



Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

April 16, 2002

10 CFR 50.36a(a)(2)  
10 CFR 50, Appendix I,  
Section IV.B.1

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

Gentlemen:

In the Matter of	)	Docket Nos.	50-259
Tennessee Valley Authority	)		50-260
			50-296

**BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - ANNUAL RADIOACTIVE EFFLUENT RELEASE (ARER) REPORT - JANUARY THROUGH DECEMBER 2001**

In accordance with 10 CFR 50.36a(a)(2) and the BFN Technical Specification (TS) 5.6.3, TVA is submitting the BFN ARER report for January through December 2001. 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 also providing the BFN inoperable radioactive effluent instrumentation report. Finally, in accordance with the TS Section 5.5.1, TVA is required to submit any revision of the ODCM implemented during the reporting period.

This report contains the following:


- Radiological Impact Assessment Report (Enclosure 1)
- Meteorological Data Tables (Enclosure 2)
- Effluent and Waste Disposal Annual Report (Enclosure 3)
- Inoperable Radiological Effluent Instrumentation Report (Enclosure 4)
- ODCM Revision 14 (Enclosure 5)

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There are no commitments contained in this letter. If you have any questions, please contact me at (256) 729-2636.

Sincerely,



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**ENCLOSURE 1**

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3**

**RADIOLOGICAL IMPACT ASSESSMENT REPORT  
2001**

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Browns Ferry Nuclear Plant  
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**I. INTRODUCTION**

Potential doses to the "maximum exposed individual" and the population around Browns Ferry are calculated for each quarter as required in Section 5.2 of the Offsite Dose Calculation Manual (ODCM). The methodology for determining plant releases for the reporting period used to estimate dose 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 Browns Ferry.

**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:

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

The EPA 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:

$$\begin{aligned} &\leq 25 \text{ mrem per year to the whole body,} \\ &\leq 75 \text{ mrem per year to the thyroid,} \\ &\quad - \text{ and -} \\ &\leq 25 \text{ mrem per year to any other organ.} \end{aligned}$$

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**III. DOSE CALCULATIONS**

Estimated doses to Members of the Public are determined using computer models (the Gaseous Effluent Licensing Code, GELC, and the Quarterly Water Dose Assessment Code, QWATA). These models are based on guidance provided by the NRC (in Regulatory Guides 1.109, 1.111 and 1.113) 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. Many of these factors are obtained from NUREG/CR-1004. 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, 7, 8, and 9.

**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 milk and beef animals.

**Airborne Release Points**

There are four monitored release points from Browns Ferry Nuclear Plant: 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 windspeeds and directions measured 10 meters above ground and from the vertical temperature difference between 10 and 45 meters, and are presented for each quarter in Tables 10, 11, 12, and 13.

Releases from the radwaste and reactor buildings are considered split-level releases. Portions of the release are treated as ground-level while other portions are considered elevated depending on the ratio of the vertical exit velocity to the horizontal wind speed. The split-level dispersion approach is implemented using a model that requires two complete quarterly JFDs for each effluent vent, one for the ground-level releases and one for the elevated releases. The ground-level portion of the split-level JFD is based on wind speeds and directions measured 10 meters above ground-level and from the vertical temperature difference between 10 and 45 meters. The elevated portion of the split-level JFD is based on wind speeds and direction measurements at the 45 meter level and the vertical temperature difference between 45 and 91 meters. Both of these JFDs are given for each quarter in Tables 14, 15, 16, 17, 18, 19, 20, and 21.

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 91 meters and the vertical temperature difference between 45 and 91 meters, and are given for each quarter in Tables 22, 23, 24, and 25.

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**Meteorological Data**

Meteorological variables at BFN are measured continuously. Measurements collected include wind speed, wind direction, and temperature at heights of 10, 45, and 91 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.

**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. For the ingestion dose, however, only those pathways that exist for each receptor are considered in the sum, i.e., 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.



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**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 are 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 (in Regulatory Guides 1.109) 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 283.0.

Doses are calculated for locations within a 50 mile radius downstream of the plant site. The maximum potential recreation dose is calculated for a location immediately downstream from the plant's release point. The maximum exposed individual dose from ingestion of fish is assumed to be that calculated for the consumption of fish caught anywhere between the plant and the first downstream dam. The maximum exposed individual dose from drinking water is assumed to be that calculated at the nearest downstream public water supply [West Morgan - East Lawrence (WMEL)]. This could be interpreted as indicating that the maximum exposed individual, as assumed for liquid releases from Browns Ferry, 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, 6, 7, and 8, along with the average river flows past the plant site for the periods.

**VI. POPULATION DOSES**

Population doses due to airborne effluents are calculated for an estimated 627,000 persons 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, 6, 7, and 8.

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**VII. OFFSITE DIRECT RADIATION DOSE**

External gamma radiation levels were measured by thermoluminescent dosimeters (TLDs) deployed around BFN as part of the offsite Radiological Environmental Monitoring Program (REMP). The quarterly gamma radiation levels determined from these TLDs during this reporting period averaged approximately 15.5 mrem/quarter at onsite (at or near the site boundary) stations and approximately 13.25 mrem/quarter at offsite stations or approximately 2.3 mrem/quarter higher onsite than at offsite stations. This difference is consistent with levels measured for pre-operation and construction phases of TVA 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 TLD 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.

**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. This review assumed that onsite TVA employees engaged in work activities not associated with nuclear power electric generation were considered as members of the public. 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 dose from effluent releases consists of inhalation, ingestion, and submersion doses. The inhalation dose commitment assumes that site occupancy factors are sufficiently low to compensate for the increase in the atmospheric dispersion above that for the site boundary. The ingestion dose commitments use the pathways and calculated values described previously for beef, milk, and garden vegetable ingestion as well as the dose commitments from liquid effluents. The submersion dose is an external radiation dose commitment from gaseous effluents.

The direct radiation dose was determined from area TLDs 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 highest direct radiation dose accounting for background and occupancy was 7.3 mrem during 2001.

The total annual dose is the sum of the direct radiation dose (7.3 mrem) and the effluent dose commitment (2.5E-02 mrem) or 7.3 mrem. It can be concluded that the dose limit for a member of the public inside the site boundary as specified in 10 CFR 20.1301 was not exceeded.

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**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 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 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 9.

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

**Individual Doses**

<b>Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>	<b>Location</b>
<b>External</b>				
Gamma Air	6.0E-04 mrad	5 mrad	< 1 %	S/8000 meters
Beta Air	1.8E-04 mrad	10 mrad	< 1 %	S/8000 meters
<b>Submersion</b>				
Total Body	5.1E-03 mrem	NA	NA	ESE/1860 meters
Skin	6.0E-03 mrem	NA	NA	ESE/1860 meters
<b>Organ Doses</b>				
Child/Bone	1.3E-02 mrem	7.5 mrem	< 1 %	NNW/1770 meters
Child/Thyroid	3.2E-02 mrem	7.5 mrem	< 1 %	NNW/1770 meters
Child/Total Body	8.2E-03 mrem	7.5 mrem	< 1 %	NNW/1770 meters

**Population Doses**

Total Body Dose                      5.5E-02 man-rem

Maximum Organ Dose (organ)    1.3E-01 man-rem (thyroid)

*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**

<b>Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>	<b>Location</b>
<b>External</b>				
Gamma Air	8.8E-04 mrad	5 mrad	< 1 %	NW/7500 meters
Beta Air	2.7E-04 mrad	10 mrad	< 1 %	NW/7500 meters
<b>Submersion</b>				
Total Body	3.1E-03 mrem	NA	NA	N/2000 meters
Skin	3.6E-03 mrem	NA	NA	N/2000 meters
<b>Organ Doses</b>				
Child/Bone	9.0E-03 mrem	7.5 mrem	< 1 %	N/2000 meters
Child/Thyroid	3.4E-02 mrem	7.5 mrem	< 1 %	N/2000 meters
Child /Total Body	6.0E-03 mrem	7.5 mrem	< 1 %	N/2000 meters

**Population Doses**

Total Body Dose                      3.0E-02 man-rem

Maximum Organ Dose (organ)    1.0E-01 man-rem (thyroid)

*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 3  
Doses from Airborne Effluents  
Third Quarter**

**Individual Doses**

<b>Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>	<b>Location</b>
<b>External</b>				
Gamma Air	2.3E-05 mrad	5 mrad	< 1 %	NW/7100 meters
Beta Air	3.7E-05 mrad	10 mrad	< 1 %	NW/7100 meters
<b>Submersion</b>				
Total Body	1.6E-04 mrem	NA	NA	NNW/1639 meters
Skin	2.0E-04 mrem	NA	NA	NNW/1639 meters
<b>Organ Doses</b>				
Child/Bone	6.2E-03 mrem	7.5 mrem	< 1 %	NNW/1770 meters
Child/Thyroid	2.7E-02 mrem	7.5 mrem	< 1 %	NNW/1770 meters
Child/Total Body	2.8E-03 mrem	7.5 mrem	< 1 %	NNW/1770 meters

**Population Doses**

Total Body Dose                      1.1E-02 man-rem

Maximum Organ Dose (organ)    8.1E-02 man-rem (thyroid)

*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**

<b>Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>	<b>Location</b>
<b>External</b>				
Gamma Air	4.8E-06 mrad	5 mrad	<1 %	NW/7000 meters
Beta Air	7.8E-06 mrad	10 mrad	<1 %	NW/7000 meters
<b>Submersion</b>				
Total Body	2.0E-04 mrem	NA	NA	NNW/1639 meters
Skin	2.3E-04 mrem	NA	NA	NNW/1639 meters
<b>Organ Doses</b>				
Child/ Bone	1.0E-02 mrem	7.5 mrem	<1 %	NNW/1770 meters
Child/Thyroid	3.2E-02 mrem	7.5 mrem	<1 %	NNW/1770 meters
Child /Total Body	4.9E-03 mrem	7.5 mrem	<1 %	NNW/1770 meters

**Population Doses**

Total Body Dose                      1.3E-02 man-rem

Maximum Organ Dose (organ)    7.3E-02 man-rem (thyroid)

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

**Individual Doses (mrem)**

<b>Age Group</b>	<b>Organ</b>	<b>Dose Pathway</b>	<b>Dose</b>	<b>Quarterly Limit</b>	<b>Percent of Limit</b>
	<b>Total Body</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>1.5 mrem</b>	<b>0 %</b>
	<b>Liver</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>
	<b>Thyroid</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>

**\*No liquid releases were made this quarter.**

Average Riverflow past BFN (cubic feet per second): 49241

**Population Doses**

Total Body Dose                    0 man-rem

Maximum Organ Dose (organ)    0 man-rem (organ)

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

**Individual Doses (mrem)**

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
	<b>Total Body</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>1.5 mrem</b>	<b>0 %</b>
	<b>Liver</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>
	<b>Thyroid</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>

**\*No liquid releases were made this quarter.**

Average Riverflow past BFN (cubic feet per second): 19157

**Population Doses**

Total Body Dose                      0 man-rem

Maximum Organ Dose (organ)      0 man-rem (organ)

*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 7  
Doses from Liquid Effluents  
Third Quarter**

**Individual Doses (mrem)**

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
	<b>Total Body</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>1.5 mrem</b>	<b>0 %</b>
	<b>Liver</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>
	<b>Thyroid</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>

**\*No liquid releases were made this quarter.**

Average Riverflow past BFN (cubic feet per second): 20506

**Population Doses**

Total Body Dose                      0 man-rem

Maximum Organ Dose (organ)    0 man-rem (organ)

*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).*

**Radiological Impact Assessment  
Browns Ferry Nuclear Plant  
January - December 2001**

**Table 8  
Doses from Liquid Effluents  
Fourth Quarter**

**Individual Doses (mrem)**

Age Group	Organ	Dose Pathway	Dose	Quarterly Limit	Percent of Limit
	<b>Total Body</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>1.5 mrem</b>	<b>0 %</b>
	<b>Liver</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>
	<b>Thyroid</b>	Fish Ingestion	0		
		Recreation	0		
		Water Ingestion	0		
		<b>Total</b>	<b>0</b>	<b>5 mrem</b>	<b>0 %</b>

**\*No liquid releases were made this quarter.**

Average Riverflow past BFN (cubic feet per second): 37179

**Population Doses**

Total Body Dose                      0 man-rem

Maximum Organ Dose (organ)      0 man-rem (organ)

*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).*

**Radiological Impact Assessment  
Browns Ferry Nuclear Plant  
January - December 2001**

**Table 9  
Total Dose from Fuel Cycle**

<b>Dose</b>	<b>First Quarter</b>	<b>Second Quarter</b>	<b>Third Quarter</b>	<b>Fourth Quarter</b>	
<b>Total Body or any Organ (except thyroid)</b>					
Total body air submersion	5.1E-03	3.1E-03	1.6E-04	2.0E-04	
Critical organ dose (air)	1.3E-02	9.0E-03	6.2E-03	1.0E-02	
Total body dose (liquid)	0	0	0	0	
Maximum organ dose (liquid)	0	0	0	0	
Direct Radiation Dose	0	0	0	0	
<b>Total</b>	<b>1.8E-02</b>	<b>1.2E-02</b>	<b>6.4E-03</b>	<b>1.0E-02</b>	
<b>Cumulative Total Dose (mrem) (Total body or any other organ)</b>					<b>4.7E-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	5.1E-03	3.1E-03	1.6E-04	2.0E-04	
Thyroid dose (airborne)	3.2E-02	3.4E-02	2.7E-02	3.2E-02	
Total body dose (liquid)	0	0	0	0	
Thyroid dose (liquid)	0	0	0	0	
Direct Radiation Dose	0	0	0	0	
<b>Total</b>	<b>3.7E-02</b>	<b>3.7E-02</b>	<b>2.7E-02</b>	<b>3.2E-02</b>	
<b>Cumulative Total Dose (Thyroid) mrem</b>					<b>1.3E-01</b>
<b>Annual Dose Limit (mrem)</b>					<b>7.5E+01</b>
<b>Percent of Limit</b>					<b>&lt; 1 %</b>

**ENCLOSURE 2**

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3**

**METEOROLOGICAL DATA TABLES**

**2001**

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**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 10**  
**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<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.190	0.428	0.000	0.000	0.000	0.618
NNE	0.000	0.000	0.000	0.000	0.190	0.333	0.048	0.000	0.000	0.571
NE	0.000	0.000	0.000	0.000	0.000	0.190	0.000	0.000	0.000	0.190
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	0.571	0.048	0.000	0.000	0.000	0.000	0.618
SSE	0.000	0.000	0.048	0.381	0.000	0.000	0.000	0.000	0.000	0.428
S	0.000	0.000	0.048	1.142	0.048	0.000	0.000	0.000	0.000	1.237
SSW	0.000	0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.143
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	0.048	0.048	0.000	0.000	0.000	0.095
W	0.000	0.000	0.000	0.000	0.000	0.048	0.143	0.000	0.000	0.190
WNW	0.000	0.000	0.000	0.000	0.000	0.190	0.143	0.000	0.000	0.333
NW	0.000	0.000	0.000	0.000	0.000	0.238	0.285	0.000	0.000	0.523
NNW	0.000	0.000	0.000	0.000	0.000	0.238	0.000	0.000	0.000	0.238
SUBTOTAL	0.000	0.000	0.095	2.236	0.523	1.713	0.618	0.000	0.000	5.186

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS A 111  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 109  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 7.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.048	0.190	0.000	0.000	0.000	0.000	0.285	
NNE	0.000	0.000	0.048	0.095	0.285	0.000	0.000	0.000	0.428	
NE	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.095	
ENE	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	0.048	0.000	0.000	0.000	0.048	
ESE	0.000	0.000	0.143	0.095	0.000	0.000	0.000	0.000	0.238	
SE	0.000	0.000	0.143	0.000	0.000	0.000	0.000	0.000	0.143	
SSE	0.000	0.048	0.048	0.000	0.000	0.000	0.000	0.000	0.095	
S	0.000	0.048	0.095	0.000	0.000	0.000	0.000	0.000	0.143	
SSW	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.048	
SW	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.000	0.143	
WSW	0.000	0.000	0.095	0.048	0.000	0.000	0.000	0.000	0.143	
W	0.000	0.000	0.000	0.000	0.143	0.000	0.000	0.000	0.523	
WNW	0.000	0.000	0.000	0.000	0.476	0.048	0.000	0.000	0.381	
NW	0.000	0.000	0.000	0.048	0.190	0.143	0.000	0.000	0.523	
NNW	0.000	0.000	0.000	0.095	0.381	0.048	0.000	0.000	0.523	
SUBTOTAL	0.000	0.000	0.666	0.428	1.760	0.285	0.000	0.000	3.235	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS B 69  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 68  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 8.32

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.095	0.333	0.190	0.000	0.000	0.000	0.618	
NNE	0.000	0.000	0.000	0.000	0.285	0.333	0.000	0.000	0.000	0.618	
NE	0.000	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.143	
ENE	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.048	
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	0.238	0.000	0.000	0.000	0.000	0.238	
SE	0.000	0.000	0.000	0.095	0.000	0.000	0.000	0.000	0.000	0.143	
SSE	0.000	0.000	0.095	0.048	0.048	0.000	0.000	0.000	0.000	0.190	
S	0.000	0.000	0.190	0.000	0.048	0.000	0.000	0.000	0.000	0.238	
SSW	0.000	0.000	0.143	0.048	0.000	0.000	0.000	0.000	0.000	0.190	
SW	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.048	
WSW	0.000	0.000	0.000	0.095	0.000	0.190	0.000	0.000	0.000	0.285	
W	0.000	0.000	0.000	0.048	0.048	0.143	0.000	0.000	0.000	0.285	
WNW	0.000	0.000	0.000	0.048	0.095	0.190	0.000	0.000	0.000	0.333	
NW	0.000	0.000	0.000	0.048	0.000	0.571	0.000	0.000	0.000	0.761	
NNW	0.000	0.000	0.000	0.000	0.048	0.381	0.143	0.000	0.000	0.571	
SUBTOTAL	0.000	0.000	0.476	0.618	1.189	2.046	0.381	0.000	0.000	4.710	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122

TOTAL HOURS OF STABILITY CLASS C 100

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 99

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102

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 10.42 METER LEVEL

MEAN WIND SPEED = 7.78

DATE PRINTED: 2001/05/16

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)							>=24.5	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		
N	0.000	0.000	0.095	0.951	0.571	0.951	0.095	0.048	0.000	2.712
NNE	0.000	0.000	0.238	1.189	0.999	1.332	0.143	0.000	0.000	3.901
NE	0.000	0.000	0.285	0.523	0.714	0.523	0.095	0.000	0.000	2.141
ENE	0.000	0.048	0.381	0.523	0.285	0.000	0.000	0.048	0.000	1.284
E	0.000	0.000	0.809	0.951	0.285	0.000	0.000	0.000	0.000	2.046
ESE	0.000	0.000	0.523	0.856	0.143	0.000	0.000	0.000	0.000	1.522
SE	0.000	0.048	0.666	1.189	0.285	0.048	0.000	0.000	0.000	2.236
SSE	0.000	0.000	0.618	0.856	0.095	0.000	0.000	0.000	0.000	1.570
S	0.000	0.000	0.285	0.285	0.190	0.095	0.000	0.000	0.000	0.856
SSW	0.000	0.095	0.285	0.000	0.000	0.143	0.000	0.000	0.000	0.523
SW	0.000	0.048	0.333	0.095	0.095	0.048	0.000	0.000	0.000	0.618
WSW	0.000	0.000	0.428	0.190	0.048	0.238	0.048	0.000	0.000	0.951
W	0.000	0.048	0.476	0.714	0.476	0.666	0.048	0.000	0.000	2.426
WNW	0.000	0.000	0.095	0.523	0.523	1.570	0.333	0.095	0.000	3.140
NW	0.000	0.000	0.190	0.381	0.666	3.663	1.998	0.095	0.000	6.993
NNW	0.000	0.000	0.190	0.333	0.476	1.618	0.285	0.048	0.000	2.950
SUBTOTAL	0.000	0.285	5.899	9.562	5.852	10.894	3.045	0.333	0.000	35.871

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS D 769  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 754  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 7.02

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.048	1.047	0.999	0.809	0.523	0.000	0.000	0.000	3.425
NNE	0.000	0.048	0.476	0.666	0.523	0.333	0.000	0.000	0.000	2.046
NE	0.000	0.048	0.333	0.523	0.571	0.095	0.000	0.000	0.000	1.570
ENE	0.000	0.048	0.666	0.381	0.048	0.000	0.000	0.000	0.000	1.142
E	0.000	0.048	0.285	0.428	0.000	0.000	0.000	0.000	0.000	0.761
ESE	0.000	0.000	0.618	0.618	0.095	0.048	0.000	0.000	0.000	1.380
SE	0.000	0.143	1.189	0.904	0.618	0.048	0.000	0.000	0.000	2.902
SSE	0.000	0.048	0.761	0.476	0.428	0.000	0.000	0.000	0.000	1.713
S	0.000	0.190	0.523	0.856	0.285	0.285	0.000	0.000	0.000	2.141
SSW	0.000	0.095	0.048	0.428	0.143	0.143	0.000	0.000	0.000	0.856
SW	0.000	0.095	0.190	0.095	0.190	0.000	0.000	0.000	0.000	0.571
WSW	0.000	0.095	0.333	0.048	0.095	0.000	0.048	0.000	0.000	0.618
W	0.000	0.048	0.476	0.618	0.285	0.190	0.000	0.000	0.000	1.618
WNW	0.000	0.000	0.381	0.333	0.238	0.333	0.000	0.000	0.000	1.284
NW	0.000	0.095	0.190	0.666	0.618	1.475	0.000	0.000	0.000	3.045
NNW	0.000	0.000	0.618	0.666	0.523	0.904	0.095	0.000	0.000	2.807
SUBTOTAL	0.000	1.047	8.135	8.706	5.471	4.377	0.143	0.000	0.000	27.878

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS E 587  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 586  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 4.90

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.048	0.761	0.666	0.190	0.000	0.000	0.000	0.000	1.665
NNE	0.000	0.095	0.476	0.714	0.238	0.000	0.000	0.000	0.000	1.522
NE	0.000	0.000	0.238	0.143	0.190	0.000	0.000	0.000	0.000	0.571
ENE	0.000	0.000	0.048	0.285	0.000	0.000	0.000	0.000	0.000	0.333
E	0.000	0.048	0.381	0.143	0.000	0.000	0.000	0.000	0.000	0.571
ESE	0.000	0.190	0.809	0.095	0.000	0.000	0.000	0.000	0.000	1.094
SE	0.000	0.143	1.237	0.714	0.048	0.000	0.000	0.000	0.000	2.141
SSE	0.000	0.285	1.237	0.476	0.428	0.143	0.000	0.000	0.000	2.569
S	0.000	0.333	0.856	0.476	0.571	0.285	0.048	0.000	0.000	2.569
SSW	0.000	0.285	0.238	0.048	0.190	0.000	0.000	0.000	0.000	0.761
SW	0.000	0.095	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.190
WSW	0.000	0.048	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.095
W	0.000	0.095	0.143	0.000	0.000	0.000	0.000	0.000	0.000	0.238
WNW	0.000	0.048	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.143
NW	0.000	0.143	0.190	0.523	0.000	0.000	0.000	0.000	0.000	0.856
NNW	0.000	0.000	0.381	0.571	0.048	0.048	0.000	0.000	0.000	1.047
SUBTOTAL	0.000	1.855	7.231	4.853	1.903	0.476	0.048	0.000	0.000	16.365

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS F 344  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 344  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 3.56

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.095	0.618	0.381	0.000	0.000	0.000	0.000	0.000	1.094
NNE	0.000	0.000	0.143	0.095	0.000	0.000	0.000	0.000	0.000	0.238
NE	0.000	0.048	0.095	0.048	0.000	0.000	0.000	0.000	0.000	0.190
ENE	0.000	0.000	0.095	0.000	0.000	0.000	0.000	0.000	0.000	0.095
E	0.000	0.000	0.143	0.095	0.000	0.000	0.000	0.000	0.000	0.238
ESE	0.000	0.143	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.381
SE	0.000	0.048	0.618	0.000	0.000	0.000	0.000	0.000	0.000	0.666
SSE	0.000	0.190	1.665	0.285	0.000	0.000	0.000	0.000	0.000	2.141
S	0.000	0.095	0.476	0.048	0.000	0.000	0.000	0.000	0.000	0.618
SSW	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.048
SW	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.048
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	0.048	0.143	0.000	0.000	0.000	0.000	0.000	0.000	0.190
NW	0.000	0.143	0.190	0.048	0.000	0.000	0.000	0.000	0.000	0.381
NNW	0.000	0.048	0.333	0.048	0.000	0.000	0.000	0.000	0.000	0.428
SUBTOTAL	0.000	0.904	4.757	1.047	0.048	0.000	0.000	0.000	0.000	6.755

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2122  
 TOTAL HOURS OF STABILITY CLASS G 142  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 142  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 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 10.42 METER LEVEL

MEAN WIND SPEED = 2.48

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 11**  
**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 <= -1.9 C/100 M)

Browns Ferry NP (new sensor)  
APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	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	
CALM	0.000	0.000	0.000	0.000	0.518	0.000	0.000	0.000	0.518
N	0.000	0.000	0.000	0.000	0.188	0.000	0.000	0.000	0.188
NNE	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
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.094
ESE	0.000	0.000	1.978	0.141	0.000	0.000	0.000	0.000	2.119
SE	0.000	0.188	0.895	0.000	0.000	0.000	0.000	0.000	1.083
SSE	0.000	0.518	0.848	0.000	0.000	0.000	0.000	0.000	1.366
S	0.000	0.801	0.236	0.000	0.000	0.000	0.000	0.000	1.037
SSW	0.000	0.000	0.283	0.000	0.000	0.000	0.000	0.000	0.283
SW	0.000	0.000	0.330	0.283	0.000	0.000	0.000	0.000	0.613
WSW	0.000	0.000	0.047	0.141	0.047	0.000	0.000	0.000	0.235
W	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
NW	0.000	0.000	0.000	0.000	0.236	0.236	0.000	0.000	0.472
NNW	0.000	0.000	0.000	0.000	0.236	0.047	0.000	0.000	0.283
SUBTOTAL	0.000	1.743	4.710	0.707	1.225	0.283	0.000	0.000	8.667

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS A 185  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 184  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 5.28

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.094	0.377	0.000	0.000	0.000	0.471
NNE	0.000	0.000	0.000	0.000	0.094	0.047	0.000	0.000	0.000	0.141
NE	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.047	0.000	0.000	0.047	0.000	0.000	0.000	0.094
SE	0.000	0.377	0.471	0.000	0.000	0.000	0.000	0.000	0.000	0.848
SSE	0.000	0.236	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.377
S	0.000	0.330	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.424
SSW	0.000	0.236	0.236	0.000	0.000	0.000	0.000	0.000	0.000	0.471
SW	0.000	0.141	0.141	0.141	0.000	0.000	0.000	0.000	0.000	0.283
WSW	0.000	0.000	0.330	0.330	0.283	0.094	0.000	0.000	0.000	0.707
W	0.000	0.000	0.141	0.141	0.330	0.141	0.000	0.000	0.000	0.612
WNW	0.000	0.000	0.000	0.000	0.000	0.330	0.141	0.000	0.000	0.471
NW	0.000	0.000	0.000	0.000	0.000	0.236	0.047	0.000	0.000	0.283
NNW	0.000	0.000	0.000	0.000	0.000	0.188	0.000	0.000	0.000	0.188
SUBTOTAL	0.000	1.319	1.602	0.801	1.507	0.188	0.000	0.000	0.000	5.417

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS B 115  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 115  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 6.09

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17



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

Browns Ferry NP (new sensor)  
 APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)							18.5-24.4	>=24.5	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			
N	0.000	0.000	0.000	0.000	0.283	0.094	0.000	0.000	0.000	0.377	
NNE	0.000	0.000	0.047	0.141	0.188	0.000	0.000	0.000	0.000	0.377	
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	0.094	0.000	0.047	0.000	0.000	0.000	0.000	0.094	
ESE	0.000	0.000	0.330	0.047	0.000	0.000	0.000	0.000	0.000	0.471	
SE	0.000	0.188	0.283	0.000	0.000	0.000	0.000	0.000	0.000	0.471	
SSE	0.000	0.424	0.188	0.000	0.000	0.000	0.000	0.000	0.000	0.612	
S	0.000	0.188	0.236	0.047	0.000	0.000	0.000	0.000	0.000	0.471	
SSW	0.000	0.000	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.236	
SW	0.000	0.188	0.188	0.000	0.000	0.000	0.000	0.000	0.000	0.377	
WSW	0.000	0.000	0.094	0.000	0.094	0.047	0.000	0.000	0.000	0.330	
W	0.000	0.000	0.047	0.236	0.188	0.000	0.000	0.000	0.000	0.471	
WNW	0.000	0.000	0.047	0.236	0.236	0.188	0.000	0.000	0.000	0.707	
NW	0.000	0.000	0.047	0.236	0.236	0.094	0.000	0.000	0.000	0.377	
NNW	0.000	0.000	0.000	0.094	0.094	0.094	0.000	0.000	0.000	0.188	
SUBTOTAL	0.000	1.272	1.696	1.460	0.942	0.188	0.000	0.000	5.558		

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS C 118  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 118  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 5.76

DATE PRINTED: 2001/08/17

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.188	0.707	0.518	0.612	0.000	0.000	0.000	0.000	2.025
NNE	0.000	0.000	0.283	0.565	0.612	0.283	0.000	0.000	0.000	0.000	1.743
NE	0.000	0.047	0.377	0.141	0.094	0.047	0.000	0.000	0.000	0.000	0.707
ENE	0.000	0.000	0.000	0.471	0.047	0.000	0.000	0.000	0.000	0.000	0.518
E	0.000	0.000	0.565	0.612	0.094	0.000	0.000	0.000	0.000	0.000	1.272
ESE	0.000	0.000	1.225	0.518	0.612	0.000	0.000	0.000	0.000	0.000	2.355
SE	0.000	0.000	1.649	0.565	0.094	0.000	0.000	0.000	0.000	0.000	2.308
SSE	0.000	0.094	1.554	0.471	0.000	0.000	0.000	0.000	0.000	0.000	2.120
S	0.000	0.047	1.978	2.025	0.377	0.000	0.000	0.000	0.000	0.000	4.428
SSW	0.000	0.000	1.130	0.942	0.236	0.094	0.000	0.000	0.000	0.000	2.402
SW	0.000	0.000	0.942	0.141	0.000	0.000	0.000	0.000	0.000	0.000	1.083
WSW	0.000	0.000	1.083	0.942	0.188	0.141	0.000	0.000	0.000	0.000	2.355
W	0.000	0.000	0.377	1.366	0.895	0.283	0.000	0.000	0.000	0.000	2.920
WNW	0.000	0.000	0.141	0.424	0.236	0.612	0.188	0.000	0.000	0.000	1.602
NW	0.000	0.000	0.047	0.424	0.236	0.659	0.424	0.000	0.000	0.000	1.790
NNW	0.000	0.000	0.141	0.471	0.565	0.424	0.000	0.000	0.000	0.000	1.602
SUBTOTAL	0.000	0.188	11.682	10.787	4.805	3.156	0.612	0.000	0.000	0.000	31.229

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2133  
667  
663  
2123  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
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 = 4.68

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS E (-0.5 < DELTA T <= 1.5 C/100 M)

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	
N	0.000	0.471	0.330	0.141	0.047	0.000	0.000	0.989	
NNE	0.000	0.424	0.330	0.094	0.000	0.000	0.000	0.942	
NE	0.000	0.424	0.000	0.094	0.000	0.000	0.000	0.754	
ENE	0.000	0.424	0.424	0.047	0.000	0.000	0.000	1.083	
E	0.000	1.743	1.036	0.000	0.000	0.000	0.000	2.967	
ESE	0.000	2.967	1.225	0.094	0.000	0.000	0.000	4.569	
SE	0.000	1.507	0.518	0.188	0.000	0.000	0.000	2.402	
SSE	0.000	2.025	0.236	0.000	0.000	0.000	0.000	2.638	
S	0.000	2.025	1.366	0.424	0.047	0.000	0.000	4.004	
SSW	0.000	0.848	0.236	0.000	0.000	0.000	0.000	1.272	
SW	0.000	0.424	0.000	0.000	0.000	0.000	0.000	0.424	
WSW	0.000	0.707	0.330	0.000	0.000	0.000	0.000	1.083	
W	0.000	0.424	0.471	0.000	0.000	0.000	0.000	1.036	
WNW	0.000	0.094	0.047	0.000	0.047	0.000	0.000	0.283	
NW	0.000	0.094	0.330	0.236	0.236	0.000	0.000	0.895	
NNW	0.000	0.424	0.612	0.471	0.188	0.000	0.000	1.743	
SUBTOTAL	0.000	15.026	7.489	1.790	0.565	0.000	0.000	27.084	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS E 577  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 575  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 3.20

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS F ( 1.5 < DELTA T <= 4.0 C/100 M)

Browns Ferry NP (new sensor)  
 APR 1, 2001 - JUN 30, 2001

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	0.188	0.754	0.801	0.047	0.000	0.000	0.000	0.000	0.000	1.790
NNE	0.000	0.141	0.565	0.471	0.094	0.000	0.000	0.000	0.000	0.000	1.272
NE	0.000	0.236	0.141	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.471
ENE	0.000	0.000	0.518	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.659
E	0.000	0.141	1.083	0.565	0.000	0.000	0.000	0.000	0.000	0.000	1.790
ESE	0.000	0.236	1.130	0.094	0.000	0.000	0.000	0.000	0.000	0.000	1.460
SE	0.000	0.094	0.612	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.707
SSE	0.000	0.330	0.612	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.942
S	0.000	0.141	0.707	0.424	0.236	0.047	0.000	0.000	0.000	0.000	1.554
SSW	0.000	0.047	0.188	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.283
SW	0.000	0.141	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.236
WSW	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.094
W	0.000	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.141
WNW	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.094
NW	0.000	0.047	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.141
NNW	0.000	0.188	0.283	0.471	0.047	0.000	0.000	0.000	0.000	0.000	0.989
SUBTOTAL	0.000	2.167	6.877	3.015	0.518	0.047	0.000	0.000	0.000	0.000	12.624

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS F 270  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 268  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 2.77

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry NP (new sensor)  
APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	CALM	WIND SPEED(MPH)							>=24.5	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		
N	0.000	0.518	1.272	0.801	0.000	0.000	0.000	0.000	0.000	2.591
NNE	0.000	0.236	0.330	0.141	0.000	0.000	0.000	0.000	0.000	0.707
NE	0.000	0.236	0.330	0.000	0.000	0.000	0.000	0.000	0.000	0.565
ENE	0.000	0.188	0.471	0.094	0.000	0.000	0.000	0.000	0.000	0.754
E	0.000	0.000	0.377	0.047	0.000	0.000	0.000	0.000	0.000	0.424
ESE	0.000	0.047	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.141
SE	0.000	0.283	0.141	0.000	0.000	0.000	0.000	0.000	0.000	0.424
SSE	0.000	0.141	0.848	0.047	0.000	0.000	0.000	0.000	0.000	1.036
S	0.000	0.047	0.659	0.188	0.000	0.000	0.000	0.000	0.000	0.895
SSW	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
SW	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
WSW	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.047
W	0.000	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.141
WNW	0.000	0.094	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.188
NW	0.000	0.141	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.236
NNW	0.000	0.377	0.801	0.000	0.000	0.000	0.000	0.000	0.000	1.178
SUBTOTAL	0.000	2.496	5.558	1.366	0.000	0.000	0.000	0.000	0.000	9.421

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2133  
 TOTAL HOURS OF STABILITY CLASS G 201  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 200  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2123  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 2.22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 12**  
**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<=-1.9 C/100 M)

Browns Ferry NP (new sensor)  
JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	CALM	WIND SPEED(MPH)						>=24.5	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		
N	0.000	0.000	0.046	0.092	0.781	0.000	0.000	0.919	
NNE	0.000	0.000	0.000	0.046	0.735	0.000	0.000	0.781	
NE	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046	
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
E	0.000	0.000	0.092	0.000	0.092	0.000	0.000	0.184	
ESE	0.000	0.000	0.368	0.276	0.000	0.000	0.000	0.643	
SE	0.000	0.460	1.149	0.092	0.000	0.000	0.000	1.700	
SSE	0.000	1.563	1.057	0.000	0.000	0.000	0.000	2.619	
S	0.000	1.149	0.965	0.000	0.000	0.000	0.000	2.114	
SSW	0.000	0.506	0.322	0.000	0.000	0.000	0.000	0.827	
SW	0.000	0.138	0.230	0.000	0.000	0.000	0.000	0.368	
WSW	0.000	0.000	0.551	0.000	0.000	0.000	0.000	0.551	
W	0.000	0.000	0.092	0.092	0.046	0.000	0.000	0.230	
WNW	0.000	0.000	0.000	0.000	0.138	0.000	0.000	0.138	
NW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046	
NNW	0.000	0.000	0.000	0.092	0.276	0.000	0.000	0.368	
SUBTOTAL	0.000	3.814	4.871	0.689	2.160	0.000	0.000	11.535	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS A 251  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 251  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 4.88

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry NP (new sensor)  
 JUL 1, 2001 - SEP 30, 2001

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	0.322	0.276	0.000	0.000	0.000	0.597
NNE	0.000	0.000	0.000	0.000	0.138	0.276	0.000	0.000	0.000	0.414
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	0.046	0.000	0.000	0.000	0.046
E	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.092
ESE	0.000	0.000	0.276	0.138	0.000	0.000	0.000	0.000	0.000	0.414
SE	0.000	0.276	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.551
SSE	0.000	0.000	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.322
S	0.000	0.000	0.735	0.000	0.000	0.000	0.000	0.000	0.000	1.011
SSW	0.000	0.000	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.276
SW	0.000	0.000	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.322
WSW	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.000	0.460
W	0.000	0.000	0.046	0.046	0.184	0.000	0.000	0.000	0.000	0.230
WNW	0.000	0.000	0.000	0.046	0.046	0.138	0.000	0.000	0.000	0.230
NW	0.000	0.000	0.000	0.046	0.184	0.184	0.000	0.000	0.000	0.414
NNW	0.000	0.000	0.000	0.046	0.368	0.092	0.000	0.000	0.000	0.506
SUBTOTAL	0.000	0.000	1.700	1.838	1.287	1.057	0.000	0.000	0.000	5.882

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS B 128  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 128  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 5.13

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	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
CALM	0.000	0.046	0.092	0.322	0.000	0.000	0.000	0.000	0.460
N	0.000	0.000	0.138	0.322	0.092	0.000	0.000	0.000	0.551
NNE	0.000	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.138
NE	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.092
ENE	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.138
E	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
ESE	0.000	0.276	0.276	0.000	0.000	0.000	0.000	0.000	0.551
SE	0.000	0.460	0.230	0.000	0.000	0.000	0.000	0.000	0.689
SSE	0.000	0.460	0.046	0.000	0.000	0.000	0.000	0.000	0.506
S	0.000	0.322	0.046	0.000	0.000	0.000	0.000	0.000	0.368
SSW	0.000	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.230
SW	0.000	0.138	0.138	0.046	0.000	0.000	0.000	0.000	0.322
WSW	0.000	0.046	0.276	0.138	0.184	0.000	0.000	0.000	0.643
W	0.000	0.000	0.000	0.184	0.138	0.000	0.000	0.000	0.322
WNW	0.000	0.000	0.092	0.138	0.046	0.000	0.000	0.000	0.276
NW	0.000	0.000	0.138	0.184	0.046	0.046	0.000	0.000	0.414
NNW	0.000	0.000	0.138	0.184	0.046	0.046	0.000	0.000	0.414
SUBTOTAL	0.000	1.976	1.654	1.471	0.597	0.046	0.000	0.000	5.744

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS C 125  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 125  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 4.90

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)						18.5-24.4	>=24.5	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			
N	0.000	0.046	0.368	0.597	0.506	0.184	0.000	0.000	0.000	1.700
NNE	0.000	0.000	0.184	0.643	0.230	0.368	0.000	0.000	0.000	1.425
NE	0.000	0.000	0.184	0.322	0.184	0.046	0.000	0.000	0.000	0.735
ENE	0.000	0.046	0.368	0.368	0.092	0.046	0.000	0.000	0.000	0.919
E	0.000	0.000	0.506	0.506	0.414	0.092	0.000	0.000	0.000	1.517
ESE	0.000	0.046	0.827	0.873	0.184	0.046	0.000	0.000	0.000	1.976
SE	0.000	0.092	1.287	0.781	0.000	0.000	0.000	0.000	0.000	2.160
SSE	0.000	0.138	2.757	0.827	0.000	0.000	0.000	0.000	0.000	3.722
S	0.000	0.184	4.044	0.735	0.000	0.000	0.000	0.000	0.000	4.963
SSW	0.000	0.092	3.539	0.368	0.000	0.000	0.000	0.000	0.000	3.998
SW	0.000	0.184	1.884	0.000	0.000	0.000	0.000	0.000	0.000	2.068
WSW	0.000	0.000	1.930	0.919	0.092	0.000	0.000	0.000	0.000	2.941
W	0.000	0.092	0.689	1.379	0.230	0.092	0.000	0.000	0.000	2.482
WNW	0.000	0.000	0.184	0.414	0.414	0.230	0.000	0.000	0.000	1.241
NW	0.000	0.000	0.138	0.322	0.184	0.092	0.000	0.000	0.000	0.735
NNW	0.000	0.000	0.184	0.368	0.368	0.414	0.092	0.000	0.000	1.425
SUBTOTAL	0.000	0.919	19.072	9.421	2.895	1.608	0.092	0.000	0.000	34.007

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2177  
741  
740  
2176  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
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 = 3.60

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	
N	0.000	0.092	0.689	0.643	0.138	0.092	0.000	0.000	1.654
NNE	0.000	0.092	0.597	0.735	0.735	0.138	0.000	0.000	2.298
NE	0.000	0.138	0.643	0.138	0.138	0.000	0.000	0.000	1.057
ENE	0.000	0.414	0.781	0.184	0.000	0.000	0.000	0.000	1.379
E	0.000	0.184	1.471	0.873	0.092	0.000	0.000	0.000	2.619
ESE	0.000	0.322	1.241	0.506	0.046	0.000	0.000	0.000	2.114
SE	0.000	0.551	1.287	0.138	0.000	0.000	0.000	0.000	1.976
SSE	0.000	0.460	0.735	0.000	0.000	0.000	0.000	0.000	1.195
S	0.000	0.276	0.827	0.092	0.000	0.000	0.000	0.000	1.195
SSW	0.000	0.368	0.689	0.092	0.000	0.000	0.000	0.000	1.149
SW	0.000	0.276	0.643	0.092	0.000	0.000	0.000	0.000	0.919
WSW	0.000	0.184	0.919	0.138	0.000	0.000	0.000	0.000	1.241
W	0.000	0.184	0.322	0.230	0.046	0.000	0.000	0.000	0.781
WNW	0.000	0.184	0.322	0.000	0.000	0.000	0.000	0.000	0.551
NW	0.000	0.138	0.138	0.046	0.046	0.046	0.000	0.000	0.414
NNW	0.000	0.184	0.597	0.460	0.322	0.000	0.000	0.000	1.563
SUBTOTAL	0.000	4.044	11.903	4.274	1.563	0.276	0.046	0.000	22.105

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS E 481  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 481  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 2.85

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS F ( 1.5 < DELTA T <= 4.0 C / 100 M)

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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
N	0.000	0.138	0.965	0.781	0.000	0.000	0.000	0.000	1.884
NNE	0.000	0.092	0.919	0.551	0.138	0.000	0.000	0.000	1.700
NE	0.000	0.138	1.103	0.184	0.138	0.000	0.000	0.000	1.563
ENE	0.000	0.230	1.517	0.551	0.000	0.000	0.000	0.000	2.298
E	0.000	0.276	1.563	0.597	0.000	0.000	0.000	0.000	2.436
ESE	0.000	0.092	0.322	0.046	0.000	0.000	0.000	0.000	0.460
SE	0.000	0.138	0.046	0.000	0.000	0.000	0.000	0.000	0.184
SSE	0.000	0.092	0.138	0.000	0.000	0.000	0.000	0.000	0.230
S	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.138
SSW	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.092
SW	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.092
WSW	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
W	0.000	0.046	0.000	0.000	0.000	0.046	0.000	0.000	0.092
WNW	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.138
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.230	0.506	0.046	0.000	0.000	0.000	0.000	0.781
SUBTOTAL	0.000	1.792	7.307	2.757	0.276	0.046	0.000	0.000	12.178

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS F 265  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 265  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 2.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry NP (new sensor)  
JUL 1, 2001 - SEP 30, 2001

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	0.016	1.654	1.057	0.000	0.000	0.000	0.000	0.000	0.000	3.417
NNE	0.007	0.551	0.322	0.000	0.000	0.000	0.000	0.000	0.000	1.340
NE	0.007	0.827	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.972
ENE	0.005	0.597	0.276	0.000	0.000	0.000	0.000	0.000	0.000	1.062
E	0.002	0.230	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.370
ESE	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.001	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.093
NNW	0.005	0.322	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.185
SUBTOTAL	0.046	4.320	1.930	0.000	0.000	0.000	0.000	0.000	0.000	8.548

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2177  
 TOTAL HOURS OF STABILITY CLASS G 186  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 186  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2176  
 TOTAL HOURS CALM 1

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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 = 2.37

DATE PRINTED: 2001/12/18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 13**  
**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<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.688	0.046	0.000	0.000	0.734
NNE	0.000	0.000	0.000	0.000	0.000	0.367	0.092	0.000	0.000	0.459
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	0.000	0.459	0.138	0.000	0.000	0.000	0.000	0.597
SE	0.000	0.000	0.229	0.046	0.000	0.000	0.000	0.000	0.000	0.275
SSE	0.000	0.046	0.918	0.000	0.000	0.000	0.000	0.000	0.000	0.964
S	0.000	0.138	0.413	0.000	0.000	0.000	0.000	0.000	0.000	0.551
SSW	0.000	0.000	0.459	0.000	0.000	0.000	0.000	0.000	0.000	0.551
SW	0.000	0.000	0.138	0.046	0.000	0.000	0.000	0.000	0.000	0.184
WSW	0.000	0.000	0.046	0.046	0.000	0.092	0.000	0.000	0.000	0.229
W	0.000	0.000	0.000	0.000	0.000	0.184	0.000	0.000	0.000	0.321
WNW	0.000	0.000	0.000	0.000	0.000	0.184	0.138	0.000	0.000	0.321
NW	0.000	0.000	0.000	0.000	0.000	0.275	0.229	0.046	0.000	0.551
NNW	0.000	0.000	0.046	0.046	0.000	0.597	0.000	0.000	0.000	0.688
SUBTOTAL	0.000	0.000	2.295	0.780	2.570	0.505	0.046	0.000	0.000	6.517

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2179
TOTAL HOURS OF STABILITY CLASS A	142
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	142
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2179
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 = 7.68

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS B (-1.9 < DELTA T <= -1.7 C/100 M)

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	
N	0.000	0.000	0.046	0.321	0.000	0.000	0.000	0.413	
NNE	0.000	0.000	0.138	0.184	0.000	0.000	0.000	0.321	
NE	0.000	0.000	0.000	0.229	0.000	0.000	0.000	0.229	
ENE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046	
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
ESE	0.000	0.000	0.138	0.184	0.000	0.000	0.000	0.321	
SE	0.000	0.000	0.184	0.092	0.046	0.000	0.000	0.321	
SSE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046	
S	0.000	0.000	0.184	0.000	0.000	0.000	0.000	0.275	
SSW	0.000	0.000	0.184	0.000	0.000	0.000	0.000	0.229	
SW	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.138	
WSW	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.138	
W	0.000	0.000	0.000	0.184	0.000	0.000	0.000	0.184	
WNW	0.000	0.000	0.046	0.275	0.184	0.000	0.000	0.642	
NW	0.000	0.000	0.000	0.138	0.184	0.000	0.000	0.413	
NNW	0.000	0.000	0.000	0.092	0.092	0.000	0.000	0.092	
SUBTOTAL	0.000	0.184	0.918	1.606	0.275	0.000	0.000	3.809	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179  
 TOTAL HOURS OF STABILITY CLASS B 83  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 83  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179  
 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 = 7.72

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12



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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	
N	0.000	0.000	0.138	0.184	0.092	0.000	0.413	
NNE	0.000	0.000	0.138	0.275	0.138	0.000	0.551	
NE	0.000	0.000	0.000	0.092	0.229	0.000	0.321	
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
E	0.000	0.000	0.000	0.046	0.000	0.000	0.046	
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
SE	0.000	0.046	0.459	0.046	0.046	0.000	0.597	
SSE	0.000	0.184	0.046	0.046	0.000	0.000	0.275	
S	0.000	0.184	0.459	0.000	0.000	0.000	0.642	
SSW	0.000	0.046	0.000	0.000	0.000	0.000	0.046	
SW	0.000	0.184	0.046	0.000	0.000	0.000	0.229	
WSW	0.000	0.046	0.092	0.138	0.000	0.000	0.275	
W	0.000	0.000	0.092	0.000	0.092	0.000	0.184	
WNW	0.000	0.000	0.138	0.046	0.229	0.046	0.459	
NW	0.000	0.046	0.184	0.000	0.092	0.000	0.321	
NNW	0.000	0.000	0.046	0.321	0.138	0.000	0.505	
SUBTOTAL	0.000	0.734	1.836	1.193	1.056	0.046	0.000	4.865

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179  
 TOTAL HOURS OF STABILITY CLASS C 106  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 106  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179  
 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 = 5.74

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.092	0.734	0.367	0.918	0.000	0.000	0.000	0.000	2.111
NNE	0.000	0.275	0.505	0.505	0.275	0.000	0.000	0.000	0.000	1.560
NE	0.000	0.046	0.229	0.138	0.184	0.000	0.000	0.000	0.000	0.597
ENE	0.000	0.367	0.138	0.275	0.000	0.000	0.000	0.000	0.000	0.780
E	0.000	0.413	0.229	0.000	0.046	0.000	0.000	0.000	0.000	0.688
ESE	0.000	0.229	1.056	0.964	0.367	0.000	0.000	0.000	0.000	2.616
SE	0.000	0.688	0.780	0.229	0.413	0.000	0.000	0.000	0.000	2.111
SSE	0.000	0.000	1.101	0.046	0.000	0.000	0.000	0.000	0.000	2.432
S	0.000	0.046	1.147	0.184	0.184	0.000	0.000	0.000	0.000	2.708
SSW	0.000	0.092	0.826	0.138	0.000	0.000	0.000	0.000	0.000	1.423
SW	0.000	0.046	0.367	0.138	0.046	0.000	0.000	0.000	0.000	0.642
WSW	0.000	0.046	0.321	0.413	0.092	0.046	0.000	0.000	0.000	1.147
W	0.000	0.000	0.413	0.275	0.321	0.092	0.000	0.000	0.000	1.377
WNW	0.000	0.000	0.367	0.459	0.413	0.275	0.092	0.000	0.000	1.836
NW	0.000	0.000	0.459	0.184	0.826	0.918	0.046	0.000	0.000	2.570
NNW	0.000	0.000	0.229	0.229	0.459	0.092	0.000	0.000	0.000	1.193
SUBTOTAL	0.000	6.792	8.123	4.543	4.543	1.423	0.138	0.000	0.000	25.792

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179  
 TOTAL HOURS OF STABILITY CLASS D 562  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 562  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179  
 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 = 5.80

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.046	0.459	0.551	0.321	0.229	0.000	0.000	0.000	1.606
NNE	0.000	0.000	0.184	0.413	0.092	0.092	0.000	0.000	0.000	0.780
NE	0.000	0.000	0.505	0.138	0.138	0.000	0.000	0.000	0.000	0.780
ENE	0.000	0.000	0.275	0.092	0.000	0.000	0.000	0.000	0.000	0.367
E	0.000	0.092	0.321	0.321	0.000	0.000	0.000	0.000	0.000	0.734
ESE	0.000	0.046	0.826	1.514	0.734	0.046	0.000	0.000	0.000	3.167
SE	0.000	0.321	1.193	1.239	0.367	0.092	0.000	0.000	0.000	3.212
SSE	0.000	0.229	1.514	1.698	0.597	0.184	0.000	0.000	0.000	4.222
S	0.000	0.000	1.239	1.423	0.597	0.367	0.000	0.000	0.000	3.626
SSW	0.000	0.138	0.321	0.367	0.046	0.046	0.000	0.000	0.000	0.918
SW	0.000	0.046	0.138	0.138	0.046	0.000	0.000	0.000	0.000	0.367
WSW	0.000	0.000	0.505	0.092	0.000	0.000	0.000	0.000	0.000	0.597
W	0.000	0.138	0.321	0.229	0.029	0.092	0.000	0.000	0.000	1.010
WNW	0.000	0.046	0.229	0.000	0.000	0.138	0.046	0.000	0.000	0.459
NW	0.000	0.000	0.321	0.505	0.229	0.459	0.138	0.000	0.000	1.652
NNW	0.000	0.000	0.413	0.367	0.321	0.275	0.000	0.000	0.000	1.377
SUBTOTAL	0.000	1.101	8.765	9.087	3.717	2.019	0.184	0.000	0.000	24.874

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179

TOTAL HOURS OF STABILITY CLASS E 542

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 542

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179

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 = 4.37

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS F ( 1.5 < DELTA T <= 4.0 C/100 M)

Browns Ferry Nuclear Plant  
 OCT 1, 2001 - DEC 31, 2001

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	0.046	0.918	1.010	0.138	0.000	0.000	0.000	0.000	2.111
NNE	0.000	0.138	0.321	1.147	0.275	0.092	0.000	0.000	0.000	1.973
NE	0.000	0.184	0.229	0.184	0.229	0.000	0.000	0.000	0.000	0.826
ENE	0.000	0.275	0.597	0.046	0.046	0.000	0.000	0.000	0.000	0.964
E	0.000	0.138	0.872	0.597	0.000	0.000	0.000	0.000	0.000	1.606
ESE	0.000	0.092	1.423	0.413	0.000	0.000	0.000	0.000	0.000	1.927
SE	0.000	0.229	1.606	0.321	0.046	0.000	0.000	0.000	0.000	2.203
SSE	0.000	0.275	1.010	0.505	0.367	0.000	0.000	0.000	0.000	2.157
S	0.000	0.138	0.551	0.321	0.046	0.138	0.000	0.000	0.000	1.193
SSW	0.000	0.092	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.275
SW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
WNW	0.000	0.046	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.184
NW	0.000	0.092	0.321	0.229	0.046	0.046	0.000	0.000	0.000	0.734
NNW	0.000	0.000	0.642	0.734	0.138	0.000	0.000	0.000	0.000	1.514
SUBTOTAL	0.000	1.836	8.903	5.507	1.331	0.275	0.000	0.000	0.000	17.852

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179  
 TOTAL HOURS OF STABILITY CLASS F 389  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 389  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179  
 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 = 3.21

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.018	0.780	1.973	1.331	0.046	0.000	0.000	0.000	0.000	4.149
NNE	0.008	0.413	0.734	0.321	0.092	0.000	0.000	0.000	0.000	1.568
NE	0.012	0.459	1.377	0.046	0.000	0.000	0.000	0.000	0.000	1.894
ENE	0.010	0.229	1.193	0.184	0.000	0.000	0.000	0.000	0.000	1.616
E	0.009	0.413	0.918	0.092	0.000	0.000	0.000	0.000	0.000	1.432
ESE	0.003	0.275	0.229	0.000	0.000	0.000	0.000	0.000	0.000	0.508
SE	0.004	0.367	0.229	0.000	0.000	0.000	0.000	0.000	0.000	0.601
SSE	0.007	0.505	0.597	0.092	0.000	0.000	0.000	0.000	0.000	1.201
S	0.002	0.092	0.275	0.000	0.000	0.000	0.000	0.000	0.000	0.370
SSW	0.001	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.001	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.092
W	0.001	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.139
WNW	0.001	0.092	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.185
NW	0.005	0.229	0.459	0.046	0.000	0.000	0.000	0.000	0.000	0.739
NNW	0.010	0.367	1.056	0.275	0.000	0.000	0.000	0.000	0.000	1.708
SUBTOTAL	0.092	4.543	9.133	2.386	0.138	0.000	0.000	0.000	0.000	16.292

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2179  
 TOTAL HOURS OF STABILITY CLASS G 355  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 355  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2179  
 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 = 2.24

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 14**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL PORTION)**  
**FIRST QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.017	0.072	0.000	0.000	0.000	0.089
NNE	0.000	0.000	0.000	0.000	0.018	0.047	0.000	0.000	0.000	0.065
NE	0.000	0.000	0.000	0.000	0.000	0.033	0.000	0.000	0.000	0.033
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	0.044	0.009	0.000	0.000	0.000	0.000	0.054
SSE	0.000	0.000	0.000	0.019	0.000	0.000	0.000	0.000	0.000	0.019
S	0.000	0.000	0.000	0.078	0.009	0.000	0.000	0.000	0.000	0.087
SSW	0.000	0.000	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.015
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	0.007	0.010	0.000	0.000	0.000	0.017
W	0.000	0.000	0.000	0.000	0.000	0.006	0.000	0.000	0.000	0.048
WNW	0.000	0.000	0.000	0.000	0.000	0.032	0.030	0.000	0.000	0.062
NW	0.000	0.000	0.000	0.000	0.000	0.042	0.058	0.000	0.000	0.100
NNW	0.000	0.000	0.000	0.000	0.000	0.026	0.000	0.000	0.000	0.026
SUBTOTAL	0.000	0.000	0.000	0.157	0.060	0.269	0.130	0.000	0.000	0.615

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS A 12.070  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 12.070

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.001	0.003	0.027	0.000	0.000	0.000	0.031
NNE	0.000	0.000	0.000	0.001	0.008	0.047	0.000	0.000	0.000	0.056
NE	0.000	0.000	0.000	0.000	0.000	0.008	0.010	0.000	0.000	0.017
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	0.010	0.000	0.000	0.000	0.010
SE	0.000	0.000	0.000	0.003	0.015	0.000	0.000	0.000	0.000	0.018
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	0.009
SSW	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.007
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.003	0.009	0.000	0.000	0.000	0.000	0.011
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.025
WNW	0.000	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.000	0.086
NW	0.000	0.000	0.000	0.000	0.000	0.072	0.013	0.000	0.000	0.067
NNW	0.000	0.000	0.000	0.000	0.004	0.034	0.030	0.000	0.000	0.085
				0.000	0.008	0.067	0.010	0.000	0.000	
SUBTOTAL	0.000	0.000	0.000	0.023	0.046	0.291	0.062	0.000	0.000	0.423

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS B 8.300  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 8.300

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16



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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.031	0.031	0.000	0.000	0.000	0.000	0.061
NNE	0.000	0.000	0.000	0.000	0.021	0.049	0.000	0.000	0.000	0.000	0.071
NE	0.000	0.000	0.000	0.000	0.004	0.009	0.010	0.000	0.000	0.000	0.022
ENE	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.041	0.000	0.000	0.000	0.000	0.000	0.041
SE	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005
SSE	0.000	0.000	0.000	0.002	0.010	0.000	0.000	0.000	0.000	0.000	0.012
S	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.009
SSW	0.000	0.000	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.014
SW	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
WSW	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.028
W	0.000	0.000	0.000	0.000	0.005	0.022	0.012	0.000	0.000	0.000	0.039
WNW	0.000	0.000	0.000	0.000	0.007	0.030	0.000	0.000	0.000	0.000	0.037
NW	0.000	0.000	0.000	0.000	0.000	0.081	0.020	0.000	0.000	0.000	0.101
NNW	0.000	0.000	0.000	0.000	0.005	0.053	0.020	0.000	0.000	0.000	0.078
SUBTOTAL	0.000	0.000	0.012	0.015	0.133	0.302	0.063	0.000	0.000	0.000	0.524

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS C 11.940  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 10.290

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.049	0.072	0.167	0.030	0.000	0.000	0.318	
NNE	0.000	0.000	0.000	0.047	0.120	0.235	0.021	0.000	0.000	0.423	
NE	0.000	0.000	0.000	0.014	0.076	0.083	0.020	0.000	0.000	0.193	
ENE	0.000	0.000	0.002	0.016	0.027	0.000	0.000	0.000	0.000	0.045	
E	0.000	0.000	0.002	0.064	0.037	0.000	0.000	0.000	0.000	0.103	
ESE	0.000	0.000	0.012	0.072	0.024	0.000	0.000	0.000	0.000	0.108	
SE	0.000	0.000	0.022	0.213	0.117	0.046	0.000	0.000	0.000	0.398	
SSE	0.000	0.000	0.017	0.106	0.000	0.000	0.000	0.000	0.000	0.122	
S	0.000	0.000	0.005	0.017	0.024	0.000	0.000	0.000	0.000	0.046	
SSW	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	
SW	0.000	0.000	0.005	0.008	0.020	0.015	0.000	0.000	0.000	0.047	
WSW	0.000	0.000	0.001	0.006	0.008	0.047	0.049	0.000	0.000	0.112	
W	0.000	0.000	0.004	0.038	0.051	0.118	0.018	0.000	0.000	0.229	
WNW	0.000	0.000	0.000	0.006	0.031	0.246	0.055	0.067	0.000	0.404	
NW	0.000	0.000	0.000	0.007	0.054	0.589	0.523	0.000	0.000	1.173	
NNW	0.000	0.000	0.000	0.013	0.056	0.262	0.032	0.000	0.000	0.362	
SUBTOTAL	0.000	0.000	0.070	0.674	0.717	1.808	0.748	0.067	0.000	4.084	

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS D 1013.900  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 80.120

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

WIND DIRECTION	WIND SPEED (MPH)										TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.000	0.026	0.098	0.135	0.084	0.000	0.000	0.000	0.000	0.343
NNE	0.000	0.000	0.011	0.068	0.075	0.068	0.000	0.000	0.000	0.000	0.222
NE	0.000	0.000	0.012	0.044	0.087	0.017	0.000	0.000	0.000	0.000	0.161
ENE	0.000	0.000	0.010	0.037	0.006	0.000	0.000	0.000	0.000	0.000	0.052
E	0.000	0.000	0.003	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.054
ESE	0.000	0.000	0.028	0.091	0.017	0.015	0.000	0.000	0.000	0.000	0.151
SE	0.000	0.000	0.048	0.139	0.186	0.038	0.000	0.000	0.000	0.000	0.412
SSE	0.000	0.000	0.030	0.088	0.179	0.000	0.000	0.000	0.000	0.000	0.297
S	0.000	0.009	0.019	0.136	0.019	0.019	0.000	0.000	0.000	0.000	0.202
SSW	0.000	0.001	0.005	0.037	0.019	0.000	0.000	0.000	0.000	0.000	0.062
SW	0.000	0.000	0.005	0.012	0.029	0.000	0.000	0.000	0.000	0.000	0.046
WSW	0.000	0.000	0.010	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.025
W	0.000	0.000	0.015	0.064	0.043	0.035	0.000	0.000	0.000	0.000	0.157
WNW	0.000	0.000	0.008	0.032	0.028	0.060	0.000	0.000	0.000	0.000	0.127
NW	0.000	0.000	0.002	0.057	0.094	0.264	0.000	0.000	0.000	0.000	0.416
NNW	0.000	0.000	0.009	0.063	0.077	0.134	0.011	0.000	0.000	0.000	0.293
SUBTOTAL	0.000	0.010	0.241	1.024	1.002	0.734	0.011	0.000	0.000	0.000	3.021

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS E 698.170  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 59.280

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.041	0.092	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.164
NNE	0.000	0.000	0.020	0.096	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.160
NE	0.000	0.000	0.014	0.019	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.068
ENE	0.000	0.000	0.000	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.042
E	0.000	0.000	0.013	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.035
ESE	0.000	0.000	0.062	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.079
SE	0.000	0.002	0.101	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.224
SSE	0.000	0.009	0.133	0.096	0.062	0.153	0.000	0.000	0.000	0.000	0.000	0.000	0.453
S	0.000	0.006	0.101	0.074	0.017	0.153	0.051	0.000	0.000	0.000	0.000	0.000	0.402
SSW	0.000	0.003	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.020
SW	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.003
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
W	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
WNW	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
NW	0.000	0.000	0.010	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.072
NNW	0.000	0.000	0.015	0.060	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SUBTOTAL	0.000	0.020	0.548	0.702	0.195	0.315	0.051	0.000	0.000	0.000	0.000	0.000	1.831

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS F 181.340  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 35.930

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.022	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.064
NNE	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.011
NE	0.000	0.000	0.000	0.006	0.000	0.000	0.000	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	0.000
E	0.000	0.000	0.004	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.015
ESE	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.014
SE	0.000	0.002	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.052
SSE	0.000	0.013	0.170	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183
S	0.000	0.004	0.058	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.061
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
NW	0.000	0.000	0.011	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.016
NNW	0.000	0.000	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.015
SUBTOTAL	0.000	0.018	0.346	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.446

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 214.750  
 TOTAL HOURS OF STABILITY CLASS G 36.280  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 8.760

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.42 METER LEVEL  
 WIND SPEED MEASURED AT 10.42 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 15**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL PORTION)**  
**SECOND QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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
N	0.000	0.000	0.000	0.000	0.000	0.087	0.000	0.000	0.087
NNE	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.030
NE	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
E	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	0.012	0.024	0.000	0.000	0.000	0.035
SE	0.000	0.000	0.004	0.159	0.021	0.000	0.000	0.000	0.185
SSE	0.000	0.000	0.029	0.052	0.000	0.000	0.000	0.000	0.081
S	0.000	0.000	0.053	0.074	0.000	0.000	0.000	0.000	0.127
SSW	0.000	0.000	0.008	0.018	0.000	0.000	0.000	0.000	0.026
SW	0.000	0.000	0.000	0.024	0.000	0.000	0.000	0.000	0.024
WSW	0.000	0.000	0.000	0.026	0.037	0.000	0.000	0.000	0.063
W	0.000	0.000	0.000	0.007	0.014	0.006	0.000	0.000	0.027
WNW	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	0.041	0.052	0.000	0.093
NNW	0.000	0.000	0.000	0.000	0.000	0.042	0.009	0.000	0.052
SUBTOTAL	0.000	0.000	0.094	0.371	0.096	0.206	0.062	0.000	0.829

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 190.480  
 TOTAL HOURS OF STABILITY CLASS A 17.590  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 17.590

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.50 METER LEVEL  
 WIND SPEED MEASURED AT 10.50 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/08/17

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 < DELTA T < -1.7 C/100 M)

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.062	0.000	0.000	0.000	0.000	0.071
NNE	0.000	0.000	0.000	0.000	0.010	0.006	0.000	0.000	0.000	0.000	0.016
NE	0.000	0.000	0.000	0.000	0.000	0.008	0.000	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	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.005	0.000	0.015	0.000	0.000	0.000	0.000	0.020
SE	0.000	0.000	0.025	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SSE	0.000	0.000	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.015
S	0.000	0.000	0.020	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.034
SSW	0.000	0.000	0.006	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.037
SW	0.000	0.000	0.001	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.008
WSW	0.000	0.000	0.000	0.012	0.039	0.017	0.000	0.000	0.000	0.000	0.068
W	0.000	0.000	0.000	0.006	0.033	0.021	0.000	0.000	0.000	0.000	0.060
WNW	0.000	0.000	0.000	0.000	0.000	0.050	0.028	0.000	0.000	0.000	0.078
NW	0.000	0.000	0.000	0.000	0.000	0.035	0.009	0.000	0.000	0.000	0.044
NNW	0.000	0.000	0.000	0.000	0.000	0.030	0.000	0.000	0.000	0.000	0.030
SUBTOTAL	0.000	0.000	0.058	0.105	0.091	0.243	0.037	0.000	0.000	0.000	0.534
TOTAL HOURS OF VALID OBSERVATIONS				2122.000							
TOTAL HOURS OF GROUND LEVEL RELEASE				190.480							
TOTAL HOURS OF STABILITY CLASS B				11.340							
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B				11.340							

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
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

DATE PRINTED: 2001/08/17



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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.028	0.014	0.000	0.000	0.000	0.000	0.042
NNE	0.000	0.000	0.000	0.001	0.016	0.025	0.000	0.000	0.000	0.000	0.042
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.001	0.031	0.008	0.000	0.000	0.000	0.000	0.000	0.039
SE	0.000	0.000	0.001	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.027
SSE	0.000	0.000	0.010	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.011
S	0.000	0.000	0.004	0.041	0.010	0.000	0.000	0.000	0.000	0.000	0.055
SSW	0.000	0.000	0.008	0.007	0.015	0.000	0.000	0.000	0.000	0.000	0.030
SW	0.000	0.000	0.005	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.015
WSW	0.000	0.000	0.000	0.012	0.013	0.009	0.000	0.000	0.000	0.000	0.033
W	0.000	0.000	0.000	0.000	0.027	0.032	0.000	0.000	0.000	0.000	0.059
WNW	0.000	0.000	0.000	0.000	0.015	0.035	0.046	0.000	0.000	0.000	0.095
NW	0.000	0.000	0.000	0.000	0.017	0.016	0.000	0.000	0.000	0.000	0.034
NNW	0.000	0.000	0.000	0.000	0.010	0.013	0.000	0.000	0.000	0.000	0.023
SUBTOTAL	0.000	0.000	0.029	0.129	0.159	0.145	0.046	0.000	0.000	0.000	0.507
TOTAL HOURS OF VALID OBSERVATIONS				2122.000							
TOTAL HOURS OF GROUND LEVEL RELEASE				190.480							
TOTAL HOURS OF STABILITY CLASS C				14.510							
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C				10.760							

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.026	0.053	0.115	0.000	0.000	0.000	0.000	0.194
NNE	0.000	0.000	0.000	0.014	0.057	0.041	0.000	0.000	0.000	0.000	0.112
NE	0.000	0.000	0.001	0.000	0.011	0.008	0.000	0.000	0.000	0.000	0.020
ENE	0.000	0.000	0.000	0.019	0.006	0.000	0.000	0.000	0.000	0.000	0.025
E	0.000	0.000	0.001	0.039	0.015	0.000	0.000	0.000	0.000	0.000	0.056
ESE	0.000	0.000	0.030	0.067	0.123	0.000	0.000	0.000	0.000	0.000	0.221
SE	0.000	0.000	0.066	0.086	0.029	0.000	0.000	0.000	0.000	0.000	0.180
SSE	0.000	0.000	0.060	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.154
S	0.000	0.000	0.171	0.352	0.087	0.000	0.000	0.000	0.000	0.000	0.610
SSW	0.000	0.000	0.018	0.159	0.077	0.076	0.000	0.000	0.000	0.000	0.331
SW	0.000	0.000	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.024
WSW	0.000	0.000	0.013	0.072	0.027	0.026	0.000	0.000	0.000	0.000	0.138
W	0.000	0.000	0.001	0.069	0.106	0.045	0.000	0.000	0.000	0.000	0.221
WNW	0.000	0.000	0.000	0.005	0.010	0.099	0.042	0.000	0.000	0.000	0.156
NW	0.000	0.000	0.000	0.006	0.024	0.117	0.188	0.000	0.000	0.000	0.335
NNW	0.000	0.000	0.000	0.009	0.052	0.071	0.000	0.000	0.000	0.000	0.132
SUBTOTAL	0.000	0.000	0.374	1.029	0.676	0.598	0.230	0.000	0.000	0.000	2.909

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 190.480  
 TOTAL HOURS OF STABILITY CLASS D 1042.420  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 61.720

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)							18.5-24.4	>=24.5	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			
N	0.000	0.000	0.013	0.025	0.020	0.009	0.000	0.000	0.000	0.066	
NNE	0.000	0.000	0.014	0.026	0.014	0.000	0.000	0.000	0.000	0.055	
NE	0.000	0.000	0.003	0.000	0.014	0.000	0.000	0.000	0.000	0.017	
ENE	0.000	0.002	0.012	0.042	0.005	0.000	0.000	0.000	0.000	0.061	
E	0.000	0.004	0.070	0.110	0.000	0.000	0.000	0.000	0.000	0.185	
ESE	0.000	0.003	0.158	0.171	0.019	0.000	0.000	0.000	0.000	0.350	
SE	0.000	0.007	0.096	0.083	0.038	0.000	0.000	0.000	0.000	0.224	
SSE	0.000	0.000	0.196	0.054	0.000	0.000	0.000	0.000	0.000	0.250	
S	0.000	0.009	0.210	0.251	0.190	0.010	0.000	0.000	0.000	0.671	
SSW	0.000	0.005	0.069	0.062	0.000	0.000	0.000	0.000	0.000	0.136	
SW	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.014	
WSW	0.000	0.004	0.010	0.033	0.000	0.000	0.000	0.000	0.000	0.048	
W	0.000	0.000	0.008	0.036	0.000	0.000	0.000	0.000	0.000	0.044	
WNW	0.000	0.000	0.000	0.001	0.000	0.008	0.000	0.000	0.000	0.009	
NW	0.000	0.000	0.003	0.019	0.036	0.041	0.000	0.000	0.000	0.100	
NNW	0.000	0.000	0.003	0.054	0.070	0.034	0.000	0.000	0.000	0.162	
SUBTOTAL	0.000	0.033	0.880	0.969	0.405	0.102	0.000	0.000	0.000	2.390	

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 190.480  
 TOTAL HOURS OF STABILITY CLASS E 780.430  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 50.710

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	WIND SPEED (MPH)							TOTAL		
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4		18.5-24.4	>=24.5
N	0.000	0.005	0.053	0.103	0.008	0.000	0.000	0.000	0.000	0.169
NNE	0.000	0.000	0.026	0.063	0.015	0.000	0.000	0.000	0.000	0.104
NE	0.000	0.005	0.000	0.006	0.008	0.000	0.000	0.000	0.000	0.018
ENE	0.000	0.000	0.016	0.013	0.000	0.000	0.000	0.000	0.000	0.029
E	0.000	0.010	0.068	0.068	0.000	0.000	0.000	0.000	0.000	0.146
ESE	0.000	0.015	0.082	0.012	0.000	0.000	0.000	0.000	0.000	0.110
SE	0.000	0.003	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.047
SSE	0.000	0.036	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.102
S	0.000	0.005	0.097	0.077	0.107	0.017	0.000	0.000	0.000	0.303
SSW	0.000	0.000	0.003	0.000	0.009	0.000	0.000	0.000	0.000	0.012
SW	0.000	0.011	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.015
WSW	0.000	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
W	0.000	0.000	0.000	0.000	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	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
NNW	0.000	0.001	0.011	0.066	0.008	0.000	0.000	0.000	0.000	0.086
SUBTOTAL	0.000	0.095	0.475	0.408	0.155	0.017	0.000	0.000	0.000	1.150

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 190.480  
 TOTAL HOURS OF STABILITY CLASS F 207.510  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 24.400

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/08/17

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.078	0.112	0.000	0.000	0.000	0.000	0.000	0.190
NNE	0.000	0.000	0.026	0.023	0.000	0.000	0.000	0.000	0.000	0.049
NE	0.000	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.021
ENE	0.000	0.000	0.018	0.007	0.000	0.000	0.000	0.000	0.000	0.025
E	0.000	0.000	0.019	0.007	0.000	0.000	0.000	0.000	0.000	0.025
ESE	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
SE	0.000	0.021	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.038
SSE	0.000	0.019	0.126	0.010	0.000	0.000	0.000	0.000	0.000	0.155
S	0.000	0.000	0.091	0.040	0.000	0.000	0.000	0.000	0.000	0.131
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	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
WNW	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.001
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.003	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.018
SUBTOTAL	0.000	0.052	0.408	0.198	0.000	0.000	0.000	0.000	0.000	0.658

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 190.480  
 TOTAL HOURS OF STABILITY CLASS G 48.200  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 13.960

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/08/17

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 16**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL PORTION)**  
**THIRD QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	
N	0.000	0.000	0.001	0.008	0.124	0.000	0.000	0.000	0.134
NNE	0.000	0.000	0.000	0.006	0.120	0.000	0.000	0.000	0.126
NE	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
E	0.000	0.000	0.001	0.000	0.014	0.000	0.000	0.000	0.015
ESE	0.000	0.000	0.029	0.041	0.000	0.000	0.000	0.000	0.070
SE	0.000	0.021	0.071	0.014	0.000	0.000	0.000	0.000	0.106
SSE	0.000	0.065	0.042	0.000	0.000	0.000	0.000	0.000	0.107
S	0.000	0.048	0.038	0.000	0.000	0.000	0.000	0.000	0.086
SSW	0.000	0.037	0.023	0.000	0.000	0.000	0.000	0.000	0.060
SW	0.000	0.001	0.008	0.000	0.000	0.000	0.000	0.000	0.010
WSW	0.000	0.000	0.033	0.000	0.000	0.000	0.000	0.000	0.030
W	0.000	0.000	0.000	0.007	0.008	0.000	0.000	0.000	0.016
WNW	0.000	0.000	0.000	0.000	0.021	0.000	0.000	0.000	0.021
NW	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.008
NNW	0.000	0.000	0.000	0.007	0.046	0.000	0.000	0.000	0.053
SUBTOTAL	0.000	0.171	0.248	0.083	0.350	0.000	0.000	0.000	0.852

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS A 18.250  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 18.250

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.50 METER LEVEL  
 WIND SPEED MEASURED AT 10.50 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 < DELTA T < -1.7 C/100 M)

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.024	0.039	0.000	0.000	0.000	0.063
NNE	0.000	0.000	0.000	0.015	0.043	0.000	0.000	0.000	0.000	0.058
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	0.007	0.000	0.000	0.000	0.007
E	0.000	0.000	0.000	0.007	0.007	0.007	0.000	0.000	0.000	0.014
ESE	0.000	0.000	0.008	0.019	0.000	0.000	0.000	0.000	0.000	0.027
SE	0.000	0.021	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.037
SSE	0.000	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.017
S	0.000	0.034	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.057
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.006
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.004
WSW	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.012
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	0.004	0.021	0.021	0.000	0.000	0.000	0.025
NW	0.000	0.000	0.000	0.011	0.027	0.027	0.000	0.000	0.000	0.038
NNW	0.000	0.000	0.000	0.021	0.014	0.014	0.000	0.000	0.000	0.035
SUBTOTAL	0.000	0.082	0.056	0.104	0.159	0.159	0.000	0.000	0.000	0.401

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS B 9.600  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 8.600

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/12/18



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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.032	0.000	0.000	0.000	0.000	0.000	0.032
NNE	0.000	0.000	0.000	0.002	0.025	0.016	0.000	0.000	0.000	0.000	0.043
NE	0.000	0.000	0.000	0.000	0.010	0.006	0.000	0.000	0.000	0.000	0.015
ENE	0.000	0.000	0.000	0.001	0.000	0.005	0.000	0.000	0.000	0.000	0.007
E	0.000	0.000	0.000	0.008	0.004	0.000	0.000	0.000	0.000	0.000	0.013
ESE	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
SE	0.000	0.000	0.016	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.022
SSE	0.000	0.000	0.012	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.028
S	0.000	0.000	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.017
SSW	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.008
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.006
WNW	0.000	0.000	0.000	0.003	0.018	0.024	0.000	0.000	0.000	0.000	0.045
NW	0.000	0.000	0.000	0.000	0.013	0.020	0.000	0.000	0.000	0.000	0.033
NNW	0.000	0.000	0.000	0.001	0.010	0.005	0.000	0.000	0.000	0.000	0.016
	0.000	0.000	0.000	0.002	0.018	0.006	0.012	0.000	0.000	0.000	0.038
SUBTOTAL	0.000	0.000	0.046	0.055	0.134	0.082	0.012	0.000	0.000	0.000	0.329

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS C 26.470  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 7.040

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/12/18

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.035	0.063	0.033	0.000	0.000	0.000	0.130
NNE	0.000	0.000	0.021	0.022	0.059	0.000	0.000	0.000	0.000	0.103
NE	0.000	0.000	0.002	0.010	0.007	0.000	0.000	0.000	0.000	0.020
ENE	0.000	0.000	0.005	0.008	0.005	0.000	0.000	0.000	0.000	0.019
E	0.000	0.000	0.029	0.062	0.015	0.000	0.000	0.000	0.000	0.108
ESE	0.000	0.000	0.118	0.026	0.009	0.000	0.000	0.000	0.000	0.180
SE	0.000	0.000	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.129
SSE	0.000	0.000	0.157	0.024	0.000	0.000	0.000	0.000	0.000	0.181
S	0.000	0.000	0.254	0.000	0.000	0.000	0.000	0.000	0.000	0.380
SSW	0.000	0.000	0.165	0.064	0.000	0.000	0.000	0.000	0.000	0.229
SW	0.000	0.000	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.009
WSW	0.000	0.000	0.010	0.042	0.013	0.000	0.000	0.000	0.000	0.064
W	0.000	0.000	0.001	0.060	0.028	0.013	0.000	0.000	0.000	0.102
WNW	0.000	0.000	0.000	0.009	0.035	0.032	0.000	0.000	0.000	0.077
NW	0.000	0.000	0.002	0.015	0.014	0.014	0.000	0.000	0.000	0.031
NNW	0.000	0.000	0.012	0.042	0.070	0.070	0.050	0.000	0.000	0.174
SUBTOTAL	0.000	0.000	0.707	0.597	0.324	0.257	0.050	0.000	0.000	1.936

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS D 1172.280  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 41.460

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.50 METER LEVEL  
 WIND SPEED MEASURED AT 10.50 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 < DELTA T <= 1.5 C/100 M)

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.023	0.085	0.023	0.017	0.000	0.000	0.000	0.000	0.148
NNE	0.000	0.003	0.020	0.086	0.117	0.023	0.000	0.000	0.000	0.000	0.249
NE	0.000	0.002	0.007	0.010	0.019	0.000	0.000	0.000	0.000	0.000	0.039
ENE	0.000	0.003	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.028
E	0.000	0.006	0.050	0.092	0.015	0.000	0.000	0.000	0.000	0.000	0.163
ESE	0.000	0.013	0.081	0.079	0.008	0.000	0.000	0.000	0.000	0.000	0.181
SE	0.000	0.018	0.062	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.106
SSE	0.000	0.014	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.050
S	0.000	0.000	0.055	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.069
SSW	0.000	0.002	0.034	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.045
SW	0.000	0.001	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011
WSW	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.005
W	0.000	0.000	0.000	0.017	0.005	0.000	0.000	0.000	0.000	0.000	0.022
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.010
NW	0.000	0.000	0.000	0.003	0.006	0.007	0.000	0.000	0.000	0.000	0.016
NNW	0.000	0.004	0.029	0.046	0.052	0.000	0.000	0.000	0.000	0.000	0.132
SUBTOTAL	0.000	0.067	0.421	0.486	0.246	0.047	0.009	0.000	0.000	0.000	1.275
TOTAL HOURS OF VALID OBSERVATIONS				2142.000							
TOTAL HOURS OF GROUND LEVEL RELEASE				125.970							
TOTAL HOURS OF STABILITY CLASS E				719.440							
TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E				27.310							

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/12/18

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

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	WIND SPEED (MPH)										TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.000	0.049	0.115	0.000	0.000	0.000	0.000	0.000	0.000	0.164
NNE	0.000	0.000	0.040	0.090	0.026	0.000	0.000	0.000	0.000	0.000	0.156
NE	0.000	0.001	0.030	0.023	0.023	0.000	0.000	0.000	0.000	0.000	0.078
ENE	0.000	0.007	0.028	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.090
E	0.000	0.005	0.077	0.066	0.000	0.000	0.000	0.000	0.000	0.000	0.148
ESE	0.000	0.000	0.009	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.013
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.001	0.016	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.024
SUBTOTAL	0.000	0.014	0.251	0.360	0.049	0.007	0.000	0.000	0.000	0.000	0.682

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS F 157.000  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 14.610

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 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

DATE PRINTED: 2001/12/18

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry NP (new sensor)

PART 1 OF 2 GROUND LEVEL RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.004	0.096	0.160	0.000	0.000	0.000	0.000	0.000	0.260
NNE	0.000	0.000	0.020	0.043	0.000	0.000	0.000	0.000	0.000	0.063
NE	0.000	0.000	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.018
ENE	0.000	0.000	0.006	0.015	0.000	0.000	0.000	0.000	0.000	0.021
E	0.000	0.001	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.008
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.013	0.022	0.000	0.000	0.000	0.000	0.000	0.035
SUBTOTAL	0.000	0.006	0.156	0.244	0.000	0.000	0.000	0.000	0.000	0.406

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 125.970  
 TOTAL HOURS OF STABILITY CLASS G 38.960  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 8.700

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 10.03 AND 45.30 METERS  
 WIND DIRECTION MEASURED AT 10.50 METER LEVEL  
 WIND SPEED MEASURED AT 10.50 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 17**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(GROUND LEVEL PORTION)**  
**FOURTH QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.123	0.009	0.000	0.000	0.000	0.133
NNE	0.000	0.000	0.000	0.000	0.000	0.066	0.019	0.000	0.000	0.000	0.085
NE	0.000	0.000	0.000	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.007
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001
ESE	0.000	0.000	0.000	0.000	0.085	0.047	0.000	0.000	0.000	0.000	0.133
SE	0.000	0.000	0.000	0.036	0.008	0.000	0.000	0.000	0.000	0.000	0.044
SSE	0.000	0.000	0.003	0.117	0.000	0.000	0.000	0.000	0.000	0.000	0.120
S	0.000	0.000	0.010	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.035
SSW	0.000	0.000	0.006	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.053
SW	0.000	0.000	0.000	0.011	0.007	0.000	0.000	0.000	0.000	0.000	0.018
WSW	0.000	0.000	0.000	0.004	0.008	0.016	0.000	0.000	0.000	0.000	0.028
W	0.000	0.000	0.000	0.000	0.015	0.029	0.000	0.000	0.000	0.000	0.044
WNW	0.000	0.000	0.000	0.000	0.000	0.027	0.044	0.000	0.000	0.000	0.071
NW	0.000	0.000	0.000	0.000	0.000	0.045	0.047	0.026	0.000	0.000	0.118
NNW	0.000	0.000	0.000	0.000	0.005	0.100	0.000	0.000	0.000	0.000	0.105
SUBTOTAL	0.000	0.000	0.019	0.241	0.128	0.460	0.120	0.026	0.000	0.000	0.994

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS A 21.380  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS A 21.380

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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.001	0.004	0.057	0.000	0.000	0.000	0.062
NNE	0.000	0.000	0.000	0.000	0.010	0.030	0.000	0.000	0.000	0.040
NE	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.000	0.000	0.035
ENE	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.000	0.009
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	0.013	0.030	0.000	0.000	0.000	0.000	0.043
SE	0.000	0.000	0.000	0.012	0.023	0.011	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.020
S	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.014
SSW	0.000	0.000	0.000	0.014	0.000	0.000	0.000	0.000	0.000	0.014
SW	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.008
WSW	0.000	0.000	0.000	0.000	0.007	0.008	0.000	0.000	0.000	0.014
W	0.000	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.028
WNW	0.000	0.000	0.000	0.000	0.007	0.042	0.057	0.000	0.000	0.106
NW	0.000	0.000	0.000	0.000	0.009	0.024	0.034	0.000	0.000	0.068
NNW	0.000	0.000	0.000	0.000	0.000	0.016	0.000	0.000	0.000	0.016
SUBTOTAL	0.000	0.000	0.000	0.063	0.110	0.260	0.091	0.000	0.000	0.524

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS B 11.270  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS B 11.270

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12



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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.015	0.000	0.000	0.000	0.000	0.034
NNE	0.000	0.000	0.000	0.002	0.021	0.021	0.000	0.000	0.000	0.000	0.045
NE	0.000	0.000	0.000	0.000	0.007	0.033	0.000	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	0.000
E	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.003
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.039	0.026	0.013	0.000	0.000	0.000	0.000	0.079
SSE	0.000	0.000	0.007	0.009	0.012	0.000	0.000	0.000	0.000	0.000	0.028
S	0.000	0.000	0.007	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.027
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.004	0.018	0.000	0.000	0.000	0.000	0.000	0.022
W	0.000	0.000	0.000	0.001	0.000	0.011	0.000	0.000	0.000	0.000	0.012
WNW	0.000	0.000	0.000	0.000	0.001	0.031	0.010	0.000	0.000	0.000	0.042
NW	0.000	0.000	0.000	0.001	0.000	0.013	0.000	0.000	0.000	0.000	0.014
NNW	0.000	0.000	0.000	0.000	0.022	0.024	0.000	0.000	0.000	0.000	0.046
SUBTOTAL	0.000	0.000	0.014	0.075	0.127	0.162	0.010	0.000	0.000	0.000	0.389

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS C 13.950  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS C 8.360

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

DATE PRINTED: 2002/02/12

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.041	0.051	0.167	0.000	0.000	0.000	0.260
NNE	0.000	0.000	0.000	0.019	0.057	0.048	0.000	0.000	0.000	0.125
NE	0.000	0.000	0.000	0.002	0.013	0.025	0.000	0.000	0.000	0.040
ENE	0.000	0.000	0.000	0.000	0.028	0.000	0.000	0.000	0.000	0.028
E	0.000	0.000	0.001	0.012	0.000	0.009	0.000	0.000	0.000	0.022
ESE	0.000	0.000	0.009	0.156	0.297	0.220	0.000	0.000	0.000	0.681
SE	0.000	0.000	0.015	0.116	0.094	0.355	0.000	0.000	0.000	0.580
SSE	0.000	0.000	0.048	0.250	0.035	0.000	0.000	0.000	0.000	0.334
S	0.000	0.000	0.062	0.227	0.047	0.064	0.000	0.000	0.000	0.400
SSW	0.000	0.000	0.021	0.065	0.025	0.000	0.000	0.000	0.000	0.110
SW	0.000	0.000	0.003	0.007	0.026	0.009	0.000	0.000	0.000	0.045
WSW	0.000	0.000	0.005	0.016	0.059	0.016	0.039	0.000	0.000	0.134
W	0.000	0.000	0.000	0.019	0.035	0.055	0.033	0.000	0.000	0.142
WNW	0.000	0.000	0.000	0.008	0.043	0.068	0.096	0.067	0.000	0.282
NW	0.000	0.000	0.000	0.012	0.018	0.152	0.247	0.047	0.000	0.474
NNW	0.000	0.000	0.000	0.002	0.023	0.081	0.020	0.000	0.000	0.127
SUBTOTAL	0.000	0.000	0.166	0.952	0.852	1.269	0.434	0.113	0.000	3.786

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS D 880.320  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS D 81.390

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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.062	0.053	0.043	0.000	0.000	0.000	0.168
NNE	0.000	0.000	0.000	0.046	0.015	0.017	0.000	0.000	0.000	0.078
NE	0.000	0.000	0.008	0.012	0.021	0.000	0.000	0.000	0.000	0.041
ENE	0.000	0.000	0.001	0.006	0.000	0.000	0.000	0.000	0.000	0.007
E	0.000	0.000	0.012	0.039	0.000	0.000	0.000	0.000	0.000	0.051
ESE	0.000	0.000	0.057	0.247	0.157	0.010	0.000	0.000	0.000	0.471
SE	0.000	0.008	0.129	0.402	0.057	0.045	0.000	0.000	0.000	0.640
SSE	0.000	0.000	0.157	0.785	0.396	0.180	0.000	0.000	0.000	1.518
S	0.000	0.000	0.134	0.272	0.163	0.278	0.000	0.000	0.000	0.847
SSW	0.000	0.000	0.026	0.044	0.010	0.009	0.000	0.000	0.000	0.088
SW	0.000	0.000	0.000	0.013	0.008	0.000	0.000	0.000	0.000	0.021
WSW	0.000	0.000	0.013	0.003	0.000	0.000	0.000	0.000	0.000	0.017
W	0.000	0.000	0.011	0.018	0.033	0.015	0.000	0.000	0.000	0.077
WNW	0.000	0.000	0.006	0.000	0.000	0.026	0.009	0.000	0.000	0.041
NW	0.000	0.000	0.003	0.053	0.033	0.088	0.029	0.000	0.000	0.207
NNW	0.000	0.000	0.004	0.040	0.052	0.050	0.000	0.000	0.000	0.146
SUBTOTAL	0.000	0.008	0.573	2.040	0.999	0.761	0.038	0.000	0.000	4.419

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS E 723.250  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS E 95.010

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

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

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

Browns Ferry Nuclear Plant

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.070	0.137	0.023	0.000	0.000	0.000	0.000	0.230
NNE	0.000	0.004	0.013	0.165	0.046	0.019	0.000	0.000	0.000	0.246
NE	0.000	0.013	0.000	0.025	0.040	0.000	0.000	0.000	0.000	0.077
ENE	0.000	0.007	0.033	0.007	0.008	0.000	0.000	0.000	0.000	0.055
E	0.000	0.003	0.049	0.065	0.000	0.000	0.000	0.000	0.000	0.117
ESE	0.000	0.004	0.152	0.064	0.000	0.000	0.000	0.000	0.000	0.220
SE	0.000	0.009	0.150	0.063	0.010	0.000	0.000	0.000	0.000	0.231
SSE	0.000	0.021	0.159	0.187	0.325	0.000	0.000	0.000	0.000	0.691
S	0.000	0.000	0.051	0.060	0.020	0.107	0.000	0.000	0.000	0.238
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	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.002
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	0.004	0.016	0.007	0.009	0.000	0.000	0.000	0.036
NNW	0.000	0.000	0.039	0.097	0.024	0.000	0.000	0.000	0.000	0.160
SUBTOTAL	0.000	0.060	0.721	0.886	0.502	0.134	0.000	0.000	0.000	2.303

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS F 314.860  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS F 49.510

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

DATE PRINTED: 2002/02/12

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

PART 1 OF 2 GROUND LEVEL RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.004	0.102	0.209	0.008	0.000	0.000	0.000	0.000	0.323
NNE	0.000	0.005	0.042	0.048	0.018	0.000	0.000	0.000	0.000	0.112
NE	0.000	0.006	0.054	0.007	0.000	0.000	0.000	0.000	0.000	0.067
ENE	0.000	0.006	0.036	0.021	0.000	0.000	0.000	0.000	0.000	0.062
E	0.000	0.027	0.040	0.011	0.000	0.000	0.000	0.000	0.000	0.078
ESE	0.000	0.018	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.032
SE	0.000	0.032	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.066
SSE	0.000	0.029	0.080	0.012	0.000	0.000	0.000	0.000	0.000	0.121
S	0.000	0.007	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.032
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	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.013	0.002	0.000	0.000	0.000	0.000	0.000	0.004
NNW	0.000	0.000	0.039	0.033	0.000	0.000	0.000	0.000	0.000	0.015
SUBTOTAL	0.000	0.135	0.480	0.344	0.026	0.000	0.000	0.000	0.000	0.985

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF GROUND LEVEL RELEASE 288.090  
 TOTAL HOURS OF STABILITY CLASS G 184.970  
 TOTAL HOURS OF GROUND LEVEL STABILITY CLASS G 21.170

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

DATE PRINTED: 2002/02/12

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 18**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(ELEVATED PORTION)**  
**FIRST QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS A 12.070  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 0.000

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS B 8.300  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 0.000

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16



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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.000	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	0.043
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.041
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	0.000	0.000	0.043	0.041	0.000	0.084

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS C 11.940  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 1.650

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

WIND DIRECTION	WIND SPEED (MPH)										TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.051	0.153	0.561	0.492	2.898	1.248	0.030	0.000	5.432	
NNE	0.000	0.000	0.102	0.459	0.988	3.274	1.117	0.000	0.000	5.939	
NE	0.000	0.051	0.051	0.204	0.542	0.944	0.209	0.000	0.000	2.002	
ENE	0.000	0.000	0.255	0.612	0.197	0.184	0.000	0.000	0.000	1.247	
E	0.000	0.000	0.255	0.408	0.592	0.462	0.000	0.000	0.000	1.717	
ESE	0.000	0.000	0.051	0.408	0.881	0.903	0.166	0.000	0.000	2.409	
SE	0.000	0.000	0.153	0.561	0.393	0.446	0.457	0.171	0.010	2.191	
SSE	0.000	0.000	0.306	0.408	0.249	0.314	0.374	0.090	0.007	1.747	
S	0.000	0.000	0.204	0.306	0.245	0.831	0.335	0.000	0.000	1.921	
SSW	0.000	0.051	0.204	0.102	0.048	0.574	0.084	0.000	0.000	1.062	
SW	0.000	0.000	0.408	0.255	0.049	0.365	0.123	0.036	0.000	1.235	
WSW	0.000	0.000	0.255	0.408	0.345	0.134	0.375	0.000	0.000	1.516	
W	0.000	0.000	0.255	0.459	0.592	1.341	0.564	0.101	0.000	3.412	
WNW	0.000	0.000	0.255	0.866	0.497	2.269	1.076	0.136	0.000	5.100	
NW	0.000	0.051	0.102	0.255	0.391	2.124	3.365	0.410	0.000	6.698	
NNW	0.000	0.000	0.051	0.153	0.246	1.768	1.706	0.040	0.000	3.964	
SUBTOTAL	0.000	0.204	3.058	6.422	6.747	18.832	11.299	1.015	0.016	47.593	

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS D 1013.900  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 933.780

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	0.102	0.153	1.017	1.212	0.084	0.021	0.000	2.589	
NNE	0.000	0.051	0.204	0.780	1.222	0.125	0.040	0.000	2.422	
NE	0.000	0.153	0.510	0.492	1.260	0.169	0.040	0.000	2.624	
ENE	0.000	0.000	0.357	0.394	0.402	0.000	0.000	0.000	1.153	
E	0.000	0.051	0.561	0.441	0.589	0.000	0.000	0.000	1.744	
ESE	0.000	0.000	0.561	0.583	0.717	0.169	0.036	0.000	2.065	
SE	0.000	0.204	0.663	0.689	1.593	1.034	0.215	0.018	4.416	
SSE	0.000	0.051	0.306	0.595	1.203	0.334	0.074	0.000	2.563	
S	0.000	0.153	0.204	0.440	0.747	0.251	0.066	0.000	1.861	
SSW	0.000	0.153	0.255	0.689	0.631	0.167	0.000	0.000	1.894	
SW	0.000	0.255	0.255	0.293	0.358	0.041	0.000	0.002	1.203	
WSW	0.000	0.000	0.459	0.148	0.273	0.000	0.000	0.000	0.931	
W	0.000	0.051	0.204	0.488	0.490	0.042	0.000	0.000	1.428	
WNW	0.000	0.153	0.102	0.491	0.900	0.208	0.000	0.000	1.854	
NW	0.000	0.051	0.051	0.248	1.035	0.498	0.000	0.000	1.883	
NNW	0.000	0.102	0.306	0.298	0.896	0.333	0.000	0.000	1.934	
SUBTOTAL	0.000	1.733	5.148	8.086	13.529	3.454	0.492	0.020	32.563	

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS E 698.170  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 638.890

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/05/16

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 < DELTA T <= 4.0 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

WIND DIRECTION	WIND SPEED (MPH)								TOTAL	
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4		>=24.5
N	0.000	0.000	0.000	0.102	0.243	0.271	0.000	0.000	0.000	0.616
NNE	0.000	0.000	0.000	0.051	0.000	0.262	0.084	0.000	0.000	0.398
NE	0.000	0.000	0.000	0.102	0.297	0.402	0.127	0.000	0.000	0.927
ENE	0.000	0.051	0.000	0.000	0.096	0.092	0.042	0.000	0.000	0.282
E	0.000	0.000	0.051	0.000	0.000	0.133	0.000	0.000	0.000	0.184
ESE	0.000	0.000	0.000	0.102	0.049	0.266	0.042	0.000	0.000	0.459
SE	0.000	0.000	0.000	0.102	0.437	0.770	0.000	0.000	0.000	1.308
SSE	0.000	0.000	0.000	0.102	0.250	0.229	0.000	0.000	0.000	0.683
S	0.000	0.000	0.000	0.204	0.250	0.229	0.000	0.000	0.000	0.867
SSW	0.000	0.000	0.051	0.357	0.194	0.266	0.000	0.000	0.000	0.581
SW	0.000	0.000	0.051	0.204	0.145	0.181	0.000	0.000	0.000	0.245
WSW	0.000	0.000	0.051	0.000	0.147	0.046	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	0.102	0.102	0.048	0.000	0.000	0.000	0.000	0.252
NW	0.000	0.000	0.000	0.051	0.000	0.091	0.000	0.000	0.000	0.142
NNW	0.000	0.000	0.051	0.051	0.000	0.088	0.000	0.000	0.000	0.190
	0.000	0.000	0.000	0.051	0.048	0.178	0.000	0.000	0.000	0.278
SUBTOTAL	0.000	0.051	0.357	1.478	1.955	3.275	0.296	0.000	0.000	7.411

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS F 181.340  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 145.410

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

JAN 1, 2001 - MAR 31, 2001

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	TOTAL	
N	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.087	0.000	0.000	0.000	0.000	0.087
ENE	0.000	0.000	0.000	0.000	0.000	0.087	0.000	0.000	0.000	0.000	0.087
E	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051
ESE	0.000	0.000	0.000	0.051	0.049	0.135	0.000	0.000	0.000	0.000	0.235
SE	0.000	0.000	0.051	0.102	0.195	0.092	0.000	0.000	0.000	0.000	0.439
SSE	0.000	0.000	0.000	0.102	0.098	0.000	0.000	0.000	0.000	0.000	0.200
S	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.000	0.000	0.100
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102
NNW	0.000	0.000	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.051
SUBTOTAL	0.000	0.102	0.204	0.255	0.442	0.400	0.000	0.000	0.000	0.000	1.403

TOTAL HOURS OF VALID OBSERVATIONS 1962.000  
 TOTAL HOURS OF ELEVATED RELEASES 1747.250  
 TOTAL HOURS OF STABILITY CLASS G 36.280  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 27.520

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.67 METER LEVEL  
 WIND SPEED MEASURED AT 45.67 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 19**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(ELEVATED PORTION)**  
**SECOND QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS A 17.590  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 0.000

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS B 11.340  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 0.000

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17



SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.047	0.000	0.000	0.000	0.000	0.000	0.047
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
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	0.041	0.000	0.000	0.000	0.041
W	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.044
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	0.047	0.089	0.041	0.000	0.000	0.000	0.177

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS C 14.510  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 3.750

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

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	0.377	0.678	1.652	0.812	0.000	0.000	0.000	3.519
NNE	0.000	0.000	0.047	0.471	0.407	1.121	0.077	0.000	0.000	0.000	2.123
NE	0.000	0.000	0.047	0.094	0.000	0.123	0.000	0.000	0.000	0.000	0.264
ENE	0.000	0.000	0.000	0.283	0.182	0.000	0.000	0.000	0.000	0.000	0.465
E	0.000	0.000	0.047	0.189	0.228	0.044	0.000	0.000	0.000	0.000	0.507
ESE	0.000	0.000	0.236	0.660	0.501	0.546	0.156	0.000	0.000	0.000	2.098
SE	0.000	0.000	0.754	1.131	1.784	1.989	0.691	0.059	0.000	0.000	6.409
SSE	0.000	0.000	0.236	0.990	1.000	1.371	0.465	0.049	0.000	0.001	4.110
S	0.000	0.000	0.660	0.943	0.501	1.389	1.765	0.410	0.000	0.000	5.667
SSW	0.000	0.000	0.283	0.707	0.722	1.929	1.305	0.213	0.004	0.000	5.164
SW	0.000	0.000	0.377	0.754	1.090	1.296	0.076	0.000	0.000	0.000	3.593
WSW	0.000	0.000	0.283	0.566	0.684	1.379	0.270	0.000	0.000	0.000	3.181
W	0.000	0.000	0.236	0.518	0.459	1.542	0.193	0.000	0.000	0.000	2.947
WNW	0.000	0.000	0.094	0.236	0.501	0.618	0.770	0.130	0.000	0.000	2.348
NW	0.000	0.000	0.094	0.471	0.223	0.490	0.882	0.161	0.000	0.000	2.322
NNW	0.000	0.000	0.000	0.094	0.316	0.779	0.308	0.000	0.000	0.000	1.498
SUBTOTAL	0.000	0.000	3.393	8.483	9.276	16.267	7.770	1.022	0.005	0.000	46.216

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS D 1042.420  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 980.700

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	WIND SPEED (MPH)										TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.047	0.047	0.283	0.584	0.450	0.156	0.025	0.000	1.592	
NNE	0.000	0.000	0.189	0.424	0.177	0.627	0.039	0.000	0.000	1.455	
NE	0.000	0.000	0.236	0.094	0.138	0.251	0.000	0.000	0.000	0.718	
ENE	0.000	0.000	0.047	0.236	0.183	0.214	0.000	0.000	0.000	0.680	
E	0.000	0.000	0.094	0.189	0.367	0.513	0.000	0.000	0.000	1.163	
ESE	0.000	0.000	0.094	0.518	0.902	1.837	0.114	0.000	0.000	3.466	
SE	0.000	0.000	0.471	0.613	1.272	2.414	0.576	0.000	0.000	5.346	
SSE	0.000	0.000	0.424	0.801	1.137	1.400	0.929	0.000	0.000	4.691	
S	0.000	0.094	0.424	0.471	0.772	1.729	1.726	0.159	0.022	5.397	
SSW	0.000	0.000	0.283	0.801	0.359	1.365	0.424	0.000	0.000	3.232	
SW	0.000	0.000	0.471	0.613	0.410	0.338	0.000	0.000	0.000	1.832	
WSW	0.000	0.000	0.141	0.424	0.091	0.206	0.000	0.000	0.000	0.863	
W	0.000	0.000	0.000	0.471	0.224	0.082	0.000	0.000	0.000	0.778	
WNW	0.000	0.000	0.047	0.141	0.136	0.082	0.039	0.000	0.000	0.446	
NW	0.000	0.000	0.141	0.141	0.135	0.450	0.193	0.000	0.000	1.061	
NNW	0.000	0.000	0.094	0.189	0.450	0.782	0.155	0.000	0.000	1.669	
SUBTOTAL	0.000	0.141	3.205	6.409	7.337	12.740	4.350	0.184	0.022	34.388	

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS E 780.430  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 729.720

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	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
CALM	0.000	0.047	0.047	0.000	0.496	0.000	0.000	0.000	0.590
N	0.000	0.047	0.189	0.091	0.856	0.000	0.000	0.000	1.183
NNE	0.000	0.047	0.189	0.319	0.617	0.039	0.000	0.000	1.211
NE	0.000	0.141	0.047	0.137	0.125	0.000	0.000	0.000	0.450
ENE	0.000	0.000	0.094	0.044	0.252	0.000	0.000	0.000	0.391
E	0.000	0.000	0.047	0.183	0.205	0.000	0.000	0.000	0.435
ESE	0.000	0.047	0.094	0.228	0.214	0.000	0.000	0.000	0.725
SE	0.000	0.141	0.094	0.045	0.000	0.000	0.000	0.000	0.280
SSE	0.000	0.141	0.094	0.141	0.207	0.000	0.000	0.000	0.867
S	0.000	0.094	0.330	0.321	0.083	0.039	0.000	0.000	0.915
SSW	0.000	0.236	0.236	0.091	0.000	0.000	0.000	0.000	0.986
SW	0.000	0.047	0.283	0.000	0.000	0.000	0.000	0.000	0.094
WSW	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.133
W	0.000	0.047	0.047	0.044	0.042	0.000	0.000	0.000	0.139
WNW	0.000	0.047	0.047	0.045	0.000	0.000	0.000	0.000	0.141
NW	0.000	0.047	0.094	0.000	0.000	0.000	0.000	0.000	0.088
NNW	0.000	0.000	0.047	0.000	0.041	0.000	0.000	0.000	0.088
SUBTOTAL	0.000	1.367	2.168	1.690	3.138	0.078	0.000	0.000	8.629

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS F 207.510  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 183.110

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	WIND SPEED (MPH)						TOTAL			
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4		12.5-18.4	18.5-24.4	>=24.5
N	0.000	0.000	0.047	0.000	0.000	0.119	0.078	0.000	0.000	0.245
NNE	0.000	0.000	0.047	0.094	0.091	0.202	0.078	0.000	0.000	0.513
NE	0.000	0.000	0.047	0.094	0.000	0.124	0.039	0.000	0.000	0.305
ENE	0.000	0.000	0.047	0.000	0.000	0.042	0.000	0.000	0.000	0.089
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	0.000	0.000	0.000	0.041
SE	0.000	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.092
SSE	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.094
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	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.093
SW	0.000	0.000	0.047	0.000	0.046	0.000	0.000	0.000	0.000	0.047
WSW	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.047	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	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
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	0.330	0.330	0.230	0.529	0.196	0.000	0.000	1.614

TOTAL HOURS OF VALID OBSERVATIONS 2122.000  
 TOTAL HOURS OF ELEVATED RELEASES 1931.520  
 TOTAL HOURS OF STABILITY CLASS G 48.200  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 34.240

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 20**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(ELEVATED PORTION)**  
**THIRD QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID OBSERVATIONS 2142.000

2016.030

TOTAL HOURS OF ELEVATED RELEASES 18.250

TOTAL HOURS OF STABILITY CLASS A 0.000

TOTAL HOURS OF ELEVATED STABILITY CLASS A

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)

STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS

WIND DIRECTION MEASURED AT 45.74 METER LEVEL

WIND SPEED MEASURED AT 45.74 METER LEVEL

EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 < DELTA T <= -1.7 C/100 M)

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS B 9.600  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 1.000

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL  
 WIND SPEED MEASURED AT 45.74 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 <= -1.5 C/100 M)

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.093	0.319	0.000	0.000	0.000	0.000	0.412
SSE	0.000	0.000	0.000	0.093	0.043	0.000	0.000	0.000	0.000	0.137
S	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SSW	0.000	0.000	0.000	0.000	0.044	0.000	0.000	0.000	0.000	0.044
SW	0.000	0.000	0.000	0.047	0.045	0.043	0.000	0.000	0.000	0.134
WSW	0.000	0.000	0.000	0.000	0.133	0.000	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	0.280	0.584	0.043	0.000	0.000	0.000	0.907

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS C 26.470  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 19.430

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL  
 WIND SPEED MEASURED AT 45.74 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 <= -0.5 C/100 M)

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.280	0.187	0.357	1.883	0.500	0.024	0.000	3.230	
NNE	0.000	0.000	0.187	0.327	0.719	1.222	0.498	0.000	0.000	2.953	
NE	0.000	0.000	0.140	0.187	0.090	0.122	0.039	0.000	0.000	0.577	
ENE	0.000	0.000	0.047	0.373	0.135	0.125	0.000	0.000	0.000	0.681	
E	0.000	0.000	0.187	0.187	0.137	0.363	0.039	0.000	0.000	0.912	
ESE	0.000	0.047	0.140	0.560	0.453	1.108	0.193	0.000	0.000	2.500	
SE	0.000	0.047	1.074	1.867	0.957	1.179	0.570	0.000	0.000	5.694	
SSE	0.000	0.000	0.747	1.727	1.451	1.993	1.374	0.000	0.000	7.363	
S	0.000	0.047	1.074	2.101	1.885	2.503	0.871	0.000	0.000	8.480	
SSW	0.000	0.000	0.934	1.494	1.630	1.363	0.114	0.000	0.000	5.535	
SW	0.000	0.000	1.074	1.821	0.946	0.212	0.039	0.000	0.000	4.091	
WSW	0.000	0.000	0.560	1.167	0.857	0.461	0.000	0.000	0.000	3.045	
W	0.000	0.000	0.373	0.840	0.674	0.621	0.077	0.000	0.000	2.586	
WNW	0.000	0.000	0.140	0.467	0.356	0.826	0.076	0.000	0.000	1.865	
NW	0.000	0.000	0.093	0.280	0.405	0.248	0.039	0.000	0.000	1.065	
NNW	0.000	0.000	0.233	0.093	0.808	0.742	0.305	0.035	0.000	2.216	
SUBTOTAL	0.000	0.140	7.283	13.679	11.857	14.972	4.733	0.128	0.000	52.793	

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS D 1172.280  
 TOTAL HOURS OF ELEVATED STABILITY CLASS D 1130.820

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/12/18

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)						18.5-24.4	>=24.5	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			
N	0.000	0.047	0.140	0.514	0.713	1.013	0.193	0.019	0.000	2.639
NNE	0.000	0.047	0.093	0.280	0.445	1.184	0.347	0.000	0.000	2.396
NE	0.000	0.047	0.280	0.233	0.275	0.947	0.039	0.000	0.000	1.821
ENE	0.000	0.047	0.233	0.560	0.182	0.208	0.039	0.000	0.000	1.268
E	0.000	0.000	0.373	0.514	0.494	0.382	0.000	0.000	0.000	1.763
ESE	0.000	0.000	0.467	1.027	1.717	1.413	0.000	0.000	0.000	4.624
SE	0.000	0.093	0.373	0.887	0.986	0.369	0.077	0.000	0.000	2.786
SSE	0.000	0.047	0.654	0.840	0.635	0.285	0.077	0.000	0.000	2.538
S	0.000	0.093	0.700	1.120	0.631	0.495	0.000	0.000	0.000	3.040
SSW	0.000	0.047	0.747	1.027	0.359	0.079	0.000	0.000	0.000	2.259
SW	0.000	0.000	0.747	0.327	0.269	0.043	0.000	0.000	0.000	1.387
WSW	0.000	0.047	0.514	0.747	0.092	0.126	0.000	0.000	0.000	1.526
W	0.000	0.047	0.093	0.467	0.270	0.248	0.000	0.000	0.000	1.125
WNW	0.000	0.047	0.047	0.280	0.093	0.125	0.037	0.000	0.000	0.629
NW	0.000	0.047	0.047	0.327	0.267	0.041	0.039	0.000	0.000	0.766
NNW	0.000	0.047	0.280	0.420	0.264	0.620	0.115	0.000	0.000	1.746
SUBTOTAL	0.000	0.700	5.789	9.570	7.692	7.579	0.962	0.019	0.000	32.312

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS E 719.440  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 692.130

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/12/18

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	
N	0.000	0.000	0.047	0.179	0.771	0.039	0.000	0.000	1.035
NNE	0.000	0.000	0.327	0.183	0.650	0.268	0.000	0.000	1.428
NE	0.000	0.093	0.140	0.178	0.403	0.077	0.000	0.000	0.892
ENE	0.000	0.093	0.093	0.180	0.295	0.000	0.000	0.000	0.661
E	0.000	0.000	0.047	0.269	0.123	0.000	0.000	0.000	0.439
ESE	0.000	0.000	0.047	0.181	0.293	0.000	0.000	0.000	0.521
SE	0.000	0.093	0.047	0.047	0.000	0.000	0.000	0.000	0.187
SSE	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
S	0.000	0.047	0.093	0.184	0.040	0.000	0.000	0.000	0.410
SSW	0.000	0.187	0.093	0.179	0.084	0.000	0.000	0.000	0.543
SW	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.093
WSW	0.000	0.000	0.047	0.047	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
WNW	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.093
NW	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	0.040	0.000	0.000	0.000	0.040
					0.119	0.000	0.000	0.000	0.119
SUBTOTAL	0.000	0.047	1.074	1.626	2.817	0.384	0.000	0.000	6.648

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS F 157.000  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 142.390

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL  
 WIND SPEED MEASURED AT 45.74 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2001/12/18

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 NP (new sensor)

PART 2 OF 2 ELEVATED RELEASE MODE

JUL 1, 2001 - SEP 30, 2001

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	0.093	0.000	0.080	0.039	0.000	0.000	0.259
NNE	0.000	0.000	0.000	0.044	0.204	0.000	0.344	0.000	0.000	0.592
NE	0.000	0.000	0.093	0.000	0.089	0.085	0.000	0.000	0.000	0.267
ENE	0.000	0.000	0.000	0.047	0.000	0.203	0.000	0.000	0.000	0.250
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.000	0.140	0.140	0.177	0.572	0.383	0.000	0.000	1.413

TOTAL HOURS OF VALID OBSERVATIONS 2142.000  
 TOTAL HOURS OF ELEVATED RELEASES 2016.030  
 TOTAL HOURS OF STABILITY CLASS G 38.960  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 30.260

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/12/18

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 21**  
**JOINT FREQUENCY DISTRIBUTION IN PERCENT**  
**FOR SPLIT LEVEL RELEASES**  
**(ELEVATED PORTION)**  
**FOURTH QUARTER**

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS A (DELTA T<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS A 21.380  
 TOTAL HOURS OF ELEVATED STABILITY CLASS A 0.000

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS B 11.270  
 TOTAL HOURS OF ELEVATED STABILITY CLASS B 0.000

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12



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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.084	0.038	0.000	0.000	0.121
SE	0.000	0.000	0.047	0.047	0.046	0.000	0.000	0.000	0.000	0.139
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.047	0.047	0.046	0.084	0.038	0.000	0.000	0.260

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS C 13.950  
 TOTAL HOURS OF ELEVATED STABILITY CLASS C 5.590

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.372	0.635	1.412	1.481	0.000	0.000	3.946
NNE	0.000	0.000	0.047	0.140	0.803	1.020	0.761	0.000	0.000	2.770
NE	0.000	0.000	0.047	0.140	0.180	0.568	0.077	0.000	0.000	1.011
ENE	0.000	0.000	0.186	0.233	0.137	0.165	0.076	0.000	0.000	0.796
E	0.000	0.000	0.047	0.279	0.135	0.082	0.038	0.000	0.000	0.580
ESE	0.000	0.047	0.047	0.372	0.359	0.850	0.380	0.000	0.000	2.053
SE	0.000	0.000	0.419	0.372	0.316	0.729	0.864	0.000	0.000	3.467
SSE	0.000	0.047	0.093	0.233	0.227	0.527	1.135	0.050	0.028	3.162
S	0.000	0.047	0.326	0.372	0.134	0.889	1.171	0.873	0.004	3.245
SSW	0.000	0.000	0.372	0.465	0.361	1.019	0.644	0.029	0.000	2.890
SW	0.000	0.093	0.186	0.326	0.402	0.285	0.229	0.037	0.000	1.558
WSW	0.000	0.000	0.279	0.326	0.314	0.780	0.267	0.000	0.008	1.973
W	0.000	0.000	0.047	0.279	0.496	0.887	0.303	0.060	0.000	2.072
WNW	0.000	0.000	0.093	0.419	0.311	0.977	0.493	0.331	0.008	2.632
NW	0.000	0.000	0.233	0.419	0.353	0.604	1.315	0.372	0.000	3.294
NNW	0.000	0.000	0.047	0.093	0.312	0.618	0.605	0.035	0.000	1.709
SUBTOTAL	0.000	0.233	2.512	4.837	5.475	11.410	9.838	2.758	0.098	37.160
TOTAL HOURS OF VALID OBSERVATIONS				2150.000						
TOTAL HOURS OF ELEVATED RELEASES				1861.910						
TOTAL HOURS OF STABILITY CLASS D				880.320						
TOTAL HOURS OF ELEVATED STABILITY CLASS D				798.930						

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND DIRECTION MEASURED AT 45.74 METER LEVEL  
 WIND SPEED MEASURED AT 45.74 METER LEVEL  
 EFFLUENT VELOCITY = 12.60 M/S

DATE PRINTED: 2002/02/12

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 < DELTA T <= 1.5 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

WIND DIRECTION	WIND SPEED (MPH)										TOTAL
	CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5		
N	0.000	0.047	0.047	0.047	0.312	1.350	0.534	0.000	0.000	0.000	2.336
NNE	0.000	0.047	0.140	0.186	0.631	1.171	0.380	0.000	0.000	0.000	2.554
NE	0.000	0.000	0.093	0.465	0.227	0.371	0.000	0.000	0.000	0.000	1.156
ENE	0.000	0.093	0.000	0.279	0.270	0.041	0.000	0.000	0.000	0.000	0.683
E	0.000	0.000	0.000	0.140	0.092	0.167	0.000	0.000	0.000	0.000	0.398
ESE	0.000	0.000	0.093	0.512	0.224	1.086	0.723	0.000	0.000	0.000	2.638
SE	0.000	0.000	0.233	0.465	0.529	1.335	1.285	0.487	0.000	0.000	4.333
SSE	0.000	0.000	0.140	0.512	0.777	1.291	0.945	0.649	0.050	0.000	4.363
S	0.000	0.047	0.326	0.372	0.360	1.330	0.800	0.152	0.011	0.000	3.398
SSW	0.000	0.000	0.233	0.326	0.179	0.491	0.380	0.000	0.000	0.000	1.608
SW	0.000	0.047	0.093	0.140	0.000	0.082	0.037	0.000	0.000	0.000	0.399
WSW	0.000	0.000	0.186	0.372	0.267	0.000	0.000	0.000	0.000	0.000	0.826
W	0.000	0.000	0.047	0.279	0.180	0.165	0.000	0.000	0.000	0.000	0.671
WNW	0.000	0.000	0.140	0.000	0.226	0.204	0.039	0.000	0.000	0.000	0.608
NW	0.000	0.000	0.140	0.233	0.090	0.487	0.414	0.000	0.000	0.000	1.364
NNW	0.000	0.000	0.047	0.140	0.130	1.304	0.267	0.000	0.000	0.000	1.887
SUBTOTAL	0.000	0.279	1.953	4.465	4.494	10.875	5.804	1.288	0.061	0.000	29.220

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS E 723.250  
 TOTAL HOURS OF ELEVATED STABILITY CLASS E 628.240

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.093	0.089	0.564	0.114	0.000	0.000	0.953	
NNE	0.000	0.000	0.093	0.093	0.312	0.611	0.077	0.000	0.000	1.186	
NE	0.000	0.000	0.140	0.233	0.090	0.561	0.077	0.000	0.000	1.100	
ENE	0.000	0.000	0.047	0.186	0.135	0.321	0.077	0.000	0.000	0.766	
E	0.000	0.047	0.186	0.186	0.046	0.161	0.000	0.000	0.000	0.626	
ESE	0.000	0.000	0.140	0.372	0.354	0.280	0.000	0.000	0.000	1.147	
SE	0.000	0.000	0.093	0.419	0.360	1.143	0.077	0.000	0.000	2.092	
SSE	0.000	0.047	0.047	0.186	0.179	0.579	0.000	0.000	0.000	1.037	
S	0.000	0.000	0.093	0.233	0.181	0.495	0.000	0.000	0.000	1.002	
SSW	0.000	0.047	0.047	0.326	0.044	0.041	0.000	0.000	0.000	0.504	
SW	0.000	0.000	0.093	0.047	0.185	0.000	0.000	0.000	0.000	0.324	
WSW	0.000	0.047	0.140	0.093	0.136	0.000	0.000	0.000	0.000	0.415	
W	0.000	0.047	0.093	0.093	0.044	0.042	0.000	0.000	0.000	0.319	
WNW	0.000	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.091	
NW	0.000	0.000	0.093	0.093	0.090	0.127	0.000	0.000	0.000	0.404	
NNW	0.000	0.000	0.000	0.093	0.044	0.202	0.039	0.000	0.000	0.378	
SUBTOTAL	0.000	0.233	1.395	2.744	2.380	5.128	0.461	0.000	0.000	12.342	

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS F 314.860  
 TOTAL HOURS OF ELEVATED STABILITY CLASS F 265.350

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

SPLIT JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS G (DELTA T > 4.0 C/100 M)

Browns Ferry Nuclear Plant

PART 2 OF 2 ELEVATED RELEASE MODE

OCT 1, 2001 - DEC 31, 2001

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	0.186	0.226	0.609	0.039	0.000	0.000	0.000	1.060
NNE	0.000	0.000	0.000	0.047	0.000	0.401	0.191	0.000	0.000	0.000	0.639
NE	0.000	0.000	0.093	0.047	0.000	0.201	0.000	0.000	0.000	0.000	0.340
ENE	0.000	0.047	0.000	0.000	0.091	0.160	0.038	0.000	0.000	0.000	0.336
E	0.000	0.000	0.140	0.140	0.182	0.085	0.000	0.000	0.000	0.000	0.547
ESE	0.000	0.000	0.047	0.186	0.353	0.417	0.000	0.000	0.000	0.000	1.003
SE	0.000	0.000	0.372	0.744	0.984	0.166	0.000	0.000	0.000	0.000	2.266
SSE	0.000	0.047	0.186	0.140	0.093	0.000	0.000	0.000	0.000	0.000	0.465
S	0.000	0.093	0.093	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.233
SSW	0.000	0.000	0.000	0.047	0.087	0.000	0.000	0.000	0.000	0.000	0.134
SW	0.000	0.000	0.093	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.140
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.047	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.140
WNW	0.000	0.000	0.093	0.000	0.133	0.000	0.000	0.000	0.000	0.000	0.226
NW	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
NNW	0.000	0.000	0.000	0.000	0.045	0.000	0.000	0.000	0.000	0.000	0.045
SUBTOTAL	0.000	0.186	1.163	1.767	2.195	2.040	0.268	0.000	0.000	0.000	7.619

TOTAL HOURS OF VALID OBSERVATIONS 2150.000  
 TOTAL HOURS OF ELEVATED RELEASES 1861.910  
 TOTAL HOURS OF STABILITY CLASS G 184.970  
 TOTAL HOURS OF ELEVATED STABILITY CLASS G 163.800

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 22**  
**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<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)						>=24.5	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		
N	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
NE	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
E	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
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	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
SW	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
W	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
NW	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
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2121

TOTAL HOURS OF STABILITY CLASS A 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 0.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2121

TOTAL HOURS OF STABILITY CLASS B 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 0.00

DATE PRINTED: 2001/05/16

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 <= -1.5 C/100 M)

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.000	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	0.048
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	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	0.048
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	0.000	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	0.000	0.000	0.000	0.048	0.000	0.095

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2121

TOTAL HOURS OF STABILITY CLASS C 2

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 2

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 17.75

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.238	0.238	0.238	0.618	2.188	2.474	0.476	0.048	6.280
NNE	0.000	0.095	0.190	0.476	3.283	1.713	1.713	0.428	0.000	6.185
NE	0.000	0.048	0.095	0.285	1.142	0.618	0.618	0.000	0.000	2.188
ENE	0.000	0.048	0.190	0.333	0.285	0.285	0.143	0.000	0.000	1.522
E	0.000	0.000	0.190	0.238	0.714	0.048	0.048	0.000	0.000	1.189
ESE	0.000	0.000	0.095	0.476	1.189	0.714	0.714	0.143	0.000	2.997
SE	0.000	0.000	0.238	0.333	0.618	0.381	0.381	0.381	0.095	2.379
SSE	0.000	0.000	0.143	0.285	0.476	0.476	0.190	0.190	0.143	1.665
S	0.000	0.048	0.095	0.048	0.523	0.761	0.143	0.143	0.143	1.998
SSW	0.000	0.048	0.095	0.238	0.523	0.571	0.238	0.238	0.238	1.951
SW	0.000	0.000	0.285	0.143	0.476	0.238	0.190	0.190	0.000	1.332
WSW	0.000	0.048	0.238	0.285	0.285	0.333	0.190	0.190	0.000	1.570
W	0.000	0.000	0.238	0.285	1.332	0.856	0.523	0.523	0.095	3.663
WNW	0.000	0.000	0.143	0.476	2.284	1.284	0.666	0.666	0.095	5.709
NW	0.000	0.000	0.143	0.238	1.332	4.186	1.332	1.332	0.285	7.707
NNW	0.000	0.000	0.238	0.095	1.522	2.997	0.523	0.523	0.048	5.519
SUBTOTAL	0.000	2.379	4.186	4.520	17.983	17.793	5.614	1.189	53.853	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2121  
 TOTAL HOURS OF STABILITY CLASS D 1150  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 1132  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 12.19

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.095	0.048	0.095	0.095	0.999	0.951	0.000	0.143	2.426	
NNE	0.000	0.000	0.095	0.048	0.143	1.380	1.047	0.095	0.000	2.807	
NE	0.000	0.000	0.000	0.095	0.285	1.094	1.094	0.190	0.048	2.807	
ENE	0.000	0.000	0.048	0.238	0.190	0.809	0.333	0.000	0.000	1.618	
E	0.000	0.000	0.000	0.333	0.381	0.381	0.238	0.048	0.000	1.380	
ESE	0.000	0.000	0.095	0.143	0.428	1.237	0.428	0.048	0.048	2.426	
SE	0.000	0.000	0.000	0.095	0.238	0.618	1.522	0.809	0.476	3.758	
SSE	0.000	0.000	0.095	0.238	0.095	1.189	1.760	0.856	0.523	4.757	
S	0.000	0.000	0.333	0.048	0.190	0.856	0.761	0.143	0.190	2.521	
SSW	0.000	0.000	0.048	0.143	0.095	0.714	0.856	0.571	0.000	2.426	
SW	0.000	0.000	0.000	0.000	0.143	0.666	0.714	0.143	0.190	1.855	
WSW	0.000	0.000	0.048	0.095	0.095	0.571	0.381	0.143	0.000	1.332	
W	0.000	0.000	0.048	0.095	0.048	0.618	0.428	0.000	0.000	1.237	
WNW	0.000	0.000	0.000	0.048	0.048	0.714	0.714	0.048	0.048	1.618	
NW	0.000	0.000	0.095	0.048	0.095	0.523	0.666	0.285	0.000	1.713	
NNW	0.000	0.000	0.048	0.048	0.190	0.856	0.999	0.238	0.048	2.426	
SUBTOTAL	0.000	0.095	0.999	1.808	2.759	13.225	12.892	3.616	1.713	37.108	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2121  
781  
780  
2102  
0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 13.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

JAN 1, 2001 - MAR 31, 2001

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	0.238	0.143	0.000	0.000	0.381
NNE	0.000	0.000	0.000	0.000	0.000	0.143	0.238	0.095	0.000	0.476
NE	0.000	0.000	0.048	0.095	0.048	0.048	0.285	0.095	0.000	0.618
ENE	0.000	0.000	0.000	0.000	0.095	0.095	0.190	0.143	0.000	0.523
E	0.000	0.000	0.000	0.095	0.143	0.143	0.095	0.000	0.000	0.476
ESE	0.000	0.000	0.048	0.000	0.048	0.095	0.143	0.048	0.000	0.381
SE	0.000	0.000	0.048	0.000	0.048	0.095	0.190	0.048	0.000	0.428
SSE	0.000	0.000	0.000	0.000	0.000	0.571	0.095	0.000	0.095	0.761
S	0.000	0.000	0.095	0.000	0.095	0.714	0.428	0.000	0.000	1.332
SSW	0.000	0.000	0.000	0.000	0.000	0.381	0.238	0.000	0.000	0.618
SW	0.000	0.000	0.000	0.000	0.048	0.285	0.285	0.000	0.000	0.618
WSW	0.000	0.000	0.000	0.000	0.048	0.143	0.285	0.000	0.000	0.190
W	0.000	0.000	0.000	0.000	0.000	0.190	0.000	0.000	0.000	0.190
WNW	0.000	0.000	0.000	0.048	0.000	0.095	0.000	0.000	0.000	0.143
NW	0.000	0.000	0.000	0.000	0.048	0.048	0.048	0.000	0.000	0.143
NNW	0.000	0.000	0.048	0.000	0.000	0.000	0.238	0.000	0.000	0.285
SUBTOTAL	0.000	0.000	0.285	0.238	0.618	3.283	2.617	0.428	0.095	7.564

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2121  
 TOTAL HOURS OF STABILITY CLASS F 159  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 159  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2102  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 12.16

DATE PRINTED: 2001/05/16

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

JAN 1, 2001 - MAR 31, 2001

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	0.000	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	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.048
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.048	0.000	0.000	0.048
E	0.000	0.000	0.000	0.000	0.000	0.000	0.143	0.000	0.000	0.143
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.095	0.000	0.000	0.095
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.095	0.000	0.000	0.190
SSE	0.000	0.000	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.190
S	0.000	0.000	0.000	0.000	0.048	0.333	0.000	0.000	0.000	0.381
SSW	0.000	0.000	0.000	0.000	0.048	0.048	0.000	0.000	0.000	0.095
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	0.048
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	0.048	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	0.048	0.000	0.000	0.048	0.000	0.000	0.000	0.095
SUBTOTAL	0.000	0.000	0.048	0.143	0.190	0.571	0.428	0.000	0.000	1.380

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2121
TOTAL HOURS OF STABILITY CLASS G	29
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	29
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2102
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 92.63 METER LEVEL

MEAN WIND SPEED = 10.02

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/05/16

**IMPACT ASSESSMENT  
BROWNS FERRY NUCLEAR PLANT  
JANUARY - DECEMBER 2001**

**TABLE 23  
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<=-1.9 C/100 M)

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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
N	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
NE	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
E	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
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	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
SW	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
W	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
NW	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
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2158  
 TOTAL HOURS OF STABILITY CLASS A 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2154  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 0.00

DATE PRINTED: 2001/08/17

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 <= -1.7 C/100 M)

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2158  
 TOTAL HOURS OF STABILITY CLASS B 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2154  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 0.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.046	0.000	0.000	0.000	0.000	0.000	0.046
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	0.000	0.000	0.046
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	0.046	0.000	0.000	0.000	0.046
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	0.046	0.046	0.046	0.000	0.000	0.186

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2158  
 TOTAL HOURS OF STABILITY CLASS C 4  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 4  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2154  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
STABILITY CLASS D (-1.5 < DELTA T <= -0.5 C/100 M)

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)							>=24.5	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		
N	0.000	0.000	0.186	0.604	1.811	1.439	0.046	0.000	4.085	
NNE	0.000	0.046	0.371	0.279	1.439	0.279	0.000	0.000	2.414	
NE	0.000	0.000	0.093	0.000	0.093	0.046	0.000	0.000	0.232	
ENE	0.000	0.093	0.093	0.325	0.046	0.000	0.000	0.000	0.557	
E	0.000	0.000	0.186	0.093	0.232	0.000	0.000	0.000	0.604	
ESE	0.000	0.139	0.325	0.650	1.021	0.279	0.000	0.000	2.414	
SE	0.000	0.557	1.021	1.346	2.321	0.975	0.279	0.000	6.500	
SSE	0.000	0.325	1.114	0.650	1.718	0.743	0.093	0.093	4.735	
S	0.000	0.186	0.511	0.371	1.207	1.811	0.929	0.046	5.060	
SSW	0.000	0.325	0.418	0.418	1.346	2.461	0.836	0.139	5.942	
SW	0.000	0.418	0.418	0.511	2.275	0.696	0.046	0.000	4.364	
WSW	0.000	0.232	0.371	0.557	1.578	0.929	0.186	0.000	3.853	
W	0.000	0.279	0.371	0.418	1.532	0.650	0.046	0.000	3.296	
WNW	0.000	0.139	0.279	0.279	0.511	1.021	0.325	0.000	2.553	
NW	0.000	0.093	0.511	0.093	0.464	1.161	0.464	0.186	2.971	
NNW	0.000	0.000	0.093	0.279	0.557	0.789	0.371	0.093	2.182	
SUBTOTAL	0.000	2.925	6.360	6.871	18.152	13.278	3.621	0.557	51.764	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS  
TOTAL HOURS OF STABILITY CLASS D  
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D  
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

2158  
1116  
1115  
2154  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 10.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.093	0.139	0.929	0.743	0.139	0.046	0.000	2.089		
NNE	0.000	0.093	0.279	0.139	0.743	0.325	0.000	0.000	0.000	1.578		
NE	0.000	0.046	0.093	0.000	0.371	0.093	0.000	0.000	0.000	0.696		
ENE	0.000	0.000	0.046	0.093	0.325	0.000	0.000	0.000	0.000	0.604		
E	0.000	0.000	0.139	0.139	0.836	0.046	0.000	0.000	0.000	1.253		
ESE	0.000	0.000	0.093	0.371	0.929	0.511	0.000	0.000	0.000	2.043		
SE	0.000	0.232	0.371	0.743	3.482	1.532	0.139	0.000	0.000	6.500		
SSE	0.000	0.139	0.418	0.836	1.996	1.486	0.139	0.000	0.000	5.014		
S	0.000	0.093	0.464	0.557	1.439	2.368	0.789	0.232	0.000	5.942		
SSW	0.000	0.139	0.464	0.186	1.161	1.996	0.139	0.000	0.000	4.085		
SW	0.000	0.046	0.232	0.418	1.346	0.232	0.000	0.000	0.000	2.321		
WSW	0.000	0.000	0.093	0.232	0.279	0.232	0.000	0.000	0.000	1.068		
W	0.000	0.000	0.279	0.279	0.371	0.093	0.000	0.000	0.000	1.114		
WNW	0.000	0.093	0.093	0.139	0.186	0.046	0.000	0.000	0.000	0.557		
NW	0.000	0.046	0.093	0.139	0.279	0.279	0.139	0.000	0.000	0.975		
NNW	0.000	0.046	0.046	0.186	0.464	0.464	0.093	0.000	0.000	1.346		
SUBTOTAL	0.000	0.139	3.296	4.596	15.135	10.446	1.625	0.279	0.000	37.187		

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2158  
804  
801  
2154  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 10.68

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.046	0.325	0.046	0.000	0.464
NNE	0.000	0.000	0.000	0.000	0.093	0.279	0.650	0.093	0.000	1.114
NE	0.000	0.000	0.046	0.046	0.046	0.325	0.604	0.232	0.000	1.300
ENE	0.000	0.046	0.000	0.046	0.093	0.232	0.279	0.046	0.000	0.743
E	0.000	0.000	0.093	0.000	0.046	0.000	0.000	0.000	0.000	0.139
ESE	0.000	0.000	0.093	0.093	0.232	0.279	0.139	0.000	0.000	0.836
SE	0.000	0.000	0.046	0.046	0.139	0.371	0.000	0.000	0.000	0.604
SSE	0.000	0.000	0.000	0.093	0.093	0.232	0.000	0.000	0.000	0.418
S	0.000	0.000	0.093	0.139	0.093	0.232	0.186	0.000	0.000	0.743
SSW	0.000	0.000	0.046	0.093	0.186	0.186	0.186	0.046	0.000	0.743
SW	0.000	0.000	0.046	0.139	0.000	0.186	0.557	0.000	0.000	0.929
WSW	0.000	0.000	0.000	0.000	0.093	0.139	0.000	0.000	0.000	0.232
W	0.000	0.000	0.046	0.186	0.093	0.093	0.046	0.000	0.000	0.464
WNW	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.093
NW	0.000	0.000	0.000	0.000	0.093	0.046	0.000	0.000	0.000	0.139
NNW	0.000	0.000	0.046	0.093	0.046	0.000	0.000	0.000	0.000	0.186
SUBTOTAL	0.000	0.046	0.557	1.021	1.393	2.693	2.971	0.464	0.000	9.146

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS F

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2158  
197  
197  
2154  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 10.60

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

APR 1, 2001 - JUN 30, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.371
NE	0.000	0.000	0.000	0.000	0.000	0.093	0.093	0.046	0.000	0.511
ENE	0.000	0.000	0.000	0.000	0.000	0.186	0.186	0.046	0.000	0.232
E	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.093
ESE	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.046
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	0.046	0.046	0.000	0.000	0.093
S	0.000	0.000	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.093
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	0.093
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.093
SUBTOTAL	0.000	0.000	0.046	0.093	0.139	0.557	0.557	0.325	0.000	1.718

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2158  
 TOTAL HOURS OF STABILITY CLASS G 37  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 37  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2154  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 13.22

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/08/17

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 24**  
**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<=-1.9 C/100 M)

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

WIND DIRECTION	CALM	WIND SPEED(MPH)					18.5-24.4	>=24.5	TOTAL
		0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4			
N	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
NE	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
E	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
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	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
SW	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
W	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
NW	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
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2184  
 TOTAL HOURS OF STABILITY CLASS A 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 0  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1996  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 0.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2184

TOTAL HOURS OF STABILITY CLASS B 1

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 1

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-OBSERVATIONS 1996

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 7.40

DATE PRINTED: 2001/12/18

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 <= -1.5 C/100 M)

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	0.000	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	0.100	0.000	0.000	0.000	0.000	0.000	0.100
SE	0.000	0.000	0.100	0.251	0.000	0.000	0.000	0.000	0.000	0.351
SSE	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
S	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.050
SSW	0.000	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.050
SW	0.000	0.000	0.000	0.050	0.100	0.000	0.000	0.000	0.000	0.150
WSW	0.000	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.050
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
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	0.251	0.401	0.251	0.000	0.000	0.000	0.000	0.902

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2184
TOTAL HOURS OF STABILITY CLASS C	20
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	18
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	1996
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

.MEAN WIND SPEED = 6.70

DATE PRINTED: 2001/12/18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	0.050	0.200	0.200	0.200	1.854	1.052	0.150	0.000	3.707
NNE	0.000	0.000	0.100	0.251	0.451	1.303	1.152	0.000	0.000	3.257
NE	0.000	0.000	0.050	0.150	0.150	0.200	0.150	0.000	0.000	0.701
ENE	0.000	0.000	0.100	0.150	0.200	0.251	0.000	0.000	0.000	0.701
E	0.000	0.000	0.100	0.150	0.100	0.150	0.401	0.000	0.000	0.902
ESE	0.000	0.000	0.501	0.451	0.551	1.253	0.902	0.050	0.000	3.707
SE	0.000	0.000	0.852	1.603	1.353	1.303	1.002	0.251	0.000	6.363
SSE	0.000	0.000	0.701	1.303	0.852	1.754	2.555	0.501	0.000	7.665
S	0.000	0.000	0.651	1.253	1.052	2.655	1.303	0.401	0.000	7.315
SSW	0.000	0.050	0.852	0.902	1.202	2.405	0.752	0.050	0.000	6.212
SW	0.000	0.100	0.401	1.102	0.752	1.102	0.100	0.000	0.000	3.557
WSW	0.000	0.000	0.551	1.002	0.601	0.802	0.100	0.000	0.000	3.056
W	0.000	0.050	0.200	1.002	0.501	0.802	0.251	0.000	0.000	2.806
WNW	0.000	0.000	0.251	0.251	0.551	1.152	0.150	0.000	0.000	2.355
NW	0.000	0.000	0.100	0.200	0.301	0.351	0.000	0.000	0.000	0.952
NNW	0.000	0.000	0.150	0.100	0.701	1.052	0.401	0.050	0.000	2.455
SUBTOTAL	0.000	0.251	5.762	10.070	9.519	18.387	10.271	1.453	0.000	55.711

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2184  
1235  
1112  
1996  
0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 8.64

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	0.050	0.050	0.050	0.301	1.052	0.852	0.100	0.050	2.505		
NNE	0.000	0.000	0.050	0.200	0.150	0.701	1.303	0.351	0.000	2.756		
NE	0.000	0.000	0.000	0.251	0.200	0.601	0.852	0.100	0.000	2.004		
ENE	0.000	0.000	0.100	0.251	0.150	0.451	0.150	0.000	0.000	1.102		
E	0.000	0.000	0.100	0.150	0.351	0.301	0.100	0.000	0.000	1.002		
ESE	0.000	0.050	0.200	0.301	0.701	1.202	0.200	0.000	0.000	2.655		
SE	0.000	0.100	0.451	0.952	0.952	2.355	0.601	0.000	0.000	5.411		
SSE	0.000	0.050	0.301	0.852	1.202	0.752	0.301	0.000	0.000	3.457		
S	0.000	0.050	0.301	0.551	0.601	1.002	0.451	0.000	0.000	2.956		
SSW	0.000	0.050	0.150	0.601	0.401	0.952	0.150	0.000	0.000	2.305		
SW	0.000	0.050	0.200	0.852	0.401	0.501	0.000	0.000	0.000	2.004		
WSW	0.000	0.000	0.200	0.251	0.701	0.401	0.050	0.000	0.000	1.603		
W	0.000	0.000	0.100	0.351	0.451	0.601	0.050	0.000	0.000	1.553		
WNW	0.000	0.050	0.100	0.200	0.100	0.251	0.050	0.000	0.000	0.802		
NW	0.000	0.050	0.050	0.251	0.251	0.251	0.000	0.000	0.000	0.852		
NNW	0.000	0.050	0.150	0.100	0.301	0.351	0.251	0.100	0.000	1.303		
SUBTOTAL	0.000	0.551	2.505	6.162	7.214	11.723	5.361	0.701	0.050	34.269		

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2184  
 TOTAL HOURS OF STABILITY CLASS E 740  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E 684  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1996  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

. MEAN WIND SPEED = 8.46

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	0.050	0.100	0.150	0.551	0.050	0.000	0.902		
NNE	0.000	0.000	0.000	0.000	0.050	0.501	0.401	0.451	0.000	1.403		
NE	0.000	0.000	0.000	0.000	0.000	0.150	0.401	0.251	0.000	0.802		
ENE	0.000	0.000	0.000	0.301	0.000	0.351	0.150	0.050	0.000	0.852		
E	0.000	0.000	0.000	0.000	0.050	0.301	0.050	0.000	0.000	0.401		
ESE	0.000	0.000	0.050	0.251	0.301	0.301	0.050	0.000	0.000	0.651		
SE	0.000	0.000	0.050	0.100	0.251	0.251	0.000	0.000	0.000	0.401		
SSE	0.000	0.000	0.050	0.100	0.150	0.150	0.000	0.000	0.000	0.401		
S	0.000	0.000	0.000	0.050	0.200	0.200	0.100	0.000	0.000	0.451		
SSW	0.000	0.000	0.000	0.000	0.000	0.251	0.150	0.000	0.000	0.401		
SW	0.000	0.000	0.000	0.000	0.100	0.050	0.050	0.000	0.000	0.200		
WSW	0.000	0.000	0.000	0.000	0.050	0.000	0.100	0.000	0.000	0.200		
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	0.050	0.050	0.000	0.000	0.000	0.150		
NW	0.000	0.000	0.000	0.050	0.000	0.000	0.000	0.000	0.000	0.050		
NNW	0.000	0.000	0.000	0.000	0.000	0.050	0.050	0.000	0.000	0.100		
SUBTOTAL	0.000	0.000	0.301	0.551	0.902	2.756	2.054	0.802	0.000	7.365		

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2184

TOTAL HOURS OF STABILITY CLASS F 154

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 147

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1996

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 11.47

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2001/12/18

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry NP (new sensor)

JUL 1, 2001 - SEP 30, 2001

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	0.050	0.200	0.000	0.100	0.000	0.351
NNE	0.000	0.000	0.000	0.000	0.000	0.100	0.050	0.401	0.000	0.551
NE	0.000	0.000	0.000	0.000	0.000	0.150	0.200	0.050	0.000	0.401
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.100
E	0.000	0.000	0.000	0.000	0.000	0.050	0.150	0.000	0.000	0.200
ESE	0.000	0.000	0.000	0.000	0.000	0.100	0.000	0.000	0.000	0.100
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.050	0.601	0.501	0.551	0.000	1.703	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2184  
 TOTAL HOURS OF STABILITY CLASS G 34  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 34  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 1996  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry NP (new sensor)  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 15.04

DATE PRINTED: 2001/12/18

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

**METEOROLOGICAL DATA TABLES**  
**BROWNS FERRY NUCLEAR PLANT**  
**JANUARY - DECEMBER 2001**

**TABLE 25**  
**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<=-1.9 C/100 M)

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS A

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2178  
0  
0  
2174  
0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

.MEAN WIND SPEED = 0.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.000	0.000	0.000	0.000
NNE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ENE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WSW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2178

TOTAL HOURS OF STABILITY CLASS B 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 0

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174

TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 0.00

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12



JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

WIND DIRECTION	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
CALM	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
N	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
NE	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
E	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
SE	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.138
SSE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.092
S	0.000	0.000	0.000	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
SW	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
W	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
NW	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
SUBTOTAL	0.000	0.000	0.046	0.092	0.092	0.046	0.000	0.000	0.276

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2178  
 TOTAL HOURS OF STABILITY CLASS C 6  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 6  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 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

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.046	0.276	0.506	1.334	2.116	0.230	0.000	4.508	
NNE	0.000	0.046	0.184	0.460	1.334	0.874	0.138	0.000	3.036	
NE	0.000	0.046	0.000	0.138	0.690	0.092	0.000	0.000	0.966	
ENE	0.000	0.138	0.184	0.230	0.138	0.230	0.000	0.000	0.920	
E	0.000	0.046	0.322	0.184	0.092	0.046	0.000	0.000	0.736	
ESE	0.000	0.000	0.184	0.322	0.552	0.874	0.230	0.000	2.346	
SE	0.000	0.414	0.322	0.184	0.828	0.736	1.288	1.242	5.014	
SSE	0.000	0.092	0.184	0.230	0.460	1.058	1.610	0.828	4.462	
S	0.000	0.092	0.138	0.092	0.644	1.472	0.644	0.046	3.128	
SSW	0.000	0.368	0.552	0.322	0.874	1.196	0.460	0.000	3.818	
SW	0.000	0.276	0.138	0.138	0.552	0.368	0.046	0.000	1.518	
WSW	0.000	0.000	0.184	0.276	1.058	0.598	0.092	0.046	2.392	
W	0.000	0.230	0.138	0.276	0.552	0.736	0.276	0.046	2.254	
WNW	0.000	0.046	0.368	0.414	0.874	0.874	0.552	0.276	3.404	
NW	0.000	0.230	0.322	0.322	0.552	1.058	1.150	0.046	3.680	
NNW	0.000	0.184	0.092	0.184	0.644	0.782	0.184	0.000	2.070	
SUBTOTAL	0.000	2.530	3.588	4.278	11.178	13.109	6.946	2.530	44.250	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2178  
962  
962  
2174  
0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

\*MEAN WIND SPEED = 13.15

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.000	0.000	0.828	1.426	0.322	0.000	2.622
NNE	0.000	0.000	0.046	0.046	0.092	0.782	1.334	0.276	0.000	2.576
NE	0.000	0.000	0.092	0.276	0.092	0.552	0.322	0.046	0.000	1.380
ENE	0.000	0.046	0.046	0.138	0.276	0.368	0.000	0.000	0.000	0.874
E	0.000	0.000	0.046	0.184	0.230	0.138	0.046	0.000	0.000	0.644
ESE	0.000	0.046	0.092	0.230	0.276	0.322	0.782	0.276	0.000	2.024
SE	0.000	0.000	0.230	0.506	0.276	0.644	2.116	1.472	0.184	5.428
SSE	0.000	0.046	0.092	0.046	0.138	1.334	1.794	1.196	0.920	5.566
S	0.000	0.000	0.184	0.046	0.092	1.104	1.426	0.598	0.138	3.588
SSW	0.000	0.000	0.230	0.046	0.276	0.690	1.058	0.138	0.046	2.484
SW	0.000	0.000	0.092	0.000	0.276	0.552	0.460	0.046	0.000	1.426
WSW	0.000	0.000	0.092	0.092	0.046	0.322	0.138	0.000	0.000	0.690
W	0.000	0.000	0.230	0.046	0.092	0.368	0.184	0.000	0.000	0.920
WNW	0.000	0.000	0.046	0.092	0.184	0.276	0.184	0.000	0.000	0.782
NW	0.000	0.000	0.000	0.138	0.046	0.368	0.322	0.460	0.000	1.334
NNW	0.000	0.000	0.138	0.046	0.046	0.644	0.874	0.092	0.000	1.840
SUBTOTAL	0.000	0.138	1.702	1.932	2.438	9.292	12.466	4.922	1.288	34.177

TOTAL HOURS OF VALID STABILITY OBSERVATIONS

TOTAL HOURS OF STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E

TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS

TOTAL HOURS CALM

2178  
747  
743  
2174  
0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 13.29

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR  
 STABILITY CLASS F ( 1.5< DELTA T<= 4.0 C/100 M)

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

WIND DIRECTION	CALM	WIND SPEED (MPH)						18.5-24.4	>=24.5	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			
N	0.000	0.046	0.046	0.046	0.092	0.506	0.138	0.000	0.874	
NNE	0.000	0.000	0.000	0.046	0.138	0.552	0.230	0.000	0.966	
NE	0.000	0.138	0.000	0.046	0.460	0.828	0.276	0.000	1.748	
ENE	0.000	0.000	0.092	0.046	0.276	0.276	0.184	0.000	0.874	
E	0.000	0.000	0.230	0.046	0.046	0.046	0.000	0.000	0.690	
ESE	0.000	0.000	0.138	0.276	0.322	0.322	0.000	0.000	1.058	
SE	0.000	0.000	0.276	0.092	0.506	0.598	0.046	0.000	1.518	
SSE	0.000	0.046	0.000	0.092	0.368	0.920	0.000	0.000	1.426	
S	0.000	0.046	0.000	0.000	0.690	0.736	0.092	0.000	1.610	
SSW	0.000	0.184	0.138	0.000	0.230	0.092	0.000	0.000	0.644	
SW	0.000	0.138	0.046	0.046	0.230	0.046	0.000	0.000	0.506	
WSW	0.000	0.046	0.046	0.000	0.276	0.046	0.000	0.000	0.414	
W	0.000	0.046	0.046	0.092	0.092	0.046	0.000	0.000	0.276	
WNW	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.092	
NW	0.000	0.000	0.000	0.000	0.184	0.138	0.000	0.000	0.322	
NNW	0.000	0.000	0.046	0.000	0.046	0.046	0.092	0.000	0.230	
SUBTOTAL	0.000	0.782	1.196	0.736	4.232	5.198	1.058	0.000	13.247	

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2178  
 TOTAL HOURS OF STABILITY CLASS F 288  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F 288  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 11.61

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Browns Ferry Nuclear Plant

OCT 1, 2001 - DEC 31, 2001

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	0.000	0.230	0.046	0.000	0.276
NNE	0.000	0.000	0.000	0.000	0.000	0.184	0.552	0.552	0.552	0.000	1.288
NE	0.000	0.000	0.000	0.000	0.092	0.138	0.414	0.414	0.000	0.000	0.644
ENE	0.000	0.000	0.000	0.000	0.092	0.046	0.046	0.230	0.000	0.000	0.414
E	0.000	0.000	0.046	0.000	0.092	0.046	0.046	0.138	0.000	0.000	0.322
ESE	0.000	0.000	0.092	0.092	0.092	0.276	0.230	0.092	0.000	0.000	0.782
SE	0.000	0.000	0.092	0.092	0.230	0.276	0.782	0.046	0.000	0.000	1.426
SSE	0.000	0.000	0.046	0.046	0.000	0.046	1.104	0.138	0.000	0.000	1.334
S	0.000	0.000	0.138	0.138	0.138	0.046	0.046	0.000	0.000	0.000	0.368
SSW	0.000	0.000	0.046	0.046	0.138	0.046	0.046	0.138	0.000	0.000	0.414
SW	0.000	0.000	0.046	0.046	0.138	0.000	0.046	0.046	0.000	0.000	0.276
WSW	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.046	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.138
WNW	0.000	0.000	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.092
NW	0.000	0.000	0.000	0.000	0.000	0.046	0.046	0.092	0.000	0.000	0.230
NNW	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SUBTOTAL	0.000	0.092	0.598	1.012	0.782	2.852	2.116	0.598	0.000	0.000	8.050

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2178  
 TOTAL HOURS OF STABILITY CLASS G 175  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G 175  
 TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2174  
 TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Browns Ferry Nuclear Plant  
 STABILITY BASED ON DELTA-T BETWEEN 45.30 AND 89.59 METERS  
 WIND SPEED AND DIRECTION MEASURED AT 90.29 METER LEVEL

MEAN WIND SPEED = 10.45

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

DATE PRINTED: 2002/02/12

**ENCLOSURE 3**

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3**

**EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
2001**

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EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
YEAR 2001

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 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 Effluent:

1. The instantaneous release rate of fission and activation gases is based on the dose rate limits of 10 CFR 20.1301 and the BFN ODCM. The dose rate at any time to areas at and beyond the site boundary due to noble gases released in gaseous effluents from the site shall be limited to  
 $\leq 500$  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.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
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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 greater than eight days half-lives released in gaseous effluents 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.



EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
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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 -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 and -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.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 SUPPLEMENTAL INFORMATION  
 2001

IV. Batch

		<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
A. Liquid	<u>Units</u>				
1. Number of batches released	Each	0	0	0	0
2. Total time for batches released	Minutes	0	0	0	0
3. Maximum time period for a batch release	Minutes	0	0	0	0
4. Average time period for a batch release	Minutes	0	0	0	0
5. Minimum time period for a batch release	Minutes	0	0	0	0
6. Average stream flow during period of release into a flowing stream	Cubic feet per second	0	0	0	0

B. Gaseous

None

C. Abnormal/Unplanned Releases\*

Type	Number of Releases	Total Activity Releases (Curies)
Liquid	None	None
Gaseous	None	None

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

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES  
YEAR 2001

	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Error %
<b>A. Fission and Activation Products</b> (Does not include tritium, gases, Alpha)						
1. Total Release	Curies	NR*	NR	NR	NR	9
2. Average Diluted Concentration Released During Period	μCi/ml	NR	NR	NR	NR	
3. Percent of Applicable Limit	%	**	**	**	**	
<b>B. Tritium</b>						
1. Total Releases	Curies	NR	NR	NR	NR	6
2. Average Diluted Concentration Released During Period	μCi/ml	NR	NR	NR	NR	
3. Percent of Applicable Limit	%	**	**	**	**	
<b>C. Dissolved and Entrained Noble Gases</b>						
1. Total Releases	Curies	NR	NR	NR	NR	8
2. Average Diluted Concentration Released During Period	μCi/ml	NR	NR	NR	NR	
3. Percent of Applicable Limit	%	**	**	**	**	
<b>D. Gross Alpha Radioactivity</b>						
1. Total Releases	Curies	NR	NR	NR	NR	48
2. Average Diluted Concentration Released During Period	μCi/ml	NR	NR	NR	NR	
<b>E. Volume of Liquid Waste to Discharge Canal (Prior to dilution)</b>						
	Liters	NR	NR	NR	NR	3
<b>F. Volume of Dilution Water for Period</b>						
	Liters	NR	NR	NR	NR	10
<b>G. Total CCW</b>						
	gigagallons	NR	NR	NR	NR	

\*NR -- No liquid releases were made in the 1<sup>st</sup> 2<sup>nd</sup> 3<sup>rd</sup> and 4<sup>th</sup> quarters.

\*\* The applicable limit is expressed in terms of dose. See Enclosure 1, Tables 5 through 8.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
LIQUID RELEASES FOR YEAR 2001 - BATCH MODE

<u>CURIES</u>		<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>
<u>Isotope</u>		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
(Required by Regulatory (REG) Guide 1.21)					
1.	Ba-140	NR*	NR	NR	NR
2.	Ce-141	NR	NR	NR	NR
3.	Co-58	NR	NR	NR	NR
4.	Co-60	NR	NR	NR	NR
5.	Cr-51	NR	NR	NR	NR
6.	Cs-134	NR	NR	NR	NR
7.	Cs-137	NR	NR	NR	NR
8.	Fe-59	NR	NR	NR	NR
9.	I-131	NR	NR	NR	NR
10.	La-140	NR	NR	NR	NR
11.	Mn-54	NR	NR	NR	NR
12.	Mo-99	NR	NR	NR	NR
13.	Nb-95	NR	NR	NR	NR
14.	Sr-89	NR	NR	NR	NR
15.	Sr-90	NR	NR	NR	NR
16.	Tc-99m	NR	NR	NR	NR
17.	Xe-133	NR	NR	NR	NR
18.	Xe-135	NR	NR	NR	NR
19.	Zn-65	NR	NR	NR	NR
20.	Zr-95	NR	NR	NR	NR

Others (Not Required by REG Guide 1.21)

NONE

\*NR -- No liquid releases were made during the 1st 2nd 3rd and 4th quarters.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES  
 YEAR 2001

	<u>Units</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>	<u>Error</u> <u>%</u>
<b>A. Fission and Activation Gases</b>						
1. Total Releases	Ci	2.97E+02	2.40E+02	3.37E+01	1.36E+01	45
2. Average Release Rate for Period	μCi/sec	3.82E+01	3.05E+01	4.24E+00	1.71E+00	
3. Percent of Applicable limit	%	*	*	*	*	
<b>B. Iodines</b>						
1. Total Iodine-131	Ci	4.77E-03	5.41E-03	5.40E-03	3.89E-03	36
2. Average Release Rate for Period	μCi/sec	6.14E-04	6.88E-04	6.79E-04	4.89E-04	
3. Percent of Applicable Limit	%	*	*	*	*	
<b>C. Particulates</b>						
1. Particulates with half-lives > eight days	Ci	4.42E-03	2.90E-03	9.89E-04	1.02E-03	35
2. Average release rate for period	μCi/sec	5.69E-04	3.69E-04	1.24E-04	1.29E-04	
3. Percent of Applicable limit	%	*	*	*	*	
4. Gross alpha radioactivity	Ci	ND**	ND	ND	ND	
<b>D. Tritium</b>						
1. Total release	Ci	1.95E+01	9.22E+00	1.48E+01	1.53E+01	21
2. Average release rate for period	μCi/sec	2.51E+00	1.17E+00	1.86E+00	1.92E+00	
3. Percent of Applicable Limit	%	*	*	*	*	

\*Applicable Limits are expressed in terms of dose. See Enclosure 1, Tables 1 through 4.  
 \*\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 YEAR 2001  
 GASEOUS EFFLUENTS - ELEVATED RELEASE

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
1. Fission Gases				
Kr-85m	7.99E+01	8.64E+01	3.37E+01	1.36E+01
Kr-85	ND*	ND	ND	ND
Kr-87	2.97E+00	1.19E+00	ND	ND
Kr-88	1.52E+02	1.16E+02	ND	ND
Xe-133	6.21E+01	3.56E+01	ND	ND
Xe-135m	ND	ND	ND	ND
Xe-135	ND	ND	ND	ND
Xe-138	ND	ND	ND	ND
Others (specify)				
NONE				
Total for Period	<u>2.97E+02</u>	<u>2.40E+02</u>	<u>3.37E+01</u>	<u>1.36E+01</u>
2. Iodines				
I-131	3.41E-04	3.87E-04	4.03E-04	2.32E-04
I-133	6.34E-04	6.93E-04	7.04E-04	3.28E-04
<u>Total for Period</u>	<u>9.75E-04</u>	<u>1.08E-03</u>	<u>1.11E-03</u>	<u>5.61E-04</u>

\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
YEAR 2001  
GASEOUS EFFLUENTS - ELEVATED RELEASE

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
3. Particulates*				
Sr-89	8.79E-05	6.53E-05	7.14E-05	8.01E-05
Sr-90	ND**	ND	ND	ND
Cs-134	ND	ND	ND	ND
Cs-137	ND	ND	ND	ND
Ba-140	1.16E-04	1.15E-04	9.15E-05	1.34E-04
La-140	6.04E-05	6.44E-05	5.52E-05	7.21E-05
Others (specify)				
Rb-88	3.59E-02	6.73E-02	4.32E-02	1.94E-02
Rb-89	2.87E-02	9.30E-02	1.04E-01	2.28E-01
Sr-91	9.58E-04	4.42E-04	8.96E-04	9.62E-04
Y-91m	8.57E-04	8.04E-04	8.56E-04	8.12E-04
Ru-103	ND	ND	ND	3.90E-06
Te-132	ND	ND	1.47E-06	3.80E-06
Cs-138	1.28E-01	1.53E-01	2.17E-01	2.40E-01
Ba-139	8.48E-02	7.97E-02	1.18E-01	1.11E-01
Ce-144	2.20E-06	ND	ND	ND
Au-199	5.44E-06	2.09E-05	6.45E-05	4.74E-05
<u>Total for Period*</u>	<u>2.80E-01</u>	<u>3.94E-01</u>	<u>4.85E-01</u>	<u>6.01E-01</u>
4. Tritium	4.39E-01	5.68E-01	2.02E+00	8.83E-01

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

\*\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 YEAR 2001  
 GASEOUS EFFLUENTS - GROUND RELEASE

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
1. Fission Gases				
Kr-85m	ND*	ND	ND	ND
Kr-85	ND	ND	ND	ND
Kr-87	ND	ND	ND	ND
Kr-88	ND	ND	ND	ND
Xe-133	ND	ND	ND	ND
Xe-135m	ND	ND	ND	ND
Xe-135	ND	ND	ND	ND
Xe-138	ND	ND	ND	ND
Others(specify)				
NONE				
<u>Total for Period</u>	<u>ND</u>	<u>ND</u>	<u>ND</u>	<u>ND</u>
2. Iodines				
I-131	2.15E-03	1.75E-03	1.58E-03	1.77E-03
I-133	1.07E-02	6.48E-03	5.65E-03	5.71E-03
I-135	3.67E-04	ND	ND	ND
<u>Total for Period</u>	<u>1.33E-02</u>	<u>8.23E-03</u>	<u>7.23E-03</u>	<u>7.47E-03</u>

\*ND – Not Detected.



EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 YEAR 2001  
 GASEOUS EFFLUENTS - GROUND RELEASE

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
3. Particulates*				
Sr-89	1.22E-04	2.51E-05	2.33E-05	5.58E-05
Sr-90	ND*	ND	ND	ND
Cs-134	ND	ND	ND	ND
Cs-137	ND	ND	ND	ND
Ba-140	5.79E-05	5.72E-06	4.29E-05	1.20E-04
La-140	1.34E-05	3.98E-06	3.57E-06	5.00E-05
Others (specify)				
Rb-89	4.61E-03	ND	5.98E-03	ND
Sr-91	4.74E-04	1.53E-04	3.73E-04	9.87E-04
Y-91m	2.97E-03	6.10E-04	8.18E-04	2.67E-03
Cs-138	6.28E-02	7.68E-03	1.21E-02	2.35E-02
Ba-139	3.15E-02	2.00E-02	1.92E-02	3.97E-02
Np-239	ND	ND	1.01E-05	ND
<u>Total for Period*</u>	<u>1.03E-01</u>	<u>2.84E-02</u>	<u>3.85E-02</u>	<u>6.70E-02</u>
4. Tritium	4.23E+00	7.09E-01	2.81E+00	3.50E+00

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

\*\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 YEAR 2001  
 GASEOUS EFFLUENTS - MIXED MODE RELEASE\*

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
1. Fission Gases				
Kr-85m	ND**	ND	ND	ND
Kr-85	ND	ND	ND	ND
Kr-87	ND	ND	ND	ND
Kr-88	ND	ND	ND	ND
Xe-133	ND	ND	ND	ND
Xe-135m	ND	ND	ND	ND
Xe-135	ND	ND	ND	ND
Xe-138	ND	ND	ND	ND
Others(specify)				
NONE				
<u>Total for Period</u>	<u>ND</u>	<u>ND</u>	<u>ND</u>	<u>ND</u>
2. Iodines				
I-131	2.28E-03	3.27E-03	3.41E-03	1.89E-03
I-132	1.33E-04	ND	ND	ND
I-133	1.07E-02	1.25E-02	1.21E-02	6.78E-03
I-135	9.18E-04	3.29E-04	ND	ND
<u>Total for Period</u>	<u>1.40E-02</u>	<u>1.61E-02</u>	<u>1.55E-02</u>	<u>8.67E-03</u>

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

\*\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
 YEAR 2001  
 GASEOUS EFFLUENTS - MIXED MODE RELEASE\*

<u>CURIES</u>	<u>Quarter</u> <u>1</u>	<u>Quarter</u> <u>2</u>	<u>Quarter</u> <u>3</u>	<u>Quarter</u> <u>4</u>
3. Particulates**				
Sr-89	1.85E-04	1.39E-04	7.51E-05	9.90E-05
Sr-90	ND	ND	ND	ND
Cs-134	ND	ND	1.64E-06	4.55E-06
Cs-137	2.42E-05	3.58E-05	6.47E-05	5.93E-05
Ba-140	7.31E-04	7.35E-04	5.68E-04	4.25E-04
La-140	4.54E-04	4.64E-04	3.78E-04	2.74E-04
Others (specify)				
Na-24	2.09E-05	7.50E-05	ND	ND
Cr-51	1.10E-04	3.17E-04	ND	ND
Mn-54	2.22E-04	1.37E-04	ND	6.30E-06
Co-58	1.16E-05	3.56E-05	ND	ND
Fe-59	ND	1.81E-05	ND	ND
Co-60	2.65E-03	1.17E-03	ND	6.56E-06
Zn-65	ND	2.15E-05	ND	ND
Zn-69m	5.32E-05	ND	ND	ND
Y-91m	7.78E-03	7.31E-03	6.05E-03	5.18E-03
Sr-91	1.28E-02	1.31E-02	6.22E-03	7.84E-03
Y-92	3.95E-05	1.10E-05	ND	ND
Sr-92	3.23E-04	2.69E-04	1.61E-03	1.43E-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.

\*\*\*ND – Not Detected.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
YEAR 2001  
GASEOUS EFFLUENTS - MIXED MODE RELEASE\*

<u>CURIES</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>	<u>Quarter</u>
Particulates** (Continued)	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
Others (specify)				
Nb-97	ND***	ND	ND	1.93E-05
Mo-99	1.81E-04	1.05E-04	ND	ND
Tc-99m	1.81E-04	4.22E-05	ND	ND
Ag-110m	7.52E-05	6.71E-05	4.20E-05	2.79E-05
Cs-138	1.07E-02	1.22E-02	ND	ND
Ba-139	2.29E-01	1.32E-01	1.72E-01	1.46E-01
Ce-141	2.98E-05	1.20E-05	8.84E-06	ND
Total for Period**	<u>2.65E-01</u>	<u>1.68E-01</u>	<u>1.87E-01</u>	<u>1.61E-01</u>
4. Tritium	1.49E+01	7.95E+00	9.99E+00	1.09E+01

\*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.

\*\*\*ND – Not Detected.

**BROWNS FERRY NUCLEAR PLANT  
ANNUAL EFFLUENT AND WASTE DISPOSAL REPORT  
2001  
SOLID WASTE AND IRRADIATED FUEL**

A. Solid Waste Shipped Off-site for Burial or Disposal (Not Irradiated Fuel)

1.	<u>Type of Waste</u>	<u>Units</u>	<u>Amount</u>	<u>Error %</u>
a.	Spent resins, filter sludge evaporator bottoms, etc.	m <sup>3</sup> Ci	0.00E+00 0.00E+00	
b.	Dry compressible waste, contaminated equipment, etc.	m <sup>3</sup> Ci	1.77E+02 7.28E+01	+/-25.0
c.	Irradiated components, control rod drives	m <sup>3</sup> Ci	0.00E+00 0.00E+00	
d.	Cartridge filters	m <sup>3</sup> Ci	0.00E+00 0.00E+00	

2. Estimate of Major Nuclide Composition by Waste Type

a.	<u>Dry compressible waste, contaminated equipment, etc.</u>		<u>Percentage</u>	<u>Activity (Curies)</u>
	<u>Nuclide</u>			
1.	Iron <sup>55</sup>	(1)	5.09E+01	3.71E+01
2.	Cobalt <sup>60</sup>	(1)	1.71E+01	1.25E+01
3.	Cesium <sup>137</sup>	(1)	1.15E+01	8.40E+00
4.	Zinc <sup>65</sup>	(1)	5.59E+00	4.07E+00
5.	Nickel <sup>63</sup>	(1)	5.14E+00	3.74E+00
6.	Cesium <sup>134</sup>	(1)	4.39E+00	3.20E+00
7.	Silver <sup>110m</sup>	(1)	2.89E+00	2.11E+00
8.	Manganese <sup>54</sup>	(1)	2.16E+00	1.57E+00
9.	Chromium <sup>51</sup>	(1)	2.01E-01	1.46E-01
10.	Cobalt <sup>58</sup>	(1)	4.01E-02	2.92E-02
11.	Strontium <sup>89</sup>	(1)	1.00E-02	7.28E-03
12.	Iron <sup>59</sup>	(1)	1.15E-04	8.36E-05
13.	Antimony <sup>125</sup>	(1)	4.99E-05	3.64E-05
14.	Zirconium <sup>95</sup>	(1)	3.99E-05	2.91E-05
15.	Cerium <sup>144</sup>	(1)	2.00E-05	1.45E-05
16.	Antimony <sup>124</sup>	(1)	9.99E-06	7.27E-06
17.	Cobalt <sup>57</sup>	(1)	4.99E-06	3.64E-06
18.	Other	(1)	<2.00E-02	<1.46E-02

(1) Calculated

**BROWNS FERRY NUCLEAR PLANT  
ANNUAL EFFLUENT AND WASTE DISPOSAL REPORT  
2001  
SOLID WASTE AND IRRADIATED FUEL**

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
32	(30) Sole Use Truck (2) Non Sole Use Truck	US Ecology Oak Ridge, TN
6	(5) Sole Use Truck (1) Non Sole Use Truck	Duratek Oak Ridge, TN

B. Irradiated Fuel Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None	N/A	N/A

C. Description of Shipments

<u>Number of Shipments</u>	<u>Type Container</u>	<u>Type Quantity</u>	<u>Number of Containers</u>	<u>Container Volume</u>	<u>Waste Type</u>
38	Strong Tight Container	A-LSA II LTD QTY	43	See Note	DAW

Solidification Agents Used:       None

Absorbents Used:                   None

NOTE: The 38 shipments of waste packaged in strong tight containers consisted of the following:

<u>Type of STC</u>	<u>Number of Packages</u>	<u>Volume of Packages (m<sup>3</sup>)</u>
40' "Sealand"	30	2.31E+03
20' "Sealand"	12	4.36E+02
LSA Metal Boxes	1	5.81E+00

**BROWNS FERRY NUCLEAR PLANT  
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT  
SUMMARY OF ABNORMAL/UNPLANNED RELEASES  
2001**

The release of radioactive material to the environment from Browns Ferry 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.

No abnormal gaseous or liquid releases occurred in 2001.

During the reporting period, January 1 through December 31, 2001, there was no missed compensatory measures.

**ENCLOSURE 4**

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3**

**INOPERABLE RADIOLOGICAL EFFLUENT INSTRUMENTATION REPORT  
2001**

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## **INOPERABLE RADIOLOGICAL EFFLUENT INSTRUMENTATION REPORT 2001**

This report is to comply with Browns Ferry Nuclear Plant Offsite Dose Calculation Manual (Offsite Dose Calculation Manual (ODCM)) Sections 1/2.1.1 and 1/2.1.2. The ODCM requires the exertion of best efforts to return inoperable instruments to operable status within 30 days. Failure to return such instruments to an operable status within the prescribed interval requires a description in the Annual Radioactive Effluent Release Report.

During the reporting period, January 1 through December 31, 2001, there were no radioactive liquid or gaseous effluent monitoring instrumentation out of service for greater than 30 days.

Some effluent monitors and flow instrumentation were placed in "out-of-service" status because these monitors' effluent streams were isolated. Therefore, these monitors are not included in this report.

**ENCLOSURE 5**

**TENNESSEE VALLEY AUTHORITY  
BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3**

**CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL  
2001**

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## **CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL (ODCM)**

This report covers the period from January 1 through December 31, 2001. During this period, one change was made to the ODCM. A revision was made to the Radiological Environmental Monitoring Program due to a dairy farm going out of business.

**TENNESSEE VALLEY AUTHORITY**

**BROWNS FERRY NUCLEAR PLANT**

**OFFSITE DOSE CALCULATION MANUAL**

**ODCM**

**REVISION 14**

PREPARED BY: Dale W. Nix

PHONE: 2682

RESPONSIBLE ORGANIZATION: RADCHEM, CHEMISTRY

APPROVED BY: GILBERT V. LITTLE

DATE: 01/11/2001

EFFECTIVE DATE: 01/12/2001

**LEVEL OF USE: REFERENCE USE**

VALIDATION DATE: NOT REQUIRED

**QUALITY-RELATED**

REVISION LOG

Procedure Number: ODCM

Revision Number: 14

Page Affected: 202, 203, and 204.

Pagination Pages: None

Description of Changes: IC-15.

Revised the Radiological Environmental Monitoring Program due to a dairy farm going out of business. The revision wording is consistent with the guidance from NUREG-1302, Offsite Dose Calculation Manual Guidance: Standard Radiological Effluent Controls for Boiling Water Reactors.

OFFSITE DOSE CALCULATION  
MANUAL (ODCM)

Browns Ferry Nuclear Plant  
Offsite Dose Calculation Manual  
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## INTRODUCTION

The Browns Ferry Nuclear Plant (BFN) Offsite Dose Calculation Manual (ODCM) is a supporting document of the BFN Technical Specifications. The ODCM is divided into two major parts. The first part of the ODCM contains: 1) Radioactive Effluent Controls specified by the BFN Technical Specification 5.5.4; 2) Radiological Environmental Monitoring Controls; 3) descriptions of the information that should be included in the Annual Radiological Environmental Operating and Annual Radioactive Effluent Release Reports required by BFN Technical Specifications 5.6.2 and 5.6.3; and, 4) Administrative Controls for the ODCM requirements. The second part of the ODCM contains the methodologies used to: 1) calculate offsite doses resulting from radioactive gaseous and liquid effluents; 2) calculate gaseous and liquid effluent monitor Alarm/Trip setpoints; and, 3) conduct the Radiological Environmental Monitoring Program (REMP).

The BFN ODCM is maintained for use as a reference guide on accepted methodologies and calculations. Changes in the calculation methods or parameters will be incorporated into the ODCM in order to assure that the ODCM represents the present methodology in all applicable areas. Any licensee initiated ODCM changes will be implemented in accordance with BFN Technical Specifications.

Radioactive waste release levels to UNRESTRICTED AREAS shall be kept "as low as reasonably achievable" and are not to exceed the annual average concentration limits specified in 10 CFR Part 20, Appendix B, Table 2. At the same time, the requirements specified in this manual permit the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power under unusual operating conditions which may temporarily result in releases higher than design objectives but still within the annual average concentration limits specified in 10 CFR Part 20. It is expected that by using this operational flexibility and exerting every effort to keep levels of radioactive releases "as low as reasonably achievable" in accordance with criteria established in 10 CFR Part 50, Appendix I, the annual releases will result in a small fraction of the annual average concentration limits specified in 10 CFR Part 20, Appendix B, Table 2.

The surveillance/testing requirements given in this manual provide assurance that liquid and gaseous wastes are properly controlled and monitored during any release of radioactive materials in the liquid and gaseous effluents. These requirements provide the data for the licensee and the Commission to evaluate the station's performance relative to radioactive materials released to the environment. Reports on the quantities of radioactive materials released in effluents shall be furnished to the Commission on the basis of Section 5.0 of this manual. On the basis of such reports and any additional information the Commission may obtain from the licensee or others, the Commission may require the licensee to take such actions as the Commission deems appropriate.

SECTION 1.0 AND 2.0

CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.0 APPLICABILITY

CONTROLS

---

1.0.1 Compliance with the Controls contained in the succeeding sections is required during the MODES specified therein; except that upon failure to meet the Control, the associated ACTION requirements shall be met.

1.0.2 Noncompliance with a Control shall exist when the requirements of the Control and associated ACTION requirements are not met within the specified time intervals. If the Control is restored prior to the expiration of the specified intervals, completion of the ACTION requirements is not required.

1.0.3 When a Control is not met, except as provided in the associated ACTION requirements, within 1 hour action shall be initiated to place the unit in the MODES in which the control does not apply by placing it, as applicable, in:

- 1) MODE 2 within 7 hours;
- 2) MODE 3 within 13 hours; and
- 3) MODE 4 within 37 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the action may be taken in accordance with the specified time limits as measured from the time of failure to meet the Control. Exceptions to these requirements are stated in the individual Controls. This Control is only applicable in MODES 1, 2, and 3.

1.0.4 Entry into a MODE or other specified condition shall not be made unless the conditions for the Control are met without reliance on provisions contained in the ACTION requirements. This provision shall not prevent passage through or to a MODE or other specified condition in the Control as required to comply with ACTION requirements. Exceptions to these requirements are stated in the individual Controls.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.0 APPLICABILITY

SURVEILLANCE REQUIREMENTS

---

- 2.0.1 Surveillance Requirements shall be met during the MODES specified for individual Controls unless otherwise stated in the individual Surveillance Requirement.
- 2.0.2 Each Surveillance Requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval.
- 2.0.3 Performance of a Surveillance Requirement within the specified time interval shall constitute compliance and OPERABILITY requirements for a Control and associated action statements unless otherwise required by these Controls. Surveillance Requirements do not have to be performed on inoperable equipment.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.1 INSTRUMENTATION

1/2.1.1 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

CONTROLS

---

1.1.1 In accordance with BFN Technical Specification 5.5.4.a, the radioactive liquid effluent monitoring instrumentation listed in Table 1.1-1 shall be OPERABLE with the applicability as shown in Tables 1.1-1 and 2.1-1. Alarm/trip setpoints will be set in accordance with guidance given in ODCM Section 6.2 to ensure that the limits of Control 1.2.1.1 are not exceeded.

APPLICABILITY: This requirement is applicable as shown in Table 1.1-1.

ACTION:

- a. With a radioactive liquid effluent monitoring channel alarm/trip setpoint less conservative than required by these requirements, suspend the release without delay, declare the channel inoperable, or adjust the alarm/trip setpoint to establish the conservatism required by these requirements.
- b. The action required when the number of OPERABLE channels is less than the minimum channels OPERABLE requirement is specified in the notes for Table 1.1-1. Exert best efforts to return the instrument(s) to OPERABLE status within 30 days and, if unsuccessful, explain in the next Annual Radioactive Effluent Release Report why the in-operability was not corrected in a timely manner.
- c. The provisions of Controls 1.0.3 and 1.0.4 are not applicable. Report all deviations in the Annual Radioactive Release Report.

SURVEILLANCE REQUIREMENTS

---

2.1.1 Each of the radioactive liquid effluent monitoring instruments shall be demonstrated OPERABLE by performance of tests in accordance with Table 2.1-1.

Table 1.1-1 (Page 1 of 2)  
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument*</u>	Minimum Channels		<u>Applicability</u>	<u>ACTION</u>
	<u>OPERABLE</u>			
1. Liquid Radwaste Effluent Monitor (RM-90-130)	1		**	A/B
2. RHR Service Water Monitor (RM-90-133D, -134D)	1		***	C
3. Raw Cooling Water Monitor (RM-90-132D)	1		**	D
4. Liquid Radwaste Effluent Flow Rate (77-60 loop)	1		**	E

\* Alarm/trip setpoints will be calculated in accordance with the guidance given in Section 6.2.

\*\* During Releases via this pathway.

\*\*\* During operation of an RHR loop and associated RHR service water system.

Table 1.1-1 (Page 2 of 2)  
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION  
TABLE NOTATION

ACTION A

During release of radioactive wastes from the radwaste processing system, the following shall be met:

- (1) liquid waste activity and flowrate shall be continuously monitored and recorded during release and shall be set to alarm and automatically close the waste discharge valve before exceeding the limits specified in Control 1.2.1.1,
- (2) if this cannot be met, two independent samples of the tank being discharged shall be analyzed in accordance with the sampling and analysis program specified in Table 2.2-1 and two qualified station personnel shall independently verify the release rate calculations and check valving before the discharge. Otherwise, suspend releases via this pathway.

ACTION B

With a radioactive liquid effluent monitoring channel alarm/trip setpoint less conservative than required by these requirements, suspend release via this pathway without delay, declare the channel inoperable, or adjust the alarm/trip setpoint to establish the conservatism required by these requirements.

ACTION C

During operation of an RHR loop and associated RHR service water system, the effluent from that unit's service water shall be continuously monitored. If an installed monitoring system is not available, a temporary monitor or grab samples taken every 4 hours and an analysis with at least an LLD<sup>1</sup> of 1E-7  $\mu\text{Ci/ml}$  (gross) or < applicable ECL ratio ( $\gamma$  isotopic) shall be used to monitor the effluent.

ACTION D

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided that a temporary monitor is installed or, at least once per 8 hours, grab samples are collected and analyzed for radioactivity with an LLD<sup>1</sup> of 1E-7  $\mu\text{Ci/ml}$  (gross) or < applicable ECL ratio ( $\gamma$  isotopic).

ACTION E

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may be continued provided the flow rate is estimated at least once per 4 hours during actual releases. Pump curves may be used to estimate flow.

<sup>1</sup> See Table 2.2-1, Table Notation for the definition of LLD.



Table 2.1-1 (Page 1 of 2)  
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>INSTRUMENT CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
a. Liquid Radwaste Effluent Monitor (RM-90-130)	D <sup>4</sup>	M	18M <sup>5</sup>	Q <sup>1</sup>
b. RHR Service Water Monitor (RM-90-133D,-134D)	D <sup>4</sup>	M	18M <sup>5</sup>	Q <sup>2</sup>
c. Raw Cooling Water Monitor (RM-90-132D)	D <sup>4</sup>	M	18M <sup>5</sup>	Q <sup>2</sup>
d. Liquid Radwaste Effluent Flow Rate (77-60 loop)	D <sup>4</sup>	N/A	18M	Q <sup>3</sup>

Table 2.1-1 (Page 2 of 2)  
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS  
TABLE NOTATION

NOTE: Each requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the interval given.

- 1 The CHANNEL FUNCTIONAL TEST shall demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
  - a. Instrument indicates measured levels above the alarm/trip setpoint.
  - b. Instrument indicates an inoperative/downscale failure.
  - c. Instrument controls not set in operate mode.
  
- 2 The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
  - a. Instrument indicates measured levels above the alarm/trip setpoint.
  - b. Instrument indicates an inoperative/downscale failure.
  - c. Instrument controls not set in operate mode.
  
- 3 This functional test shall consist of measuring rate of tank decrease over a period of time and comparing this value with flow rate instrument reading.
  
- 4 INSTRUMENT CHECK shall consist of verifying indication during periods of release. INSTRUMENT CHECK shall be made at least once per 24 hours on days which continuous, periodic, or batch releases are made.
  
- 5 The CHANNEL CALIBRATION shall include the use of a known (traceable to the National Institute of Standards and Technology (NIST)) radioactive source(s) positioned in a reproducible geometry with respect to the sensor or using standards that have been obtained from suppliers that participate in measurement assurance activities with the NIST.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.1 INSTRUMENTATION

1/2.1.2 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

CONTROLS

---

1.1.2 In accordance with BFN Technical Specification 5.5.4.a, the radioactive gaseous effluent monitoring instruments listed in Table 1.1-2 shall be OPERABLE with the applicability as shown in Table 1.1-2. Alarm/trip setpoints will be set in accordance with guidance given in ODCM Section 7.2 to ensure that the limits of ODCM Control 1.2.2.1 are not exceeded.

---

APPLICABILITY: As shown in Table 1.1-2.

ACTION:

- a. With a radioactive gaseous effluent monitoring channel alarm/trip setpoint less conservative than required by these requirements, suspend the release without delay, declare the channel inoperable or adjust the alarm/trip setpoint to establish the conservatism required by these requirements.
- b. Both off-gas treatment monitors may be taken out of service for less than one hour for purging of monitors during SI performance.
- c. The action required when the number of operable channels is less than the minimum channels operable requirement is specified in the notes for Table 1.1-2. Exert best efforts to return the instrument(s) to operable status within 30 days and, if unsuccessful, explain in the next Annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.
- d. The provisions of Controls 1.0.3 and 1.0.4 are not applicable. Report all deviations in the Annual Radioactive Release Report.

SURVEILLANCE REQUIREMENTS

---

2.1.2 Each of the radioactive gaseous effluent monitoring instruments shall be demonstrated OPERABLE by performance of tests in accordance with Table 2.1-2.

Table 1.1-2 (Page 1 of 2)  
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument</u>	<u>Minimum Channels/ Devices OPERABLE</u>	<u>Applicability</u>	<u>ACTION</u>
1. STACK (RM-90-147B & -148B)			
a. Noble Gas Monitor	1	*	A/C
b. Iodine Cartridge	1	*	B/C
c. Particulate Filter	1	*	B/C
d. Sampler Flow Abnormal	1	*	D
e. Stack Flow (FT, FM, FI-90-271)	1	*	G
2. REACTOR/TURBINE/REFUEL BUILDING VENTILATION ZONE (RM-90-250)			
a. Noble Gas Monitor	1	*	A/C
b. Iodine Sampler	1	*	B/C
c. Particulate Sampler	1	*	B/C
d. Sampler Flowmeter	1	*	D
3. TURBINE BUILDING EXHAUST (RM-90-249, -251)			
a. Noble Gas Monitor	1	**	A/C
b. Iodine Sampler	1	**	B/C
c. Particulate Sampler	1	**	B/C
e. Sampler Flowmeter	1	**	D
4. RADWASTE BUILDING VENT (RM-90-252)			
a. Noble Gas Monitor	1	*	A/C
b. Iodine Sampler	1	*	B/C
c. Particulate Sampler	1	*	B/C
e. Sampler Flowmeter	1	*	D
5. OFFGAS POST TREATMENT			
a. Noble Gas Activity Monitor (RM-90-265, -266)	1	**	F
b. Sample Flow Abnormal (PA-90-262)	1	**	D

\* At all times.

\*\* During releases via this pathway.

Table 1.1-2 (Page 2 of 2)  
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION  
TABLE NOTATION

ACTION A

With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue provided a temporary monitoring system is installed or grab samples are taken and analyzed at least once every 8 hours.

ACTION B

With a number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided samples are continuously collected with auxiliary sampling equipment for periods on the order of seven (7) days and analyzed in accordance with the sampling and analysis program specified in Table 2.2-2 within 48 hours after the end of the sampling period.

ACTION C

A monitoring system may be out of service for 4 hours for functional testing, calibration, or repair without providing or initiating grab sampling.

ACTION D

With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 4 hours.

ACTION F

With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 8 hours and these samples are analyzed for gross activity within 24 hours. Purging during SI performance is not considered a loss of monitoring capability.

ACTION G

With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, effluent releases via this pathway may continue provided the flow rate is recorded from 0-FI-90-348 (WRGERMS, Stack Flow Indicator)[BFPER960961]. If both 0-FI-90-271 and 0-FI-90-348 are inoperable, ACTION D applies.

Table 2.1-2 (Page 1 of 2)  
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>Instrument</u>	<u>INSTRUMENT CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. STACK				
a. Noble Gas Monitor <sup>4</sup>	D	M	18M <sup>1</sup>	Q <sup>2</sup>
b. Iodine Cartridge	W	N/A	N/A	N/A
c. Particulate Filter	W	N/A	N/A	N/A
d. Sampler Flow Abnormal	D	N/A	18M	Q
e. Stack Flowmeter	D	N/A	18M	Q
2. REACTOR/TURBINE/REFUEL BUILDING VENTILATION ZONE				
a. Noble Gas Monitor <sup>5</sup>	D	M	18M <sup>1</sup>	Q <sup>2</sup>
b. Iodine Sampler	W	N/A	N/A	N/A
c. Particulate Sampler	W	N/A	N/A	N/A
b. Sampler Flowmeter	D	N/A	18M	Q
3. TURBINE BUILDING EXHAUST				
a. Noble Gas Monitor <sup>5</sup>	D	M	18M <sup>1</sup>	Q <sup>2</sup>
b. Iodine Sampler	W	N/A	N/A	N/A
c. Particulate Sampler	W	N/A	N/A	N/A
b. Sampler Flowmeter	D	N/A	18M	Q
4. RADWASTE BUILDING VENT				
a. Noble Gas Monitor <sup>5</sup>	D	M	18M <sup>1</sup>	Q <sup>2</sup>
b. Iodine Sampler	W	N/A	N/A	N/A
c. Particulate Sampler	W	N/A	N/A	N/A
b. Sampler Flowmeter	D	N/A	18M	Q
5. OFF GAS POST TREATMENT				
a. Noble Gas Activity Monitor <sup>4</sup>	D	M	18M <sup>1</sup>	Q <sup>3</sup>
b. Sample Flow Abnormal	D	N/A	18M	Q <sup>2</sup>

Table 2.1-2 (Page 2 of 2)  
RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

NOTE: Each requirement shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the interval given.

- <sup>1</sup> The CHANNEL CALIBRATION shall include the use of a known (traceable to the National Institute of Standards and Technology (NIST)) radioactive source(s) positioned in a reproducible geometry with respect to the sensor or using standards that have been obtained from suppliers that participate in measurement assurance activities with the NIST.
- <sup>2</sup> The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:

  1. Instrument indicates measured levels above the alarm/trip setpoint.
  2. Instrument indicates an inoperative/downscale failure.
  3. Instrument controls not set in operate mode (stack only).
- <sup>3</sup> The CHANNEL FUNCTIONAL TEST shall demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:

  1. Instrument indicates measured levels above the alarm/trip setpoint.
  2. Instrument indicates an inoperative/downscale failure.
  3. Instrument controls not set in operate mode (stack only).

The two channels are arranged in a coincidence logic such that 2 upscale, or 1 downscale and 1 upscale or 2 downscale will isolate the offgas line.
- <sup>4</sup> The noble gas monitor shall have a LLD of  $1E-5$   $\mu\text{Ci}/\text{cc}$  (Xe-133 Equivalent).
- <sup>5</sup> The noble gas monitor shall have a LLD of  $1E-6$   $\mu\text{Ci}/\text{cc}$  (Xe-133 Equivalent).

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.1 LIQUID EFFLUENTS

1/2.2.1.1 CONCENTRATION

CONTROLS

---

1.2.1.1 In accordance with BFN Technical Specifications 5.5.4.b and c, the concentration of radioactive material released at any time from the site to UNRESTRICTED AREAS (see Figure 3.1) shall be limited to ten times the concentrations specified in 10 CFR Part 20, Appendix B, Table 2, Column 2 for radionuclides other than dissolved or entrained noble gases. For dissolved or entrained noble gases, the concentration shall be limited to  $2E-4$   $\mu\text{Ci/ml}$  total activity.

APPLICABILITY: At all times.

ACTION:

- a. If the above limits are exceeded, appropriate action shall be initiated without delay to bring the release within limits. Report all deviations in the Annual Radioactive Effluent Release Report.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

- 2.2.1.1.1 Facility records shall be maintained of radioactive concentrations and volume before dilution of each batch of liquid effluent released, and of the average dilution flow and the length of time over which each discharge occurred.
- 2.2.1.1.2 Radioactive liquid waste sampling and activity analysis of each liquid waste batch to be discharged shall be performed prior to release in accordance with the sampling and analysis program specified in Table 2.2-1.
- 2.2.1.1.3 The operation of the automatic isolation valves and discharge tank selection valves shall be checked once per 24 months.
- 2.2.1.1.4 The results of the analysis of samples collected from release points shall be used with the calculational methodology in ODCM Section 6.1 to assure that the concentrations at the point of discharge are maintained within the above limits.



Table 2.2-1 (Page 1 of 3)  
RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

Liquid Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	System Design Capability Lower Limit of Detection (LLD) <sup>3</sup> (μCi/ml)
Batch Waste Releases <sup>1</sup>	Each Batch	Each Batch Prior to Release	Principal Gamma Emitters <sup>4</sup>	5x10 <sup>-7</sup>
	One Batch per Month	Monthly	Dissolved and Entrained Gases <sup>5</sup>	1x10 <sup>-5</sup>
	Monthly Proportional Composite <sup>2</sup>	Monthly	Tritium	1x10 <sup>-5</sup>
			Gross Alpha	1x10 <sup>-7</sup>
	Quarterly Proportional Composite <sup>2</sup>	Quarterly	Sr-89, Sr-90	5x10 <sup>-8</sup>
			Fe-55	1x10 <sup>-6</sup>

Table 2.2-1 (Page 2 of 3)  
RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM  
TABLE NOTATION

- 1 A batch release is the discharge of liquid waste of a discrete volume. The discharge shall be thoroughly mixed prior to sampling.
- 2 A proportional composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged from the plant and is representative of the liquid discharged.
- 3 The LLD is defined for the purpose of these requirements as the smallest concentration of radioactive material in a sample that will yield a net count above system background that will be detected with 95% probability with only a 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$LLD = \frac{4.66s_b}{E \quad V \quad 2.22E+06 \quad Y \quad \exp(-\lambda\Delta t)}$$

Where:

- LLD = the "a priori" lower limit of detection as defined above ( $\mu\text{Ci/g}$  or  $\mu\text{Ci/ml}$ ),
- $s_b$  = the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (cpm),
- E = the counting efficiency (c/decay),
- V = the sample size (g or ml),
- 2.22E+06 = the number of dpm/ $\mu\text{Ci}$
- Y = the fractional radiochemical yield, when applicable,
- $\lambda$  = the radioactive decay constant for the particular radionuclide ( $s^{-1}$ ), and
- $\Delta t$  = the elapsed time between midpoint of sample collection and time of counting (s).

Typical values of E, V, Y, and  $\Delta t$  should be used in the calculation.

It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not an a posteriori (after the fact) limit for a particular measurement.

Table 2.2-1 (Page 3 of 3)  
RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM  
TABLE NOTATION

<sup>4</sup> The principal gamma emitters for which the LLD specification will apply are exclusively the following radionuclides: Zn-65, Co-60, Cs-137, Mn-54, Co-58, Cs-134, Ce-141, Ce-144, Mo-99 and Fe-59 for liquid releases. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported as being present. Nuclides which are below the LLD for the analysis should not be reported as being present at the LLD level for that nuclide. I-131 shall have a LLD of  $\leq 1E-6$   $\mu\text{Ci/ml}$ .

<sup>5</sup> Gamma Emitters Only.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.1 LIQUID EFFLUENTS

1/2.2.1.2 DOSE

CONTROLS

---

1.2.1.2 In accordance with BFN Technical Specifications 5.5.4.d and e, 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:

- a. During any calendar quarter to  $\leq$  1.5 mrem to the total body and to  $\leq$  5 mrem to any organ, and
- b. During any calendar year to  $\leq$  3 mrem to the total body and to  $\leq$  10 mrem to any organ.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits. This Special Report shall also include: (1) the results of radiological analyses of the drinking water source, and (2) the radiological impact on finished drinking water supplies with regard to the requirements of 40 CFR Part 141, National Primary Drinking Water Regulations.\*
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.1.2 Cumulative quarterly and yearly dose contributions from liquid effluents shall be determined as specified in ODCM Section 6.3 at least once every 31 days.

\* The requirements of (1) and (2) above are applicable only if drinking water supply is taken from the receiving water body within 3 miles of the plant discharge. In the case of river-sited plants this is 3 miles downstream only.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.1 LIQUID EFFLUENTS

1/2.2.1.3 LIQUID RADWASTE TREATMENT SYSTEM

CONTROLS

---

1.2.1.3 In accordance with BFN Technical Specification 5.5.4.f, the Liquid Radwaste Treatment System shall be used to reduce the radioactive materials in liquid discharge from the site when the projected monthly dose would exceed 0.06 mrem to the total body or 0.20 mrem to any other organ per unit.

APPLICABILITY: At all times.

ACTION:

- a. With radioactive liquid waste being discharged for more than 31 days without treatment and when the projected dose is in excess of the above limits and any portion of the Liquid Radwaste Treatment System not in operation, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that includes the following information:
  1. Explanation of why liquid radwaste was being discharged without treatment, identification of any inoperable equipment or subsystems, and the reason for the inoperability,
  2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
  3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.1.3 Doses due to liquid releases to UNRESTRICTED AREAS shall be projected at least once per 31 days, in accordance with ODCM Section 6.5.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.2 GASEOUS EFFLUENTS

1/2.2.2.1 DOSE RATE

CONTROLS

---

1.2.2.1 In accordance with BFN Technical Specification 5.5.4.g, the dose rate at any time to areas at and beyond the SITE BOUNDARY (see Figure 3.1) due to radioactivity released in gaseous effluents from the site shall be limited to the following values:

- a. The dose rate limit for noble gases shall be  $\leq$  500 mrem/yr to the total body and  $\leq$  3000 mrem/yr to the skin, and
- b. The dose rate limit for I-131, I-133, H-3 and particulates with greater than eight day half-lives shall be  $\leq$  1500 mrem/yr to any organ.

APPLICABILITY: At all times.

ACTION: a. If the limits above are exceeded, appropriate corrective action shall be immediately initiated to bring the release within limits. Report all deviations in the Annual Radioactive Effluent Release Report.

- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.2.1.1 The gross  $\beta/\gamma$  and particulate activity of gaseous wastes released to the environment shall be monitored and recorded.

- a. For effluent streams having continuous monitoring capability, the activity shall be monitored and flow rate evaluated and recorded to enable release rates of gross radioactivity to be determined at least once per shift using instruments specified in Table 1.1-2.
- b. For effluent streams without continuous monitoring capability, the activity shall be monitored and recorded and the release through these streams controlled to within the limits specified above.

2.2.2.1.2 Radioactive gaseous waste sampling and activity analysis shall be performed in accordance with the sampling and analysis program specified in Table 2.2-2. Dose rates shall be determined to be within the above limits using methods contained in ODCM Section 7.3.

2.2.2.1.3 Samples of offgas system effluents shall be analyzed at least weekly to determine the identity and quantity of the principal radionuclides being released.

Table 2.2-2 (Page 1 of 2)  
RADIOACTIVE GASEOUS WASTE MONITORING SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	System Design Capability Lower Limit of Detection (LLD) <sup>1</sup> (μCi/ml)
A. Containment Purge	Prior to Each PURGE Grab Sample <sup>5</sup>	Prior to Each PURGE	Principal Gamma Emitters <sup>3</sup>	1x10 <sup>-4</sup>
		Monthly <sup>6</sup>	H-3	1x10 <sup>-6</sup>
B.1. Stack	Monthly Grab Sample	Monthly <sup>4</sup>	Principal Gamma Emitters <sup>3</sup>	1x10 <sup>-4</sup>
2. Building Ventilation	Monthly Grab Sample	Monthly <sup>4</sup>	H-3	1x10 <sup>-6</sup>
a. Reactor/Turbine				
b. Turbine Exhaust				
c. Radwaste				
C. All Release Points Listed in B. Above	Continuous Sampler	Charcoal Sample Weekly <sup>4</sup>	I-131	1x10 <sup>-12</sup> 2
	Continuous Sampler	Particulate Sample Weekly <sup>4</sup>	Principal Gamma Emitters <sup>3</sup>	1x10 <sup>-11</sup> 2
			I-131	1x10 <sup>-12</sup> 2
	Continuous Sampler	Composite Particulate Sample Monthly	Gross Alpha	1x10 <sup>-11</sup>
	Continuous Sampler	Composite Particulate Sample Quarterly	Sr-89, Sr-90	1x10 <sup>-11</sup>

Table 2.2-2 (Page 2 of 2)  
RADIOACTIVE GASEOUS WASTE MONITORING SAMPLING AND ANALYSIS PROGRAM  
TABLE NOTATION

<sup>1</sup> The LLD is defined, for the purpose of this requirement, as the smallest concentration of radioactive material in a sample that will yield a net count above system background that will be detected with 95% probability with only a 5% probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system (which may include radiochemical separation):

$$LLD = \frac{4.66 s_b}{E V 2.22E+06 Y \exp(-\lambda \Delta t)}$$

Where:

- LLD = the "a priori" lower limit of detection ( $\mu\text{Ci/g}$  or  $\mu\text{Ci/ml}$ ),  
 $s_b$  = the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate (cpm),  
E = the counting efficiency (c/decay),  
V = the sample size (g or ml)  
2.22E+06 = the number of dpm/ $\mu\text{Ci}$ ,  
Y = the fractional radiochemical yield, when applicable,  
 $\lambda$  = the radioactive decay constant for the particular radionuclide ( $s^{-1}$ ), and  
 $\Delta t$  = the elapsed time between midpoint of sample collection and time of counting (s).

Typical values of E, V, Y, and  $\Delta t$  should be used in the calculation

It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not an a posteriori (after the fact) limit for a particular measurement.

- <sup>2</sup> When samples are collected more often than that shown, the minimum detectable concentrations can be correspondingly higher.
- <sup>3</sup> The principal gamma emitters for which the LLD specification will apply are exclusively the following radionuclides: Kr-87, Kr-88, Xe-133, Xe-133m, Xe-135, and Xe-138 for gaseous emissions and Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, Cs-134, Cs-137, Ce-141 and Ce-144 for particulate emissions. This list does not mean that only these nuclides are to be detected and reported. Other peaks which are measurable and identifiable, together with the above nuclides, shall also be identified and reported. Nuclides which are below the LLD for the analyses should not be reported as being present at the LLD level for that nuclide.
- <sup>4</sup> Analysis shall also be performed if the radiation monitor alarm exceeds the setpoint value.
- <sup>5</sup> A grab sample is not required after deinerting, provided that:
- the reactor has not achieved criticality in the interim, and,
  - the reactor coolant temperature has not reached or exceeded 212°F.
- <sup>6</sup> The primary coolant H-3 concentration in  $\mu\text{Ci/ml}$  can be converted to  $\mu\text{Ci/cc}$  and used to estimate the containment H-3 concentration (R38 960812 943).



1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.2 GASEOUS EFFLUENTS

1/2.2.2.2 DOSE - NOBLE GASES

CONTROLS

---

1.2.2.2 In accordance with BFN Technical Specification 5.5.4.h, the air dose to areas at and beyond the SITE BOUNDARY (see Figure 3.1) due to noble gases released in gaseous effluents per unit shall be limited to the following:

- a. During any calendar quarter, to  $\leq 5$  mrad for gamma radiation and  $\leq 10$  mrad for beta radiation;
- b. During any calendar year, to  $\leq 10$  mrad for gamma radiation and  $\leq 20$  mrad for beta radiation.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated air dose from radioactive noble gases in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.2.2 Cumulative quarterly and yearly dose contributions from gaseous releases shall be determined using methods contained in ODCM Section 7.3 at least once every 31 days.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.2 GASEOUS EFFLUENTS

1/2.2.2.3 DOSE - I-131, I-133, TRITIUM AND RADIONUCLIDES IN PARTICULATE FORM  
WITH HALF-LIVES GREATER THAN EIGHT DAYS

CONTROLS

---

1.2.2.3 In accordance with BFN Technical Specification 5.5.4.e and i, 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 8 days in gaseous effluent released per unit to areas at and beyond the SITE BOUNDARY (see Figure 3.1) shall be limited to the following:

- a. To any organ during any calendar quarter to  $\leq 7.5$  mrem;
- b. To any organ during any calendar year to  $\leq 15$  mrem.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated dose from the release of Iodine-131, Iodine-133, tritium, and radionuclides in particulate form with half-lives greater than 8 days, in gaseous effluents exceeding any of the above limits, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions that have been taken to reduce the releases and the proposed corrective actions to be taken to assure that subsequent releases will be in compliance with the above limits.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.2.3 Cumulative quarterly and yearly dose contributions from gaseous releases shall be determined using methods contained in ODCM Section 7.4 at least once every 31 days.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.2 GASEOUS EFFLUENTS

1/2.2.2.4 GASEOUS RADWASTE TREATMENT

CONTROLS

---

- 1.2.2.4 During operation above 25% power, the discharge of the SJAE must be routed through the charcoal adsorbers.

In accordance with BFN Technical Specification 5.5.4.f, the GASEOUS RADWASTE TREATMENT SYSTEM shall be operable and appropriate portions of the system shall be used to reduce releases of radioactivity when the projected doses in 31 days due to gaseous effluents from each unit, to areas at and beyond the SITE BOUNDARY, would exceed:

- a. 0.2 mrad to air from gamma radiation, or
- b. 0.4 mrad to air from beta radiation, or
- c. 0.3 mrem to any organ of a MEMBER OF THE PUBLIC.

APPLICABILITY: At all times.

ACTION:

- a. With gaseous radwaste being discharged without treatment for more than 7 days, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that includes the following information:
  1. Identification of the inoperable equipment or subsystems and the reason for inoperability,
  2. Action(s) taken to restore the inoperable equipment to OPERABLE status, and
  3. Summary description of action(s) taken to prevent a recurrence.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

- 2.2.2.4.1 During operation above 25% power, the position of the charcoal bed bypass valve will be verified daily.

- 2.2.2.4.2 Doses due to gaseous releases to areas at and beyond the SITE BOUNDARY shall be projected in accordance with Section 7.6 at least once per 31 days.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.2 RADIOACTIVE EFFLUENTS

1/2.2.3 TOTAL DOSE

CONTROLS

---

1.2.3 In accordance with BFN Technical Specification 5.5.4.j, the dose or dose commitment to a real individual in an UNRESTRICTED AREA from all uranium fuel cycle sources is limited to  $\leq 25$  mrem to the total body or any organ (except the thyroid, which is limited to  $\leq 75$  mrem) over a period of one calendar year.

APPLICABILITY: At all times.

ACTION:

- a. With the calculated doses from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of Control 1.2.1.2, 1.2.2.2, or 1.2.2.3, calculations shall be made including direct radiation contributions from the units (including outside storage tanks, etc.) to determine whether the above limits of Control 1.2.3 have been exceeded. If such is the case, prepare and submit to the Commission within 30 days, pursuant to ODCM Administrative Control 5.4, a Special Report that defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the above limits and includes the schedule for achieving conformance with the above limits. This Special Report, as defined in 10 CFR 20.2203, shall include an analysis that estimates the radiation exposure (dose) to a MEMBER OF THE PUBLIC in an UNRESTRICTED AREA from uranium fuel cycle sources, including all effluent pathways and direct radiation, for the calendar year that includes the release(s) covered by this report. It shall also describe levels of radiation and concentrations of radioactive material involved, and the cause of the exposure levels or concentrations. If the estimated dose(s) exceeds the above limits, and if the release condition resulting in violation of 40 CFR Part 190 has not already been corrected, the Special Report shall include a request for a variance in accordance with the provisions of 40 CFR Part 190. Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete.
- b. The provisions of Controls 1.0.3 and 1.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

---

2.2.3 Cumulative dose contributions from liquid and gaseous effluents shall be determined in accordance with ODCM Sections 6.3, 7.4, and 7.5 and the methods in ODCM Section 8.0.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.3 RADIOLOGICAL ENVIRONMENTAL MONITORING

1/2.3.1 MONITORING PROGRAM

CONTROLS

---

1.3.1 The Radiological Environmental Monitoring Program (REMP) shall be conducted as specified in Table 2.3-1.

APPLICABILITY: At all times.

ACTION:

- a. With the REMP not being conducted as specified in Table 2.3-1, prepare and submit to the Commission, in the Annual Radiological Environmental Operating Report, a description of the reasons for not conducting the program as required and the plans for preventing a recurrence.

Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, seasonal unavailability or malfunction of automatic sampling equipment. If the latter, every effort shall be made to complete corrective action prior to the end of the next sampling period. All deviations from the sampling schedule shall be reported in the Annual Radiological Environmental Operating Report.

- b. With the level of radioactivity in an environmental sampling medium exceeding the reporting levels of Table 2.3-3 when averaged over any calendar quarter, prepare and submit to the Commission within 30 days from the end of the affected quarter a report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce radioactive effluents so that the potential annual dose to a member of the public is less than the calendar year limits of ODCM Controls 1.2.1.2, 1.2.2.2, and 1.2.2.3. When one or more of the radionuclides in Table 2.3-2 is detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration}(1)}{\text{limit level}(1)} + \frac{\text{concentration}(2)}{\text{limit level}(2)} + \dots \geq 1.0$$

When radionuclides other than those in Table 2.3-3 are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to a MEMBER OF THE PUBLIC is equal to or greater than the calendar year limits of ODCM Controls 1.2.1.2, 1.2.2.2, and 1.2.2.3. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiological Environmental Operating Report.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.3 RADIOLOGICAL ENVIRONMENTAL MONITORING

1/2.3.1 MONITORING PROGRAM

CONTROLS

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ACTION (CONTINUED):

- c. With milk or fresh leafy vegetable samples unavailable from one or more of the sample locations required by Table 2.3-1, identify locations for obtaining replacement samples, if available, and add them to the REMP within 30 days. The specific locations from which samples were unavailable may then be deleted from the monitoring program.

Pursuant to Control 1.3.1.b, identify the cause of the unavailability of samples and identify the new location(s), if available, for obtaining replacement samples in the next Annual Radiological Environmental Operating Report and also include a revised figure(s) and table(s) for the ODCM reflecting the new location(s).

The detection capabilities required by Table 2.3-2 are state-of-the art for routine environmental measurements in industrial laboratories. It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not as a posteriori (after the fact) limit for a particular measurement. Analyses shall be performed in such a manner that the stated LLDs will be achieved under routine conditions. Occasionally background fluctuations, unavoidably small sample sizes, the presence of interfering nuclides, or other uncontrollable circumstances may render these LLDs unachievable. In such cases, the contributing circumstances will be identified and described in the Annual Radiological Environmental Operating Report.

SURVEILLANCE REQUIREMENTS

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- 2.3.1.1 The radiological environmental monitoring samples shall be collected pursuant to Table 2.3-1 from the locations given in the tables and figures listed below and shall be analyzed pursuant to the requirements of Table 2.3-1 and the detection capabilities required by Table 2.3-2.
- 2.3.1.2 If measured levels of radioactivity in a environmental sampling medium are determined to exceed the reporting level values of Table 2.3-3 when averaged over any calendar quarter sampling period, a report shall be submitted to the Commission pursuant to Control 1.3.1.b.

Table 2.3-1 (1 of 3)  
MINIMUM REQUIRED RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Sample Locations<sup>a</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
1. AIRBORNE			
Radioiodine/ Particulates	Minimum of 5 locations	Continuous operation of sampler with sample collection as required by dust loading but at least once per 7 days.	Radioiodine canister: Analyze at least once per 7 days for I-131.  Particulate sampler: Analyze for gross beta radioactivity ≥ 24 hours following filter change. Perform gamma isotopic analysis on each sample when gross beta activity is > 10 times the average of control samples. Perform gamma isotopic analysis on composite (by location) sample at least once per 92 days.
2. DIRECT RADIATION	At least 40 locations with ≥ 2 dosimeters at each location.	At least once per 92 days.	Gamma Dose. At least once per 92 days.

<sup>a</sup> Sample locations are given in ODCM Section 9.0.

Table 2.3-1 (2 of 3)  
MINIMUM REQUIRED RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Sample Locations<sup>a</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
3. WATERBORNE			
a. Surface	2 locations	Composite sample collected over a period of $\leq 31$ days. <sup>b</sup>	Gamma isotopic analysis of each composite sample. Tritium analysis of composite sample at least once per 92 days.
b. Drinking	Minimum of 1 downstream location, or all water supplies within 10 miles downstream which are taken from the Tennessee River	Composite sample collected over a period of $\leq 31$ days. <sup>b, c</sup>	Gross beta and gamma isotopic analysis of each composite sample. Tritium analysis of composite sample at least once per 92 days.
c. Sediment	Minimum of 1 location.	At least once per 184 days	Gamma isotopic analysis of each sample.
d. Ground <sup>d</sup>			

<sup>a</sup> Sample locations are given in ODCM Section 9.0.

<sup>b</sup> Composite samples shall be collected by collecting an aliquot at intervals not exceeding 2 hours.

<sup>c</sup> Composite samples shall be collected over a period of  $\leq 14$  days for I-131 if drinking water is obtained within 3 miles downstream of the plant.

<sup>d</sup> Ground water movement in the area has been determined to be from the plant site toward the Tennessee River. Since no drinking water wells exist between the plant and the river, monitoring of ground water is not required.



Table 2.3-1 (3 of 3)  
MINIMUM REQUIRED RADIOLOGICAL ENVIRONMENTAL MONITORING PROGRAM

<u>Exposure Pathway and/or Sample</u>	<u>Number of Samples and Sample Locations<sup>a</sup></u>	<u>Sampling and Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
4. INGESTION			
a. Milk	3 locations	At least once per 15 days when animals are on pasture; at least once per 31 days at other times.	I-131 analysis of each sample. Gamma isotopic analysis at least once per 31 days
b. Fish	2 samples	One sample in season, or at least once per 184 days if not seasonal. One sample of commercial and game species.	Gamma isotopic analysis on edible portions.
c. Food Products <sup>e</sup>	2 locations	At least once per year at time of harvest	Gamma isotopic analysis on edible portion.

<sup>a</sup> Sample locations are given in ODCM Section 9.0.

<sup>e</sup> Since water from the Tennessee River in the immediate area downstream is not used for irrigation purposes, the sampling of food products (primarily broad leaf vegetation) is not required unless milk sampling is not performed.

Table 2.3-2 (1 of 2)  
MAXIMUM VALUES FOR THE LOWER LIMIT OF DETECTION (LLD) a,b  
FOR ENVIRONMENTAL SAMPLES

<u>Analysis</u>	<u>Water</u> <u>(pCi/L)</u>	<u>Airborne</u> <u>Particulate</u> <u>or Gases</u> <u>(pCi/m<sup>3</sup>)</u>	<u>Fish</u> <u>(pCi/kg,</u> <u>wet)</u>	<u>Milk</u> <u>(pCi/L)</u>	<u>Food</u> <u>Products</u> <u>(pCi/kg,</u> <u>wet)</u>	<u>Sediment</u> <u>(pCi/kg,</u> <u>dry)</u>
gross beta	4	0.01	N/A	N/A	N/A	N/A
H-3	2000 <sup>c</sup>	N/A	N/A	N/A	N/A	N/A
Mn-54	15	N/A	130	N/A	N/A	N/A
Fe-59	30	N/A	260	N/A	N/A	N/A
Co-58, 60	15	N/A	130	N/A	N/A	N/A
Zn-65	30	N/A	260	N/A	N/A	N/A
Zr-95	30	N/A	N/A	N/A	N/A	N/A
Nb-95	15	N/A	N/A	N/A	N/A	N/A
I-131	1 <sup>d</sup>	0.07	N/A	1	60	N/A
Cs-134	15	0.05	130	15	60	150
Cs-137	18	0.06	150	18	80	180
Ba-140	60	N/A	N/A	60	N/A	N/A
La-140	15	N/A	N/A	15	N/A	N/A

Table 2.3-2 (2 of 2)  
MAXIMUM VALUES FOR THE LOWER LIMIT OF DETECTION (LLD)<sup>a,b</sup>  
FOR ENVIRONMENTAL SAMPLES  
TABLE NOTATION

<sup>a</sup> The LLD is the smallest concentration of radioactive material in a sample that will be detected with 95 percent probability with 5 percent probability of falsely concluding that a blank observation represents a "real" signal.

For a particular measurement system, which may include radiochemical separation:

$$LLD = \frac{4.66 s_p}{E V 2.22 Y \exp(-\lambda \Delta t)}$$

Where:

- LLD = the "a priori" lower limit of detection as defined above, (as pCi/g or pCi/L).
- $s_p$  = the standard deviation of the background counting rate or of the counting rate of a blank sample as appropriate, (cpm).
- E = the counting efficiency, (c/decay).
- V = the sample size (g or L).
- 2.22 = the number of dpm/pCi,
- Y = the fractional radiochemical yield, (when applicable).
- $\lambda$  = the radioactive decay constant for the particular radionuclide, ( $s^{-1}$ ) and
- $\Delta t$  = for environmental samples is the elapsed time between sample collection, (or end of the sample collection period), and time of counting (for environmental samples, not plant effluent samples), seconds.

Typical values of E, V, Y, and  $\Delta t$  should be used in the calculation.

It should be recognized that the LLD is defined as an a priori (before the fact) limit representing the capability of a measurement system and not as an a posteriori (after the fact) limit for a particular measurement.

- <sup>b</sup> Other peaks which are measurable and identifiable shall be identified and reported.
- <sup>c</sup> If no drinking water pathway exists, a value of 3000 pCi/L may be used.
- <sup>d</sup> LLD for analysis of drinking water and surface water samples shall be performed by gamma spectroscopy at approximately 15 pCi/L. If levels greater than 15 pCi/L are identified in surface water samples downstream from the plant, or in the event of an unanticipated release of I-131, drinking water samples will be analyzed at an LLD of 1.0 pCi/L for I-131.

Table 2.3-3

REPORTING LEVELS FOR RADIOACTIVITY CONCENTRATIONS IN ENVIRONMENTAL SAMPLES

<u>Analysis</u>	<u>Water</u> <u>(pCi/L)</u>	<u>Airborne</u> <u>Particulate</u> <u>or gases</u> <u>(pCi/m<sup>3</sup>)</u>	<u>Fish</u> <u>(pCi/Kg, wet)</u>	<u>Milk</u> <u>(pCi/L)</u>	<u>Food Products</u> <u>(pCi/Kg, wet)</u>
H-3	2 x 10 <sup>4</sup> (a)	N.A.	N.A.	N.A.	N.A.
Mn-54	1 x 10 <sup>3</sup>	N.A.	3 x 10 <sup>4</sup>	N.A.	N.A.
Fe-59	4 x 10 <sup>2</sup>	N.A.	1 x 10 <sup>4</sup>	N.A.	N.A.
Co-58	1 x 10 <sup>3</sup>	N.A.	3 x 10 <sup>4</sup>	N.A.	N.A.
Co-60	3 x 10 <sup>2</sup>	N.A.	1 x 10 <sup>4</sup>	N.A.	N.A.
Zn-65	3 x 10 <sup>2</sup>	N.A.	2 x 10 <sup>4</sup>	N.A.	N.A.
Zr-Nb-95	4 x 10 <sup>2</sup>	N.A.	N.A.	N.A.	N.A.
I-131	2 (b)	0.9	N.A.	3	1 x 10 <sup>2</sup>
Cs-134	30	10	1 x 10 <sup>3</sup>	60	1 x 10 <sup>3</sup>
Cs-137	50	20	2 x 10 <sup>3</sup>	70	2 x 10 <sup>3</sup>
Ba-La-140	2 x 10 <sup>2</sup>	N.A.	N.A.	3 x 10 <sup>2</sup>	N.A.

(a) For drinking water samples. This is 40 CFR Part 141 value. If no drinking water pathway exists, a value of 30,000 pCi/L may be used.

(b) If no drinking water pathway exists, a value of 20 pCi/L may be used.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.3 RADIOLOGICAL ENVIRONMENTAL MONITORING

1/2.3.2 LAND USE CENSUS

CONTROLS

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1.3.2 A land use census shall be conducted and shall identify the location of the nearest milk animal, the nearest residence and the nearest garden<sup>1</sup> of greater than 500 square feet producing vegetables in each of the 16 meteorological sectors within a distance of 5 miles. (For elevated releases as defined in Regulatory Guide 1.111, Revision 1, July 1977, the land use census shall also identify the locations of all milk animals and gardens of greater than 500 square feet producing fresh leafy vegetables in each of the 16 meteorological sectors within a distance of three miles.)

<sup>1</sup> Broad leaf vegetation sampling may be performed at the SITE BOUNDARY in the direction sector with the highest D/Q in lieu of the garden census.

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APPLICABILITY: At all times.

ACTION:

With a land use census identifying a location(s) which yields a calculated dose or dose commitment greater than the maximum value currently being calculated in Section 7.5, identify the new location(s) in the next Annual Radiological Environmental Operating Report.

With a land use census identifying a location(s) that yields a calculated dose or dose commitment (via the same exposure pathway) 20 percent greater than at a location from which samples are currently being obtained in accordance with ODCM Control 1.3.1, add the new location(s) to the REMP within 30 days if the owner consents. The sampling location(s), excluding the control station location, having the lowest calculated dose or dose commitment(s) (via the same exposure pathway) may be deleted from this monitoring program after October 31 of the year in which this land use census was conducted. Identify the new location(s) in the next Annual Radiological Environmental Operating Report and provide a revised figure(s) and table(s) reflecting the new location(s).

SURVEILLANCE REQUIREMENTS

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(see next page)

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.3 RADIOLOGICAL ENVIRONMENTAL MONITORING

1/2.3.2 LAND USE CENSUS

SURVEILLANCE REQUIREMENTS

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2.3.2 The land use census shall be conducted at least once per calendar year between the dates of April 1 and October 1 using the following techniques:

1. Within a 2-mile radius from the plant or within the 15 mrem per year isodose line, whichever is larger, enumeration by a door-to-door or equivalent counting technique.
2. Within a 5-mile radius from the plant, enumeration by using appropriate techniques such as door-to-door survey, mail survey, telephone survey, aerial survey, or information from local agricultural authorities or other reliable sources.

1/2 CONTROLS AND SURVEILLANCE REQUIREMENTS

1/2.3 RADIOLOGICAL ENVIRONMENTAL MONITORING

1/2.3.3 INTERLABORATORY COMPARISON PROGRAM

CONTROLS

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1.3.3 Analyses shall be performed on radioactive materials supplied as part of an Interlaboratory Comparison Program which has been approved by the Commission.

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APPLICABILITY: At all times.

ACTION:

With analyses not being performed as required above, report the corrective actions taken to prevent a recurrence to the Commission in the Annual Radiological Environmental Operating Report.

SURVEILLANCE REQUIREMENTS

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2.3.3 A summary of the results obtained as part of the above required Interlaboratory Comparison Program (or participants in the Environmental Protection Agency (EPA) cross check program may provide the EPA program code designation for the unit) shall be included in the Annual Radiological Environmental Operating Report.

BASES FOR  
SECTIONS 1.0 AND 2.0  
CONTROLS  
AND  
SURVEILLANCE REQUIREMENTS

NOTE

The BASES contained in succeeding pages summarize the reasons for the Controls in Sections 1.0 and 2.0, but are not part of these Controls.



BASES

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1/2.1 EFFLUENT MONITORING INSTRUMENTATION

1/2.1.1 RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases of liquid effluents. The alarm/trip setpoints for these instruments shall be calculated in accordance with guidance provided in the ODCM to ensure that the alarm/trip will occur prior to exceeding ten times the limits of 10 CFR Part 20 Appendix B, Table 2, Column 2. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

The criteria for ensuring the reliability and accuracy of the radioactive liquid effluent instrumentation is listed in Table 2.1-1.

1/2.1.2 RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases of gaseous effluents. The alarm/trip setpoints for these instruments will be calculated in accordance with Section 7.2.1 to ensure that the alarm/trip will occur prior to exceeding ten times the limits of 10 CFR Part 20. The operability and use of this instrumentation is consistent with the requirements of General Design Criteria 60, 63, and 64 of Appendix A to 10 CFR Part 50.

The action required when the number of OPERABLE channels is less than the Minimum Channels Operable requirement is specified in the notes for Table 1.1-2. Exert best efforts to return the instruments to OPERABLE status within 30 days and, if unsuccessful, explain in the next Annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

The criteria for ensuring the reliability and accuracy of the radioactive gaseous effluent instrumentation is listed in Table 2.1-2.

Two post treatment off-gas radiation monitors are provided and, when their trip point is reached, cause an isolation of the off-gas line. Isolation is initiated when both instruments reach their high trip point or one has an upscale trip and the other a downscale trip or both have a downscale trip.

Both instruments are required for trip but the instruments are set so that the instantaneous stack release rate limit given in Control 1.2.2.1 is not exceeded.

The off-gas post treatment monitors are connected in a 2-out-of-2 logic arrangement. Based on experience with instruments of similar design, a testing interval of once every three months has been found adequate.