



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

April 30, 2012

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, Unit 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: Annual Radioactive Effluent Release Report – 2011**

In accordance with the Browns Ferry Nuclear Plant (BFN), Units 1, 2, and 3, Technical Specification Section 5.6.3, the Tennessee Valley Authority (TVA) is submitting documents that collectively comprise the BFN Annual Radioactive Effluent Release Report for the period January through December 2011. This documentation is in conformance with 10 CFR 50.36a and 10 CFR Part 50, Appendix I Section IV.B.1. Also, in accordance with the BFN Offsite Dose Calculation Manual (ODCM) Section 1.1.1, Action (b), and Section 1.1.2, Action (c), TVA is providing the BFN Inoperable Radiological Effluent Instrumentation Report.


Enclosure 1 provides the Radiological Impact Assessment Report. Enclosure 2 provides the Meteorological Data Tables. Enclosure 3 is the Effluent and Waste Disposal Annual Report, and Enclosure 4 is the Inoperable Radiological Effluent Instrumentation Report. Enclosure 5 provides the ODCM, Revision 21.

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There are no regulatory commitments contained within this letter. If you have any questions concerning this submittal, please contact Tom Hess, at (423) 751-3487.

Respectively,



J. W. Shea  
Manager, Corporate Nuclear Licensing

Enclosures:   1. 2011 Radiological Impact Assessment  
                  2. 2011 Meteorological Data Tables  
                  3. 2011 Effluent and Waste Disposal Annual Report  
                  4. 2011 Inoperable Radiological Effluent Instrumentation Report  
                  5. Offsite Dose Calculation Manual, Revision 21

cc: (w/Enclosure):

NRC Regional Administrator - Region II  
NRC Senior Resident Inspector - Browns Ferry Nuclear Plant

**Enclosure 1**

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

**2011 Radiological Impact Assessment Report**

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**(See Attached)**

## 2011 Radiological Impact Assessment Report

### I. 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.

### II. 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:

$$\begin{aligned} &\leq 5 \text{ mrad per quarter and} \\ &\leq 10 \text{ mrad per year for gamma radiation.} \\ &\quad - \text{ and -} \\ &\leq 10 \text{ mrad per quarter and} \\ &\leq 20 \text{ mrad per year for beta radiation.} \end{aligned}$$

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:

$$\begin{aligned} &\leq 7.5 \text{ mrem per quarter and} \\ &\leq 15 \text{ mrem per year to any organ.} \end{aligned}$$

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

$$\begin{aligned} &\leq 1.5 \text{ mrem per quarter and} \\ &\leq 3 \text{ mrem per year to the total body,} \\ &\quad - \text{ and -} \\ &\leq 5 \text{ mrem per quarter and} \\ &\leq 10 \text{ mrem per year to any organ.} \end{aligned}$$

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

$$100 \text{ mrem per year.}$$

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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.

### III. 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 1, 2, 3, 4, 5, 6, and 7.

### IV. 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.

#### 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 Enclosure 2, 2011 Meteorological Data Tables, Tables 1, 2, 3, and 4.

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

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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 Enclosure 2, 2011 Meteorological Data Tables, Tables 5, 6, 7, and 8.

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 Enclosure 2, 2011 Meteorological Data Tables, Tables 9, 10, 11, and 12.

### **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.

### **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.

### **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.

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### **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 Tables 1, 2, 3, and 4.

### **V. 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. 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.

#### **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

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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 Tables 5 and 6 along with the average river flows past the plant site for the periods. For the third and fourth quarter of 2011, there were no river releases.

### **VI. 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 1, 2, 3, 4, 5, and 6.

### **VII. 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 19.3 mrem/quarter at onsite (at or near the site boundary) stations and approximately 16.8 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.



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### **VIII. 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 0.81 mrem during 2011.

The total annual dose commitment to a member of the public for 2011 is 0.81 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.

### **IX. 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 7.

## 2011 Radiological Impact Assessment Report

**Table 1**  
**Doses from Airborne Effluents**  
**First Quarter**

### Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	1.6E-08 mrad	5 mrad	< 1 %	NNW/1650 meters
Beta Air	7.1E-09 mrad	10 mrad	< 1 %	NNW/1650 meters
<b>Submersion</b>				
Total Body	3.5E-04 mrem	NA	NA	E/1290 meters
Skin	4.2E-04 mrem	NA	NA	E/1290 meters
<b>Organ Doses</b>				
Child/Bone	1.5E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Thyroid	2.1E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Total Body	9.3E-03 mrem	7.5 mrem	< 1 %	NNW/1802 meters

### Population Doses

Total Body Dose                      1.1E-01 man-rem

Maximum Organ Dose (organ)    4.8E-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).*

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**Table 2**  
**Doses from Airborne Effluents**  
**Second Quarter\***

### Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	8.8E-06 mrad	5 mrad	< 1 %	NNE/1300 meters
Beta Air	3.6E-06 mrad	10 mrad	< 1 %	NNE/1300 meters
<b>Submersion</b>				
Total Body	9.1E-04 mrem	NA	NA	N/2447 meters
Skin	1.1E-03 mrem	NA	NA	N/2447 meters
<b>Organ Doses</b>				
Child/Bone	1.5E-02 mrem	7.5 mrem	< 1 %	N/4580 meters
Child/Thyroid	1.0E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Total Body	4.1E-03 mrem	7.5 mrem	< 1 %	NNW/4580 meters

### Population Doses

Total Body Dose                      8.0E-02 man-rem

Maximum Organ Dose (organ)    3.6E-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.

## 2011 Radiological Impact Assessment Report

**Table 3**  
**Doses from Airborne Effluents**  
**Third Quarter**

**Individual Doses**

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	3.6E-10 mrad	5 mrad	< 1 %	S/2250 meters
Beta Air	1.1E-09 mrad	10 mrad	< 1 %	S/2250 meters
<b>Submersion</b>				
Total Body	1.3E-03 mrem	NA	NA	E/1290 meters
Skin	1.5E-03 mrem	NA	NA	E/1290 meters
<b>Organ Doses</b>				
Child/Bone	3.4E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Thyroid	1.6E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Total Body	9.3E-03 mrem	7.5 mrem	< 1 %	NNW/1802 meters

**Population Doses**

Total Body Dose                      1.7E-01 man-rem

Maximum Organ Dose (organ)    7.6E-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).*

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**Table 4**  
**Doses from Airborne Effluents**  
**Fourth Quarter**

**Individual Doses**

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
<b>External</b>				
Gamma Air	3.6E-10 mrad	5 mrad	< 1 %	NNW/1650 meters
Beta Air	1.1E-09 mrad	10 mrad	< 1 %	NNW/1650 meters
<b>Submersion</b>				
Total Body	2.1E-04 mrem	NA	NA	E/1290 meters
Skin	2.5E-04 mrem	NA	NA	E/1290 meters
<b>Organ Doses</b>				
Child/ Bone	1.5E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child/Thyroid	1.7E-02 mrem	7.5 mrem	< 1 %	NNW/1802 meters
Child /Total Body	8.6E-03 mrem	7.5 mrem	< 1 %	NNW/1802 meters

**Population Doses**

Total Body Dose                      1.3E-01 man-rem

Maximum Organ Dose (organ)    5.2E-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).*

## 2011 Radiological Impact Assessment Report

**Table 5  
Doses from Liquid Effluents  
First Quarter\***

**Individual Doses (mrem)**

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
<b>Adult</b>	<b>Total Body</b>	Fish Ingestion	5.3E-04		
		Recreation	1.8E-04		
		Water Ingestion	2.0E-05		
		<b>Total</b>	<b>7.3E-04</b>	1.5 mrem	< 1 %
<b>Child</b>	<b>Bone</b>	Fish Ingestion	7.9E-04		
		Recreation	1.8E-04		
		Water Ingestion	8.8E-05		
		<b>Total</b>	<b>1.1E-03</b>	5 mrem	< 1 %
<b>Child</b>	<b>Thyroid</b>	Fish Ingestion	3.4E-06		
		Recreation	1.8E-04		
		Water Ingestion	1.7E-05		
		<b>Total</b>	<b>2.0E-04</b>	5 mrem	< 1 %

Average Riverflow past BFN (cubic feet per second): 66423

**Population Doses**

Total Body Dose                      5.4E-03 man-rem

Maximum Organ Dose (organ)      8.2E-03 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.

## 2011 Radiological Impact Assessment Report

**Table 6**  
**Doses from Liquid Effluents**  
**Second Quarter**

**Individual Doses (mrem)**

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
<b>Adult</b>	<b>Total Body</b>	Fish Ingestion	2.0E-04		
		Recreation	3.1E-05		
		Water Ingestion	2.4E-05		
		<b>Total</b>	<b>2.6E-04</b>	1.5 mrem	< 1 %
<b>Teen</b>	<b>Liver</b>	Fish Ingestion	3.1E-04		
		Recreation	3.1E-05		
		Water Ingestion	2.0E-05		
		<b>Total</b>	<b>3.6E-04</b>	5 mrem	< 1 %
<b>Child</b>	<b>Thyroid</b>	Fish Ingestion	6.4E-07		
		Recreation	3.1E-05		
		Water Ingestion	2.8E-05		
		<b>Total</b>	<b>6.0E-05</b>	5 mrem	< 1 %

Average Riverflow past BFN (cubic-feet per second): 49084

**Population Doses**

Total Body Dose                      2.6E-03 man-rem

Maximum Organ Dose (organ)    3.6E-03 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).*

## 2011 Radiological Impact Assessment Report

**Table 7**  
**Total Dose from Fuel Cycle**

Dose	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
<b>Total Body or any Organ (except thyroid)</b>					
Total body air submersion	3.5E-04	9.1E-04	1.3E-03	2.1E-04	
Critical organ dose (air)	1.5E-02	1.5E-02	3.4E-02	1.5E-02	
Total body dose (liquid)	7.3E-04	2.6E-04	-	-	
Maximum organ dose (liquid)	1.1E-03	3.6E-04	-	-	
Direct Radiation Dose	0	0	0	0	
<b>Total</b>	<b>1.7E-02</b>	<b>1.7E-02</b>	<b>3.5E-02</b>	<b>1.5E-02</b>	
<b>Cumulative Total Dose (mrem) (Total body or any other organ)</b>					<b>8.4E-02</b>
<b>Annual Dose Limit (mrem)</b>					<b>2.5E+01</b>
<b>Percent of Limit</b>					<b>&lt; 1 %</b>
<b>Thyroid Dose (mrem)</b>					
Total body air submersion	3.5E-04	9.1E-04	1.3E-03	2.1E-04	
Thyroid dose (airborne)	2.1E-02	1.0E-02	1.6E-02	1.7E-02	
Total body dose (liquid)	7.3E-04	2.6E-04	-	-	
Thyroid dose (liquid)	2.0E-04	6.0E-05	-	-	
Direct Radiation Dose	0	0	0	0	
<b>Total</b>	<b>2.2E-03</b>	<b>1.1E-02</b>	<b>1.7E-02</b>	<b>1.7E-02</b>	
<b>Cumulative Total Dose (Thyroid) mrem</b>					<b>4.7E-02</b>
<b>Annual Dose Limit (mrem)</b>					<b>7.5E+01</b>
<b>Percent of Limit</b>					<b>&lt; 1 %</b>



**Enclosure 2**

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

**2011 Meteorological Data Tables**

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**(See Attached)**

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 1**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR GROUND LEVEL RELEASES**  
**FIRST QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NNE	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.139
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	0.093	0.000	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.046	0.000	0.046	0.046	0.000	0.000	0.000	0.139
SE	0.000	0.000	0.000	0.788	0.139	0.046	0.000	0.000	0.000	0.974
SSE	0.000	0.000	0.232	0.742	0.000	0.000	0.000	0.000	0.000	0.974
S	0.000	0.000	0.000	0.278	0.000	0.000	0.000	0.000	0.000	0.278
SSW	0.000	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.000	0.232
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	0.093	0.000	0.000	0.000	0.093
NNW	0.000	0.000	0.000	0.000	0.000	0.046	0.232	0.000	0.000	0.278
SUBTOTAL	0.000	0.000	0.371	2.041	0.186	0.417	0.232	0.000	0.000	3.247

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS A	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
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

MEAN WIND SPEED = 5.53

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.139	0.046	0.000	0.000	0.000	0.232
NNE	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.139
NE	0.000	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.093
ENE	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
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	0.186	0.000	0.046	0.000	0.000	0.000	0.232
SE	0.000	0.000	0.046	0.139	0.046	0.000	0.000	0.000	0.000	0.232
SSE	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.093
S	0.000	0.000	0.093	0.046	0.000	0.000	0.000	0.000	0.000	0.139
SSW	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.186
SW	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.139
WSW	0.000	0.000	0.000	0.371	0.046	0.000	0.000	0.000	0.000	0.417
W	0.000	0.000	0.000	0.046	0.139	0.000	0.000	0.000	0.000	0.186
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	0.186	0.325	0.000	0.000	0.510
NNW	0.000	0.000	0.000	0.000	0.046	0.325	0.046	0.000	0.000	0.417
SUBTOTAL	0.000	0.000	0.278	1.252	0.464	0.788	0.371	0.000	0.000	3.154

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS B	68
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	68
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 7.09

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.046	0.093	0.000	0.000	0.000	0.186
NNE	0.000	0.000	0.000	0.000	0.093	0.186	0.000	0.000	0.000	0.278
NE	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.139
ENE	0.000	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.093
E	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.093
ESE	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.139	0.046	0.000	0.093	0.000	0.000	0.000	0.278
SSE	0.000	0.000	0.139	0.093	0.000	0.000	0.000	0.000	0.000	0.232
S	0.000	0.000	0.046	0.139	0.000	0.000	0.000	0.000	0.000	0.186
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	0.093	0.139	0.046	0.000	0.000	0.000	0.000	0.278
WSW	0.000	0.000	0.000	0.093	0.139	0.046	0.000	0.000	0.000	0.278
W	0.000	0.000	0.000	0.093	0.093	0.139	0.000	0.000	0.000	0.325
WNW	0.000	0.000	0.000	0.046	0.093	0.093	0.046	0.000	0.000	0.278
NW	0.000	0.000	0.000	0.046	0.139	0.417	0.139	0.000	0.000	0.742
NNW	0.000	0.000	0.000	0.093	0.093	0.278	0.000	0.000	0.000	0.464
SUBTOTAL	0.000	0.000	0.417	0.974	0.835	1.531	0.186	0.000	0.000	3.942

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS C	85
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	85
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 7.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.232	0.649	0.974	1.206	0.000	0.000	0.000	3.061
NNE	0.000	0.000	0.417	0.974	0.974	0.974	0.000	0.000	0.000	3.340
NE	0.000	0.000	0.139	1.531	1.067	0.881	0.000	0.000	0.000	3.618
ENE	0.000	0.000	0.325	1.252	0.835	0.232	0.000	0.000	0.000	2.644
E	0.000	0.046	0.371	0.603	0.325	0.046	0.000	0.000	0.000	1.391
ESE	0.000	0.000	0.232	0.974	0.139	0.371	0.000	0.000	0.000	1.716
SE	0.000	0.000	0.510	0.835	0.093	0.139	0.000	0.000	0.000	1.577
SSE	0.000	0.000	0.696	0.371	0.093	0.000	0.000	0.000	0.000	1.160
S	0.000	0.000	0.603	0.371	0.000	0.000	0.000	0.000	0.000	0.974
SSW	0.000	0.000	0.835	0.186	0.046	0.000	0.000	0.000	0.000	1.067
SW	0.000	0.000	0.417	0.371	0.232	0.000	0.000	0.000	0.000	1.020
WSW	0.000	0.000	0.093	0.510	0.232	0.417	0.000	0.000	0.000	1.252
W	0.000	0.000	0.139	0.974	0.742	0.974	0.186	0.000	0.000	3.015
WNW	0.000	0.000	0.093	0.371	0.510	1.020	1.345	0.000	0.000	3.340
NW	0.000	0.000	0.046	0.835	0.696	3.200	1.855	0.186	0.000	6.818
NNW	0.000	0.000	0.232	0.649	1.020	3.061	0.464	0.000	0.000	5.427
SUBTOTAL	0.000	0.046	5.380	11.456	7.978	12.523	3.850	0.186	0.000	41.419

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS D	893
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	893
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 7.09

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.278	0.371	0.186	0.139	0.000	0.000	0.000	0.974
NNE	0.000	0.093	0.417	0.974	0.371	0.093	0.000	0.000	0.000	1.948
NE	0.000	0.046	0.325	0.742	0.325	0.278	0.000	0.000	0.000	1.716
ENE	0.000	0.000	0.371	0.371	0.093	0.000	0.000	0.000	0.000	0.835
E	0.000	0.046	0.742	0.325	0.000	0.000	0.000	0.000	0.000	1.113
ESE	0.000	0.232	1.160	0.742	0.186	0.000	0.000	0.000	0.000	2.319
SE	0.000	0.232	1.252	0.788	0.325	0.093	0.000	0.000	0.000	2.690
SSE	0.000	0.464	1.113	0.649	0.046	0.000	0.000	0.000	0.000	2.273
S	0.000	0.278	0.974	1.113	0.510	0.232	0.000	0.000	0.000	3.108
SSW	0.000	0.093	0.186	0.417	0.928	0.464	0.000	0.000	0.000	2.087
SW	0.000	0.046	0.278	0.464	0.139	0.000	0.000	0.000	0.000	0.928
WSW	0.000	0.046	0.603	0.232	0.232	0.000	0.000	0.000	0.000	1.113
W	0.000	0.046	0.325	0.649	0.186	0.093	0.000	0.000	0.000	1.299
WNW	0.000	0.093	0.093	0.186	0.046	0.093	0.046	0.000	0.000	0.557
NW	0.000	0.000	0.139	0.232	0.046	0.510	0.000	0.000	0.000	0.928
NNW	0.000	0.000	0.278	0.186	0.464	0.232	0.046	0.000	0.000	1.206
SUBTOTAL	0.000	1.716	8.534	8.442	4.082	2.226	0.093	0.000	0.000	25.093

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS E	541
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	541
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 4.26

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.232	0.881	0.139	0.000	0.000	0.000	0.000	0.000	1.252
NNE	0.000	0.093	0.278	0.464	0.093	0.000	0.000	0.000	0.000	0.928
NE	0.000	0.093	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.278
ENE	0.000	0.046	0.557	0.093	0.000	0.000	0.000	0.000	0.000	0.696
E	0.000	0.046	0.742	0.232	0.000	0.000	0.000	0.000	0.000	1.020
ESE	0.000	0.186	0.974	0.139	0.000	0.000	0.000	0.000	0.000	1.299
SE	0.000	0.232	1.670	0.278	0.000	0.000	0.000	0.000	0.000	2.180
SSE	0.000	0.557	1.623	0.000	0.000	0.000	0.000	0.000	0.000	2.180
S	0.000	0.232	1.067	0.881	0.371	0.186	0.000	0.000	0.000	2.737
SSW	0.000	0.186	0.417	0.186	0.000	0.000	0.000	0.000	0.000	0.788
SW	0.000	0.000	0.278	0.000	0.000	0.000	0.000	0.000	0.000	0.278
WSW	0.000	0.139	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.232
W	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.093
WNW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NNW	0.000	0.046	0.186	0.093	0.000	0.000	0.000	0.000	0.000	0.325
SUBTOTAL	0.000	2.134	8.905	2.597	0.557	0.186	0.000	0.000	0.000	14.378

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS F	310
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	310
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 2.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
N	0.005	0.139	0.649	0.186	0.000	0.000	0.000	0.000	0.000	0.979
NNE	0.002	0.093	0.278	0.139	0.000	0.000	0.000	0.000	0.000	0.512
NE	0.002	0.186	0.232	0.000	0.000	0.000	0.000	0.000	0.000	0.420
ENE	0.001	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.187
E	0.002	0.232	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.280
ESE	0.001	0.139	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.187
SE	0.005	0.603	0.325	0.000	0.000	0.000	0.000	0.000	0.000	0.933
SSE	0.017	1.345	1.531	0.000	0.000	0.000	0.000	0.000	0.000	2.893
S	0.008	0.232	1.113	0.278	0.093	0.000	0.000	0.000	0.000	1.724
SSW	0.001	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.001	0.093	0.000	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	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NW	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.093
NNW	0.001	0.139	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.326
SUBTOTAL	0.046	3.525	4.360	0.742	0.093	0.000	0.000	0.000	0.000	8.766

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS G	189
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	189
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
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

MEAN WIND SPEED = 1.95

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 2**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR GROUND LEVEL RELEASES**  
**SECOND QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.046	0.046	0.092	0.000	0.000	0.000	0.185
NNE	0.000	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.092
NE	0.000	0.000	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.092
ENE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.092
ESE	0.000	0.000	0.046	0.231	0.046	0.092	0.000	0.000	0.000	0.416
SE	0.000	0.000	0.323	0.369	0.000	0.000	0.000	0.000	0.000	0.693
SSE	0.000	0.000	0.739	0.092	0.000	0.000	0.000	0.000	0.000	0.831
S	0.000	0.000	0.600	0.416	0.000	0.000	0.000	0.000	0.000	1.016
SSW	0.000	0.000	0.416	0.877	0.046	0.000	0.000	0.000	0.000	1.339
SW	0.000	0.000	0.231	0.369	0.000	0.000	0.000	0.000	0.000	0.600
WSW	0.000	0.000	0.000	0.462	0.139	0.185	0.000	0.000	0.000	0.785
W	0.000	0.000	0.000	0.185	0.323	0.092	0.000	0.000	0.000	0.600
WNW	0.000	0.000	0.000	0.092	0.092	0.185	0.000	0.000	0.000	0.369
NW	0.000	0.000	0.000	0.000	0.046	0.231	0.185	0.000	0.000	0.462
NNW	0.000	0.000	0.000	0.000	0.000	0.185	0.000	0.000	0.000	0.185
SUBTOTAL	0.000	0.000	2.401	3.232	0.831	1.154	0.185	0.000	0.000	7.802

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS A	169
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	169
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
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

MEAN WIND SPEED = 4.97

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.092	0.185	0.000	0.000	0.000	0.277
NNE	0.000	0.000	0.000	0.092	0.139	0.185	0.000	0.000	0.000	0.416
NE	0.000	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.139
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	0.046	0.000	0.092	0.000	0.000	0.000	0.000	0.139
SE	0.000	0.000	0.323	0.277	0.000	0.000	0.000	0.000	0.000	0.600
SSE	0.000	0.000	0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.277
S	0.000	0.000	0.416	0.139	0.000	0.000	0.000	0.000	0.000	0.554
SSW	0.000	0.000	0.323	0.369	0.000	0.000	0.000	0.000	0.000	0.693
SW	0.000	0.000	0.185	0.046	0.000	0.000	0.000	0.000	0.000	0.231
WSW	0.000	0.000	0.092	0.231	0.185	0.046	0.000	0.000	0.000	0.554
W	0.000	0.000	0.046	0.046	0.185	0.139	0.000	0.000	0.000	0.416
WNW	0.000	0.000	0.000	0.092	0.046	0.323	0.092	0.000	0.000	0.554
NW	0.000	0.000	0.000	0.000	0.092	0.277	0.139	0.000	0.000	0.508
NNW	0.000	0.000	0.000	0.000	0.185	0.139	0.000	0.000	0.000	0.323
SUBTOTAL	0.000	0.000	1.708	1.385	1.062	1.293	0.231	0.000	0.000	5.679

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS B	123
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	123
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 5.87

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.185	0.231	0.000	0.000	0.000	0.416
NNE	0.000	0.000	0.000	0.046	0.139	0.046	0.000	0.000	0.000	0.231
NE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
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	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.139
SE	0.000	0.000	0.323	0.231	0.000	0.000	0.000	0.000	0.000	0.554
SSE	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.139
S	0.000	0.000	0.139	0.092	0.000	0.000	0.000	0.000	0.000	0.231
SSW	0.000	0.000	0.416	0.231	0.046	0.000	0.000	0.000	0.000	0.693
SW	0.000	0.000	0.462	0.046	0.000	0.000	0.000	0.000	0.000	0.508
WSW	0.000	0.000	0.139	0.369	0.000	0.046	0.000	0.000	0.000	0.554
W	0.000	0.000	0.046	0.231	0.092	0.139	0.000	0.000	0.000	0.508
WNW	0.000	0.000	0.000	0.000	0.092	0.462	0.092	0.000	0.000	0.646
NW	0.000	0.000	0.000	0.092	0.046	0.600	0.092	0.000	0.000	0.831
NNW	0.000	0.000	0.046	0.046	0.092	0.185	0.092	0.000	0.000	0.462
SUBTOTAL	0.000	0.000	1.801	1.477	0.693	1.754	0.277	0.000	0.000	6.002

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS C	130
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	130
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 6.13

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.139	0.231	0.462	0.092	0.000	0.000	0.000	0.923
NNE	0.000	0.000	0.231	0.231	0.277	0.185	0.000	0.000	0.000	0.923
NE	0.000	0.000	0.046	0.185	0.092	0.092	0.000	0.000	0.000	0.416
ENE	0.000	0.000	0.046	0.092	0.139	0.000	0.000	0.000	0.000	0.277
E	0.000	0.000	0.231	0.092	0.139	0.000	0.000	0.000	0.000	0.462
ESE	0.000	0.000	0.877	0.462	0.092	0.046	0.000	0.000	0.000	1.477
SE	0.000	0.000	1.016	0.231	0.000	0.000	0.000	0.000	0.000	1.247
SSE	0.000	0.000	1.108	0.046	0.000	0.000	0.000	0.000	0.000	1.154
S	0.000	0.092	2.632	0.600	0.139	0.000	0.000	0.000	0.000	3.463
SSW	0.000	0.000	2.078	1.524	0.231	0.000	0.000	0.000	0.000	3.832
SW	0.000	0.000	1.108	0.277	0.046	0.046	0.000	0.000	0.000	1.477
WSW	0.000	0.000	0.923	0.600	0.369	0.092	0.000	0.000	0.000	1.985
W	0.000	0.000	0.554	0.416	0.785	0.877	0.000	0.000	0.000	2.632
WNW	0.000	0.000	0.139	0.508	0.554	1.524	0.600	0.000	0.000	3.324
NW	0.000	0.046	0.046	0.277	1.108	1.801	0.877	0.185	0.000	4.340
NNW	0.000	0.000	0.185	0.369	0.554	1.062	0.046	0.000	0.000	2.216
SUBTOTAL	0.000	0.139	11.357	6.140	4.986	5.817	1.524	0.185	0.000	30.148

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS D	653
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	653
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 5.69

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.554	0.369	0.092	0.000	0.000	0.000	0.000	1.062
NNE	0.000	0.000	0.462	0.323	0.046	0.000	0.000	0.000	0.000	0.831
NE	0.000	0.092	0.092	0.231	0.323	0.000	0.000	0.000	0.000	0.739
ENE	0.000	0.231	0.416	0.046	0.185	0.000	0.000	0.000	0.000	0.877
E	0.000	0.092	1.016	0.600	0.000	0.000	0.000	0.000	0.000	1.708
ESE	0.000	0.092	1.616	0.739	0.092	0.000	0.000	0.000	0.000	2.539
SE	0.000	0.277	0.739	0.139	0.000	0.000	0.000	0.000	0.000	1.154
SSE	0.000	0.323	1.154	0.000	0.000	0.000	0.000	0.000	0.000	1.477
S	0.000	0.277	1.893	0.462	0.462	0.092	0.000	0.000	0.000	3.186
SSW	0.000	0.139	2.355	2.031	0.231	0.139	0.046	0.000	0.000	4.940
SW	0.000	0.092	0.646	0.092	0.000	0.000	0.000	0.000	0.000	0.831
WSW	0.000	0.092	0.646	0.323	0.046	0.000	0.000	0.000	0.000	1.108
W	0.000	0.092	0.739	0.369	0.185	0.139	0.000	0.000	0.000	1.524
WNW	0.000	0.000	0.185	0.046	0.046	0.092	0.046	0.000	0.000	0.416
NW	0.000	0.092	0.092	0.046	0.000	0.000	0.092	0.000	0.000	0.323
NNW	0.000	0.000	0.416	0.462	0.092	0.139	0.000	0.000	0.000	1.108
SUBTOTAL	0.000	1.939	13.019	6.279	1.801	0.600	0.185	0.000	0.000	23.823

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS E	516
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	516
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 3.32

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.004	0.277	1.108	0.231	0.000	0.000	0.000	0.000	0.000	1.620
NNE	0.001	0.092	0.231	0.323	0.000	0.000	0.000	0.000	0.000	0.647
NE	0.001	0.231	0.139	0.046	0.092	0.000	0.000	0.000	0.000	0.509
ENE	0.004	0.739	0.693	0.277	0.092	0.000	0.000	0.000	0.000	1.805
E	0.008	0.693	2.031	0.277	0.000	0.000	0.000	0.000	0.000	3.009
ESE	0.008	0.785	1.754	0.000	0.000	0.000	0.000	0.000	0.000	2.547
SE	0.004	0.277	0.923	0.000	0.000	0.000	0.000	0.000	0.000	1.204
SSE	0.002	0.277	0.231	0.000	0.000	0.000	0.000	0.000	0.000	0.509
S	0.004	0.185	1.154	0.185	0.323	0.000	0.000	0.000	0.000	1.851
SSW	0.003	0.231	0.877	0.046	0.046	0.046	0.000	0.000	0.000	1.250
SW	0.001	0.185	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.370
WSW	0.001	0.000	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.185
W	0.001	0.139	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.231
WNW	0.001	0.185	0.046	0.000	0.000	0.046	0.000	0.000	0.000	0.278
NW	0.001	0.139	0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.417
NNW	0.003	0.185	0.646	0.046	0.000	0.000	0.000	0.000	0.000	0.880
SUBTOTAL	0.046	4.617	10.526	1.477	0.554	0.092	0.000	0.000	0.000	17.313

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS F	375
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	375
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	1

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

MEAN WIND SPEED = 2.31

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

WIND DIRECTION	CALM	WIND SPEED (MPH)								TOTAL	
		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	0.035	0.600	1.016	0.185	0.000	0.000	0.000	0.000	0.000	0.000	1.835
NNE	0.014	0.462	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.660
NE	0.012	0.277	0.277	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.566
ENE	0.028	0.600	0.693	0.046	0.000	0.000	0.000	0.000	0.000	0.000	1.367
E	0.021	0.462	0.508	0.046	0.000	0.000	0.000	0.000	0.000	0.000	1.036
ESE	0.011	0.323	0.185	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.519
SE	0.007	0.277	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.330
SSE	0.018	0.231	0.600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.849
S	0.012	0.139	0.416	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.658
SSW	0.005	0.139	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.236
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.002	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.094
W	0.001	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
WNW	0.001	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NW	0.005	0.185	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.236
NNW	0.015	0.277	0.416	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.754
SUBTOTAL	0.185	4.155	4.478	0.416	0.000	0.000	0.000	0.000	0.000	0.000	9.234

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS G	200
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	200
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2166
TOTAL HOURS CALM	4

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

MEAN WIND SPEED = 1.72

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT  
2011 METEOROLOGICAL DATA TABLE 3  
JOINT FREQUENCY DISTRIBUTION IN PERCENT  
FOR GROUND LEVEL RELEASES  
THIRD QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.046	0.093	0.790	0.000	0.000	0.000	0.930
NNE	0.000	0.000	0.000	0.046	0.093	0.325	0.000	0.000	0.000	0.465
NE	0.000	0.000	0.000	0.000	0.093	0.046	0.000	0.000	0.000	0.139
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	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.000	0.046	0.465	0.465	0.000	0.000	0.000	0.000	0.976
SE	0.000	0.000	0.697	1.860	0.046	0.000	0.000	0.000	0.000	2.603
SSE	0.000	0.000	1.209	0.837	0.000	0.000	0.000	0.000	0.000	2.046
S	0.000	0.000	1.023	0.372	0.000	0.000	0.000	0.000	0.000	1.395
SSW	0.000	0.000	0.325	0.232	0.000	0.000	0.000	0.000	0.000	0.558
SW	0.000	0.000	0.093	0.279	0.000	0.000	0.000	0.000	0.000	0.372
WSW	0.000	0.000	0.000	0.279	0.093	0.000	0.000	0.000	0.000	0.372
W	0.000	0.000	0.000	0.186	0.232	0.232	0.000	0.000	0.000	0.651
WNW	0.000	0.000	0.000	0.000	0.046	0.279	0.000	0.000	0.000	0.325
NW	0.000	0.000	0.000	0.046	0.000	0.046	0.325	0.000	0.000	0.418
NNW	0.000	0.000	0.000	0.000	0.093	0.186	0.186	0.000	0.000	0.465
SUBTOTAL	0.000	0.000	3.440	4.695	1.302	1.906	0.511	0.000	0.000	11.855

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS A	255
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	255
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
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

MEAN WIND SPEED = 5.32

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.046	0.139	0.232	0.000	0.000	0.000	0.418
NNE	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.093
NE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
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	0.139	0.186	0.000	0.000	0.000	0.000	0.325
SE	0.000	0.000	0.232	0.186	0.000	0.000	0.000	0.000	0.000	0.418
SSE	0.000	0.000	0.372	0.279	0.000	0.000	0.000	0.000	0.000	0.651
S	0.000	0.000	0.511	0.093	0.000	0.000	0.000	0.000	0.000	0.604
SSW	0.000	0.000	0.325	0.093	0.000	0.000	0.000	0.000	0.000	0.418
SW	0.000	0.000	0.279	0.093	0.000	0.000	0.000	0.000	0.000	0.372
WSW	0.000	0.000	0.000	0.186	0.000	0.000	0.000	0.000	0.000	0.186
W	0.000	0.000	0.000	0.186	0.372	0.046	0.000	0.000	0.000	0.604
WNW	0.000	0.000	0.000	0.046	0.093	0.093	0.046	0.000	0.000	0.279
NW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.093	0.046	0.046	0.000	0.000	0.186
SUBTOTAL	0.000	0.000	1.720	1.348	0.976	0.511	0.093	0.000	0.000	4.649

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS B	100
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	100
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 5.02

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C ( $-1.7 < \Delta T \leq -1.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

WIND DIRECTION	CALM	WIND SPEED (MPH)								TOTAL
		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	0.093	0.139	0.279	0.000	0.000	0.000	0.511
NNE	0.000	0.000	0.000	0.046	0.186	0.046	0.000	0.000	0.000	0.279
NE	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.093
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	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.000	0.093	0.232	0.093	0.000	0.000	0.000	0.000	0.418
SE	0.000	0.000	0.372	0.139	0.000	0.000	0.000	0.000	0.000	0.511
SSE	0.000	0.000	0.511	0.046	0.000	0.000	0.000	0.000	0.000	0.558
S	0.000	0.000	0.418	0.186	0.000	0.000	0.000	0.000	0.000	0.604
SSW	0.000	0.000	0.232	0.046	0.000	0.000	0.000	0.000	0.000	0.279
SW	0.000	0.000	0.139	0.139	0.000	0.000	0.000	0.000	0.000	0.279
WSW	0.000	0.000	0.000	0.372	0.000	0.000	0.000	0.000	0.000	0.372
W	0.000	0.000	0.093	0.465	0.325	0.000	0.000	0.000	0.000	0.883
WNW	0.000	0.000	0.000	0.139	0.186	0.372	0.093	0.000	0.000	0.790
NW	0.000	0.000	0.000	0.232	0.186	0.046	0.093	0.000	0.000	0.558
NNW	0.000	0.000	0.046	0.000	0.186	0.186	0.046	0.000	0.000	0.465
SUBTOTAL	0.000	0.000	1.953	2.232	1.395	0.930	0.232	0.000	0.000	6.741

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS C	145
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	145
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
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

MEAN WIND SPEED = 5.26

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.139	0.651	0.325	0.186	0.000	0.000	0.000	1.302
NNE	0.000	0.000	0.139	0.325	0.558	0.279	0.000	0.000	0.000	1.302
NE	0.000	0.046	0.186	0.279	0.186	0.093	0.000	0.000	0.000	0.790
ENE	0.000	0.000	0.279	0.279	0.093	0.000	0.000	0.000	0.000	0.651
E	0.000	0.000	0.418	0.279	0.372	0.093	0.000	0.000	0.000	1.162
ESE	0.000	0.046	0.744	1.395	0.651	0.000	0.000	0.000	0.000	2.836
SE	0.000	0.000	0.976	0.093	0.000	0.046	0.000	0.000	0.000	1.116
SSE	0.000	0.139	1.627	0.046	0.000	0.000	0.000	0.000	0.000	1.813
S	0.000	0.000	1.441	0.046	0.000	0.000	0.000	0.000	0.000	1.488
SSW	0.000	0.093	1.813	0.279	0.000	0.000	0.000	0.000	0.000	2.185
SW	0.000	0.000	0.930	0.093	0.000	0.000	0.000	0.000	0.000	1.023
WSW	0.000	0.000	1.255	0.930	0.046	0.000	0.000	0.000	0.000	2.232
W	0.000	0.000	0.186	1.488	0.837	0.046	0.000	0.000	0.000	2.557
WNW	0.000	0.046	0.000	0.697	0.465	0.186	0.000	0.000	0.000	1.395
NW	0.000	0.000	0.046	0.418	0.790	0.744	0.418	0.000	0.000	2.417
NNW	0.000	0.000	0.186	0.465	0.232	1.023	0.046	0.000	0.000	1.953
SUBTOTAL	0.000	0.372	10.367	7.764	4.556	2.696	0.465	0.000	0.000	26.220

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS D	565
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	564
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 4.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.093	0.976	0.744	0.046	0.000	0.000	0.000	0.000	1.865
NNE	0.004	0.046	0.604	0.279	0.046	0.000	0.000	0.000	0.000	0.980
NE	0.005	0.372	0.465	0.186	0.139	0.093	0.000	0.000	0.000	1.260
ENE	0.007	0.046	1.302	0.418	0.186	0.000	0.046	0.000	0.000	2.006
E	0.009	0.232	1.441	1.348	0.186	0.000	0.000	0.000	0.000	3.217
ESE	0.007	0.232	1.116	0.790	0.372	0.000	0.000	0.000	0.000	2.518
SE	0.008	0.511	0.930	0.046	0.000	0.000	0.000	0.000	0.000	1.496
SSE	0.004	0.186	0.604	0.000	0.000	0.000	0.000	0.000	0.000	0.795
S	0.010	0.186	1.581	0.000	0.000	0.000	0.000	0.000	0.000	1.776
SSW	0.006	0.279	0.744	0.186	0.093	0.000	0.000	0.000	0.000	1.307
SW	0.006	0.139	0.976	0.093	0.000	0.000	0.000	0.000	0.000	1.215
WSW	0.007	0.186	1.116	0.511	0.000	0.000	0.000	0.000	0.000	1.820
W	0.007	0.139	1.209	1.023	0.279	0.000	0.000	0.000	0.000	2.657
WNW	0.001	0.046	0.186	0.232	0.046	0.000	0.000	0.000	0.000	0.513
NW	0.002	0.000	0.325	0.279	0.093	0.000	0.000	0.000	0.000	0.699
NNW	0.003	0.046	0.558	0.232	0.465	0.186	0.000	0.000	0.000	1.491
SUBTOTAL	0.093	2.743	14.133	6.369	1.953	0.279	0.046	0.000	0.000	25.616

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS E	551
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	551
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
TOTAL HOURS CALM	2

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

MEAN WIND SPEED = 3.05

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.279	2.371	0.930	0.046	0.000	0.000	0.000	0.000	3.626
NNE	0.000	0.325	0.744	0.325	0.000	0.000	0.000	0.000	0.000	1.395
NE	0.000	0.139	0.558	0.093	0.139	0.000	0.046	0.000	0.000	0.976
ENE	0.000	0.232	0.930	0.232	0.000	0.000	0.000	0.000	0.000	1.395
E	0.000	0.093	1.813	0.604	0.000	0.046	0.000	0.000	0.000	2.557
ESE	0.000	0.279	0.511	0.046	0.000	0.000	0.000	0.000	0.000	0.837
SE	0.000	0.093	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.279
SSE	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.232
S	0.000	0.186	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.325
SSW	0.000	0.139	0.279	0.000	0.000	0.000	0.000	0.000	0.000	0.418
SW	0.000	0.139	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.232
WSW	0.000	0.093	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.232
W	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.186
WNW	0.000	0.046	0.372	0.000	0.000	0.000	0.000	0.000	0.000	0.418
NW	0.000	0.000	0.139	0.000	0.000	0.000	0.000	0.000	0.000	0.139
NNW	0.000	0.186	0.465	0.232	0.186	0.000	0.000	0.000	0.000	1.069
SUBTOTAL	0.000	2.417	8.973	2.464	0.372	0.046	0.046	0.000	0.000	14.319

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS F	308
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	308
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 2.62

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	1.209	1.674	0.325	0.000	0.000	0.000	0.000	0.000	3.208
NNE	0.000	0.976	0.511	0.093	0.000	0.000	0.000	0.000	0.000	1.581
NE	0.000	0.744	0.558	0.046	0.000	0.000	0.000	0.000	0.000	1.348
ENE	0.000	0.418	0.651	0.232	0.000	0.000	0.000	0.000	0.000	1.302
E	0.000	0.139	0.558	0.093	0.000	0.000	0.000	0.000	0.000	0.790
ESE	0.000	0.139	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.186
SE	0.000	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.186
SSE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
S	0.000	0.093	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.139
SSW	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.046	0.000	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	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.093
NNW	0.000	0.744	0.651	0.093	0.000	0.000	0.000	0.000	0.000	1.488
SUBTOTAL	0.000	4.788	4.881	0.930	0.000	0.000	0.000	0.000	0.000	10.600

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2152
TOTAL HOURS OF STABILITY CLASS G	228
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	228
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2151
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

MEAN WIND SPEED = 1.89

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT  
2011 METEOROLOGICAL DATA TABLE 4  
JOINT FREQUENCY DISTRIBUTION IN PERCENT  
FOR GROUND LEVEL RELEASES  
FOURTH QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
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	0.137	0.000	0.000	0.000	0.137
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	0.046	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.000	0.091	0.228	0.000	0.000	0.000	0.000	0.319
SE	0.000	0.000	0.137	0.865	0.137	0.000	0.000	0.000	0.000	1.138
SSE	0.000	0.000	0.546	0.820	0.000	0.000	0.000	0.000	0.000	1.366
S	0.000	0.000	0.046	0.410	0.000	0.000	0.000	0.000	0.000	0.455
SSW	0.000	0.000	0.137	0.455	0.000	0.000	0.000	0.000	0.000	0.592
SW	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
WSW	0.000	0.000	0.000	0.182	0.046	0.000	0.000	0.000	0.000	0.228
W	0.000	0.000	0.000	0.000	0.000	0.182	0.000	0.000	0.000	0.182
WNW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.000	0.319	0.000	0.000	0.000	0.319
SUBTOTAL	0.000	0.000	0.865	2.914	0.501	0.774	0.046	0.000	0.000	5.100

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
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	2196
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

MEAN WIND SPEED = 5.18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.273	0.000	0.000	0.000	0.319
NNE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
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	0.182	0.046	0.046	0.000	0.000	0.000	0.273
SE	0.000	0.000	0.091	0.091	0.091	0.000	0.000	0.000	0.000	0.273
SSE	0.000	0.000	0.228	0.137	0.000	0.000	0.000	0.000	0.000	0.364
S	0.000	0.000	0.182	0.182	0.000	0.000	0.000	0.000	0.000	0.364
SSW	0.000	0.000	0.046	0.000	0.091	0.000	0.000	0.000	0.000	0.137
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	0.137	0.000	0.000	0.000	0.000	0.000	0.137
W	0.000	0.000	0.046	0.091	0.000	0.182	0.000	0.000	0.000	0.319
WNW	0.000	0.000	0.000	0.000	0.091	0.046	0.091	0.000	0.000	0.228
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	0.046	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.000	0.592	0.820	0.364	0.638	0.091	0.000	0.000	2.505

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
TOTAL HOURS OF STABILITY CLASS B	55
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	55
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2196
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 5.83

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.137	0.000	0.000	0.000	0.228
NNE	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.091
NE	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
ENE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
E	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.091
ESE	0.000	0.000	0.046	0.091	0.046	0.000	0.000	0.000	0.000	0.182
SE	0.000	0.000	0.000	0.228	0.000	0.000	0.000	0.000	0.000	0.228
SSE	0.000	0.000	0.182	0.182	0.000	0.000	0.000	0.000	0.000	0.364
S	0.000	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.137
SSW	0.000	0.000	0.046	0.046	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	0.046	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.091	0.046	0.228	0.000	0.000	0.000	0.364
WNW	0.000	0.000	0.000	0.046	0.091	0.455	0.046	0.000	0.000	0.638
NW	0.000	0.000	0.000	0.000	0.046	0.228	0.046	0.000	0.000	0.319
NNW	0.000	0.000	0.000	0.000	0.046	0.228	0.046	0.000	0.000	0.319
SUBTOTAL	0.000	0.000	0.364	0.865	0.501	1.366	0.137	0.000	0.000	3.233

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
TOTAL HOURS OF STABILITY CLASS C	71
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	71
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2196
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 6.81

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.273	0.956	1.047	0.000	0.000	0.000	2.368
NNE	0.000	0.000	0.046	0.410	0.956	0.683	0.000	0.000	0.000	2.095
NE	0.000	0.000	0.091	0.091	0.137	0.364	0.000	0.000	0.000	0.683
ENE	0.000	0.000	0.137	0.182	0.046	0.000	0.000	0.000	0.000	0.364
E	0.000	0.046	0.364	0.182	0.091	0.000	0.000	0.000	0.000	0.683
ESE	0.000	0.000	0.638	0.455	0.137	0.046	0.000	0.000	0.000	1.275
SE	0.000	0.000	0.592	0.638	0.046	0.000	0.000	0.000	0.000	1.275
SSE	0.000	0.000	1.184	0.729	0.000	0.046	0.000	0.000	0.000	1.958
S	0.000	0.000	0.956	0.455	0.273	0.046	0.000	0.000	0.000	1.730
SSW	0.000	0.000	0.501	0.501	0.091	0.228	0.000	0.000	0.000	1.321
SW	0.000	0.000	0.046	0.592	0.091	0.046	0.000	0.000	0.000	0.774
WSW	0.000	0.000	0.137	0.319	0.273	0.137	0.000	0.000	0.000	0.865
W	0.000	0.000	0.091	0.455	0.911	1.776	0.137	0.000	0.000	3.370
WNW	0.000	0.000	0.137	0.455	0.319	0.865	0.683	0.046	0.000	2.505
NW	0.000	0.000	0.137	0.364	0.911	1.958	1.412	0.000	0.000	4.781
NNW	0.000	0.000	0.000	0.546	1.321	2.004	0.046	0.000	0.000	3.916
SUBTOTAL	0.000	0.046	5.146	6.648	6.557	9.244	2.277	0.046	0.000	29.964

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
TOTAL HOURS OF STABILITY CLASS D	658
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	658
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2196
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 6.82

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.091	0.410	0.592	0.228	0.091	0.000	0.000	0.000	1.412
NNE	0.000	0.000	0.410	0.273	0.091	0.182	0.000	0.000	0.000	0.956
NE	0.000	0.000	0.182	0.182	0.046	0.000	0.000	0.000	0.000	0.410
ENE	0.000	0.000	0.455	0.319	0.000	0.000	0.000	0.000	0.000	0.774
E	0.000	0.046	0.865	0.683	0.000	0.000	0.000	0.000	0.000	1.594
ESE	0.000	0.091	0.956	0.683	0.273	0.091	0.000	0.000	0.000	2.095
SE	0.000	0.228	1.412	0.865	0.410	0.000	0.000	0.000	0.000	2.914
SSE	0.000	0.000	1.685	0.410	0.000	0.000	0.000	0.000	0.000	2.095
S	0.000	0.000	1.366	2.368	0.865	0.046	0.000	0.000	0.000	4.645
SSW	0.000	0.000	0.319	0.455	0.228	0.046	0.000	0.000	0.000	1.047
SW	0.000	0.091	0.228	0.137	0.000	0.000	0.000	0.000	0.000	0.455
WSW	0.000	0.046	0.501	0.364	0.000	0.000	0.000	0.000	0.000	0.911
W	0.000	0.091	0.319	1.047	0.273	0.137	0.000	0.000	0.000	1.867
WNW	0.000	0.046	0.364	0.182	0.137	0.182	0.000	0.000	0.000	0.911
NW	0.000	0.000	0.273	0.364	0.410	0.364	0.137	0.000	0.000	1.548
NNW	0.000	0.000	0.228	0.410	0.364	0.273	0.046	0.000	0.000	1.321
SUBTOTAL	0.000	0.729	9.973	9.335	3.324	1.412	0.182	0.000	0.000	24.954

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
TOTAL HOURS OF STABILITY CLASS E	548
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	548
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2196
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 4.07

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.091	1.184	0.592	0.046	0.000	0.000	0.000	0.000	1.913
NNE	0.000	0.000	0.319	0.546	0.046	0.046	0.000	0.000	0.000	0.956
NE	0.000	0.046	0.319	0.364	0.000	0.000	0.000	0.000	0.000	0.729
ENE	0.000	0.228	0.820	0.455	0.046	0.000	0.000	0.000	0.000	1.548
E	0.000	0.137	1.594	0.774	0.000	0.000	0.000	0.000	0.000	2.505
ESE	0.000	0.137	1.685	0.182	0.000	0.000	0.000	0.000	0.000	2.004
SE	0.000	0.546	0.865	0.046	0.000	0.000	0.000	0.000	0.000	1.457
SSE	0.000	0.410	1.594	0.091	0.000	0.000	0.000	0.000	0.000	2.095
S	0.000	0.091	1.821	1.503	0.182	0.000	0.000	0.000	0.000	3.597
SSW	0.000	0.046	0.137	0.091	0.000	0.000	0.000	0.000	0.000	0.273
SW	0.000	0.046	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.137
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.091
WNW	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.137
NW	0.000	0.046	0.410	0.091	0.000	0.000	0.000	0.000	0.000	0.546
NNW	0.000	0.000	0.546	0.319	0.228	0.000	0.000	0.000	0.000	1.093
SUBTOTAL	0.000	1.913	11.475	5.100	0.546	0.046	0.000	0.000	0.000	19.080

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2196  
 TOTAL HOURS OF STABILITY CLASS F 419  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 419  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2196  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 2.89

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
N	0.020	0.865	2.095	0.729	0.000	0.000	0.000	0.000	0.000	3.708
NNE	0.010	0.683	0.774	0.182	0.046	0.000	0.000	0.000	0.000	1.695
NE	0.007	0.410	0.683	0.137	0.000	0.000	0.000	0.000	0.000	1.237
ENE	0.011	0.455	1.184	0.091	0.000	0.000	0.000	0.000	0.000	1.741
E	0.005	0.182	0.592	0.000	0.000	0.000	0.000	0.000	0.000	0.779
ESE	0.002	0.091	0.273	0.000	0.000	0.000	0.000	0.000	0.000	0.367
SE	0.003	0.182	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.413
SSE	0.008	0.410	0.820	0.000	0.000	0.000	0.000	0.000	0.000	1.238
S	0.007	0.182	0.865	0.046	0.000	0.000	0.000	0.000	0.000	1.100
SSW	0.000	0.046	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	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.046	0.000	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	0.004	0.501	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.596
NNW	0.014	0.774	1.321	0.046	0.000	0.000	0.000	0.000	0.000	2.154
SUBTOTAL	0.091	4.827	8.971	1.230	0.046	0.000	0.000	0.000	0.000	15.164

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2196
TOTAL HOURS OF STABILITY CLASS G	333
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	333
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2196
TOTAL HOURS CALM	2

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

MEAN WIND SPEED = 2.03

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 5**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)**  
**FIRST QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.007	0.000	0.000	0.000	0.007
NNE	0.000	0.000	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.019
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	0.004	0.000	0.000	0.000	0.000	0.000	0.004
ESE	0.000	0.000	0.000	0.000	0.007	0.009	0.000	0.000	0.000	0.017
SE	0.000	0.000	0.000	0.113	0.058	0.009	0.000	0.000	0.000	0.180
SSE	0.000	0.000	0.012	0.143	0.000	0.000	0.000	0.000	0.000	0.154
S	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.018
SSW	0.000	0.000	0.005	0.014	0.000	0.000	0.000	0.000	0.000	0.019
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	0.015	0.000	0.000	0.000	0.015
NNW	0.000	0.000	0.000	0.000	0.000	0.009	0.065	0.000	0.000	0.074
SUBTOTAL	0.000	0.000	0.016	0.292	0.065	0.068	0.065	0.000	0.000	0.507

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS A 16.480  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 10.930

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.018	0.006	0.000	0.000	0.000	0.023
NNE	0.000	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.018
NE	0.000	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.005
ENE	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002
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	0.002	0.000	0.023	0.000	0.000	0.000	0.025
SE	0.000	0.000	0.002	0.011	0.009	0.000	0.000	0.000	0.000	0.021
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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
SSW	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.006
SW	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.017
WSW	0.000	0.000	0.000	0.031	0.006	0.000	0.000	0.000	0.000	0.037
W	0.000	0.000	0.000	0.005	0.012	0.000	0.000	0.000	0.000	0.017
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	0.032	0.064	0.000	0.000	0.095
NNW	0.000	0.000	0.000	0.000	0.005	0.056	0.010	0.000	0.000	0.071
SUBTOTAL	0.000	0.000	0.012	0.074	0.051	0.139	0.073	0.000	0.000	0.349

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS B 12.680  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 7.530

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.008	0.025	0.000	0.000	0.000	0.033
NE	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.020
ENE	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.007
E	0.000	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.010
ESE	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.006
SE	0.000	0.000	0.005	0.000	0.000	0.051	0.000	0.000	0.000	0.056
SSE	0.000	0.000	0.005	0.032	0.000	0.000	0.000	0.000	0.000	0.037
S	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.011
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	0.003	0.008	0.000	0.000	0.000	0.000	0.011
WSW	0.000	0.000	0.000	0.009	0.019	0.008	0.000	0.000	0.000	0.036
W	0.000	0.000	0.000	0.000	0.006	0.024	0.000	0.000	0.000	0.029
WNW	0.000	0.000	0.000	0.000	0.003	0.012	0.013	0.000	0.000	0.028
NW	0.000	0.000	0.000	0.000	0.011	0.062	0.027	0.000	0.000	0.100
NNW	0.000	0.000	0.000	0.000	0.008	0.044	0.000	0.000	0.000	0.053
SUBTOTAL	0.000	0.000	0.010	0.062	0.074	0.267	0.041	0.000	0.000	0.454

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS C 36.600  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 9.780

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.002	0.041	0.122	0.220	0.000	0.000	0.000	0.385
NNE	0.000	0.000	0.000	0.049	0.115	0.160	0.000	0.000	0.000	0.324
NE	0.000	0.000	0.000	0.049	0.105	0.127	0.000	0.000	0.000	0.281
ENE	0.000	0.000	0.000	0.048	0.075	0.030	0.000	0.000	0.000	0.153
E	0.000	0.000	0.006	0.029	0.037	0.008	0.000	0.000	0.000	0.080
ESE	0.000	0.000	0.000	0.115	0.029	0.164	0.000	0.000	0.000	0.307
SE	0.000	0.000	0.021	0.237	0.081	0.097	0.000	0.000	0.000	0.436
SSE	0.000	0.000	0.007	0.266	0.093	0.000	0.000	0.000	0.000	0.366
S	0.000	0.000	0.018	0.058	0.000	0.000	0.000	0.000	0.000	0.076
SSW	0.000	0.000	0.016	0.031	0.009	0.000	0.000	0.000	0.000	0.056
SW	0.000	0.000	0.009	0.027	0.044	0.000	0.000	0.000	0.000	0.079
WSW	0.000	0.000	0.000	0.040	0.030	0.078	0.000	0.000	0.000	0.148
W	0.000	0.000	0.005	0.040	0.080	0.179	0.060	0.000	0.000	0.364
WNW	0.000	0.000	0.000	0.005	0.031	0.158	0.422	0.000	0.000	0.615
NW	0.000	0.000	0.000	0.006	0.056	0.501	0.451	0.143	0.000	1.156
NNW	0.000	0.000	0.000	0.018	0.106	0.503	0.140	0.000	0.000	0.767
SUBTOTAL	0.000	0.000	0.084	1.057	1.012	2.225	1.072	0.143	0.000	5.593

TOTAL HOURS OF VALID OBSERVATIONS                    2156.000  
TOTAL HOURS OF GROUND LEVEL RELEASE                291.180  
TOTAL HOURS OF STABILITY CLASS D                    1005.710  
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D    120.590

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.015	0.041	0.029	0.025	0.000	0.000	0.000	0.111
NNE	0.000	0.000	0.020	0.103	0.054	0.017	0.000	0.000	0.000	0.194
NE	0.000	0.000	0.010	0.070	0.042	0.046	0.000	0.000	0.000	0.168
ENE	0.000	0.000	0.015	0.037	0.013	0.000	0.000	0.000	0.000	0.065
E	0.000	0.000	0.037	0.038	0.000	0.000	0.000	0.000	0.000	0.076
ESE	0.000	0.002	0.079	0.105	0.033	0.000	0.000	0.000	0.000	0.219
SE	0.000	0.009	0.108	0.182	0.241	0.085	0.000	0.000	0.000	0.625
SSE	0.000	0.004	0.145	0.461	0.046	0.000	0.000	0.000	0.000	0.657
S	0.000	0.003	0.083	0.214	0.141	0.179	0.000	0.000	0.000	0.620
SSW	0.000	0.003	0.013	0.072	0.204	0.260	0.000	0.000	0.000	0.553
SW	0.000	0.000	0.013	0.076	0.028	0.000	0.000	0.000	0.000	0.116
WSW	0.000	0.000	0.035	0.026	0.041	0.000	0.000	0.000	0.000	0.102
W	0.000	0.000	0.012	0.062	0.029	0.018	0.000	0.000	0.000	0.121
WNW	0.000	0.000	0.000	0.010	0.006	0.015	0.018	0.000	0.000	0.048
NW	0.000	0.000	0.000	0.010	0.006	0.091	0.000	0.000	0.000	0.108
NNW	0.000	0.000	0.003	0.014	0.066	0.040	0.010	0.000	0.000	0.133
SUBTOTAL	0.000	0.021	0.590	1.522	0.978	0.776	0.027	0.000	0.000	3.916

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS E 704.110  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 84.420

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.054	0.018	0.000	0.000	0.000	0.000	0.000	0.071
NNE	0.000	0.000	0.009	0.058	0.017	0.000	0.000	0.000	0.000	0.083
NE	0.000	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.010
ENE	0.000	0.002	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.028
E	0.000	0.005	0.054	0.019	0.000	0.000	0.000	0.000	0.000	0.078
ESE	0.000	0.006	0.088	0.023	0.000	0.000	0.000	0.000	0.000	0.116
SE	0.000	0.010	0.180	0.052	0.000	0.000	0.000	0.000	0.000	0.243
SSE	0.000	0.028	0.348	0.000	0.000	0.000	0.000	0.000	0.000	0.376
S	0.000	0.017	0.164	0.168	0.130	0.170	0.000	0.000	0.000	0.650
SSW	0.000	0.013	0.039	0.030	0.000	0.000	0.000	0.000	0.000	0.082
SW	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014
WSW	0.000	0.001	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.005
W	0.000	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.004
WNW	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.008
NW	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.007
NNW	0.000	0.000	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.027
SUBTOTAL	0.000	0.082	0.985	0.402	0.162	0.170	0.000	0.000	0.000	1.801

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS F 295.720  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 38.840

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



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

GROUND LEVEL RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.012	0.025	0.000	0.000	0.000	0.000	0.000	0.038
NNE	0.000	0.000	0.007	0.013	0.000	0.000	0.000	0.000	0.000	0.020
NE	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004
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	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.004
ESE	0.000	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.010
SE	0.001	0.059	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.097
SSE	0.002	0.137	0.212	0.000	0.000	0.000	0.000	0.000	0.000	0.352
S	0.001	0.034	0.194	0.054	0.058	0.000	0.000	0.000	0.000	0.342
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	0.007	0.000	0.000	0.000	0.000	0.000	0.007
NNW	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.013
SUBTOTAL	0.004	0.237	0.474	0.112	0.058	0.000	0.000	0.000	0.000	0.885

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 291.180  
 TOTAL HOURS OF STABILITY CLASS G 84.700  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 19.090

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
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	0.045	0.084	0.000	0.000	0.000	0.129
SSE	0.000	0.000	0.000	0.000	0.000	0.082	0.000	0.000	0.000	0.082
S	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
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	0.167	0.000	0.000	0.000	0.257

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF ELEVATED RELEASES 1864.820  
 TOTAL HOURS OF STABILITY CLASS A 16.480  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 5.550

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.000	0.000	0.015	0.000	0.061
SSE	0.000	0.000	0.000	0.000	0.046	0.085	0.000	0.000	0.000	0.131
S	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
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	0.046	0.092	0.085	0.000	0.015	0.000	0.239

TOTAL HOURS OF VALID OBSERVATIONS                    2156.000  
TOTAL HOURS OF ELEVATED RELEASES                    1864.820  
TOTAL HOURS OF STABILITY CLASS B                    12.680  
TOTAL HOURS OF ELEVATED STABILITY CLASS B            5.150

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.080	0.000	0.000	0.000	0.080
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	0.089	0.039	0.037	0.000	0.000	0.165
SE	0.000	0.000	0.000	0.046	0.178	0.041	0.000	0.000	0.000	0.266
SSE	0.000	0.000	0.000	0.000	0.046	0.041	0.000	0.000	0.000	0.087
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	0.046	0.046	0.000	0.077	0.000	0.000	0.170
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	0.132	0.041	0.000	0.000	0.000	0.173
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	0.037	0.000	0.000	0.037
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.113	0.000	0.000	0.113
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.113	0.000	0.000	0.113
SUBTOTAL	0.000	0.000	0.000	0.093	0.492	0.282	0.377	0.000	0.000	1.244

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF ELEVATED RELEASES 1864.820  
 TOTAL HOURS OF STABILITY CLASS C 36.600  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 26.820

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.278	0.537	1.567	0.983	0.035	0.000	3.493
NNE	0.000	0.000	0.046	0.603	0.488	1.661	0.421	0.000	0.000	3.220
NE	0.000	0.000	0.093	0.278	0.847	1.514	0.000	0.000	0.000	2.732
ENE	0.000	0.000	0.046	0.464	0.892	0.783	0.000	0.000	0.000	2.186
E	0.000	0.000	0.046	0.464	0.619	0.622	0.038	0.000	0.000	1.789
ESE	0.000	0.000	0.139	0.557	0.408	0.859	0.299	0.103	0.000	2.364
SE	0.000	0.000	0.139	0.417	0.178	0.399	0.152	0.274	0.029	1.588
SSE	0.000	0.000	0.186	0.232	0.091	0.243	0.113	0.043	0.012	0.920
S	0.000	0.000	0.186	0.232	0.313	0.161	0.115	0.000	0.000	1.006
SSW	0.000	0.000	0.093	0.186	0.271	0.332	0.114	0.000	0.000	0.994
SW	0.000	0.000	0.046	0.417	0.445	0.694	0.379	0.000	0.000	1.982
WSW	0.000	0.000	0.000	0.232	0.220	0.988	0.415	0.000	0.000	1.855
W	0.000	0.000	0.000	0.417	0.763	0.614	0.944	0.183	0.000	2.922
WNW	0.000	0.000	0.046	0.510	0.354	1.172	1.313	0.631	0.000	4.026
NW	0.000	0.000	0.046	0.510	0.577	2.128	1.848	0.442	0.031	5.582
NNW	0.000	0.000	0.046	0.278	0.529	1.682	1.553	0.306	0.000	4.395
SUBTOTAL	0.000	0.000	1.252	6.076	7.532	15.420	8.686	2.016	0.072	41.054

TOTAL HOURS OF VALID OBSERVATIONS                    2156.000  
TOTAL HOURS OF ELEVATED RELEASES                    1864.820  
TOTAL HOURS OF STABILITY CLASS D                    1005.710  
TOTAL HOURS OF ELEVATED STABILITY CLASS D           885.120

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.312	0.731	0.113	0.000	0.000	1.203
NNE	0.000	0.000	0.000	0.046	0.482	1.250	0.152	0.000	0.000	1.931
NE	0.000	0.000	0.046	0.093	0.618	0.911	0.192	0.000	0.000	1.861
ENE	0.000	0.000	0.093	0.139	0.403	0.210	0.000	0.000	0.000	0.845
E	0.000	0.046	0.093	0.093	0.442	0.370	0.000	0.000	0.000	1.044
ESE	0.000	0.000	0.325	0.278	0.629	0.944	0.267	0.016	0.007	2.467
SE	0.000	0.000	0.232	0.186	0.354	1.008	1.435	0.256	0.044	3.514
SSE	0.000	0.000	0.139	0.325	0.629	0.524	0.522	0.163	0.019	2.322
S	0.000	0.000	0.093	0.325	0.487	0.571	1.167	0.419	0.014	3.077
SSW	0.000	0.000	0.000	0.325	0.315	0.686	0.978	0.419	0.006	2.729
SW	0.000	0.000	0.046	0.278	0.717	0.986	0.528	0.034	0.000	2.590
WSW	0.000	0.000	0.000	0.046	0.264	0.629	0.304	0.000	0.000	1.244
W	0.000	0.000	0.046	0.093	0.400	0.579	0.000	0.000	0.009	1.127
WNW	0.000	0.000	0.046	0.139	0.132	0.160	0.076	0.000	0.000	0.554
NW	0.000	0.000	0.139	0.186	0.046	0.359	0.342	0.000	0.000	1.071
NNW	0.000	0.000	0.046	0.139	0.180	0.608	0.191	0.000	0.000	1.165
SUBTOTAL	0.000	0.046	1.345	2.737	6.412	10.528	6.267	1.307	0.100	28.743

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF ELEVATED RELEASES 1864.820  
 TOTAL HOURS OF STABILITY CLASS E 704.110  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 619.690

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.089	0.410	0.038	0.000	0.000	0.629
NNE	0.000	0.000	0.186	0.000	0.089	0.163	0.038	0.000	0.000	0.475
NE	0.000	0.000	0.000	0.000	0.045	0.083	0.000	0.000	0.000	0.128
ENE	0.000	0.046	0.046	0.093	0.179	0.327	0.000	0.000	0.000	0.691
E	0.000	0.000	0.000	0.093	0.090	0.332	0.000	0.000	0.000	0.514
ESE	0.000	0.000	0.046	0.186	0.225	0.454	0.000	0.000	0.000	0.910
SE	0.000	0.000	0.046	0.046	0.267	1.143	0.267	0.076	0.010	1.856
SSE	0.000	0.000	0.046	0.371	0.404	0.202	0.412	0.072	0.000	1.508
S	0.000	0.000	0.093	0.232	0.224	0.880	0.606	0.108	0.000	2.142
SSW	0.000	0.000	0.046	0.093	0.219	0.623	0.115	0.000	0.000	1.097
SW	0.000	0.000	0.139	0.186	0.538	0.212	0.000	0.000	0.000	1.075
WSW	0.000	0.000	0.046	0.000	0.045	0.000	0.000	0.000	0.000	0.092
W	0.000	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.139
WNW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.232	0.044	0.039	0.000	0.000	0.000	0.314
NNW	0.000	0.000	0.000	0.093	0.044	0.122	0.038	0.000	0.000	0.298
SUBTOTAL	0.000	0.046	0.788	1.763	2.547	4.988	1.515	0.256	0.010	11.915

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF ELEVATED RELEASES 1864.820  
 TOTAL HOURS OF STABILITY CLASS F 295.720  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 256.880

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

ELEVATED RELEASE MODE

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.046	0.000	0.045	0.000	0.000	0.000	0.000	0.092
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	0.093	0.046	0.087	0.041	0.000	0.000	0.000	0.267
ENE	0.000	0.000	0.046	0.000	0.000	0.043	0.000	0.000	0.000	0.089
E	0.000	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.000	0.093	0.046	0.000	0.000	0.000	0.000	0.000	0.139
SE	0.000	0.000	0.139	0.046	0.046	0.000	0.038	0.032	0.000	0.301
SSE	0.000	0.000	0.093	0.046	0.046	0.000	0.226	0.000	0.000	0.411
S	0.000	0.000	0.000	0.000	0.135	0.164	0.228	0.000	0.000	0.527
SSW	0.000	0.000	0.046	0.093	0.088	0.168	0.000	0.000	0.000	0.396
SW	0.000	0.000	0.046	0.093	0.178	0.043	0.000	0.000	0.000	0.360
WSW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.186
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.044
SUBTOTAL	0.000	0.046	0.742	0.557	0.716	0.459	0.492	0.032	0.000	3.043

TOTAL HOURS OF VALID OBSERVATIONS 2156.000  
 TOTAL HOURS OF ELEVATED RELEASES 1864.820  
 TOTAL HOURS OF STABILITY CLASS G 84.700  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 65.610

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 6**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)**  
**SECOND QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.001	0.006	0.014	0.000	0.000	0.000	0.020
NNE	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.009
NE	0.000	0.000	0.000	0.000	0.000	0.012	0.000	0.000	0.000	0.012
ENE	0.000	0.000	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.023
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	0.000	0.022	0.008	0.036	0.000	0.000	0.000	0.065
SE	0.000	0.000	0.025	0.029	0.000	0.000	0.000	0.000	0.000	0.055
SSE	0.000	0.000	0.054	0.005	0.000	0.000	0.000	0.000	0.000	0.058
S	0.000	0.000	0.075	0.039	0.000	0.000	0.000	0.000	0.000	0.114
SSW	0.000	0.000	0.052	0.159	0.009	0.000	0.000	0.000	0.000	0.221
SW	0.000	0.000	0.006	0.035	0.000	0.000	0.000	0.000	0.000	0.041
WSW	0.000	0.000	0.000	0.057	0.019	0.026	0.000	0.000	0.000	0.101
W	0.000	0.000	0.000	0.006	0.033	0.014	0.000	0.000	0.000	0.053
WNW	0.000	0.000	0.000	0.004	0.006	0.030	0.000	0.000	0.000	0.040
NW	0.000	0.000	0.000	0.000	0.002	0.036	0.041	0.000	0.000	0.080
NNW	0.000	0.000	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.027
SUBTOTAL	0.000	0.000	0.234	0.365	0.093	0.195	0.041	0.000	0.000	0.928

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS A 32.540  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 19.850

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.028	0.000	0.000	0.000	0.036
NNE	0.000	0.000	0.000	0.000	0.011	0.027	0.000	0.000	0.000	0.038
NE	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.000	0.000	0.004
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	0.026	0.000	0.000	0.000	0.000	0.026
SE	0.000	0.000	0.002	0.018	0.000	0.000	0.000	0.000	0.000	0.020
SSE	0.000	0.000	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.013
S	0.000	0.000	0.028	0.010	0.000	0.000	0.000	0.000	0.000	0.038
SSW	0.000	0.000	0.017	0.058	0.000	0.000	0.000	0.000	0.000	0.075
SW	0.000	0.000	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.016
WSW	0.000	0.000	0.006	0.012	0.023	0.009	0.000	0.000	0.000	0.049
W	0.000	0.000	0.000	0.003	0.020	0.023	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.002	0.056	0.018	0.000	0.000	0.076
NW	0.000	0.000	0.000	0.000	0.008	0.038	0.031	0.000	0.000	0.077
NNW	0.000	0.000	0.000	0.000	0.017	0.022	0.000	0.000	0.000	0.039
SUBTOTAL	0.000	0.000	0.075	0.109	0.117	0.203	0.050	0.000	0.000	0.553

TOTAL HOURS OF VALID OBSERVATIONS                    2138.000  
TOTAL HOURS OF GROUND LEVEL RELEASE                248.640  
TOTAL HOURS OF STABILITY CLASS B                    34.990  
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B    11.830

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.020	0.034	0.000	0.000	0.000	0.054
NNE	0.000	0.000	0.000	0.001	0.010	0.008	0.000	0.000	0.000	0.019
NE	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.008
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	0.006	0.012	0.000	0.000	0.000	0.000	0.000	0.018
SE	0.000	0.000	0.012	0.004	0.000	0.000	0.000	0.000	0.000	0.015
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	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.028
SSW	0.000	0.000	0.026	0.034	0.000	0.000	0.000	0.000	0.000	0.060
SW	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
WSW	0.000	0.000	0.000	0.015	0.000	0.008	0.000	0.000	0.000	0.024
W	0.000	0.000	0.000	0.007	0.013	0.023	0.000	0.000	0.000	0.044
WNW	0.000	0.000	0.000	0.000	0.003	0.071	0.019	0.000	0.000	0.094
NW	0.000	0.000	0.000	0.000	0.005	0.093	0.018	0.000	0.000	0.116
NNW	0.000	0.000	0.000	0.000	0.012	0.031	0.047	0.000	0.000	0.090
SUBTOTAL	0.000	0.000	0.071	0.087	0.063	0.276	0.085	0.000	0.000	0.582

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS C 116.910  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 12.440

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.010	0.058	0.017	0.000	0.000	0.000	0.086
NNE	0.000	0.000	0.000	0.005	0.032	0.030	0.000	0.000	0.000	0.067
NE	0.000	0.000	0.000	0.003	0.007	0.016	0.000	0.000	0.000	0.027
ENE	0.000	0.000	0.000	0.002	0.011	0.000	0.000	0.000	0.000	0.013
E	0.000	0.000	0.017	0.011	0.023	0.000	0.000	0.000	0.000	0.051
ESE	0.000	0.000	0.075	0.097	0.019	0.010	0.000	0.000	0.000	0.200
SE	0.000	0.000	0.055	0.035	0.000	0.000	0.000	0.000	0.000	0.090
SSE	0.000	0.000	0.055	0.006	0.000	0.000	0.000	0.000	0.000	0.060
S	0.000	0.000	0.192	0.117	0.051	0.000	0.000	0.000	0.000	0.361
SSW	0.000	0.000	0.209	0.343	0.092	0.000	0.000	0.000	0.000	0.644
SW	0.000	0.000	0.069	0.028	0.009	0.047	0.000	0.000	0.000	0.152
WSW	0.000	0.000	0.012	0.045	0.053	0.018	0.000	0.000	0.000	0.128
W	0.000	0.000	0.012	0.022	0.099	0.117	0.000	0.000	0.000	0.249
WNW	0.000	0.000	0.000	0.011	0.037	0.215	0.111	0.000	0.000	0.375
NW	0.000	0.000	0.000	0.005	0.089	0.292	0.255	0.109	0.000	0.750
NNW	0.000	0.000	0.000	0.013	0.057	0.164	0.023	0.000	0.000	0.256
SUBTOTAL	0.000	0.000	0.696	0.752	0.638	0.926	0.390	0.109	0.000	3.509

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS D 860.580  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 75.030

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.030	0.045	0.016	0.000	0.000	0.000	0.000	0.091
NNE	0.000	0.000	0.007	0.026	0.006	0.000	0.000	0.000	0.000	0.038
NE	0.000	0.000	0.002	0.014	0.050	0.000	0.000	0.000	0.000	0.066
ENE	0.000	0.006	0.010	0.005	0.025	0.000	0.000	0.000	0.000	0.046
E	0.000	0.000	0.076	0.085	0.000	0.000	0.000	0.000	0.000	0.161
ESE	0.000	0.003	0.173	0.122	0.035	0.000	0.000	0.000	0.000	0.333
SE	0.000	0.009	0.077	0.033	0.000	0.000	0.000	0.000	0.000	0.119
SSE	0.000	0.002	0.103	0.000	0.000	0.000	0.000	0.000	0.000	0.105
S	0.000	0.012	0.250	0.108	0.275	0.091	0.000	0.000	0.000	0.737
SSW	0.000	0.000	0.345	0.656	0.074	0.094	0.047	0.000	0.000	1.215
SW	0.000	0.000	0.054	0.013	0.000	0.000	0.000	0.000	0.000	0.067
WSW	0.000	0.002	0.034	0.043	0.008	0.000	0.000	0.000	0.000	0.087
W	0.000	0.000	0.036	0.033	0.024	0.008	0.000	0.000	0.000	0.101
WNW	0.000	0.000	0.002	0.004	0.007	0.005	0.000	0.000	0.000	0.018
NW	0.000	0.002	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.039
NNW	0.000	0.000	0.011	0.046	0.012	0.025	0.000	0.000	0.000	0.094
SUBTOTAL	0.000	0.036	1.210	1.234	0.531	0.222	0.084	0.000	0.000	3.317

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS E 624.910  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 70.920

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.014	0.088	0.029	0.000	0.000	0.000	0.000	0.000	0.131
NNE	0.000	0.009	0.024	0.047	0.000	0.000	0.000	0.000	0.000	0.080
NE	0.000	0.024	0.014	0.007	0.014	0.000	0.000	0.000	0.000	0.060
ENE	0.000	0.045	0.053	0.031	0.014	0.000	0.000	0.000	0.000	0.144
E	0.001	0.058	0.160	0.023	0.000	0.000	0.000	0.000	0.000	0.242
ESE	0.000	0.046	0.163	0.000	0.000	0.000	0.000	0.000	0.000	0.210
SE	0.000	0.014	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.102
SSE	0.000	0.007	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.029
S	0.001	0.013	0.271	0.078	0.266	0.000	0.000	0.000	0.000	0.628
SSW	0.000	0.019	0.164	0.019	0.016	0.039	0.000	0.000	0.000	0.257
SW	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.019
WSW	0.000	0.000	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.031
W	0.000	0.007	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.012
WNW	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
NW	0.000	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.015
NNW	0.000	0.000	0.034	0.007	0.000	0.000	0.000	0.000	0.000	0.042
SUBTOTAL	0.003	0.273	1.139	0.246	0.311	0.039	0.000	0.000	0.000	2.010

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS F 393.060  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 42.980

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

GROUND LEVEL RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
N	0.001	0.006	0.074	0.019	0.000	0.000	0.000	0.000	0.000	0.100
NNE	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.008
NE	0.000	0.022	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.029
ENE	0.001	0.070	0.022	0.006	0.000	0.000	0.000	0.000	0.000	0.099
E	0.001	0.036	0.052	0.002	0.000	0.000	0.000	0.000	0.000	0.092
ESE	0.001	0.039	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.050
SE	0.000	0.032	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.036
SSE	0.001	0.029	0.073	0.000	0.000	0.000	0.000	0.000	0.000	0.103
S	0.001	0.019	0.076	0.049	0.000	0.000	0.000	0.000	0.000	0.145
SSW	0.001	0.014	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.038
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	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
NW	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
NNW	0.000	0.001	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.018
SUBTOTAL	0.009	0.278	0.359	0.083	0.000	0.000	0.000	0.000	0.000	0.729

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 248.640  
 TOTAL HOURS OF STABILITY CLASS G 75.010  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 15.590

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
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	0.042	0.000	0.000	0.000	0.042
SSE	0.000	0.000	0.000	0.000	0.088	0.085	0.000	0.000	0.000	0.174
S	0.000	0.000	0.000	0.000	0.000	0.000	0.037	0.000	0.000	0.037
SSW	0.000	0.000	0.000	0.000	0.000	0.040	0.000	0.000	0.000	0.040
SW	0.000	0.000	0.000	0.000	0.134	0.083	0.000	0.000	0.000	0.217
WSW	0.000	0.000	0.000	0.000	0.043	0.041	0.000	0.000	0.000	0.085
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	0.266	0.290	0.037	0.000	0.000	0.594

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS A 32.540  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 12.690

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.040	0.000	0.000	0.000	0.040
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	0.093	0.000	0.000	0.000	0.093
SE	0.000	0.000	0.000	0.047	0.000	0.042	0.000	0.000	0.000	0.089
SSE	0.000	0.000	0.000	0.000	0.000	0.124	0.000	0.000	0.000	0.124
S	0.000	0.000	0.000	0.000	0.046	0.166	0.037	0.034	0.000	0.283
SSW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
SW	0.000	0.000	0.000	0.000	0.000	0.288	0.000	0.000	0.000	0.288
WSW	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.041
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	0.042	0.000	0.037	0.000	0.079
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	0.047	0.186	0.742	0.037	0.071	0.000	1.083

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS B 34.990  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 23.160

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.161	0.078	0.000	0.000	0.239
NNE	0.000	0.000	0.000	0.000	0.092	0.334	0.000	0.000	0.000	0.427
NE	0.000	0.000	0.000	0.000	0.000	0.081	0.000	0.000	0.000	0.081
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	0.043	0.000	0.000	0.000	0.088
SE	0.000	0.000	0.000	0.140	0.136	0.041	0.038	0.000	0.000	0.355
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.077	0.000	0.000	0.077
S	0.000	0.000	0.000	0.140	0.046	0.166	0.193	0.104	0.000	0.649
SSW	0.000	0.000	0.000	0.140	0.000	0.161	0.038	0.000	0.000	0.340
SW	0.000	0.000	0.000	0.187	0.044	0.165	0.000	0.000	0.000	0.396
WSW	0.000	0.000	0.000	0.047	0.045	0.245	0.268	0.000	0.000	0.605
W	0.000	0.000	0.000	0.047	0.270	0.124	0.075	0.000	0.000	0.516
WNW	0.000	0.000	0.000	0.000	0.090	0.083	0.267	0.000	0.000	0.441
NW	0.000	0.000	0.000	0.000	0.088	0.120	0.076	0.066	0.000	0.350
NNW	0.000	0.000	0.000	0.000	0.000	0.167	0.155	0.000	0.000	0.321
SUBTOTAL	0.000	0.000	0.000	0.702	0.857	1.891	1.266	0.171	0.000	4.886

TOTAL HOURS OF VALID OBSERVATIONS                    2138.000  
TOTAL HOURS OF ELEVATED RELEASES                    1889.360  
TOTAL HOURS OF STABILITY CLASS C                    116.910  
TOTAL HOURS OF ELEVATED STABILITY CLASS C           104.470

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D ( $-1.5 < \Delta T \leq -0.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.094	0.181	1.061	0.077	0.000	0.009	1.421
NNE	0.000	0.000	0.140	0.140	0.402	0.413	0.116	0.000	0.000	1.212
NE	0.000	0.000	0.047	0.140	0.229	0.080	0.076	0.000	0.000	0.572
ENE	0.000	0.000	0.094	0.094	0.088	0.042	0.000	0.000	0.000	0.317
E	0.000	0.000	0.047	0.000	0.044	0.042	0.000	0.000	0.000	0.132
ESE	0.000	0.094	0.047	0.421	0.361	0.169	0.188	0.000	0.000	1.279
SE	0.000	0.047	0.281	0.842	0.406	0.450	0.191	0.094	0.000	2.309
SSE	0.000	0.000	0.374	0.094	0.540	1.176	0.574	0.150	0.000	2.908
S	0.000	0.047	0.327	0.561	0.583	1.223	1.600	0.651	0.000	4.992
SSW	0.000	0.047	0.421	0.655	0.449	1.630	0.802	0.130	0.000	4.133
SW	0.000	0.000	0.374	0.702	0.958	0.905	0.189	0.000	0.000	3.128
WSW	0.000	0.000	0.421	0.655	0.446	0.569	0.230	0.033	0.000	2.354
W	0.000	0.000	0.187	0.468	0.366	1.187	0.344	0.000	0.000	2.551
WNW	0.000	0.000	0.000	0.374	0.626	1.384	1.182	0.131	0.000	3.698
NW	0.000	0.000	0.094	0.374	0.316	1.143	1.605	0.156	0.020	3.708
NNW	0.000	0.000	0.047	0.140	0.446	1.140	0.230	0.024	0.000	2.027
SUBTOTAL	0.000	0.234	2.900	5.753	6.441	12.614	7.404	1.368	0.029	36.742

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS D 860.580  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 785.550

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.094	0.358	0.371	0.038	0.000	0.000	0.908
NNE	0.000	0.000	0.234	0.094	0.271	0.246	0.038	0.000	0.000	0.883
NE	0.000	0.000	0.000	0.140	0.271	0.201	0.039	0.000	0.000	0.651
ENE	0.000	0.000	0.187	0.047	0.000	0.082	0.000	0.000	0.000	0.316
E	0.000	0.000	0.000	0.047	0.089	0.371	0.000	0.000	0.000	0.507
ESE	0.000	0.000	0.000	0.047	0.182	0.410	0.077	0.000	0.000	0.715
SE	0.000	0.000	0.094	0.327	0.487	2.062	0.384	0.085	0.000	3.438
SSE	0.000	0.000	0.000	0.421	0.451	1.278	0.951	0.318	0.009	3.428
S	0.000	0.000	0.187	0.374	0.493	1.307	2.086	0.772	0.048	5.268
SSW	0.000	0.000	0.374	0.935	0.492	1.305	0.762	0.264	0.008	4.141
SW	0.000	0.000	0.327	0.608	0.492	0.501	0.078	0.000	0.000	2.007
WSW	0.000	0.000	0.187	0.140	0.316	0.376	0.038	0.000	0.000	1.058
W	0.000	0.000	0.047	0.094	0.357	0.415	0.039	0.019	0.000	0.971
WNW	0.000	0.000	0.047	0.140	0.045	0.000	0.000	0.000	0.000	0.232
NW	0.000	0.000	0.000	0.047	0.093	0.291	0.037	0.012	0.000	0.480
NNW	0.000	0.000	0.094	0.234	0.137	0.409	0.037	0.000	0.000	0.910
SUBTOTAL	0.000	0.000	1.824	3.789	4.535	9.625	4.603	1.471	0.065	25.912

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS E 624.910  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 553.990

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	0.140	0.047	0.543	0.000	0.000	0.000	0.730
NNE	0.000	0.000	0.094	0.234	0.180	0.833	0.000	0.000	0.000	1.341
NE	0.000	0.000	0.140	0.187	0.045	0.245	0.039	0.000	0.000	0.656
ENE	0.000	0.000	0.140	0.140	0.000	0.448	0.000	0.000	0.000	0.729
E	0.000	0.047	0.047	0.047	0.044	0.328	0.000	0.000	0.000	0.513
ESE	0.000	0.000	0.094	0.281	0.271	0.541	0.000	0.000	0.000	1.187
SE	0.000	0.000	0.094	0.281	0.991	1.161	0.038	0.000	0.000	2.564
SSE	0.000	0.000	0.187	0.140	0.406	0.691	0.495	0.037	0.000	1.956
S	0.000	0.000	0.094	0.187	0.538	1.515	0.569	0.104	0.000	3.007
SSW	0.000	0.000	0.187	0.281	0.355	0.456	0.000	0.000	0.000	1.278
SW	0.000	0.000	0.094	0.374	0.046	0.042	0.000	0.000	0.000	0.555
WSW	0.000	0.047	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.187
W	0.000	0.047	0.094	0.047	0.000	0.042	0.039	0.000	0.000	0.268
WNW	0.000	0.000	0.094	0.000	0.045	0.000	0.000	0.000	0.000	0.139
NW	0.000	0.000	0.047	0.187	0.137	0.000	0.000	0.000	0.000	0.371
NNW	0.000	0.000	0.047	0.234	0.452	0.161	0.000	0.000	0.000	0.894
SUBTOTAL	0.000	0.140	1.543	2.806	3.558	7.006	1.179	0.141	0.000	16.374

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS F 393.060  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 350.080

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

ELEVATED RELEASE MODE

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
NNE	0.000	0.000	0.047	0.000	0.043	0.247	0.000	0.000	0.000	0.337
NE	0.000	0.000	0.000	0.094	0.134	0.247	0.000	0.000	0.000	0.475
ENE	0.000	0.000	0.000	0.094	0.270	0.041	0.000	0.000	0.000	0.405
E	0.000	0.000	0.000	0.047	0.090	0.000	0.000	0.000	0.000	0.137
ESE	0.000	0.000	0.000	0.047	0.091	0.000	0.000	0.000	0.000	0.138
SE	0.000	0.000	0.047	0.047	0.044	0.251	0.000	0.000	0.000	0.388
SSE	0.000	0.000	0.047	0.047	0.046	0.081	0.000	0.000	0.000	0.221
S	0.000	0.000	0.000	0.000	0.000	0.081	0.000	0.000	0.000	0.081
SSW	0.000	0.000	0.047	0.047	0.000	0.041	0.000	0.000	0.000	0.134
SW	0.000	0.000	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.140
WSW	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.094
W	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
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	0.047	0.047	0.044	0.000	0.000	0.000	0.000	0.138
SUBTOTAL	0.000	0.000	0.468	0.514	0.809	0.988	0.000	0.000	0.000	2.779

TOTAL HOURS OF VALID OBSERVATIONS 2138.000  
 TOTAL HOURS OF ELEVATED RELEASES 1889.360  
 TOTAL HOURS OF STABILITY CLASS G 75.010  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 59.420

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 7**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)**  
**THIRD QUARTER**



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.001	0.010	0.166	0.000	0.000	0.000	0.177
NNE	0.000	0.000	0.000	0.003	0.007	0.075	0.000	0.000	0.000	0.084
NE	0.000	0.000	0.000	0.000	0.004	0.005	0.000	0.000	0.000	0.010
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	0.004	0.005	0.000	0.000	0.000	0.000	0.009
ESE	0.000	0.000	0.000	0.039	0.080	0.000	0.000	0.000	0.000	0.119
SE	0.000	0.000	0.026	0.136	0.008	0.000	0.000	0.000	0.000	0.170
SSE	0.000	0.000	0.051	0.021	0.000	0.000	0.000	0.000	0.000	0.072
S	0.000	0.000	0.058	0.023	0.000	0.000	0.000	0.000	0.000	0.081
SSW	0.000	0.000	0.024	0.007	0.000	0.000	0.000	0.000	0.000	0.031
SW	0.000	0.000	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.007
WSW	0.000	0.000	0.000	0.005	0.009	0.000	0.000	0.000	0.000	0.014
W	0.000	0.000	0.000	0.013	0.022	0.032	0.000	0.000	0.000	0.067
WNW	0.000	0.000	0.000	0.000	0.004	0.036	0.000	0.000	0.000	0.040
NW	0.000	0.000	0.000	0.002	0.000	0.009	0.072	0.000	0.000	0.083
NNW	0.000	0.000	0.000	0.000	0.008	0.030	0.065	0.000	0.000	0.104
SUBTOTAL	0.000	0.000	0.161	0.259	0.157	0.354	0.136	0.000	0.000	1.067

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 131.030  
 TOTAL HOURS OF STABILITY CLASS A 67.780  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 22.060

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND-SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.018	0.066	0.000	0.000	0.000	0.085
NNE	0.000	0.000	0.000	0.000	0.009	0.007	0.000	0.000	0.000	0.015
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	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.008	0.030	0.000	0.000	0.000	0.000	0.039
SE	0.000	0.000	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.007
SSE	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
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	0.000	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	0.004	0.000	0.000	0.000	0.000	0.000	0.004
W	0.000	0.000	0.000	0.008	0.028	0.007	0.000	0.000	0.000	0.043
WNW	0.000	0.000	0.000	0.001	0.008	0.016	0.010	0.000	0.000	0.035
NW	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.004
NNW	0.000	0.000	0.000	0.000	0.008	0.009	0.015	0.000	0.000	0.032
SUBTOTAL	0.000	0.000	0.014	0.023	0.104	0.112	0.025	0.000	0.000	0.279

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 131.030  
 TOTAL HOURS OF STABILITY CLASS B 63.930  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 5.760

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS C ( $-1.7 < \Delta T \leq -1.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.005	0.017	0.065	0.000	0.000	0.000	0.087
NNE	0.000	0.000	0.000	0.000	0.012	0.010	0.000	0.000	0.000	0.022
NE	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
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	0.006	0.000	0.000	0.000	0.000	0.009
ESE	0.000	0.000	0.000	0.020	0.015	0.000	0.000	0.000	0.000	0.035
SE	0.000	0.000	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.020
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	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.006
WSW	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.005
W	0.000	0.000	0.000	0.001	0.029	0.000	0.000	0.000	0.000	0.030
WNW	0.000	0.000	0.000	0.001	0.011	0.049	0.019	0.000	0.000	0.080
NW	0.000	0.000	0.000	0.002	0.016	0.007	0.022	0.000	0.000	0.047
NNW	0.000	0.000	0.000	0.000	0.014	0.027	0.017	0.000	0.000	0.058
SUBTOTAL	0.000	0.000	0.014	0.049	0.125	0.158	0.058	0.000	0.000	0.403

TOTAL HOURS OF VALID OBSERVATIONS                    2067.000  
TOTAL HOURS OF GROUND LEVEL RELEASE                    131.030  
TOTAL HOURS OF STABILITY CLASS C                    112.740  
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C                    8.340

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D ( $-1.5 < \Delta T \leq -0.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.036	0.031	0.037	0.000	0.000	0.000	0.104
NNE	0.000	0.000	0.000	0.003	0.069	0.068	0.000	0.000	0.000	0.139
NE	0.000	0.000	0.000	0.001	0.021	0.012	0.000	0.000	0.000	0.033
ENE	0.000	0.000	0.000	0.010	0.008	0.000	0.000	0.000	0.000	0.018
E	0.000	0.000	0.000	0.024	0.052	0.009	0.000	0.000	0.000	0.085
ESE	0.000	0.000	0.027	0.233	0.133	0.000	0.000	0.000	0.000	0.392
SE	0.000	0.000	0.028	0.010	0.000	0.009	0.000	0.000	0.000	0.046
SSE	0.000	0.005	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.029
S	0.000	0.000	0.058	0.034	0.000	0.000	0.000	0.000	0.000	0.092
SSW	0.000	0.000	0.038	0.028	0.000	0.000	0.000	0.000	0.000	0.066
SW	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.020
WSW	0.000	0.000	0.005	0.044	0.006	0.000	0.000	0.000	0.000	0.055
W	0.000	0.000	0.000	0.043	0.057	0.008	0.000	0.000	0.000	0.108
WNW	0.000	0.000	0.000	0.007	0.039	0.031	0.000	0.000	0.000	0.077
NW	0.000	0.000	0.000	0.002	0.059	0.119	0.100	0.000	0.000	0.279
NNW	0.000	0.000	0.000	0.016	0.024	0.189	0.010	0.000	0.000	0.240
SUBTOTAL	0.000	0.005	0.200	0.490	0.498	0.482	0.110	0.000	0.000	1.786

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 131.030  
 TOTAL HOURS OF STABILITY CLASS D 808.120  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 36.920

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.034	0.081	0.007	0.000	0.000	0.000	0.000	0.123
NNE	0.000	0.000	0.012	0.029	0.005	0.000	0.000	0.000	0.000	0.046
NE	0.000	0.003	0.007	0.013	0.020	0.014	0.000	0.000	0.000	0.058
ENE	0.000	0.000	0.020	0.035	0.027	0.000	0.021	0.000	0.000	0.102
E	0.000	0.000	0.082	0.147	0.029	0.000	0.000	0.000	0.000	0.258
ESE	0.000	0.006	0.044	0.111	0.065	0.000	0.000	0.000	0.000	0.226
SE	0.000	0.005	0.034	0.002	0.000	0.000	0.000	0.000	0.000	0.041
SSE	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014
S	0.000	0.000	0.079	0.000	0.000	0.000	0.000	0.000	0.000	0.079
SSW	0.000	0.006	0.036	0.040	0.021	0.000	0.000	0.000	0.000	0.104
SW	0.000	0.000	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.024
WSW	0.000	0.000	0.024	0.043	0.000	0.000	0.000	0.000	0.000	0.067
W	0.000	0.000	0.023	0.077	0.034	0.000	0.000	0.000	0.000	0.134
WNW	0.000	0.000	0.000	0.014	0.007	0.000	0.000	0.000	0.000	0.021
NW	0.000	0.000	0.000	0.015	0.012	0.000	0.000	0.000	0.000	0.028
NNW	0.000	0.000	0.011	0.021	0.072	0.034	0.000	0.000	0.000	0.138
SUBTOTAL	0.000	0.021	0.434	0.638	0.299	0.048	0.021	0.000	0.000	1.462

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 131.030  
 TOTAL HOURS OF STABILITY CLASS E 564.400  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 30.220

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.219	0.142	0.009	0.000	0.000	0.000	0.000	0.370
NNE	0.000	0.000	0.024	0.048	0.000	0.000	0.000	0.000	0.000	0.072
NE	0.000	0.010	0.020	0.009	0.024	0.000	0.046	0.000	0.000	0.109
ENE	0.000	0.000	0.034	0.017	0.000	0.000	0.000	0.000	0.000	0.052
E	0.000	0.006	0.102	0.057	0.000	0.008	0.000	0.000	0.000	0.172
ESE	0.000	0.000	0.022	0.007	0.000	0.000	0.000	0.000	0.000	0.030
SE	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
SSE	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
S	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
SSW	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.027
SW	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
WSW	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
W	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
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	0.029	0.033	0.033	0.000	0.000	0.000	0.000	0.096
SUBTOTAL	0.000	0.031	0.488	0.313	0.066	0.008	0.046	0.000	0.000	0.953

TOTAL HOURS OF VALID OBSERVATIONS                    2067.000  
TOTAL HOURS OF GROUND LEVEL RELEASE                131.030  
TOTAL HOURS OF STABILITY CLASS F                    333.640  
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F    19.690

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

GROUND LEVEL RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	0.008	0.104	0.046	0.000	0.000	0.000	0.000	0.000	0.158
NNE	0.000	0.004	0.024	0.014	0.000	0.000	0.000	0.000	0.000	0.042
NE	0.000	0.003	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.019
ENE	0.000	0.013	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.042
E	0.000	0.000	0.036	0.013	0.000	0.000	0.000	0.000	0.000	0.049
ESE	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.007
SE	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
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	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.003
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.002	0.049	0.014	0.000	0.000	0.000	0.000	0.000	0.066
SUBTOTAL	0.000	0.033	0.254	0.101	0.000	0.000	0.000	0.000	0.000	0.389

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 131.030  
 TOTAL HOURS OF STABILITY CLASS G 116.390  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 8.040

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.320	0.000	0.000	0.320
NNE	0.000	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.041
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	0.043	0.000	0.000	0.000	0.043
SE	0.000	0.000	0.000	0.000	0.137	0.373	0.039	0.000	0.000	0.550
SSE	0.000	0.000	0.000	0.000	0.470	0.345	0.000	0.000	0.000	0.816
S	0.000	0.000	0.000	0.000	0.139	0.171	0.000	0.000	0.000	0.311
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	0.045	0.088	0.000	0.000	0.000	0.133
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	0.792	1.061	0.359	0.000	0.000	2.212

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF ELEVATED RELEASES 1935.970  
 TOTAL HOURS OF STABILITY CLASS A 67.780  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 45.720

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.128	0.080	0.000	0.000	0.256
NNE	0.000	0.000	0.000	0.000	0.091	0.126	0.000	0.000	0.000	0.218
NE	0.000	0.000	0.000	0.000	0.048	0.045	0.000	0.000	0.000	0.092
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	0.097	0.469	0.296	0.161	0.000	0.000	1.023
SSE	0.000	0.000	0.000	0.242	0.046	0.043	0.000	0.000	0.000	0.331
S	0.000	0.000	0.000	0.000	0.186	0.088	0.000	0.000	0.000	0.274
SSW	0.000	0.000	0.000	0.000	0.045	0.043	0.000	0.000	0.000	0.089
SW	0.000	0.000	0.000	0.000	0.047	0.000	0.040	0.000	0.000	0.087
WSW	0.000	0.000	0.000	0.097	0.095	0.000	0.000	0.000	0.000	0.192
W	0.000	0.000	0.000	0.000	0.045	0.041	0.000	0.000	0.000	0.087
WNW	0.000	0.000	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.042
NW	0.000	0.000	0.000	0.000	0.000	0.041	0.039	0.000	0.000	0.080
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	0.435	1.121	0.937	0.320	0.000	0.000	2.814

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF ELEVATED RELEASES 1935.970  
 TOTAL HOURS OF STABILITY CLASS B 63.930  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 58.170

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C ( $-1.7 < \Delta T \leq -1.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.048	0.000	0.253	0.040	0.000	0.000	0.342
NNE	0.000	0.000	0.000	0.000	0.045	0.125	0.000	0.000	0.000	0.170
NE	0.000	0.000	0.000	0.000	0.000	0.086	0.000	0.000	0.000	0.086
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	0.171	0.000	0.000	0.000	0.171
SE	0.000	0.000	0.000	0.290	0.327	0.298	0.160	0.000	0.000	1.075
SSE	0.000	0.000	0.048	0.435	0.046	0.130	0.000	0.000	0.000	0.659
S	0.000	0.000	0.048	0.242	0.140	0.043	0.000	0.000	0.000	0.473
SSW	0.000	0.000	0.000	0.242	0.094	0.000	0.000	0.000	0.000	0.336
SW	0.000	0.000	0.000	0.145	0.090	0.000	0.000	0.000	0.000	0.236
WSW	0.000	0.000	0.000	0.242	0.048	0.044	0.000	0.000	0.000	0.334
W	0.000	0.000	0.000	0.000	0.048	0.303	0.000	0.000	0.000	0.351
WNW	0.000	0.000	0.000	0.048	0.000	0.215	0.039	0.000	0.000	0.302
NW	0.000	0.000	0.000	0.000	0.046	0.000	0.077	0.000	0.000	0.123
NNW	0.000	0.000	0.000	0.000	0.000	0.129	0.234	0.030	0.000	0.393
SUBTOTAL	0.000	0.000	0.097	1.693	0.886	1.795	0.549	0.030	0.000	5.051

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF ELEVATED RELEASES 1935.970  
 TOTAL HOURS OF STABILITY CLASS C 112.740  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 104.400

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D ( $-1.5 < \Delta T \leq -0.5$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.145	0.339	0.556	0.719	0.314	0.139	0.000	2.213
NNE	0.000	0.000	0.097	0.290	0.373	0.595	0.275	0.188	0.000	1.818
NE	0.000	0.000	0.145	0.242	0.093	0.380	0.000	0.000	0.000	0.860
ENE	0.000	0.000	0.242	0.097	0.045	0.086	0.000	0.000	0.000	0.470
E	0.000	0.000	0.048	0.290	0.092	0.170	0.039	0.000	0.000	0.640
ESE	0.000	0.000	0.145	0.290	0.141	0.811	0.000	0.000	0.000	1.388
SE	0.000	0.000	0.339	0.871	0.793	1.267	0.787	0.139	0.000	4.196
SSE	0.000	0.000	1.161	1.209	0.278	0.427	0.468	0.115	0.000	3.658
S	0.000	0.000	0.919	1.306	0.604	0.645	0.078	0.063	0.000	3.616
SSW	0.000	0.048	0.774	1.161	0.328	0.342	0.117	0.114	0.000	2.884
SW	0.000	0.000	0.822	0.919	0.428	0.175	0.000	0.000	0.000	2.344
WSW	0.000	0.000	0.532	1.064	0.472	0.216	0.000	0.000	0.000	2.284
W	0.000	0.000	0.242	1.306	1.296	0.911	0.040	0.000	0.000	3.796
WNW	0.000	0.000	0.048	0.435	0.659	0.892	0.118	0.000	0.000	2.153
NW	0.000	0.000	0.000	0.532	0.651	0.783	0.276	0.000	0.000	2.241
NNW	0.000	0.000	0.000	0.387	0.277	0.842	0.904	0.338	0.000	2.748
SUBTOTAL	0.000	0.048	5.660	10.740	7.088	9.261	3.417	1.096	0.000	37.310

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF ELEVATED RELEASES 1935.970  
 TOTAL HOURS OF STABILITY CLASS D 808.120  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 771.200

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.048	0.290	0.290	0.374	0.893	0.079	0.000	0.000	1.975
NNE	0.000	0.000	0.145	0.387	0.187	0.516	0.000	0.000	0.000	1.236
NE	0.000	0.000	0.484	0.194	0.184	0.259	0.000	0.000	0.000	1.120
ENE	0.000	0.000	0.000	0.290	0.189	0.306	0.000	0.028	0.000	0.813
E	0.000	0.000	0.242	0.242	0.274	0.473	0.000	0.000	0.000	1.231
ESE	0.000	0.000	0.145	0.581	0.604	0.903	0.040	0.000	0.000	2.272
SE	0.000	0.000	0.387	0.290	0.420	0.718	0.358	0.000	0.000	2.173
SSE	0.000	0.000	0.242	0.726	0.325	0.567	0.078	0.000	0.000	1.938
S	0.000	0.000	0.387	0.919	0.744	0.473	0.196	0.057	0.000	2.776
SSW	0.000	0.000	0.484	0.435	0.280	0.214	0.119	0.000	0.000	1.532
SW	0.000	0.000	0.290	0.774	0.095	0.086	0.000	0.000	0.000	1.245
WSW	0.000	0.000	0.242	0.484	0.236	0.174	0.000	0.000	0.000	1.135
W	0.000	0.000	0.290	0.919	1.061	0.916	0.039	0.000	0.000	3.226
WNW	0.000	0.000	0.097	0.435	0.372	0.216	0.000	0.000	0.000	1.120
NW	0.000	0.000	0.097	0.097	0.282	0.132	0.000	0.000	0.000	0.607
NNW	0.000	0.000	0.097	0.435	0.048	0.506	0.358	0.000	0.000	1.445
SUBTOTAL	0.000	0.048	3.919	7.499	5.674	7.351	1.268	0.085	0.000	25.843

TOTAL HOURS OF VALID OBSERVATIONS                    2067.000  
TOTAL HOURS OF ELEVATED RELEASES                    1935.970  
TOTAL HOURS OF STABILITY CLASS E                    564.400  
TOTAL HOURS OF ELEVATED STABILITY CLASS E        534.180

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.145	0.370	1.059	0.321	0.000	0.000	1.895
NNE	0.000	0.000	0.145	0.194	0.280	1.233	0.120	0.000	0.000	1.971
NE	0.000	0.000	0.145	0.290	0.507	0.170	0.040	0.000	0.002	1.155
ENE	0.000	0.000	0.194	0.339	0.280	0.087	0.040	0.000	0.000	0.939
E	0.000	0.000	0.000	0.242	0.324	0.306	0.000	0.000	0.000	0.872
ESE	0.000	0.000	0.145	0.484	0.421	0.563	0.000	0.000	0.000	1.612
SE	0.000	0.048	0.145	0.339	0.377	0.431	0.000	0.000	0.000	1.340
SSE	0.000	0.000	0.290	0.339	0.232	0.217	0.000	0.000	0.000	1.077
S	0.000	0.000	0.339	0.194	0.000	0.087	0.000	0.000	0.000	0.619
SSW	0.000	0.048	0.339	0.048	0.000	0.000	0.000	0.000	0.000	0.435
SW	0.000	0.048	0.194	0.339	0.048	0.000	0.000	0.000	0.000	0.628
WSW	0.000	0.000	0.097	0.387	0.045	0.000	0.000	0.000	0.000	0.529
W	0.000	0.000	0.242	0.097	0.094	0.043	0.000	0.000	0.000	0.476
WNW	0.000	0.000	0.242	0.242	0.048	0.000	0.000	0.000	0.000	0.532
NW	0.000	0.000	0.097	0.048	0.047	0.000	0.000	0.000	0.000	0.192
NNW	0.000	0.000	0.000	0.194	0.139	0.504	0.080	0.000	0.000	0.916
SUBTOTAL	0.000	0.145	2.612	3.919	3.211	4.698	0.601	0.000	0.002	15.189

TOTAL HOURS OF VALID OBSERVATIONS                   2067.000  
TOTAL HOURS OF ELEVATED RELEASES                   1935.970  
TOTAL HOURS OF STABILITY CLASS F                   333.640  
TOTAL HOURS OF ELEVATED STABILITY CLASS F       313.950

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

ELEVATED RELEASE MODE

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
NNE	0.000	0.048	0.000	0.000	0.188	0.262	0.040	0.000	0.000	0.538
NE	0.000	0.048	0.000	0.048	0.472	0.431	0.000	0.000	0.000	1.000
ENE	0.000	0.000	0.048	0.048	0.184	0.172	0.000	0.000	0.000	0.452
E	0.000	0.048	0.097	0.000	0.000	0.085	0.000	0.000	0.000	0.230
ESE	0.000	0.000	0.048	0.097	0.093	0.000	0.000	0.000	0.000	0.238
SE	0.000	0.000	0.145	0.194	0.325	0.044	0.000	0.000	0.000	0.708
SSE	0.000	0.000	0.194	0.290	0.047	0.000	0.000	0.000	0.000	0.531
S	0.000	0.048	0.290	0.097	0.048	0.000	0.000	0.000	0.000	0.484
SSW	0.000	0.000	0.097	0.145	0.000	0.000	0.000	0.000	0.000	0.242
SW	0.000	0.000	0.145	0.048	0.000	0.000	0.000	0.000	0.000	0.194
WSW	0.000	0.000	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.097
W	0.000	0.000	0.097	0.048	0.000	0.000	0.000	0.000	0.000	0.145
WNW	0.000	0.048	0.097	0.048	0.000	0.000	0.000	0.000	0.000	0.194
NW	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.094
NNW	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.048
SUBTOTAL	0.000	0.242	1.403	1.064	1.499	0.993	0.040	0.000	0.000	5.242

TOTAL HOURS OF VALID OBSERVATIONS 2067.000  
 TOTAL HOURS OF ELEVATED RELEASES 1935.970  
 TOTAL HOURS OF STABILITY CLASS G 116.390  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 108.350

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 8**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL RELEASE MODE AND ELEVATED RELEASE MODE)**  
**FOURTH QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.005	0.028	0.000	0.000	0.000	0.032
NNE	0.000	0.000	0.000	0.000	0.000	0.023	0.000	0.000	0.000	0.023
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	0.005	0.000	0.000	0.000	0.000	0.005
ESE	0.000	0.000	0.000	0.016	0.040	0.000	0.000	0.000	0.000	0.056
SE	0.000	0.000	0.022	0.090	0.024	0.000	0.000	0.000	0.000	0.136
SSE	0.000	0.000	0.087	0.071	0.000	0.000	0.000	0.000	0.000	0.158
S	0.000	0.000	0.000	0.075	0.000	0.000	0.000	0.000	0.000	0.075
SSW	0.000	0.000	0.012	0.076	0.000	0.000	0.000	0.000	0.000	0.088
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	0.011	0.006	0.000	0.000	0.000	0.000	0.018
W	0.000	0.000	0.000	0.000	0.000	0.031	0.000	0.000	0.000	0.031
WNW	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.006
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	0.056	0.000	0.000	0.000	0.056
SUBTOTAL	0.000	0.000	0.122	0.340	0.080	0.144	0.000	0.000	0.000	0.686

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 292.070  
 TOTAL HOURS OF STABILITY CLASS A 26.670  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 15.050

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.006	0.043	0.000	0.000	0.000	0.049
NNE	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.009
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	0.017	0.007	0.009	0.000	0.000	0.000	0.034
SE	0.000	0.000	0.000	0.006	0.015	0.000	0.000	0.000	0.000	0.022
SSE	0.000	0.000	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.016
S	0.000	0.000	0.014	0.024	0.000	0.000	0.000	0.000	0.000	0.037
SSW	0.000	0.000	0.000	0.000	0.017	0.000	0.000	0.000	0.000	0.017
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	0.005	0.000	0.000	0.000	0.000	0.000	0.005
W	0.000	0.000	0.000	0.005	0.000	0.030	0.000	0.000	0.000	0.035
WNW	0.000	0.000	0.000	0.000	0.004	0.008	0.019	0.000	0.000	0.031
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	0.005	0.000	0.000	0.000	0.005
SUBTOTAL	0.000	0.000	0.021	0.067	0.050	0.104	0.019	0.000	0.000	0.260

TOTAL HOURS OF VALID OBSERVATIONS	2194.000
TOTAL HOURS OF GROUND LEVEL RELEASE	292.070
TOTAL HOURS OF STABILITY CLASS B	33.690
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B	5.700

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.008	0.021	0.000	0.000	0.000	0.029
NNE	0.000	0.000	0.000	0.000	0.004	0.006	0.000	0.000	0.000	0.010
NE	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.005
ENE	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.006
E	0.000	0.000	0.000	0.004	0.007	0.000	0.000	0.000	0.000	0.011
ESE	0.000	0.000	0.007	0.012	0.007	0.000	0.000	0.000	0.000	0.026
SE	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.021
SSE	0.000	0.000	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.005
S	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.004
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	0.003	0.000	0.000	0.000	0.000	0.000	0.003
W	0.000	0.000	0.000	0.000	0.006	0.031	0.000	0.000	0.000	0.038
WNW	0.000	0.000	0.000	0.000	0.006	0.060	0.009	0.000	0.000	0.075
NW	0.000	0.000	0.000	0.000	0.004	0.033	0.000	0.000	0.000	0.037
NNW	0.000	0.000	0.000	0.000	0.004	0.035	0.009	0.000	0.000	0.047
SUBTOTAL	0.000	0.000	0.010	0.047	0.051	0.193	0.018	0.000	0.000	0.318

TOTAL HOURS OF VALID OBSERVATIONS                   2194.000  
TOTAL HOURS OF GROUND LEVEL RELEASE               292.070  
TOTAL HOURS OF STABILITY CLASS C                   62.570  
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C   6.980

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.189	0.000	0.000	0.000	0.330
NNE	0.000	0.000	0.000	0.019	0.107	0.116	0.000	0.000	0.000	0.242
NE	0.000	0.000	0.000	0.000	0.010	0.048	0.000	0.000	0.000	0.057
ENE	0.000	0.000	0.000	0.003	0.001	0.000	0.000	0.000	0.000	0.004
E	0.000	0.000	0.001	0.008	0.015	0.000	0.000	0.000	0.000	0.024
ESE	0.000	0.000	0.031	0.044	0.027	0.008	0.000	0.000	0.000	0.110
SE	0.000	0.000	0.021	0.076	0.036	0.000	0.000	0.000	0.000	0.133
SSE	0.000	0.000	0.070	0.109	0.000	0.013	0.000	0.000	0.000	0.193
S	0.000	0.000	0.077	0.108	0.127	0.036	0.000	0.000	0.000	0.347
SSW	0.000	0.000	0.022	0.067	0.017	0.186	0.000	0.000	0.000	0.292
SW	0.000	0.000	0.000	0.048	0.015	0.009	0.000	0.000	0.000	0.072
WSW	0.000	0.000	0.003	0.027	0.037	0.026	0.000	0.000	0.000	0.093
W	0.000	0.000	0.000	0.026	0.106	0.317	0.056	0.000	0.000	0.504
WNW	0.000	0.000	0.000	0.000	0.020	0.126	0.219	0.032	0.000	0.397
NW	0.000	0.000	0.000	0.000	0.070	0.327	0.334	0.000	0.000	0.732
NNW	0.000	0.000	0.000	0.010	0.134	0.321	0.018	0.000	0.000	0.484
SUBTOTAL	0.000	0.000	0.225	0.563	0.845	1.721	0.627	0.032	0.000	4.013

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 292.070  
 TOTAL HOURS OF STABILITY CLASS D 811.150  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 88.050

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.010	0.061	0.038	0.018	0.000	0.000	0.000	0.126
NNE	0.000	0.000	0.007	0.019	0.015	0.031	0.000	0.000	0.000	0.071
NE	0.000	0.000	0.000	0.015	0.006	0.000	0.000	0.000	0.000	0.021
ENE	0.000	0.000	0.018	0.036	0.000	0.000	0.000	0.000	0.000	0.055
E	0.000	0.000	0.056	0.092	0.000	0.000	0.000	0.000	0.000	0.148
ESE	0.000	0.000	0.088	0.125	0.088	0.018	0.000	0.000	0.000	0.320
SE	0.000	0.003	0.164	0.278	0.181	0.000	0.000	0.000	0.000	0.627
SSE	0.000	0.000	0.316	0.243	0.000	0.000	0.000	0.000	0.000	0.560
S	0.000	0.000	0.217	0.685	0.454	0.038	0.000	0.000	0.000	1.393
SSW	0.000	0.000	0.036	0.076	0.052	0.040	0.000	0.000	0.000	0.204
SW	0.000	0.000	0.008	0.022	0.000	0.000	0.000	0.000	0.000	0.030
WSW	0.000	0.005	0.022	0.032	0.000	0.000	0.000	0.000	0.000	0.059
W	0.000	0.000	0.009	0.087	0.041	0.024	0.000	0.000	0.000	0.161
WNW	0.000	0.000	0.005	0.017	0.015	0.028	0.000	0.000	0.000	0.066
NW	0.000	0.000	0.000	0.029	0.053	0.063	0.028	0.000	0.000	0.173
NNW	0.000	0.000	0.002	0.028	0.052	0.049	0.010	0.000	0.000	0.141
SUBTOTAL	0.000	0.008	0.958	1.846	0.995	0.309	0.038	0.000	0.000	4.154

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 292.070  
 TOTAL HOURS OF STABILITY CLASS E 674.840  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 91.130

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F<sup>1</sup> (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.011	0.069	0.064	0.008	0.000	0.000	0.000	0.000	0.152
NNE	0.000	0.000	0.015	0.078	0.008	0.009	0.000	0.000	0.000	0.109
NE	0.000	0.000	0.025	0.045	0.000	0.000	0.000	0.000	0.000	0.070
ENE	0.000	0.021	0.059	0.062	0.008	0.000	0.000	0.000	0.000	0.150
E	0.000	0.007	0.152	0.107	0.000	0.000	0.000	0.000	0.000	0.266
ESE	0.000	0.014	0.152	0.026	0.000	0.000	0.000	0.000	0.000	0.193
SE	0.000	0.034	0.070	0.012	0.000	0.000	0.000	0.000	0.000	0.116
SSE	0.000	0.030	0.337	0.077	0.000	0.000	0.000	0.000	0.000	0.444
S	0.000	0.008	0.392	0.552	0.113	0.000	0.000	0.000	0.000	1.064
SSW	0.000	0.000	0.018	0.015	0.000	0.000	0.000	0.000	0.000	0.033
SW	0.000	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.012
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	0.003	0.000	0.000	0.000	0.000	0.000	0.004
NW	0.000	0.000	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.024
NNW	0.000	0.000	0.021	0.039	0.031	0.000	0.000	0.000	0.000	0.091
SUBTOTAL	0.000	0.132	1.329	1.091	0.167	0.009	0.000	0.000	0.000	2.728

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 292.070  
 TOTAL HOURS OF STABILITY CLASS F 384.990  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 59.860

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

GROUND LEVEL RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
N	0.001	0.010	0.142	0.086	0.000	0.000	0.000	0.000	0.000	0.239
NNE	0.000	0.001	0.022	0.026	0.008	0.000	0.000	0.000	0.000	0.057
NE	0.000	0.021	0.026	0.019	0.000	0.000	0.000	0.000	0.000	0.066
ENE	0.001	0.041	0.082	0.011	0.000	0.000	0.000	0.000	0.000	0.134
E	0.000	0.013	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.074
ESE	0.000	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.022
SE	0.000	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.049
SSE	0.001	0.057	0.179	0.000	0.000	0.000	0.000	0.000	0.000	0.238
S	0.001	0.017	0.176	0.009	0.000	0.000	0.000	0.000	0.000	0.203
SSW	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009
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	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.006
NNW	0.000	0.016	0.034	0.006	0.000	0.000	0.000	0.000	0.000	0.057
SUBTOTAL	0.005	0.214	0.768	0.157	0.008	0.000	0.000	0.000	0.000	1.153

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 292.070  
 TOTAL HOURS OF STABILITY CLASS G 200.090  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 25.300

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
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	0.044	0.000	0.037	0.000	0.000	0.082
SSE	0.000	0.000	0.000	0.000	0.000	0.116	0.188	0.026	0.000	0.330
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	0.081	0.000	0.000	0.000	0.081
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	0.037	0.000	0.000	0.037
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	0.044	0.196	0.263	0.026	0.000	0.530

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF ELEVATED RELEASES 1901.930  
 TOTAL HOURS OF STABILITY CLASS A 26.670  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 11.620

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.041	0.186	0.000	0.000	0.227
NNE	0.000	0.000	0.000	0.000	0.000	0.078	0.000	0.000	0.000	0.078
NE	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.039
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	0.040	0.000	0.000	0.000	0.040
SE	0.000	0.000	0.000	0.000	0.088	0.119	0.149	0.000	0.000	0.356
SSE	0.000	0.000	0.000	0.000	0.043	0.077	0.037	0.000	0.000	0.158
S	0.000	0.000	0.000	0.000	0.000	0.000	0.074	0.000	0.000	0.074
SSW	0.000	0.000	0.000	0.000	0.000	0.038	0.037	0.000	0.000	0.076
SW	0.000	0.000	0.000	0.000	0.000	0.040	0.038	0.000	0.000	0.077
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	0.075	0.000	0.000	0.113
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	0.037	0.000	0.000	0.037
SUBTOTAL	0.000	0.000	0.000	0.000	0.131	0.510	0.634	0.000	0.000	1.276

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF ELEVATED RELEASES 1901.930  
 TOTAL HOURS OF STABILITY CLASS B 33.690  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 27.990

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.158	0.186	0.000	0.000	0.345
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.074	0.000	0.000	0.074
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	0.041	0.038	0.000	0.000	0.079
SE	0.000	0.000	0.000	0.046	0.129	0.482	0.110	0.000	0.000	0.767
SSE	0.000	0.000	0.000	0.046	0.043	0.040	0.112	0.032	0.000	0.273
S	0.000	0.000	0.000	0.000	0.000	0.000	0.038	0.000	0.000	0.038
SSW	0.000	0.000	0.000	0.000	0.044	0.118	0.000	0.000	0.000	0.161
SW	0.000	0.000	0.000	0.091	0.045	0.040	0.000	0.000	0.000	0.175
WSW	0.000	0.000	0.000	0.091	0.088	0.164	0.000	0.000	0.000	0.343
W	0.000	0.000	0.000	0.000	0.046	0.077	0.000	0.000	0.000	0.122
WNW	0.000	0.000	0.000	0.000	0.000	0.040	0.037	0.000	0.000	0.077
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	0.080	0.000	0.000	0.000	0.080
SUBTOTAL	0.000	0.000	0.000	0.273	0.393	1.239	0.596	0.032	0.000	2.534

TOTAL HOURS OF VALID OBSERVATIONS                    2194.000  
TOTAL HOURS OF ELEVATED RELEASES                    1901.930  
TOTAL HOURS OF STABILITY CLASS C                    62.570  
TOTAL HOURS OF ELEVATED STABILITY CLASS C           55.590

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.046	0.218	1.340	0.931	0.088	0.000	2.669
NNE	0.000	0.000	0.046	0.091	0.303	1.680	0.410	0.030	0.000	2.559
NE	0.000	0.000	0.091	0.182	0.172	0.677	0.000	0.000	0.000	1.123
ENE	0.000	0.000	0.046	0.046	0.087	0.000	0.000	0.000	0.000	0.178
E	0.000	0.000	0.091	0.182	0.000	0.039	0.000	0.000	0.000	0.313
ESE	0.000	0.000	0.182	0.319	0.264	0.199	0.187	0.000	0.000	1.152
SE	0.000	0.000	0.547	0.866	0.663	1.392	0.224	0.369	0.021	4.082
SSE	0.000	0.000	0.182	0.410	0.134	0.281	0.403	0.203	0.025	1.639
S	0.000	0.000	0.273	0.365	0.220	0.282	0.369	0.106	0.009	1.624
SSW	0.000	0.000	0.273	0.091	0.000	0.476	0.597	0.061	0.026	1.525
SW	0.000	0.000	0.091	0.137	0.132	0.762	0.222	0.000	0.000	1.344
WSW	0.000	0.000	0.046	0.182	0.176	0.476	0.148	0.000	0.000	1.028
W	0.000	0.000	0.137	0.228	0.394	1.264	1.154	0.060	0.000	3.237
WNW	0.000	0.046	0.091	0.365	0.434	1.082	0.658	0.245	0.000	2.920
NW	0.000	0.000	0.137	0.365	0.435	1.028	1.398	0.462	0.000	3.825
NNW	0.000	0.046	0.000	0.273	0.526	2.156	0.706	0.035	0.000	3.743
SUBTOTAL	0.000	0.091	2.279	4.148	4.160	13.136	7.406	1.658	0.081	32.958

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF ELEVATED RELEASES 1901.930  
 TOTAL HOURS OF STABILITY CLASS D 811.150  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 723.100

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.091	0.262	0.196	0.074	0.000	0.000	0.670
NNE	0.000	0.000	0.046	0.228	0.088	0.360	0.149	0.000	0.000	0.871
NE	0.000	0.000	0.091	0.091	0.307	0.362	0.076	0.000	0.000	0.927
ENE	0.000	0.000	0.000	0.137	0.262	0.247	0.000	0.000	0.000	0.646
E	0.000	0.000	0.091	0.137	0.175	0.447	0.000	0.000	0.000	0.849
ESE	0.000	0.046	0.182	0.091	0.304	1.083	0.149	0.000	0.000	1.856
SE	0.000	0.000	0.228	0.273	0.352	1.398	0.483	0.146	0.000	2.880
SSE	0.000	0.000	0.046	0.091	0.355	0.758	1.033	0.758	0.072	3.113
S	0.000	0.000	0.137	0.273	0.438	1.395	1.814	0.579	0.066	4.702
SSW	0.000	0.000	0.091	0.091	0.133	1.107	1.301	0.165	0.025	2.912
SW	0.000	0.000	0.046	0.228	0.262	0.358	0.113	0.000	0.000	1.006
WSW	0.000	0.000	0.046	0.046	0.088	0.369	0.000	0.000	0.000	0.547
W	0.000	0.000	0.182	0.182	0.700	0.483	0.075	0.000	0.000	1.623
WNW	0.000	0.000	0.000	0.273	0.216	0.562	0.000	0.000	0.000	1.052
NW	0.000	0.000	0.091	0.182	0.131	0.834	0.073	0.036	0.000	1.348
NNW	0.000	0.000	0.046	0.182	0.308	0.806	0.260	0.000	0.000	1.602
SUBTOTAL	0.000	0.046	1.367	2.598	4.380	10.766	5.602	1.684	0.163	26.605

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF ELEVATED RELEASES 1901.930  
 TOTAL HOURS OF STABILITY CLASS E 674.840  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 583.710

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
 STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.043	0.598	0.000	0.000	0.000	0.732
NNE	0.000	0.000	0.000	0.046	0.131	0.719	0.075	0.000	0.000	0.970
NE	0.000	0.000	0.091	0.046	0.219	0.318	0.000	0.000	0.000	0.673
ENE	0.000	0.000	0.091	0.091	0.223	0.315	0.000	0.000	0.000	0.721
E	0.000	0.000	0.046	0.000	0.044	0.599	0.037	0.000	0.000	0.726
ESE	0.000	0.000	0.046	0.228	0.170	1.150	0.000	0.000	0.000	1.594
SE	0.000	0.000	0.137	0.046	0.387	1.490	0.000	0.000	0.000	2.060
SSE	0.000	0.000	0.091	0.000	0.220	0.354	0.851	0.201	0.000	1.717
S	0.000	0.000	0.182	0.182	0.220	1.072	0.626	0.000	0.000	2.282
SSW	0.000	0.000	0.137	0.410	0.268	0.434	0.113	0.000	0.000	1.362
SW	0.000	0.000	0.137	0.046	0.000	0.039	0.000	0.000	0.000	0.222
WSW	0.000	0.000	0.091	0.000	0.087	0.000	0.000	0.000	0.000	0.178
W	0.000	0.000	0.000	0.182	0.132	0.000	0.000	0.000	0.000	0.314
WNW	0.000	0.000	0.137	0.228	0.046	0.000	0.000	0.000	0.000	0.410
NW	0.000	0.000	0.046	0.137	0.176	0.121	0.000	0.000	0.000	0.479
NNW	0.000	0.000	0.000	0.091	0.086	0.202	0.000	0.000	0.000	0.380
SUBTOTAL	0.000	0.000	1.231	1.823	2.451	7.412	1.702	0.201	0.000	14.819

TOTAL HOURS OF VALID OBSERVATIONS                    2194.000  
TOTAL HOURS OF ELEVATED RELEASES                    1901.930  
TOTAL HOURS OF STABILITY CLASS F                    384.990  
TOTAL HOURS OF ELEVATED STABILITY CLASS F           325.130

METEOROLOGICAL FACILITY: BROWNS FERRY NUCLEAR PLANT  
STABILITY BASED ON ΔT 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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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

ELEVATED RELEASE MODE

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.046	0.091	0.086	0.469	0.038	0.000	0.000	0.730
NNE	0.000	0.000	0.046	0.137	0.000	0.159	0.038	0.000	0.000	0.379
NE	0.000	0.000	0.091	0.182	0.218	0.200	0.037	0.000	0.000	0.728
ENE	0.000	0.000	0.000	0.000	0.259	0.082	0.000	0.000	0.000	0.341
E	0.000	0.000	0.182	0.228	0.175	0.082	0.000	0.000	0.000	0.667
ESE	0.000	0.046	0.046	0.182	0.128	0.245	0.000	0.000	0.000	0.646
SE	0.000	0.000	0.182	0.593	0.445	0.243	0.000	0.000	0.000	1.464
SSE	0.000	0.046	0.228	0.137	0.087	0.079	0.073	0.000	0.000	0.649
S	0.000	0.046	0.228	0.046	0.000	0.157	0.000	0.000	0.000	0.476
SSW	0.000	0.000	0.273	0.046	0.042	0.119	0.000	0.000	0.000	0.480
SW	0.000	0.046	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.137
WSW	0.000	0.046	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.182
W	0.000	0.046	0.046	0.000	0.045	0.000	0.000	0.000	0.000	0.136
WNW	0.000	0.000	0.182	0.091	0.000	0.000	0.000	0.000	0.000	0.273
NW	0.000	0.000	0.137	0.137	0.043	0.000	0.000	0.000	0.000	0.316
NNW	0.000	0.046	0.091	0.137	0.088	0.000	0.000	0.000	0.000	0.361
SUBTOTAL	0.000	0.319	2.005	2.005	1.616	1.835	0.186	0.000	0.000	7.967

TOTAL HOURS OF VALID OBSERVATIONS 2194.000  
 TOTAL HOURS OF ELEVATED RELEASES 1901.930  
 TOTAL HOURS OF STABILITY CLASS G 200.090  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 174.790

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT  
2011 METEOROLOGICAL DATA TABLE 9  
JOINT FREQUENCY DISTRIBUTION IN PERCENT  
FOR ELEVATED RELEASES  
FIRST QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
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	0.046	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.000	0.139
S	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
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	0.093	0.186	0.000	0.000	0.000	0.278

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS A	6
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	6
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
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

MEAN WIND SPEED = 8.28

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.000	0.046	0.000	0.000	0.046	0.139
SSE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
S	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.093
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	0.046	0.093	0.093	0.000	0.000	0.046	0.278

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS B	6
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	6
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 9.78

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.000	0.000	0.000	0.093
NNE	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
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	0.093	0.139	0.046	0.046	0.000	0.325
SE	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.093
SSE	0.000	0.000	0.000	0.046	0.000	0.093	0.000	0.000	0.000	0.139
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	0.046	0.000	0.093	0.000	0.000	0.139
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	0.000	0.000	0.139	0.046	0.000	0.000	0.186
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	0.046	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.139
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.139	0.000	0.000	0.139
SUBTOTAL	0.000	0.000	0.000	0.093	0.186	0.557	0.510	0.046	0.000	1.391

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS C	30
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	30
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 11.31

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.139	0.325	1.252	1.531	0.371	0.000	3.711
NNE	0.000	0.000	0.046	0.139	0.603	2.087	0.881	0.000	0.000	3.757
NE	0.000	0.000	0.000	0.186	0.278	1.577	0.696	0.000	0.000	2.737
ENE	0.000	0.000	0.093	0.139	0.696	1.252	0.417	0.000	0.000	2.597
E	0.000	0.093	0.093	0.232	0.649	0.835	0.325	0.000	0.000	2.226
ESE	0.000	0.000	0.000	0.510	0.464	0.742	0.464	0.278	0.232	2.690
SE	0.000	0.046	0.139	0.139	0.046	0.278	0.371	0.186	0.835	2.041
SSE	0.000	0.000	0.186	0.093	0.093	0.278	0.232	0.093	0.139	1.113
S	0.000	0.046	0.093	0.186	0.278	0.093	0.186	0.000	0.000	0.881
SSW	0.000	0.000	0.093	0.093	0.139	0.371	0.278	0.000	0.000	0.974
SW	0.000	0.046	0.139	0.139	0.325	0.788	0.557	0.139	0.000	2.134
WSW	0.000	0.000	0.000	0.186	0.371	1.020	0.649	0.278	0.000	2.505
W	0.000	0.000	0.000	0.232	0.603	0.974	0.881	0.788	0.232	3.711
WNW	0.000	0.000	0.046	0.371	0.232	1.391	1.531	1.438	0.325	5.334
NW	0.000	0.000	0.000	0.278	0.417	1.438	2.551	0.928	0.139	5.751
NNW	0.000	0.000	0.046	0.186	0.371	1.577	2.365	0.649	0.046	5.241
SUBTOTAL	0.000	0.232	1.067	3.247	5.891	15.955	13.915	5.148	1.948	47.403

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156  
 TOTAL HOURS OF STABILITY CLASS D 1022  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 1022  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2156  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 12.34

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.093	0.788	0.464	0.000	0.000	1.391
NNE	0.000	0.000	0.000	0.000	0.093	0.742	1.113	0.046	0.000	1.994
NE	0.000	0.000	0.046	0.093	0.000	1.299	0.464	0.186	0.000	2.087
ENE	0.000	0.000	0.046	0.046	0.093	0.649	0.371	0.000	0.000	1.206
E	0.000	0.000	0.000	0.232	0.046	0.325	0.278	0.000	0.000	0.881
ESE	0.000	0.046	0.139	0.139	0.325	0.557	0.278	0.139	0.046	1.670
SE	0.000	0.000	0.232	0.046	0.000	0.696	2.134	0.510	1.067	4.685
SSE	0.000	0.000	0.139	0.093	0.325	0.928	0.881	0.649	0.325	3.340
S	0.000	0.000	0.093	0.046	0.278	0.928	1.252	0.788	0.464	3.850
SSW	0.000	0.000	0.139	0.186	0.278	1.160	1.113	1.206	0.278	4.360
SW	0.000	0.000	0.046	0.000	0.464	1.020	0.742	0.371	0.093	2.737
WSW	0.000	0.000	0.046	0.093	0.046	0.742	0.881	0.093	0.000	1.902
W	0.000	0.000	0.000	0.186	0.046	0.603	0.510	0.000	0.046	1.391
WNW	0.000	0.000	0.000	0.000	0.139	0.232	0.139	0.139	0.000	0.649
NW	0.000	0.000	0.000	0.232	0.046	0.139	0.649	0.093	0.000	1.160
NNW	0.000	0.000	0.000	0.046	0.093	0.139	0.557	0.046	0.000	0.881
SUBTOTAL	0.000	0.046	0.928	1.484	2.365	10.946	11.827	4.267	2.319	34.184

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2156  
 TOTAL HOURS OF STABILITY CLASS E 737  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 737  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2156  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 13.86

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	0.046	0.000	0.139	0.186	0.046	0.000	0.417
NNE	0.000	0.000	0.000	0.000	0.046	0.186	0.278	0.046	0.000	0.557
NE	0.000	0.000	0.000	0.046	0.000	0.139	0.000	0.000	0.000	0.186
ENE	0.000	0.000	0.046	0.000	0.046	0.046	0.093	0.046	0.000	0.278
E	0.000	0.046	0.046	0.000	0.000	0.325	0.232	0.046	0.000	0.696
ESE	0.000	0.000	0.000	0.046	0.093	0.371	0.186	0.000	0.000	0.696
SE	0.000	0.000	0.046	0.046	0.000	0.557	0.510	0.093	0.093	1.345
SSE	0.000	0.000	0.046	0.046	0.139	0.557	0.557	0.325	0.000	1.670
S	0.000	0.000	0.046	0.000	0.000	0.649	1.716	0.417	0.093	2.922
SSW	0.000	0.000	0.000	0.046	0.186	0.510	0.510	0.093	0.000	1.345
SW	0.000	0.000	0.046	0.186	0.139	0.835	0.186	0.000	0.000	1.391
WSW	0.000	0.046	0.000	0.093	0.093	0.371	0.139	0.000	0.000	0.742
W	0.000	0.000	0.000	0.046	0.000	0.000	0.046	0.000	0.000	0.093
WNW	0.000	0.000	0.000	0.093	0.046	0.046	0.000	0.000	0.000	0.186
NW	0.000	0.000	0.046	0.046	0.186	0.093	0.000	0.000	0.000	0.371
NNW	0.000	0.000	0.093	0.000	0.046	0.000	0.139	0.046	0.000	0.325
SUBTOTAL	0.000	0.093	0.417	0.742	1.020	4.824	4.777	1.160	0.186	13.219

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS F	285
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	285
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 12.20

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JANUARY 1, 2011 - MARCH 31, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NNE	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.093
NE	0.000	0.000	0.046	0.093	0.000	0.093	0.000	0.000	0.000	0.232
ENE	0.000	0.000	0.000	0.000	0.046	0.093	0.046	0.000	0.000	0.186
E	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
ESE	0.000	0.000	0.046	0.093	0.046	0.000	0.000	0.000	0.000	0.186
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.046
SSE	0.000	0.000	0.046	0.000	0.000	0.000	0.278	0.046	0.000	0.371
S	0.000	0.000	0.046	0.000	0.046	0.000	0.139	0.139	0.000	0.371
SSW	0.000	0.000	0.093	0.093	0.046	0.093	0.278	0.046	0.000	0.649
SW	0.000	0.046	0.046	0.000	0.000	0.232	0.046	0.000	0.000	0.371
WSW	0.000	0.000	0.093	0.000	0.046	0.093	0.093	0.000	0.000	0.325
W	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.046	0.093	0.046	0.000	0.000	0.000	0.000	0.186
NW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.093	0.510	0.371	0.464	0.649	0.881	0.278	0.000	3.247

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2156
TOTAL HOURS OF STABILITY CLASS G	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	70
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2156
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

MEAN WIND SPEED = 9.62

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 10**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR ELEVATED RELEASES**  
**SECOND QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
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	0.048	0.000	0.000	0.000	0.048
SSE	0.000	0.000	0.000	0.000	0.048	0.144	0.000	0.000	0.000	0.192
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	0.048	0.048	0.000	0.096
SW	0.000	0.000	0.000	0.000	0.000	0.144	0.048	0.048	0.000	0.239
WSW	0.000	0.000	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.096
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	0.048	0.383	0.144	0.096	0.000	0.670

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS A	14
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	14
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
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

MEAN WIND SPEED = 11.46

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.048	0.000	0.000	0.048
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	0.048	0.000	0.048	0.000	0.000	0.000	0.096
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	0.096	0.000	0.000	0.000	0.096
S	0.000	0.000	0.000	0.000	0.000	0.192	0.048	0.096	0.000	0.335
SSW	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.000	0.096
SW	0.000	0.000	0.000	0.000	0.000	0.048	0.287	0.000	0.000	0.335
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.048
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	0.048	0.000	0.000	0.000	0.048
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	0.096	0.048	0.431	0.431	0.096	0.000	1.102

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS B	26
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	23
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 12.21

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.192	0.144	0.000	0.000	0.335
NNE	0.000	0.000	0.000	0.000	0.096	0.383	0.000	0.000	0.000	0.479
NE	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.048
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	0.048	0.000	0.000	0.000	0.000	0.048
SE	0.000	0.000	0.000	0.000	0.192	0.096	0.048	0.048	0.000	0.383
SSE	0.000	0.000	0.000	0.048	0.048	0.000	0.048	0.000	0.000	0.144
S	0.000	0.000	0.000	0.000	0.000	0.096	0.144	0.096	0.048	0.383
SSW	0.000	0.000	0.000	0.096	0.096	0.096	0.239	0.000	0.000	0.527
SW	0.000	0.000	0.000	0.048	0.144	0.096	0.287	0.000	0.000	0.575
WSW	0.000	0.000	0.000	0.096	0.000	0.144	0.239	0.192	0.000	0.670
W	0.000	0.000	0.000	0.048	0.096	0.287	0.144	0.144	0.000	0.718
WNW	0.000	0.000	0.000	0.000	0.144	0.144	0.192	0.000	0.000	0.479
NW	0.000	0.000	0.000	0.000	0.048	0.144	0.048	0.000	0.000	0.239
NNW	0.000	0.000	0.000	0.000	0.000	0.192	0.192	0.000	0.000	0.383
SUBTOTAL	0.000	0.000	0.000	0.335	0.910	1.916	1.724	0.479	0.048	5.412

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS C	118
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	113
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 11.85

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.048	0.000	0.000	0.144	1.102	0.383	0.000	0.096	1.772
NNE	0.000	0.000	0.096	0.192	0.383	0.623	0.287	0.000	0.000	1.580
NE	0.000	0.000	0.048	0.144	0.192	0.048	0.096	0.048	0.000	0.575
ENE	0.000	0.000	0.096	0.096	0.000	0.192	0.048	0.000	0.000	0.431
E	0.000	0.000	0.144	0.000	0.096	0.048	0.000	0.000	0.000	0.287
ESE	0.000	0.000	0.096	0.144	0.096	0.383	0.048	0.144	0.000	0.910
SE	0.000	0.000	0.048	0.479	0.192	0.575	0.144	0.144	0.000	1.580
SSE	0.000	0.000	0.383	0.479	0.431	0.862	1.006	0.144	0.144	3.448
S	0.000	0.000	0.287	0.335	0.383	1.341	1.533	1.485	0.096	5.460
SSW	0.000	0.048	0.287	0.383	0.048	1.102	2.059	0.814	0.239	4.981
SW	0.000	0.000	0.144	0.479	0.335	1.485	0.862	0.287	0.048	3.640
WSW	0.000	0.000	0.431	0.431	0.335	0.862	0.575	0.096	0.048	2.778
W	0.000	0.048	0.287	0.335	0.575	0.623	0.862	0.287	0.000	3.017
WNW	0.000	0.000	0.048	0.287	0.431	1.149	1.628	0.527	0.096	4.167
NW	0.000	0.000	0.144	0.287	0.479	0.910	1.964	0.431	0.287	4.502
NNW	0.000	0.000	0.048	0.048	0.239	1.197	0.958	0.096	0.000	2.586
SUBTOTAL	0.000	0.144	2.586	4.119	4.358	12.500	12.452	4.502	1.054	41.715

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2166  
 TOTAL HOURS OF STABILITY CLASS D 909  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 871  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2088  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 11.78

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.048	0.000	0.096	0.766	0.192	0.000	0.000	1.102
NNE	0.000	0.000	0.000	0.000	0.144	0.287	0.144	0.048	0.000	0.623
NE	0.000	0.000	0.096	0.096	0.192	0.383	0.192	0.000	0.000	0.958
ENE	0.000	0.000	0.000	0.048	0.000	0.048	0.000	0.096	0.000	0.192
E	0.000	0.000	0.000	0.000	0.048	0.048	0.192	0.000	0.000	0.287
ESE	0.000	0.000	0.000	0.096	0.096	0.192	0.239	0.048	0.000	0.670
SE	0.000	0.000	0.000	0.000	0.192	1.102	0.862	0.048	0.048	2.251
SSE	0.000	0.000	0.096	0.096	0.287	1.628	1.149	0.431	0.000	3.688
S	0.000	0.000	0.144	0.096	0.144	1.389	1.868	1.916	1.533	7.088
SSW	0.000	0.000	0.144	0.192	0.431	1.149	2.011	1.676	0.287	5.891
SW	0.000	0.000	0.192	0.287	0.383	1.293	0.718	0.144	0.000	3.017
WSW	0.000	0.000	0.144	0.192	0.192	0.431	0.335	0.048	0.000	1.341
W	0.000	0.000	0.000	0.192	0.239	0.479	0.527	0.000	0.000	1.437
WNW	0.000	0.000	0.000	0.048	0.048	0.144	0.144	0.000	0.048	0.431
NW	0.000	0.000	0.000	0.048	0.000	0.192	0.096	0.048	0.048	0.431
NNW	0.000	0.000	0.096	0.144	0.192	0.192	0.287	0.048	0.000	0.958
SUBTOTAL	0.000	0.000	0.958	1.533	2.682	9.722	8.956	4.550	1.964	30.364

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS E	654
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	634
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 13.59

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	0.048	0.144	0.239	0.335	0.000	0.000	0.766
NNE	0.000	0.000	0.048	0.000	0.048	0.479	0.527	0.000	0.000	1.102
NE	0.000	0.000	0.000	0.000	0.096	0.479	0.335	0.000	0.000	0.910
ENE	0.000	0.000	0.000	0.048	0.144	0.192	0.144	0.096	0.000	0.623
E	0.000	0.048	0.048	0.096	0.000	0.144	0.239	0.000	0.000	0.575
ESE	0.000	0.048	0.048	0.144	0.000	0.144	0.335	0.000	0.000	0.718
SE	0.000	0.000	0.144	0.096	0.239	0.718	0.287	0.000	0.000	1.485
SSE	0.000	0.000	0.048	0.144	0.383	1.533	0.575	0.192	0.000	2.874
S	0.000	0.000	0.048	0.000	0.239	0.766	1.437	0.958	0.096	3.544
SSW	0.000	0.000	0.192	0.000	0.192	0.575	1.293	0.144	0.000	2.395
SW	0.000	0.000	0.096	0.000	0.000	0.527	0.239	0.000	0.000	0.862
WSW	0.000	0.000	0.096	0.096	0.239	0.192	0.000	0.000	0.000	0.623
W	0.000	0.048	0.096	0.048	0.096	0.000	0.048	0.000	0.000	0.335
WNW	0.000	0.000	0.048	0.000	0.048	0.000	0.048	0.000	0.000	0.144
NW	0.000	0.000	0.048	0.096	0.192	0.144	0.000	0.000	0.000	0.479
NNW	0.000	0.000	0.000	0.000	0.096	0.096	0.096	0.000	0.000	0.287
SUBTOTAL	0.000	0.144	0.958	0.814	2.155	6.226	5.939	1.389	0.096	17.720

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS F	382
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	370
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 11.38

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

APRIL 1, 2011 - JUNE 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.000	0.000	0.048	0.096	0.000	0.000	0.000	0.144
NNE	0.000	0.000	0.000	0.000	0.000	0.048	0.096	0.000	0.000	0.144
NE	0.000	0.000	0.048	0.000	0.000	0.192	0.383	0.000	0.000	0.623
ENE	0.000	0.000	0.000	0.096	0.000	0.048	0.048	0.000	0.000	0.192
E	0.000	0.000	0.000	0.048	0.192	0.287	0.000	0.000	0.000	0.527
ESE	0.000	0.000	0.000	0.048	0.192	0.000	0.000	0.000	0.000	0.239
SE	0.000	0.000	0.000	0.000	0.000	0.048	0.096	0.000	0.000	0.144
SSE	0.000	0.000	0.000	0.000	0.048	0.000	0.144	0.000	0.000	0.192
S	0.000	0.000	0.000	0.096	0.000	0.000	0.144	0.000	0.000	0.239
SSW	0.000	0.000	0.000	0.096	0.000	0.000	0.096	0.000	0.000	0.192
SW	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.048
WSW	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.000	0.096
W	0.000	0.000	0.048	0.096	0.000	0.000	0.000	0.000	0.000	0.144
WNW	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.048
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	0.048	0.000	0.000	0.000	0.048
SUBTOTAL	0.000	0.000	0.096	0.575	0.575	0.766	1.006	0.000	0.000	3.017

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2166
TOTAL HOURS OF STABILITY CLASS G	63
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	63
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2088
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

MEAN WIND SPEED = 9.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 11**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR ELEVATED RELEASES**  
**THIRD QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

WIND DIRECTION	CALM	WIND SPEED (MPH)								TOTAL
		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	0.397	0.000	0.000	0.397
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	0.099	0.099	0.000	0.000	0.198
SE	0.000	0.000	0.000	0.000	0.198	0.248	0.198	0.000	0.000	0.645
SSE	0.000	0.000	0.000	0.000	0.297	0.496	0.000	0.000	0.000	0.793
S	0.000	0.000	0.000	0.000	0.099	0.198	0.000	0.000	0.000	0.297
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	0.149	0.000	0.000	0.000	0.149
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	0.595	1.190	0.744	0.000	0.000	2.529

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS A	51
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	51
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
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

MEAN WIND SPEED = 10.50

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B (-1.9 < ΔT ≤ -1.7 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.050	0.099	0.149	0.000	0.000	0.297
NNE	0.000	0.000	0.000	0.000	0.050	0.198	0.050	0.000	0.000	0.297
NE	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
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	0.149	0.149	0.050	0.000	0.000	0.347
SE	0.000	0.000	0.000	0.099	0.198	0.297	0.248	0.000	0.000	0.843
SSE	0.000	0.000	0.000	0.149	0.149	0.050	0.000	0.000	0.000	0.347
S	0.000	0.000	0.000	0.000	0.099	0.099	0.000	0.000	0.000	0.198
SSW	0.000	0.000	0.000	0.000	0.000	0.099	0.000	0.000	0.000	0.099
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.050
WSW	0.000	0.000	0.000	0.050	0.149	0.000	0.000	0.000	0.000	0.198
W	0.000	0.000	0.000	0.000	0.000	0.099	0.050	0.000	0.000	0.149
WNW	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.099	0.000	0.000	0.099
NNW	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
SUBTOTAL	0.000	0.000	0.000	0.297	0.843	1.239	0.645	0.050	0.000	3.074

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS B	63
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	62
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 9.21

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.050	0.149	0.248	0.000	0.000	0.446
NNE	0.000	0.000	0.000	0.000	0.000	0.149	0.000	0.000	0.000	0.149
NE	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
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	0.099	0.000	0.000	0.000	0.099
ESE	0.000	0.000	0.000	0.050	0.198	0.248	0.347	0.000	0.000	0.843
SE	0.000	0.000	0.000	0.297	0.149	0.198	0.000	0.000	0.000	0.645
SSE	0.000	0.000	0.149	0.198	0.149	0.099	0.050	0.000	0.000	0.645
S	0.000	0.000	0.099	0.050	0.149	0.050	0.000	0.000	0.000	0.347
SSW	0.000	0.000	0.000	0.050	0.050	0.050	0.000	0.000	0.000	0.149
SW	0.000	0.000	0.000	0.198	0.050	0.099	0.000	0.000	0.000	0.347
WSW	0.000	0.000	0.050	0.149	0.198	0.050	0.000	0.000	0.000	0.446
W	0.000	0.000	0.000	0.000	0.050	0.248	0.000	0.000	0.000	0.297
WNW	0.000	0.000	0.000	0.050	0.050	0.248	0.099	0.000	0.000	0.446
NW	0.000	0.000	0.000	0.000	0.000	0.050	0.099	0.149	0.000	0.297
NNW	0.000	0.000	0.000	0.000	0.000	0.198	0.099	0.099	0.000	0.397
SUBTOTAL	0.000	0.000	0.297	1.041	1.091	1.983	0.942	0.248	0.000	5.602

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS C	113
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	113
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 9.16

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.099	0.149	0.595	1.239	0.545	0.347	0.099	3.074
NNE	0.000	0.000	0.050	0.198	0.297	0.496	0.347	0.099	0.198	1.686
NE	0.000	0.000	0.248	0.198	0.099	0.149	0.248	0.000	0.000	0.942
ENE	0.000	0.000	0.149	0.050	0.149	0.099	0.050	0.000	0.000	0.496
E	0.000	0.000	0.248	0.050	0.050	0.248	0.149	0.050	0.000	0.793
ESE	0.000	0.000	0.050	0.496	0.347	0.595	0.744	0.000	0.000	2.231
SE	0.000	0.050	0.347	0.843	0.446	1.091	1.041	0.843	0.000	4.660
SSE	0.000	0.000	0.645	0.496	0.149	0.496	0.000	0.347	0.000	2.132
S	0.000	0.000	0.793	0.297	0.496	1.140	0.198	0.198	0.099	3.223
SSW	0.000	0.050	0.694	0.892	0.446	0.446	0.248	0.149	0.000	2.925
SW	0.000	0.050	0.694	0.645	0.446	0.645	0.099	0.000	0.000	2.578
WSW	0.000	0.050	0.694	1.140	0.744	0.595	0.000	0.000	0.000	3.223
W	0.000	0.000	0.149	0.992	0.843	2.082	0.099	0.000	0.000	4.165
WNW	0.000	0.000	0.149	0.198	0.744	1.190	0.347	0.000	0.000	2.628
NW	0.000	0.000	0.050	0.397	0.545	0.843	0.198	0.198	0.000	2.231
NNW	0.000	0.000	0.050	0.347	0.198	0.793	1.091	0.744	0.099	3.322
SUBTOTAL	0.000	0.198	5.107	7.387	6.594	12.147	5.404	2.975	0.496	40.307

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS D	845
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	813
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 9.07

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.248	0.050	0.645	0.942	0.050	0.000	1.983
NNE	0.000	0.000	0.099	0.099	0.397	0.297	0.496	0.000	0.000	1.388
NE	0.000	0.000	0.099	0.099	0.347	0.297	0.198	0.000	0.000	1.041
ENE	0.000	0.000	0.000	0.099	0.347	0.397	0.099	0.050	0.000	0.992
E	0.000	0.000	0.099	0.149	0.149	0.099	0.347	0.000	0.000	0.843
ESE	0.000	0.000	0.099	0.297	0.248	0.843	0.496	0.000	0.000	1.983
SE	0.000	0.000	0.149	0.297	0.347	0.992	0.744	0.198	0.000	2.727
SSE	0.000	0.000	0.297	0.347	0.397	0.793	0.248	0.050	0.000	2.132
S	0.000	0.000	0.000	0.248	0.744	0.942	0.248	0.248	0.050	2.479
SSW	0.000	0.000	0.297	0.446	0.446	0.545	0.149	0.050	0.000	1.934
SW	0.000	0.000	0.099	0.496	0.297	0.198	0.099	0.050	0.000	1.239
WSW	0.000	0.050	0.050	0.198	0.198	0.446	0.050	0.000	0.000	0.992
W	0.000	0.000	0.297	0.347	0.347	1.934	0.297	0.050	0.000	3.272
WNW	0.000	0.000	0.000	0.248	0.347	0.694	0.149	0.000	0.000	1.438
NW	0.000	0.000	0.198	0.198	0.397	0.050	0.000	0.000	0.000	0.843
NNW	0.000	0.000	0.149	0.099	0.000	0.297	0.595	0.198	0.000	1.339
SUBTOTAL	0.000	0.050	1.983	3.917	5.057	9.470	5.156	0.942	0.050	26.624

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2091  
 TOTAL HOURS OF STABILITY CLASS E 574  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 537  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2017  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 9.18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	0.149	0.297	0.992	0.694	0.000	2.231
NNE	0.000	0.000	0.050	0.099	0.297	0.397	0.892	0.050	0.000	1.785
NE	0.000	0.000	0.000	0.000	0.149	0.545	0.248	0.000	0.000	0.942
ENE	0.000	0.000	0.099	0.347	0.149	0.595	0.248	0.050	0.000	1.487
E	0.000	0.050	0.099	0.000	0.050	0.496	0.050	0.000	0.000	0.744
ESE	0.000	0.000	0.000	0.297	0.149	0.496	0.099	0.000	0.000	1.041
SE	0.000	0.000	0.099	0.297	0.198	0.793	0.099	0.000	0.000	1.487
SSE	0.000	0.000	0.149	0.248	0.248	1.140	0.149	0.000	0.000	1.934
S	0.000	0.000	0.149	0.149	0.050	0.050	0.050	0.000	0.000	0.446
SSW	0.000	0.000	0.099	0.347	0.198	0.000	0.000	0.000	0.000	0.645
SW	0.000	0.000	0.149	0.248	0.149	0.099	0.000	0.000	0.000	0.645
WSW	0.000	0.000	0.050	0.050	0.149	0.347	0.000	0.000	0.000	0.595
W	0.000	0.000	0.149	0.099	0.050	0.198	0.050	0.000	0.000	0.545
WNW	0.000	0.000	0.099	0.198	0.050	0.099	0.000	0.000	0.000	0.446
NW	0.000	0.000	0.000	0.198	0.099	0.050	0.000	0.000	0.000	0.347
NNW	0.000	0.000	0.099	0.149	0.149	0.149	0.397	0.050	0.000	0.992
SUBTOTAL	0.000	0.050	1.339	2.776	2.281	5.751	3.272	0.843	0.000	16.311

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS F	333
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	329
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 9.46

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

JULY 1, 2011 - SEPTEMBER 30, 2011

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	$\geq 24.5$	
N	0.000	0.000	0.099	0.050	0.000	0.000	0.000	0.000	0.000	0.149
NNE	0.000	0.000	0.050	0.099	0.050	0.050	0.000	0.050	0.000	0.297
NE	0.000	0.000	0.099	0.050	0.000	0.198	0.248	0.000	0.000	0.595
ENE	0.000	0.000	0.050	0.050	0.000	0.397	0.248	0.000	0.000	0.744
E	0.000	0.000	0.000	0.050	0.198	0.050	0.050	0.000	0.000	0.347
ESE	0.000	0.000	0.000	0.248	0.099	0.099	0.000	0.000	0.000	0.446
SE	0.000	0.000	0.248	0.000	0.248	0.099	0.000	0.000	0.000	0.595
SSE	0.000	0.000	0.050	0.149	0.198	0.099	0.000	0.000	0.000	0.496
S	0.000	0.050	0.000	0.000	0.248	0.198	0.000	0.000	0.000	0.496
SSW	0.000	0.050	0.149	0.050	0.050	0.000	0.000	0.000	0.000	0.297
SW	0.000	0.000	0.050	0.297	0.099	0.000	0.000	0.000	0.000	0.446
WSW	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.000	0.000	0.099
W	0.000	0.000	0.000	0.050	0.099	0.099	0.000	0.000	0.000	0.248
WNW	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
NW	0.000	0.000	0.050	0.000	0.050	0.050	0.000	0.000	0.000	0.149
NNW	0.000	0.050	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.099
SUBTOTAL	0.000	0.198	0.843	1.140	1.438	1.339	0.545	0.050	0.000	5.553

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2091
TOTAL HOURS OF STABILITY CLASS G	112
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	112
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2017
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

MEAN WIND SPEED = 6.87

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**BROWNS FERRY NUCLEAR PLANT**  
**2011 METEOROLOGICAL DATA TABLE 12**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR ELEVATED RELEASES**  
**FOURTH QUARTER**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS A ( $\Delta T \leq -1.9$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
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	0.046	0.091	0.091	0.000	0.000	0.228
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.228	0.046	0.000	0.273
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	0.046	0.000	0.000	0.000	0.046
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.046	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	0.046	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	0.046	0.137	0.365	0.091	0.000	0.638

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2194
TOTAL HOURS OF STABILITY CLASS A	14
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	14
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2194
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

MEAN WIND SPEED = 14.64

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS B ( $-1.9 < \Delta T \leq -1.7$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.091	0.137	0.000	0.000	0.228
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	0.046	0.000	0.000	0.000	0.046
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	0.046	0.046	0.046	0.000	0.137
SE	0.000	0.000	0.000	0.000	0.046	0.137	0.273	0.000	0.000	0.456
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.091
S	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
SSW	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.046	0.000	0.137
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	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	0.137	0.000	0.000	0.137
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	0.182	0.000	0.000	0.182
SUBTOTAL	0.000	0.000	0.000	0.000	0.046	0.365	0.957	0.137	0.000	1.504

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2194
TOTAL HOURS OF STABILITY CLASS B	33
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	33
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2194
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

MEAN WIND SPEED = 14.36

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS C (-1.7 < ΔT ≤ -1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.137	0.319	0.000	0.000	0.456
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.046
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	0.091	0.365	0.137	0.091	0.000	0.684
SE	0.000	0.000	0.000	0.000	0.137	0.137	0.091	0.000	0.000	0.365
SSE	0.000	0.000	0.000	0.000	0.000	0.046	0.137	0.091	0.000	0.273
S	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
SSW	0.000	0.000	0.000	0.000	0.000	0.091	0.091	0.000	0.000	0.182
SW	0.000	0.000	0.000	0.000	0.000	0.182	0.000	0.000	0.000	0.182
WSW	0.000	0.000	0.000	0.000	0.182	0.091	0.046	0.000	0.000	0.319
W	0.000	0.000	0.000	0.000	0.046	0.000	0.137	0.000	0.000	0.182
WNW	0.000	0.000	0.000	0.000	0.000	0.046	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	0.000	0.000	0.091	0.000	0.000	0.000	0.091
SUBTOTAL	0.000	0.000	0.000	0.000	0.456	1.231	0.957	0.228	0.000	2.871

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2194
TOTAL HOURS OF STABILITY CLASS C	63
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	63
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2194
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 12.15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS D (-1.5 < ΔT ≤ -0.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.273	1.048	1.823	0.410	0.000	3.555
NNE	0.000	0.046	0.046	0.000	0.182	1.139	0.866	0.091	0.000	2.370
NE	0.000	0.000	0.046	0.273	0.091	0.547	0.273	0.000	0.000	1.231
ENE	0.000	0.000	0.046	0.000	0.182	0.091	0.000	0.000	0.000	0.319
E	0.000	0.000	0.091	0.091	0.137	0.091	0.000	0.000	0.000	0.410
ESE	0.000	0.000	0.182	0.866	0.273	0.775	0.638	0.137	0.000	2.871
SE	0.000	0.000	0.137	0.456	0.319	0.684	0.775	0.684	0.365	3.418
SSE	0.000	0.046	0.046	0.319	0.228	0.273	0.319	0.365	0.365	1.960
S	0.000	0.000	0.137	0.137	0.091	0.410	0.410	0.273	0.137	1.595
SSW	0.000	0.000	0.046	0.000	0.091	0.410	0.820	0.182	0.228	1.778
SW	0.000	0.000	0.228	0.228	0.000	0.638	0.319	0.137	0.000	1.550
WSW	0.000	0.000	0.000	0.137	0.091	0.410	0.501	0.091	0.000	1.231
W	0.000	0.000	0.182	0.273	0.182	0.775	1.413	1.003	0.182	4.011
WNW	0.000	0.000	0.137	0.547	0.410	1.367	0.547	0.957	0.182	4.148
NW	0.000	0.046	0.000	0.273	0.319	0.638	1.732	1.139	0.000	4.148
NNW	0.000	0.000	0.091	0.091	0.273	2.005	1.048	0.228	0.000	3.737
SUBTOTAL	0.000	0.137	1.413	3.692	3.145	11.304	11.486	5.697	1.459	38.332

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2194  
 TOTAL HOURS OF STABILITY CLASS D 841  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 841  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2194  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 12.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS E (-0.5 < ΔT ≤ 1.5 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.091	0.137	0.365	0.319	0.046	0.000	1.003
NNE	0.000	0.000	0.046	0.000	0.046	0.410	0.228	0.182	0.000	0.912
NE	0.000	0.046	0.091	0.091	0.091	0.501	0.273	0.000	0.000	1.094
ENE	0.000	0.046	0.046	0.091	0.137	0.137	0.046	0.000	0.000	0.501
E	0.000	0.000	0.137	0.091	0.137	0.319	0.319	0.000	0.000	1.003
ESE	0.000	0.000	0.000	0.137	0.137	0.456	1.139	0.228	0.046	2.142
SE	0.000	0.000	0.046	0.046	0.273	0.593	1.185	0.866	0.456	3.464
SSE	0.000	0.000	0.000	0.046	0.182	0.820	1.367	0.912	1.459	4.786
S	0.000	0.000	0.273	0.046	0.182	1.413	2.644	1.459	0.365	6.381
SSW	0.000	0.000	0.046	0.000	0.000	0.729	1.459	0.638	0.091	2.963
SW	0.000	0.000	0.000	0.000	0.137	0.593	0.365	0.000	0.000	1.094
WSW	0.000	0.000	0.000	0.046	0.000	0.273	0.365	0.000	0.000	0.684
W	0.000	0.000	0.046	0.182	0.137	0.820	0.273	0.046	0.000	1.504
WNW	0.000	0.000	0.000	0.000	0.273	0.638	0.501	0.000	0.000	1.413
NW	0.000	0.046	0.000	0.091	0.182	0.410	0.501	0.137	0.000	1.367
NNW	0.000	0.000	0.046	0.000	0.000	0.501	0.912	0.046	0.000	1.504
SUBTOTAL	0.000	0.137	0.820	0.957	2.051	8.979	11.896	4.558	2.416	31.814

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2194  
 TOTAL HOURS OF STABILITY CLASS E 698  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 698  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2194  
 TOTAL HOURS CALM 0

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

MEAN WIND SPEED = 14.23

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS F (1.5 < ΔT ≤ 4.0 C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	0.182	0.501	0.091	0.000	0.775
NNE	0.000	0.000	0.000	0.000	0.000	0.182	0.729	0.091	0.000	1.003
NE	0.000	0.000	0.046	0.000	0.091	0.273	0.273	0.046	0.000	0.729
ENE	0.000	0.046	0.000	0.046	0.046	0.273	0.182	0.000	0.000	0.593
E	0.000	0.046	0.137	0.137	0.046	0.319	0.365	0.091	0.000	1.139
ESE	0.000	0.000	0.046	0.046	0.000	0.365	0.866	0.228	0.000	1.550
SE	0.000	0.000	0.137	0.182	0.046	0.638	1.048	0.182	0.091	2.325
SSE	0.000	0.000	0.046	0.046	0.046	0.410	1.641	0.729	0.000	2.917
S	0.000	0.000	0.000	0.000	0.000	0.365	1.185	0.182	0.000	1.732
SSW	0.000	0.000	0.000	0.091	0.046	0.365	0.638	0.228	0.000	1.367
SW	0.000	0.000	0.091	0.000	0.182	0.319	0.046	0.000	0.000	0.638
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.091
W	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.182	0.273	0.046	0.000	0.000	0.000	0.501
NW	0.000	0.000	0.000	0.182	0.091	0.273	0.091	0.000	0.000	0.638
NNW	0.000	0.046	0.046	0.000	0.000	0.182	0.182	0.000	0.000	0.456
SUBTOTAL	0.000	0.137	0.547	0.957	0.866	4.193	7.840	1.869	0.091	16.500

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2194
TOTAL HOURS OF STABILITY CLASS F	362
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	362
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2194
TOTAL HOURS CALM	0

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

MEAN WIND SPEED = 13.03

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

STABILITY CLASS G ( $\Delta T > 4.0$  C/100 M)

BROWNS FERRY NUCLEAR PLANT

OCTOBER 1, 2011 - DECEMBER 31, 2011

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	$\geq 24.5$	
N	0.000	0.046	0.000	0.000	0.046	0.228	0.456	0.137	0.000	0.912
NNE	0.000	0.000	0.046	0.000	0.000	0.046	0.182	0.000	0.000	0.273
NE	0.000	0.000	0.000	0.046	0.000	0.273	0.137	0.046	0.000	0.501
ENE	0.000	0.046	0.365	0.046	0.046	0.182	0.000	0.000	0.000	0.684
E	0.000	0.000	0.137	0.091	0.273	0.182	0.046	0.000	0.000	0.729
ESE	0.000	0.091	0.228	0.228	0.228	0.091	0.091	0.000	0.000	0.957
SE	0.000	0.000	0.046	0.228	0.228	0.228	0.182	0.000	0.000	0.912
SSE	0.000	0.000	0.137	0.137	0.319	0.137	0.228	0.046	0.000	1.003
S	0.000	0.000	0.137	0.091	0.046	0.091	0.182	0.000	0.000	0.547
SSW	0.000	0.046	0.091	0.091	0.000	0.137	0.137	0.046	0.000	0.547
SW	0.000	0.000	0.046	0.091	0.182	0.000	0.000	0.000	0.000	0.319
WSW	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.182
W	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.137
NW	0.000	0.000	0.046	0.046	0.046	0.137	0.000	0.000	0.000	0.273
NNW	0.000	0.000	0.091	0.046	0.000	0.137	0.000	0.046	0.000	0.319
SUBTOTAL	0.000	0.319	1.459	1.231	1.459	1.914	1.641	0.319	0.000	8.341

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2194
TOTAL HOURS OF STABILITY CLASS G	183
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	183
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2194
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

MEAN WIND SPEED = 8.28

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**Enclosure 3**

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

**2011 Effluent and Waste Disposal Annual Report**

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**(See attached)**

## 2011 Effluent and Waste Disposal Annual Report

### I. 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 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  $\leq 5$  millirad (mrad) for gamma radiation and  $\leq 10$  mrad for beta radiation; and during any calendar year to  $\leq 10$  mrad for gamma radiation and  $\leq 20$  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  $\leq 7.5$  millirem (mrem), and during any calendar year to  $\leq 15$  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  $\leq 1.5$  mrem to the total body and  $\leq 5$  mrem to any organ and during any calendar year to  $\leq 3$  mrem to the total body and  $\leq 10$  mrem to any organ.

### II. Limitation on Dose Rate

#### A. Fission and Activation Gases in Gaseous Effluents:

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  $\leq 500$  mrem per year to the total body and  $\leq 3000$  mrem per year to the skin.
2. The BFN ODCM Section 7.2 determines the maximum noble gas release rate.

## 2011 Effluent and Waste Disposal Annual Report

### II. Limitations 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  $\leq 1500$  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  $2E-4$   $\mu\text{Ci}$  per milliliter (ml) total activity.

### III. 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.



## 2011 Effluent and Waste Disposal Annual Report

### III. Measurements and Approximations of Total Radioactivity (continued)

#### 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.
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.

**2011 Effluent and Waste Disposal Annual Report  
Supplemental Information**

**IV. Batch**

A. Liquid	<u>Units</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
1. Number of batches released	Each	7	11	-	-
2. Total time for batches released	Minutes	1451	2519	-	-
3. Maximum time period for a batch release	Minutes	240	276	-	-
4. Average time period for a batch release	Minutes	207	229	-	-
5. Minimum time period for a batch release	Minutes	100	15	-	-
6. Average BFN beach flow during period of release into the river stream	ft <sup>3</sup> /sec	66423	49084	-	-

B. Gaseous

None

C. Abnormal/Unplanned Releases\*

Number of Releases: 2

Type: One Liquid/One Gas

Total Activity Released (Curies)

<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	6.44E-02	-	-	-
	F-18	5.80E-04	-	-	-
Air	Ba-139	-	9.01E-08	-	-
	Cs-138	-	5.03E-07	-	-
	Kr-85m	-	2.66E-03	-	-
	Ar-41	-	8.26E-03	-	-
	H-3	-	5.54E-04	-	-
	Sr-89	-	6.08E-08	-	-

\* - An explanation of any liquid or gaseous abnormal/unexplained releases shall be documented in the summary.

**2011 Effluent and Waste Disposal Annual Report**  
**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>
<b>A. Fission and Activation Products</b> (Does not include tritium, gases, Alpha)						
1. Total Release	Curies	1.32E-02**	1.50E-03	-	-	9
2. Average Diluted Concentration Released During Period	µCi/ml	1.73E-09**	2.03E-10	-	-	
3. Percent of Applicable Limit	%	***	***	-	-	
<b>B. Tritium</b>						
1. Total Releases	Curies	1.70E+00**	3.51E+00	-	-	6
2. Average Diluted Concentration Released During Period	µCi/ml	2.23E-07**	4.73E-07	-	-	
3. Percent of Applicable Limit	%	***	***	-	-	
<b>C. Dissolved and Entrained Noble Gases</b>						
1. Total Releases	Curies	2.15E-04	1.79E-05	-	-	8
2. Average Diluted Concentration Released During Period	µCi/ml	2.82E-11	2.41E-12	-	-	
3. Percent of Applicable Limit	%	***	***	-	-	
<b>D. Gross Alpha Radioactivity</b>						
1. Total Releases	Curies	*	*	-	-	48
2. Average Diluted Concentration Released During Period	µCi/ml	*	*	-	-	
<b>E. Volume of Liquid Waste to Discharge Canal (Prior to dilution)</b>						
	Liters	5.95E+05	1.38E+06	-	-	3
<b>F. Volume of Dilution Water for Period</b>						
	Liters	7.62E+09	7.42E+09	-	-	10
<b>G. Total CCW</b>						
	Gigagal	2.24E+02	1.99E+02	-	-	

\* - Not Detected. Dilution flow was not determined for the abnormal release.

\*\* - Includes activity from abnormal releases.

\*\*\* - The applicable limit is expressed in terms of dose. See Enclosure 1.

**2011 Effluent and Waste Disposal Annual Report  
Liquid Releases - Batch Mode**

<u>CURIES</u> <u>Isotope</u> <u>(Required by Regulatory</u> <u>(REG) Guide 1.21)</u>		<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1.	Ba-140	7.59E-05	4.94E-06	-	-
2.	Ce-141	*	*	-	-
3.	Co-58	3.90E-04	1.71E-05	-	-
4.	Co-60	5.77E-03	5.14E-04	-	-
5.	Cr-51	*	*	-	-
6.	Cs-134	1.70E-04	2.65E-05	-	-
7.	Cs-137	2.95E-03	8.44E-04	-	-
8.	Fe-59	*	*	-	-
9.	I-131	4.58E-05	3.37E-06	-	-
10.	La-140	8.18E-05	3.56E-06	-	-
11.	Mn-54	5.65E-04	3.87E-05	-	-
12.	Mo-99	8.40E-05	2.85E-06	-	-
13.	Nb-95	*	*	-	-
14.	Sr-89	1.13E-03	*	-	-
15.	Sr-90	1.43E-05	*	-	-
16.	Tc-99m	8.20E-05	2.78E-06	-	-
17.	Xe-133	1.31E-04	*	-	-
18.	Xe-135	8.37E-05	6.97E-06	-	-
19.	Zn-65	1.78E-04	1.29E-05	-	-
20.	Zr-95	*	*	-	-

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\* - Not Detected.

**2011 Effluent and Waste Disposal Annual Report  
Liquid Releases - Batch Mode**

<u>CURIES</u>					
<u>Isotope</u>					
<u>Others (Not Required by REG</u>					
<u>Guide 1.21)</u>		<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1.	F-18	6.37E-04*	5.24E-06	-	-
2.	Fe-55	1.08E-04	**	-	-
3.	Mn-56	**	**	-	-
4.	Zn-69m	8.95E-07	**	-	-
5.	Kr-88	**	**	-	-
6.	Nb-97	**	**	-	-
7.	Ag-110m	4.93E-04	1.82E-05	-	-
8.	Sb-124	5.57E-05	2.98E-06	-	-
9.	I-133	**	**	-	-
10.	As-76	2.60E-05	**	-	-
11.	Na-24	3.02E-04	**	-	-
12.	Y-91m	1.70E-05	**	-	-
13.	Xe-133m	**	1.09E-05	-	-

\* - Activity from abnormal release.  
\*\* - Not Detected.

**2011 Effluent and Waste Disposal Annual Report  
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>
<b>A. Fission and Activation Gases</b>						
1. Total Releases	Curies	**	1.09E-02*	**	**	45
2. Average Release Rate for Period	μCi/sec	**	6.65E-03*	**	**	
3. Percent of Applicable Limit	%	****	****	****	****	
<b>B. Iodines</b>						
1. Total Iodine-131	Curies	3.32E-03	3.25E-04	2.68E-03	2.03E-03	36
2. Average Release Rate for Period	μCi/sec	4.27E-04	4.13E-04	3.38E-04	2.55E-04	
3. Percent of Applicable Limit	%	****	****	****	****	
<b>C. Particulates</b>						
1. Particulates with half-lives > eight days	Curies	1.82E-03	1.39E-03*	1.81E-03	9.58E-04	35
2. Average Release Rate for Period	μCi/sec	2.34E-04	1.77E-04*	2.28E-04	1.21E-04	
3. Percent of Applicable Limit	%	****	****	****	****	
4. Gross Alpha Radioactivity	Curies	**	**	**	**	
<b>D. Tritium</b>						
1. Total Release	Curies	2.58E+01	1.56E+01*	2.57E+01	3.03E+01	21
2. Average Release Rate for Period	μCi/sec	3.32E+00	1.99E+00*	3.23E+00	3.81E+00	
3. Percent of Applicable Limit	%	****	****	****	****	
<b>E. Carbon-14***</b>						
1. Total Release	Curies	8.45E+00	6.32E+00	9.81E+00	9.95E+00	
2. Total as CO <sub>2</sub>	Curies	8.03E+00	6.01E+00	9.32E+00	9.45E+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.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Elevated Release**

<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 (specify)	*	*	*	*
<u>Total for Period</u>	<u>*</u>	<u>*</u>	<u>*</u>	<u>*</u>
2. Iodines				
I-131	5.51E-04	7.86E-04	6.36E-04	7.28E-04
I-133	1.11E-03	1.13E-03	1.39E-03	1.43E-03
<u>Total for Period</u>	<u>1.66E-03</u>	<u>1.92E-03</u>	<u>2.03E-03</u>	<u>2.16E-03</u>

\* - Not Detected.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Elevated Release**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates*				
Sr-89	1.40E-04	1.28E-04	1.99E-04	1.82E-04
Sr-90	**	**	**	**
Sr-91	8.25E-04	3.43E-04	2.61E-03	4.09E-03
Cs-134	**	**	**	**
Cs-137	**	**	**	**
Ba-140	8.15E-05	7.23E-05	1.87E-04	3.34E-04
La-140	4.91E-05	4.53E-05	1.24E-04	2.21E-04
Others (Au-199)	**	**	3.15E-06	2.76E-06
Others (Zn-69m)	**	**	**	7.06E-06
RB-89	**	**	5.85E-02	**
Y-91m	8.92E-04	6.23E-04	1.73E-03	2.55E-03
Cs-138	1.10E-01	1.64E-02	2.85E-02	1.86E-02
Ba-139	6.54E-02	6.62E-02	1.86E-01	2.82E-01
<u>Total for Period*</u>	<u>1.78E-01</u>	<u>8.38E-02</u>	<u>2.78E-01</u>	<u>3.08E-01</u>
4. Tritium	1.43E+00	4.12E+00	5.38E+00	3.60E+00
5. Carbon-14***	8.45E+00	6.32E+00	9.81E+00	9.95E+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.



**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Ground Release**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
1. Fission Gases				
Kr-85m	*	2.66E-03**	*	*
Kr-85	*	*	*	*
Kr-87	*	*	*	*
Kr-88	*	*	*	*
Xe-133	*	*	*	*
Xe-135m	*	*	*	*
Xe-135	*	*	*	*
Xe-138	*	*	*	*
Ar-41	*	8.26E-03**	*	*
Other (specify)	*	*	*	*
<u>Total for Period</u>	<u>*</u>	<u>*</u>	<u>*</u>	<u>*</u>
2. Iodines				
I-131	4.29E-04	2.46E-04	5.39E-04	5.93E-04
I-133	1.73E-03	1.17E-03	1.88E-03	2.49E-03
<u>Total for Period</u>	<u>2.16E-03</u>	<u>1.41E-03</u>	<u>2.42E-03</u>	<u>3.08E-03</u>

\* - Not Detected.

\*\* - Activity from Abnormal Release.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Ground Release**

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates*				
Co-60	**	**	**	**
Sr-89	4.95E-05	3.32E-05***	4.48E-05	5.05E-05
Sr-90	**	**	**	**
Cs-134	**	**	**	**
Cs-137	**	**	**	**
Ba-140	3.99E-05	1.59E-05	4.37E-05	8.45E-05
La-140	7.23E-06	**	1.14E-05	2.67E-05
Other (Sr-91)	**	9.66E-05	1.68E-04	4.64E-04
Other (Rb-89)	**	**	3.94E-03	**
Other (Au-199)	**	**	**	2.23E-06
Y-91m	1.44E-03	6.12E-04	8.84E-04	1.57E-03
Cs-138	1.80E-02	9.95E-03***	1.96E-02	8.26E-02
Ba-139	4.06E-02	2.60E-02***	4.05E-02	8.49E-02
<u>Total for Period*</u>	<u>6.01E-02</u>	<u>3.67E-02</u>	<u>6.52E-02</u>	<u>1.70E-01</u>
4. Tritium	<u>5.13E+00</u>	<u>1.47E+00***</u>	<u>3.43E+00</u>	<u>7.41E+00</u>

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\* - Include all nuclides even those with less than an eight day half-life.  
 \*\* - Not Detected.  
 \*\*\* - Includes Activity from Abnormal Release.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Mixed Mode Release\***

<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	2.34E-03	2.21E-03	1.51E-03	7.03E-04
I-132	3.52E-03	**	**	**
I-133	1.19E-02	1.12E-02	6.58E-03	2.95E-03
I-135	9.97E-04	1.75E-03	**	**
<u>Total for Period</u>	<u>1.88E-02</u>	<u>1.52E-02</u>	<u>8.09E-03</u>	<u>3.65E-03</u>

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

\*\* - Not Detected.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Mixed Mode Release\***

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates**				
Sr-89	6.73E-05	7.19E-05	3.19E-04	3.84E-05
Ce-141	6.25E-06	5.70E-06	***	***
Y-92	2.99E-03	***	***	***
Cs-137	***	1.91E-06	***	2.92E-06
Ba-140	8.82E-04	5.53E-04	2.55E-04	1.05E-04
La-140	6.57E-04	2.76E-04	1.14E-04	2.43E-05
Na-24	2.48E-05	***	***	***
Cr-51	2.22E-04	***	2.31E-05	***
Mn-54	2.60E-05	1.07E-05	3.91E-06	1.47E-05
Mn-56	4.90E-03	5.38E-03	5.82E-03	1.30E-02
Co-58	7.66E-05	2.65E-05	2.71E-05	5.45E-05
Co-60	1.98E-04	4.45E-04	7.09E-04	8.40E-05
Zn-65	2.61E-05	2.36E-05	***	6.09E-06
Zn-69m	5.35E-05	5.27E-05	2.71E-05	9.10E-05
Y-91m	1.29E-02	7.96E-03	3.90E-03	1.51E-03
Sr-91	1.91E-02	8.52E-03	2.14E-03	1.65E-04
Sr-92	8.62E-03	1.52E-03	***	***

\* - 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.

**2011 Effluent and Waste Disposal Annual Report  
Gaseous Effluents - Mixed Mode Release\***

<u>CURIES</u>	<u>Quarter 1</u>	<u>Quarter 2</u>	<u>Quarter 3</u>	<u>Quarter 4</u>
3. Particulates** (Continued)				
Mo-99	2.19E-06	6.86E-06	***	3.30E-06
Tc-99m	2.14E-06	6.69E-06	***	3.22E-06
Cs-138	***	3.46E-02	2.81E-02	1.34E-02
Ba-139	3.18E-01	2.00E-01	1.55E-01	6.30E-02
Total for Period**	<u>3.69E-01</u>	<u>2.59E-01</u>	<u>1.96E-01</u>	<u>9.15E-02</u>
4. Tritium	<u>1.92E+01</u>	<u>1.00E+01</u>	<u>1.69E+01</u>	<u>1.93E+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.

## 2011 Effluent and Waste Disposal Annual Report

### Solid Radioactive Waste Shipped for Processing or Disposal

Resins, Filters, and Evaporator Bottoms	Volume		Curies Shipped
	ft <sup>3</sup>	m <sup>3</sup>	Curies
<b>A</b>	3.93E+3	1.11E+02	1.79E+02
<b>B</b>	0.00E+00	0.00E+00	0.00E+00
<b>C</b>	0.00E+00	0.00E+00	0.00E+00
<b>ALL</b>	3.93E+03	1.11E+02	1.79E+02

### Major Nuclides for the Above Table:

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	Co-60	4.91E+01	8.80E+01
2)	H-3	9.99E-04	1.79E-03
3)	Fe-55	1.59E+01	2.84E+01
4)	Mn-54	5.25E+00	9.41E+00
5)	Zn-65	2.62E+00	4.70E+00
6)	Ni-63	1.85E+00	3.31E+00
7)	Na-24	4.45E-07	7.98E-07
8)	Ag-110m	1.60E+00	2.86E+00
9)	Co-58	2.21E+00	3.96E+00
10)	Cr-51	4.67E-01	8.37E-01
11)	Ce-144	1.62E-01	2.90E-01
12)	Co-57	3.97E-04	7.11E-04
13)	C-14	9.82E-02	1.76E-01
14)	Sr-92	6.92E-19	1.24E-18
15)	Fe-59	5.07E-02	9.09E-02
16)	Sr-90	3.15E-02	5.65E-02
17)	Zr-97	1.70E-07	3.05E-07
18)	I-133	4.03E-09	7.22E-09
19)	I-131	4.98E-01	8.92E-01
20)	Cs-138	1.19E-61	2.14E-61
21)	Cs-137	1.79E+01	3.20E+01
22)	Cs-134	1.23E+00	2.21E+00
23)	La-141	2.14E-13	3.84E-13
24)	La-140	4.08E-04	7.31E-04
25)	Ce-141	2.74E-01	4.91E-01
26)	Ba-140	7.20E-01	1.29E+00
27)	Sb-125	4.02E-04	7.20E-04
28)	Sb-124	2.40E-02	4.30E-02
29)	Mo-99	1.11E-04	1.98E-04
30)	Zr-95	9.94E-03	1.78E-02
31)	Tc-99	3.07E-02	5.50E-02
32)	Pu-241	2.70E-02	4.83E-02
33)	Sr-89	1.50E-03	2.68E-03

## 2011 Effluent and Waste Disposal Annual Report

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
34)	Tc-99m	9.43E-11	1.69E-10
35)	Am-241	3.24E-04	5.81E-04
36)	Cm-242	1.09E-05	1.96E-05
37)	Cm-243	2.25E-04	4.03E-04
38)	Cm-244	2.68E-05	4.81E-05
39)	Pu-239	9.60E-06	1.72E-05
40)	Pu-240	9.60E-06	1.72E-05
41)	Pu-238	2.95E-05	5.28E-05
42)	Cu-64	7.42E-14	1.33E-13
43)	Zn-69m	1.63E-12	2.92E-12

### Solid Radioactive Waste Shipped for Processing or Disposal

Dry Active Waste	Volume		Curies Shipped
	ft <sup>3</sup>	m <sup>3</sup>	
<b>Waste Class</b>			<b>Curies</b>
<b>A</b>	5.29E+04	1.50E+03	4.51E-01
<b>B</b>	0.00E+00	0.00E+00	0.00E+00
<b>C</b>	0.00E+00	0.00E+00	0.00E+00
<b>ALL</b>	5.29E+04	1.50E+03	4.51E-01

### Major Nuclides for the Above Table:

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	Co-60	6.52E+01	2.94E-01
2)	Ag-110m	4.13E+00	1.86E-02
3)	Fe-55	1.20E+01	5.43E-02
4)	Zn-65	1.97E+00	8.86E-03
5)	Cs-137	1.17E+01	5.27E-02
6)	Mn-54	4.13E+00	1.86E-02
7)	Ni-63	7.57E-01	3.41E-03
			2.10E-
8)	H-3	4.66E-02	
9)	Sr-89	0.00E+00	0.00E+00
10)	Sr-90	1.08E-02	4.87E-05
11)	Cs-134	0.00E+00	0.00E+00
12)	Co-58	0.00E+00	0.00E+00

## 2011 Effluent and Waste Disposal Annual Report

### Solid Radioactive Waste Shipped for Processing or Disposal

Irradiated Components	Volume		Curies Shipped
	ft <sup>3</sup>	m <sup>3</sup>	Curies
A	0.00E+00	0.00E+00	0.00E+00
B	0.00E+00	0.00E+00	0.00E+00
C	0.00E+00	0.00E+00	0.00E+00
ALL	0.00E+00	0.00E+00	0.00E+00

Major Nuclides for the Above Table: N/A

### Solid Radioactive Waste Shipped for Processing or Disposal

Other Waste (Combined Packages)	Volume		Curies Shipped
	ft <sup>3</sup>	m <sup>3</sup>	Curies
A	4.64E+03	1.31E+02	1.81E+00
B	0.00E+00	0.00E+00	0.00E+00
C	0.00E+00	0.00E+00	0.00E+00
ALL	4.64E+03	1.31E+02	1.81E+00

Major Nuclides for the Above Table:

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	Co-60	5.64E+01	1.02E+00
2)	Cs-137	1.62E+01	2.93E-01
3)	Ag-110m	1.37E+00	2.48E-02
4)	Fe-55	1.62E+01	2.92E-01
5)	Zn-65	2.16E+00	3.90E-02
6)	Mn-54	3.88E+00	7.02E-02
7)	Ni-63	1.51E+00	2.72E-02
8)	Cs-134	1.31E+00	2.37E-02
9)	Co-58	5.75E-01	1.04E-02
10)	H-3	1.24E-02	2.24E-04
11)	Pu-241	2.45E-02	4.42E-04
12)	Ce-144	1.47E-01	2.66E-03
13)	C-14	7.03E-02	1.27E-03
14)	Co-57	1.81E-03	3.28E-05
15)	Sr-89	9.85E-02	1.78E-03
16)	Sr-90	2.69E-02	4.86E-04
17)	Tc-99	1.60E-04	2.89E-06
18)	Pu-238	2.81E-06	5.07E-08



## 2011 Effluent and Waste Disposal Annual Report

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
19)	Am-241	2.55E-04	4.61E-06
20)	Cm-242	4.84E-06	8.75E-08
21)	Cm-243	1.86E-04	3.37E-06

### Solid Radioactive Waste Shipped for Processing or Disposal

<b>Sum of All Low-Level Waste Shipped from Site</b>	<b>Volume</b>		<b>Curies Shipped</b>
	<b>ft<sup>3</sup></b>	<b>m<sup>3</sup></b>	<b>Curies</b>
<b>A</b>	6.15E+04	1.74E+03	1.81E+02
<b>B</b>	0.00E+00	0.00E+00	0.00E+00
<b>C</b>	0.00E+00	0.00E+00	0.00E+00
<b>ALL</b>	6.15E+04	1.74E+03	1.81E+02

### Major Nuclides for the Above Table:

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
1)	Co-60	4.92E+01	8.93E+01
2)	Cs-137	1.78E+01	3.23E+01
3)	Fe-55	1.59E+01	2.88E+01
4)	Mn-54	5.24E+00	9.50E+00
5)	Zn-65	2.62E+00	4.75E+00
6)	Ni-63	1.84E+00	3.34E+00
7)	Cs-134	1.23E+00	2.23E+00
8)	Ag-110m	1.60E+00	2.90E+00
9)	Co-58	2.19E+00	3.98E+00
10)	Cr-51	4.61E-01	8.37E-01
11)	Ce-144	1.61E-01	2.92E-01
12)	I-131	4.92E-01	8.92E-01
13)	C-14	9.76E-02	1.77E-01
14)	Ba-140	7.11E-01	1.29E+00
15)	Fe-59	5.01E-02	9.09E-02
16)	Sr-90	3.15E-02	5.71E-02
17)	Na-24	4.40E-07	7.98E-07
18)	Sb-124	2.37E-02	4.30E-02
19)	Ce-141	2.71E-01	4.91E-01
20)	La-141	2.12E-13	3.84E-13
21)	Sb-125	3.97E-04	7.20E-04
22)	Cs-138	1.18E-61	2.14E-61
23)	Tc-99m	9.32E-11	1.69E-10
24)	Mo-99	1.09E-04	1.98E-04
25)	Zr-97	1.68E-07	3.05E-07
26)	Zr-95	9.81E-03	1.78E-02
27)	Pu-241	2.68E-02	4.87E-02

## 2011 Effluent and Waste Disposal Annual Report

	<u>Nuclide</u>	<u>Percentage</u>	<u>Curies</u>
28)	Tc-99	3.03E-02	5.50E-02
29)	Sr-89	2.46E-03	4.46E-03
30)	H-3	1.22E-03	2.22E-03
31)	Co-57	4.10E-04	7.44E-04
32)	Am-241	3.23E-04	5.86E-04
33)	Sr-92	6.84E-19	1.24E-18
34)	Cm-242	1.09E-05	1.97E-05
35)	Cm-243	2.24E-04	4.07E-04
36)	Cm-244	2.65E-05	4.81E-05
37)	La-140	4.03E-04	7.31E-04
38)	Pu-239	9.48E-06	1.72E-05
39)	Pu-240	9.48E-06	1.72E-05
40)	Pu-238	2.92E-05	5.29E-05
41)	I-133	3.98E-09	7.22E-09
42)	Cu-64	7.33E-14	1.33E-13
43)	Zn-69m	1.61E-12	2.92E-12

## 2011 Effluent and Waste Disposal Annual Report 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.

One abnormal liquid release occurred in 2011. A leak from a roughing cooler was detected to BFN Unit 3 station sump on January 13, 2011 (Problem Evaluation Report (PER) 324700). The BFN Unit 3 station sump sample analyzed on December 9, 2011, was clean but was used as the beginning period for the leak identified in 2011. The period of the release between December 9, 2010, and January 1, 2011, was reported in the Annual Radioactive Effluent Release Report for 2010. The BFN Unit 3 station sump was found to be clean on February 13, 2011.

One abnormal gaseous release occurred in 2011. On April 21, 2011, it was discovered that the ductwork access door below stack damper (2-DMP-66-92A) was missing bolts and leaking off-gas (PER 359503). This pathway, if secured, would have discharged through the elevated plant stack. Since the actual elevation of the leak was near ground level, the release was included in the ground level data.

### 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. 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. The highest concentration identified in the groundwater for the year was 1013 pCi/L. 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 estimated groundwater/channel water dilution ratio is 1:20,000 at a rate of approximately 0.5 gpm. The tritium concentrations obtained in 2011 from these non-REMP wells are listed below.

Well ID	Date	Activity in pCi/L
BH25 (1309)	5/5/11	590
DEWAT A(1311)	5/5/11	750
DEWAT A(1311)	10/20/11	559
DEWAT E(1312)	5/5/11	1013

## **2011 Effluent and Waste Disposal Annual Report Summary of Abnormal/Unplanned Releases**

### **Missed Compensatory Samples**

During the reporting period, January 1, 2011, through December 31, 2011, there was one missed compensatory sample. On April 27, 2011, six effluent continuous air monitors were found not operating due to the severe weather that occurred near the plant which resulted in the loss of off-site power and the shutdown of all three units. All six of the monitors were reset and a source check was performed to determine operability. The 1-RM-90-251, Turbine Building Effluent Radiation Monitor, failed the source check and remained inoperable. This allowed insufficient time to set up grab sample and flow readings. The monitor was declared inoperable on April 27, 2011, at 2330 hours and the first flow and sample was obtained on April 28, 2011, at 0525 hours. The ODCM requires a compensatory sample once per 8 hours and flow once per 4 hours. This first flow reading exceeded the four hour time requirement. No activity was found in the sample. (PER 362404)

### **Liquid Radwaste or Temporary Storage Tanks**

BFN does not have outside liquid radwaste or temporary storage tanks that can be discharged directly to the environs (Technical Requirements Manual 3.7.1).

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

In calendar year 2011, BFN had no changes to the radwaste system and no changes to the Process Control Program.

**Enclosure 4**

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

**2011 Inoperable Radiological Effluent Instrumentation Report**

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**(See Attached)**

## **2011 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, 2011, through December 31, 2011, there were no radioactive gaseous effluent monitoring instruments and no liquid effluent monitoring instruments out of service for greater than 30 days.