.181	0.227	0.590	0.635	0.000	0.000	1.951
SSE	0.000	0.000	0.136	0.136	0.544	1.134	0.726	0.499	0.091	3.267
S	0.000	0.000	0.045	0.000	0.181	0.499	1.044	0.408	0.318	2.495
SSW	0.000	0.045	0.091	0.000	0.045	0.045	0.227	0.000	0.000	0.454
SW	0.000	0.000	0.045	0.000	0.000	0.045	0.000	0.000	0.000	0.091
WSW	0.000	0.000	0.000	0.000	0.045	0.045	0.045	0.000	0.000	0.136
W	0.000	0.000	0.000	0.000	0.045	0.045	0.045	0.000	0.000	0.136
WNW	0.000	0.000	0.045	0.045	0.045	0.045	0.000	0.000	0.000	0.181
NW	0.000	0.000	0.091	0.045	0.091	0.091	0.000	0.000	0.000	0.318
NNW	0.000	0.000	0.091	0.045	0.000	0.045	0.181	0.181	0.000	0.544
SUBTOTAL	0.000	0.091	1.497	1.089	2.314	4.673	4.719	1.225	0.408	16.016

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS F	353
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	353
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 11.24

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G (DELTA T > 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCT 1, 2013 - DEC 31, 2013

WIND DIRECTION	WIND SPEED (MPH)									TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	
N	0.003	0.045	0.045	0.000	0.091	0.000	0.181	0.000	0.000	0.366
NNE	0.002	0.000	0.045	0.045	0.091	0.000	0.045	0.000	0.000	0.229
NE	0.005	0.000	0.136	0.136	0.045	0.227	0.136	0.000	0.000	0.686
ENE	0.007	0.000	0.181	0.091	0.000	0.181	0.045	0.000	0.000	0.506
E	0.002	0.000	0.045	0.000	0.000	0.091	0.000	0.000	0.000	0.138
ESE	0.002	0.000	0.045	0.181	0.091	0.091	0.000	0.000	0.000	0.410
SE	0.005	0.000	0.136	0.272	0.136	0.136	0.091	0.000	0.000	0.776
SSE	0.007	0.091	0.091	0.272	0.045	0.136	0.045	0.045	0.000	0.733
S	0.002	0.045	0.000	0.091	0.091	0.045	0.091	0.000	0.000	0.365
SSW	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
SW	0.002	0.045	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.092
WSW	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
W	0.002	0.000	0.045	0.000	0.000	0.091	0.000	0.000	0.000	0.138
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.007	0.000	0.181	0.045	0.000	0.091	0.000	0.000	0.000	0.324
NNW	0.002	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.047
SUBTOTAL	0.045	0.227	0.998	1.225	0.681	1.089	0.635	0.045	0.000	4.946

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2204
TOTAL HOURS OF STABILITY CLASS G	109
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	109
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2204
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT
STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 89.59 METERS
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

DATE PRINTED: 2014/02/25

MEAN WIND SPEED = 6.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

ATTACHMENT 1

Deviations from ODCM Controls and Surveillance Requirements

This report is to comply with Browns Ferry Nuclear Plant Offsite Dose Calculation Manual (ODCM). The ODCM requires that all deviations be reported in the Annual Radioactive Effluent Release Report.

During the reporting period, January 1, 2013 through December 31, 2013, there were no missed compensatory samples.

Liquid Radwaste or Temporary Storage Tanks

During the reporting period, January 1, 2013 through December 31, 2013, BFN utilized 7 temporary outside liquid radwaste (FRAC) tanks from January through May of 2013. These tanks were used to process batch releases to the river from the excess water flooding the Radwaste basement. All releases were permitted and documented by performance of Surveillance Instruction 0-SI-4.8.A.1-1(a) in accordance with ODCM requirements (Reference PER 662887)

Changes to the Radwaste System and Changes to the Process Control Program

In calendar year 2013, BFN had no permanent changes to the Radwaste System or the Process Control Program. The previous paragraph documents the Temporary Storage Tanks brought on-site due to Radwaste basement flooding from CCW leaks. These temporary tanks were removed from service in May, 2013 when the plant Liquid Radwaste Treatment System resumed all processing operations.

**BROWNS FERRY NUCLEAR PLANT
UNITS 1, 2, AND 3
2013 ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT**

ATTACHMENT 2

2013 Inoperable Radiological Effluent Instrumentation Report

This report is to comply with Browns Ferry Nuclear Plant Offsite Dose Calculation Manual (ODCM) Sections 1/2.1.1 and 1/2.1.2. The ODCM requires the exertion of best efforts to return inoperable instruments to operable status within 30 days. Failure to return such instruments to an operable status within the prescribed interval requires a description in the Annual Radioactive Effluent Release Report.

During the reporting period, January 1 through December 31, 2013, there was one radioactive gaseous effluent monitoring instrument (Problem Evaluation Report (PER) 732596) out of service for greater than 30 days.

1-RM-90-251, Unit 1 Turbine Building Ventilation Effluent Radiation monitor, was declared inoperable on April 25, 2013 at 03:55 due to source check failure. A steam leak in the area was repaired to lower the background and the source was replaced. The monitor was returned to service after successful completion of the source check on June 18, 2013 at 09:15.

During the reporting period, January 1 through December 31, 2013, there was one automatic isolation valve out of service for failure to perform the required surveillance within the specified interval.

BFN ODCM requires the operation of the automatic isolation valves and discharge tank selection valves shall be checked once per 24 months. Contrary to this ODCM requirement, 3-FCV-077-0061, Radwaste Discharge Valve, was declared inoperable due to failure to perform 3-SI-4.8.A.3 within the specified time interval plus 25%. There were no liquid effluent releases made through the Unit 3 discharge lines from the time the 3-FCV-077-0061 was declared inoperable through December 31, 2013.