Enclosure 1

Watts Bar Nuclear Plant

2005 Annual Radioactive Effluent Release Report

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

SUPPLEMENTAL INFORMATION

1. Regulatory Limits

A. Gaseous Effluents

1. Dose rates due to radioactivity released in gaseous effluents from the site to areas at and beyond the unrestricted area boundary shall be limited to the following:

   a. Noble gases: - Less than or equal to 500 mrem/year to the total body.
   - Less than or equal to 3000 mrem/year to the skin.

   b. Iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than 8 days:

   - Less than or equal to 1500 mrem/year to any organ.

2. Air dose due to noble gases released in gaseous effluents to areas at and beyond the unrestricted area boundary shall be limited to the following:

   a. Less than or equal to 5 mrad for gamma radiation and less than or equal to 10 mrad for beta radiation during any calendar quarter.

   b. Less than or equal to 10 mrad for gamma radiation and less than or equal to 20 mrad for beta radiation during any calendar year.

3. Dose to a member of the public from iodine-131, iodine-133, tritium, and all radionuclides in particulate form with half-lives greater than eight days in gaseous effluents released to areas at and beyond the unrestricted area boundary shall be limited to the following:

   a. Less than or equal to 7.5 mrem to any organ during any calendar quarter.

   b. Less than or equal to 15 mrem to any organ during any calendar year.

B. Liquid Effluents

1. The concentration of radioactivity released in liquid effluents to unrestricted areas shall be limited to 10 times the concentrations specified in Title 10 of the Code of Federal Regulations, Part 20 (Standards for Protection Against Radiation), 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 2.0 E-04 μCi/ml total activity.

2. The dose or dose commitment to a member of the public from radioactivity in liquid effluents released to unrestricted areas shall be limited to:

   a. Less than or equal to 1.5 mrem to the total body and less than or equal to 5 mrem to any organ during any calendar quarter.

   b. Less than or equal to 3 mrem to the total body and less than or equal to 10 mrem to any organ during any calendar year.

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2. Effluent Concentration Limits

A. Liquids

The Effluent Concentration Limits (ECL) for liquids are those listed in 10 CFR 20, Appendix B, Table 2, Column 2. For dissolved and entrained gases the ECL of 2.0E-04 Ci/ml is applied. This ECL is based on the Xe-135 concentration in air (submersion dose) converted to an equivalent concentration in water as discussed in the International Commission on Radiological Protection (ICRP), Publication 2.

B. Gaseous

Concentration limits for gaseous releases are met through compliance with the maximum permissible dose rates for gaseous releases as defined in plant Offsite Dose Calculation Manual (ODCM) and presented in Section 1.A.1 of this report.

3. Average Energy

Watts Bar's ODCM limits the dose equivalent rates due to the release of noble gases to less than or equal to 500 mrem/year to the total body and less than or equal to 3000 mrem/year to the skin. Therefore, the average beta and gamma energies (E) for gaseous effluents as described in Regulatory Guide 1.21, "Measuring, Evaluation, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," are not applicable.

4. Measurements and Approximations of Total Radioactivity

Radioactivity measurements performed in support of the WBN Offsite Dose Calculation Manual (ODCM) meet the Lower Limit of Detection requirements given in ODCM Tables 2.2-1 and 2.2-2.

A. Liquid Effluents

Batch (Radwaste and Condensate Demineralizer tanks)

Total gamma isotopic activity concentrations are determined on each Radwaste and Condensate Demineralizer batch tank prior to release. The total activity of a batch release is obtained by determining the concentration of each nuclide and then multiplying by the volume discharged to arrive at the curie concentration for each nuclide. The curies of each nuclide are then summed. Composite samples are maintained and analyzed monthly for tritium and gross alpha, and quarterly for Iron-55, Strontium-89, and Strontium-90. During periods of no significant identified primary to secondary leakage, composite samples are not maintained for Condensate Demineralizer Tank releases and the feedwater tritium concentration is used to determine the curies of tritium released from Condensate Demineralizer Tank.

SUPPLEMENTAL INFORMATION

Continuous Releases (Turbine Building Sump, Steam Generator Blowdown, and Groundwater Sump)

During periods of no significant identified primary to secondary leakage, the volume released from the TBS and SGB is obtained. The TBS tritium concentration is determined via weekly grab samples. The feedwater tritium concentration is used to determine the curies of tritium released from SGB. During periods when a signigicant primary to secondary leak is detected, composite samples are maintained on the TBS and SGB and analyzed monthly for tritium and gross alpha, and quarterly for Iron-55, Strontium-89, and Strontium-90. The Groundwater Sump is sampled weekly and analyzed for gross gamma and tritium. The total activity released is obtained by determining the concentration of each nuclide and then multiplying by the volume discharged to arrive at the curie concentration for each nuclide.

B. Fission and Activation Gases

Airborne effluent gaseous activity is continuously monitored and recorded. Weekly grab samples from the auxiliary building and monthly grab samples from the service building are taken and analyzed to determine the quantity of noble gas activity released based on the total flows for the sample period. Also, noble gas samples are collected and evaluated following startup, shutdown, or rated thermal power change exceeding 15 percent within one hour (sampling only required if dose equivalent I-131 concentration in the primary coolant or the noble gas activity monitor shows that the containment activity has increased more than a factor of 3).

The concentration of noble gases released through the shield building exhaust due to purging of containment is determined by using the purge monitor response in combination with containment air samples obtained prior to purge. The quantity of activity released during the purge is determined using the duration, flowrate, and concentration of noble gases determined for each purge. Also, noble gas samples are collected and evaluated for ongoing containment purges following startup, shutdown, or rated thermal power change exceeding 15 percent within one hour (sampling only required if DEI concentration in the primary coolant or the noble gas activity monitor shows that the containment activity has increased more than a factor of 3).

The quantity of noble gases released through the shield building exhaust due to the batch release of waste gas decay tanks is determined by sampling each tank prior to release. The total activity released is determined from the total pressure change recorded for the tank during the release.

C. Iodines and Particulates in Gaseous Releases

Iodine and particulate activity is continuously sampled. Weekly charcoal and particulate samples are taken from the shield building exhaust and auxiliary building exhausts and from condenser vacuum exhaust during periods of primary to secondary leak. These samples are analyzed at least weekly to determine the total activity released from the plant based on the total vent flows recorded for the sampling period. Also, particulate and charcoal samples are taken from the shield building exhausts, auxiliary building exhaust, and condenser vacuum exhaust when a primary to secondary leak exist once per 24 hours for 7 days following startup, shutdown, or a rated thermal power change exceeding 15 percent within one hour (if dose equivalent I-131 concentration in the primary coolant or the noble gas activity monitor shows that the containment activity has increased more than a factor of 3).

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5. Batch Releases

	Value		
	1st Half	2nd Half	Units
A. Liquid (Radwaste only)			
1. Number of releases	70	44	Each
2. Total time period of releases	15697	6348	Minutes
3. Maximum time period of release	1083	300	Minutes
4. Average time period of releases	224	144	Minutes
5. Minimum time period for release	1	54	Minutes
6. Average dilution stream flow during release periods	26,013	22,987	CFS
B. Gaseous (Batches only - containment purges, and waste gas decay tanks)			
1. Number of releases	46	41	Each
2. Total time period of releases	124846	66346	Minutes
3. Maximum time period for release	16534	8341	Minutes
4. Average time period for releases	2714	1618	Minutes
5. Minimum time period for release	13	4	Minutes

6. Abnormal Releases

	Value		Units
	1st Half	2nd Half	
A. Liquid			
Number of Releases	*	*	
Total Activity Released	1.02	0.572	Ci

*Releases from the Groundwater Sump only contain tritium and are quantified on a weekly basis.

B. Gaseous			
Number of Releases	2**	0	
Total Activity Released	5.35E-02	N/A	Ci

**There was an unplanned release from Steam Generator PORV's on 2/22/2005 when the PORV's intermittently opened from 00:42 until 01:27 during shutdown for U1C6 outage.

**There was an unplanned release of 10 psig over a one hour period from Waste Gas Decay Tank C via the Un t 1 Sheild Building Exhaust on 3/24/2005 at 02:30.

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TABLE 1-A
Liquid Effluents - Summation of All Releases
Unit: 1
Starting: 1-Jan-2005 Ending: 30-Jun-2005

Type Of Effluent	Units	Quarter 1	Quarter 2	Est. Tot Error %
A. Fission & Activation Products				
1. Total Release (Not Including Tritium, Gases, Alpha)	Ci	5.48E-02	4.75E-02	25%
2. Average Diluted Concentration During Period	Ci/ml	4.14E-09	4.87E-09	
3. Percent Of Applicable Limit	%	*	*	
B. Tritium				
1. Total Release	Ci	1.05E+03	1.13E+02	18%
2. Average Diluted Concentration During Period	Ci/ml	7.93E-05	1.16E-05	
3. Percent Of Applicable Limit	%	*	*	
C. Dissolved And Entrained Gases				
1. Total Release	Ci	1.56E+00	3.07E-02	39%
2. Average Diluted Concentration During Period	Ci/ml	1.18E-07	3.14E-09	
3. Percent Of Applicable Limit	%	5.89E-02	1.57E-03	
D. Gross Alpha Radioactivity				
1. Total Release	Curies	0.000E+00**	0.000E+00	N/A***
E. Waste Volume Released (Pre-Dilution)	Liters	3.37E+08	4.34E+08	2%
F. Volume Of Dilution Water Used	Liters	1.29E+10	9.33E+09	12%

* Applicable limits are expressed in terms of dose. See Table 7A of this report.
** Zeroes in this table indicate that no radioactivity was present at detectable levels.
*** N/A - Errors in measurements are not reported for these values since none were identified during the reporting period.

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TABLE 1-B
Liquid Effluents - Summation of All Releases
Unit: 1
Starting: 1-Jul-2005 Ending: 31-Dec-2005

Type Of Effluent	Units	Quarter 3	Quarter 4	Est. Tot Error %
A. Fission & Activation Products				
1. Total Release (Not Including Tritium, Gases, Alpha)	Ci	4.07E-03	6.63E-03	25%
2. Average Diluted Concentration During Period	Ci/ml	2.60E-10	7.40E-10	
3. Percent Of Applicable Limit	%	*	*	
B. Tritium				
1. Total Release	Ci	3.56E+01	1.37E+02	18%
2. Average Diluted Concentration During Period	Ci/ml	2.28E-06	1.53E-05	
3. Percent Of Applicable Limit	%	*	*	
C. Dissolved And Entrained Gases				
1. Total Release	Ci	8.61E-03	4.84E-03	39%
2. Average Diluted Concentration During Period	Ci/ml	5.51E10	5.40E-10	
3. Percent Of Applicable Limit	%	2.75E-04	2.70E-04	
D. Gross Alpha Radioactivity				
1. Total Release	Ci	0.00E+00**	0.00E+00	N/A***
E. Waste Volume Released (Pre-Dilution)	Liters	5.38E+08	4.72E+08	2%
F. Volume Of Dilution Water Used	Liters	1.51E+10	8.49E+09	12%

* Applicable limits are expressed in terms of dose. See Table 7B of this report.
** Zeroes in this table indicate that no radioactivity was present at detectable levels.
*** N/A - Errors in measurements are not reported for these values since none were identified during the reporting period.

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TABLE 2-A
Liquid Effluents
Unit: 1
Starting: 1-Jan-2005 Ending: 30-Jun-2005

		Continuous Mode		Batch Mode	
Nuclide	Unit	Quarter 1	Quarter 2	Quarter 1	Quarter 2
H-3	Ci	1.41E+00	6.56E-01	1.05E+03	1.12E+02
Fission & Activation Products					
Ag-110m	Ci	0.00E+00	0.00E+00	3.21E-05	0.00E+00
Co-57	Ci	0.00E+00	0.00E+00	3.38E-05	1.12E-04
Co-58	Ci	0.00E+00	0.00E+00	6.28E-03	3.33E-02
Co-60	Ci	0.00E+00	0.00E+00	2.23E-03	1.81E-03
Cr-51	Ci	5.22E-04	0.00E+00	1.41E-04	1.22E-03
Cs-134	Ci	1.64E-04	0.00E+00	5.87E-04	1.13E-03
Cs-137	Ci	1.23E-04	0.00E+00	5.81E-04	9.49E-04
Cs-138	Ci	4.53E-03	0.00E+00	0.00E+00	2.33E-05
Fe-55	Ci	3.28E-09	0.00E+00	2.24E-07	1.56E-07
Fe-59	Ci	0.00E+00	0.00E+00	0.00E+00	6.52E-05
I-131	Ci	1.46E-03	0.00E+00	2.04E-03	1.20E-04
I-132	Ci	2.42E-03	0.00E+00	1.08E-03	0.00E+00
I-133	Ci	4.52E-03	0.00E+00	5.77E-05	0.00E+00
I-134	Ci	9.98E-04	0.00E+00	0.00E+00	0.00E+00
I-135	Ci	3.07E-03	0.00E+00	0.00E+00	0.00E+00
La-140	Ci	0.00E+00	0.00E+00	4.47E-06	0.00E+00
Mn-54	Ci	0.00E+00	0.00E+00	1.59E-04	3.18E-04
Nb-95	Ci	0.00E+00	0.00E+00	2.52E-05	3.32E-04
Rb-88	Ci	1.01E-02	0.00E+00	0.00E+00	5.40E-05
Rh-106	Ci	0.00E+00	0.00E+00	1.78E-05	0.00E+00
Ru-103	Ci	0.00E+00	0.00E+00	3.86E-06	0.00E+00
Ru-106	Ci	0.00E+00	0.00E+00	1.78E-05	0.00E+00
Sb-122	Ci	0.00E+00	0.00E+00	1.72E-05	0.00E+00
Sb-124	Ci	0.00E+00	0.00E+00	3.02E-04	6.46E-04
Sb-125	Ci	0.00E+00	0.00E+00	6.97E-03	4.66E-03
Sb-126	Ci	0.00E+00	0.00E+00	3.19E-03	8.50E-04
Sn-117m	Ci	0.00E+00	0.00E+00	6.50E-05	1.25E-04
Sr-89	Ci	0.00E+00	0.00E+00	2.21E-03	0.00E+00
Sr-90	Ci	0.00E+00	0.00E+00	7.75E-05	0.00E+00
Te-129	Ci	0.00E+00	0.00E+00	0.00E+00	6.73E-04
Te-129m	Ci	0.00E+00	0.00E+00	0.00E+00	9.56E-04
Te-132	Ci	0.00E+00	0.00E+00	7.65E-04	0.00E+00
Zr-95	Ci	0.00E+00	0.00E+00	9.37E-06	1.68E-04
Totals	Ci	2.79E-02	0.00E+00	2.69E-02	4.75E-02

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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TABLE 2-A (Continued)
Liquid Effluents
Unit: 1
Starting: 1-Jan-2005 Ending: 30-Jun-2005

		Continuous Mode		Batch Mode	
Nuclide	**Unit**	**Quarter 1**	**Quarter 2**	**Quarter 1**	**Quarter 2**
Dissolved And Entrained Gases					
Ar-41	Ci	0.00E+00	0.00E+00	0.00E+00	1.62E-05
Kr-85	Ci	0.00E+00	0.00E+00	7.54E-02	1.84E-02
Kr-85M	Ci	5.12E-05	0.00E+00	1.08E-04	0.00E+00
Xe-131M	Ci	0.00E+00	0.00E+00	4.65E-02	2.73E-03
Xe-133	Ci	0.00E+00	0.00E+00	1.42E+00	9.61E-03
Xe-133M	Ci	0.00E+00	0.00E+00	1.04E-02	0.00E+00
Xe-135	Ci	1.65E-04	0.00E+00	3.72E-03	6.25E-06
Xe-135M	Ci	2.08E-04	0.00E+00	0.00E+00	0.00E+00
Totals	Ci	4.24E-04	0.00E+00	1.56E+00	3.08E-02

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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TABLE 2-B
Liquid Effluents
Unit: 1
Starting: 1-Jul-2005 Ending: 31-Dec-2005

		Continuous Mode		Batch Mode	
Nuclide	**Unit**	**Quarter 3**	**Quarter 4**	**Quarter 3**	**Quarter 4**
H-3	Ci	7.02E-01	6.77E-01	3.49E+01	1.36E+02
Fission & Activation Products					
Ag-110m	Ci	0.00E+00	0.00E+00	0.00E+00	2.87E-05
Co-57	Ci	0.00E+00	0.00E+00	8.05E-06	2.55E-05
Co-58	Ci	0.00E+00	0.00E+00	3.08E-03	2.42E-03
Co-60	Ci	0.00E+00	0.00E+00	1.81E-04	1.21E-03
Cs-134	Ci	0.00E+00	0.00E+00	1.02E-04	7.68E-05
Cs-137	Ci	0.00E+00	0.00E+00	1.16E-04	8.71E-05
Fe-55	Ci	0.00E+00	0.00E+00	2.98E-07	6.32E-07
I-131	Ci	0.00E+00	0.00E+00	9.76E-06	0.00E+00
Mn-54	Ci	0.00E+00	0.00E+00	6.81E-06	1.54E-04
Nb-95	Ci	0.00E+00	0.00E+00	0.00E+00	4.21E-05
Sb-124	Ci	0.00E+00	0.00E+00	4.47E-06	0.00E+00
Sb-125	Ci	0.00E+00	0.00E+00	5.62E-04	2.29E-03
Sn-117m	Ci	0.00E+00	0.00E+00	1.72E-06	0.00E+00
Sr-89	Ci	0.00E+00	0.00E+00	0.00E+00	2.88E-04
Sr-90	Ci	0.00E+00	0.00E+00	0.00E+00	9.95E-06
Totals	Ci	0.00E+00	0.00E+00	1.64E-02	6.63E-03
Dissolved And Entrained Gases					
Kr-85	Ci	0.00E+00	0.00E+00	3.40E-03	3.93E-03
Xe-131m	Ci	0.00E+00	0.00E+00	8.42E-05	0.00E+00
Xe-133	Ci	0.00E+00	0.00E+00	5.12E-03	9.05E-04
Xe-135	Ci	0.00E+00	0.00E+00	4.19E-06	3.62E-06
Totals	Ci	0.00E+00	0.00E+00	8.61E-03	4.84E-03

*Zeroes in this table indicate that no radioactivity was present at detectable levels.

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TABLE 3-A
Gaseous Effluents - Summation of All Releases
Unit: 1
Starting: 1-Jan-2005 Ending: 30-Jun-2005

Type Of Effluent	Units	Quarter 1	Quarter 2	Est. Tot Error %
A. Fission & Activation Products				
1. Total Release	Ci	2.34E+02	9.30E+00	22
2. Average Release Rate For Period	Ci/sec	3.01E+01	1.18E+00	
3. Percent Of Applicable Limit	%	*	*	
B. Radioiodines				
1. Total Iodine-131	Ci	2.55E-02	3.84E-04	N/A***
2. Average Release Rate For Period	Ci/sec	3.28E-03	4.89E-05	
3. Percent Of Applicable Limit	%	*	*	
C. Particulates				
1. Particulates (Half-Lives>8 Days)	Ci	2.33E-04	9.29E-05	N/A***
2. Average Release Rate For Period	Ci/sec	3.00E-05	1.81E-05	
3. Percent Of Applicable Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	0.000E+00	0.000E+00	
D. Tritium				
1. Total Release	Ci	4.16E+00	8.96E+00	11
2. Average Release Rate For Period	Ci/sec	5.35E-01	1.14E+00	
3. Percent Of Applicable Limit	%	*	*	

* Applicable limits are expressed in terms of dose. See Table 6A of this report.
** Zeroes in this table indicate that no radioactivity was present at detectable levels.
*** N/A - Errors in measurements are not reported for these values since none were identified during the reporting period.

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TABLE 3-B
Gaseous Effluents - Summation of All Releases
Unit: 1
Starting: 1-Jul-2005 Ending: 31-Dec-2005

Type Of Effluent	Units	Quarter 3	Quarter 4	Est. Tot Error %
A. Fission & Activation Products				
1. Total Release	Ci	1.72E+01	4.33E+01	22
2. Average Release Rate For Period	Ci/sec	2.17E+00	5.45E+00	
3. Percent Of Applicable Limit	%	*	*	
B. Radioiodines				
1. Total Iodine-131	Ci	2.48E-06	1.28E-05	***N/A
2. Average Release Rate For Period	Ci/sec	3.12E-07	1.61E-06	
3. Percent Of Applicable Limit	%	*	*	
C. Particulates				
1. Particulates (Half-Lives>8 Days)	Ci	0.000E+00	0.000E+00	***N/A
2. Average Release Rate For Period	Ci/sec	0.000E+00	0.000E+00	
3. Percent Of Applicable Limit	%	*	*	
4. Gross Alpha Radioactivity	Ci	0.000E+00	0.000E+00	
D. Tritium				
1. Total Release	Ci	7.87E+00	3.82E+00	11
2. Average Release Rate For Period	Ci/sec	9.90E-01	4.81E-01	
3. Percent Of Applicable Limit	%	*	*	

* Applicable limits are expressed in terms of dose. See Table 6-B of this report.
** Zeroes in this table indicate that no radioactivity was present at detectable levels.
*** N/A - Errors in measurements are not reported for these values since none were identified during the reporting period.

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TABLE 4-A
Gaseous Effluents-Ground Level Releases
Unit: 1
Starting: 1-Jan-2005 Ending: 30-Jun-2005

		Continuous Mode		Batch Mode	
Nuclides Released	Unit	Quarter 1	Quarter 2	Quarter 1	Quarter 2
Fission Gases					
Kr-88	Ci	9.24E-03	0.00E+00	0.00E+00	0.00E+00
Kr-87	Ci	9.38E-03	0.00E+00	0.00E+00	0.00E+00
Xe-138	Ci	1.39E-02	0.00E+00	0.00E+00	0.00E+00
Xe-135m	Ci	1.66E-02	0.00E+00	0.00E+00	0.00E+00
Kr-85m	Ci	6.19E-03	0.00E+00	2.02E-02	3.01E-03
Xe-131m	Ci	0.00E+00	0.00E+00	3.00E+00	2.46E-02
Xe-133m	Ci	0.00E+00	0.00E+00	1.75E+00	7.32E-02
Xe-135	Ci	5.20E-01	7.26E-03	1.79E+00	1.82E-01
Kr-85	Ci	0.00E+00	0.00E+00	6.05E+00	5.19E-01
Ar-41	Ci	2.93E-03	3.29E-02	6.15E-01	8.21E-01
Xe-133	Ci	8.13E+00	1.17E+00	2.12E+02	6.46E+00
Total	Ci	8.71E+00	1.21E+00	2.26E+02	8.09E+00
Iodines					
I-134	Ci	1.54E-07	0.00E+00	0.00E+00	0.00E+00
I-135	Ci	1.37E-05	0.00E+00	0.00E+00	0.00E+00
I-132	Ci	3.66E-03	0.00E+00	0.00E+00	0.00E+00
I-133	Ci	1.34E-03	7.00E-06	0.00E+00	0.00E+00
I-131	Ci	2.55E-02	3.84E-04	0.00E+00	0.00E+00
Total	Ci	3.05E-02	3.91E-04	0.00E+00	0.00E+00
Particulates					
Sr-89	Ci	2.26E-11	0.00E+00	0.00E+00	0.00E+00
Nb-97	Ci	6.71E-07	0.00E+00	0.00E+00	0.00E+00
Ru-103	Ci	7.51E-07	0.00E+00	0.00E+00	0.00E+00
Co-60	Ci	1.11E-06	0.00E+00	0.00E+00	0.00E+00
Cs-137	Ci	5.88E-06	0.00E+00	0.00E+00	0.00E+00
Cs-134	Ci	6.59E-06	0.00E+00	0.00E+00	0.00E+00
Ba-139	Ci	1.46E-05	0.00E+00	0.00E+00	0.00E+00
Cr-51	Ci	2.28E-05	0.00E+00	0.00E+00	0.00E+00
Rb-88	Ci	3.46E-05	0.00E+00	0.00E+00	0.00E+00
Cs-138	Ci	6.56E-04	0.00E+00	0.00E+00	0.00E+00
Br-82	Ci	4.88E-06	1.96E-06	0.00E+00	0.00E+00
Co-58	Ci	1.96E-04	9.29E-05	0.00E+00	0.00E+00
Total	Ci	9.44E-04	9.48E-05	0.00E+00	0.00E+00
H-3	Ci	4.16E+00	8.96E+00	0.00E+00	0.00E+00

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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TABLE 4-B

Gaseous Effluents-Ground Level Releases

Unit: 1

Starting: 1-Jul-2005 Ending: 31-Dec-2005

		Continuous Mode		Batch Mode	
Nuclides Released	**Unit**	**Quarter 3**	**Quarter 4**	**Quarter 3**	**Quarter 4**
Fission Gases					
Xe-135m	Ci	0.00E+00	6.91E-04	0.00E+00	0.00E+00
Xe-131	Ci	0.00E+00	0.00E+00	9.34E-02	6.69E-03
Kr-85m	Ci	0.00E+00	1.16E-04	6.49E-04	1.34E-02
Xe-133m	Ci	0.00E+00	0.00E+00	1.31E-01	1.32E-01
Xe-135	Ci	1.95E-03	1.80E-03	7.94E-02	1.56E-01
Kr-85	Ci	0.00E+00	0.00E+00	9.95E-01	1.19E+00
Ar-41	Ci	5.13E-02	0.00E+00	7.46E-01	3.20E+00
Xe-133	Ci	2.83E+00	1.42E+01	1.23E+01	2.44E+01
Total	Ci	2.88E+00	1.42E+01	1.43E+01	2.91E+01
Iodines					
I-131	Ci	2.48E-06	1.28E-05	0.00E+00	0.00E+00
I-132	Ci	0.00E+00	3.93E-08	0.00E+00	0.00E+00
I-133	Ci	1.81E-05	2.47E-5	0.00E+00	0.00E+00
I-135	Ci	0.00E+00	1.04E-07	0.00E+00	0.00E+00
Total	Ci	2.05E-05	3.77E-05	0.00E+00	0.00E+00
Particulates					
Sr-89	Ci	0.00E+00	1.05E-11	0.00E+00	0.00E+00
Rb-88	Ci	0.00E+00	6.82E-07	0.00E+00	0.00E+00
Ba-139	Ci	0.00E+00	8.49E-07	0.00E+00	0.00E+00
Br-82	Ci	2.61E-06	1.35E-06	0.00E+00	0.00E+00
Rb89	Ci	0.00E+00	5.41E-06	0.00E+00	0.00E+00
Cs-138	Ci	0.00E+00	2.82E-05	0.00E+00	0.00E+00
Total	Ci	2.61E-05	3.65E-05	0.00E+00	0.00E+00
H-3	Ci	7.87E+00	3.82E+00	0.00E+00	0.00E+00

* Zeroes in this table indicate that no radioactivity was present at detectable levels.

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TABLE 5-A
SOLID WASTE (RADIOACTIVE SHIPMENTS)

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

1. Type of Waste	Unit	12 Month Period	Est. (Ci) Error %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m^3	13.6	N/A
	Ci	167	+/-25%
b. Dry Active Waste, Compressible Waste Contaminated Equipment, etc.	m^3	298.8	N/A
	Ci	1.854	+/-25%
c. Irradiated Components, Control Rods, etc.	m^3	None	N/A
	Ci	None	N/A

2. Estimate of Major Nuclide Composition (by type of waste)

a. Spent resins, filter sludges, evaporator bottoms, etc.
(nuclides determined by measurement)

	Percent	Ci
H-3	0.158	2.63E-1
Be-7	0.045	7.55E-2
C-14	0.206	3.43E-1
Mn-54	3.031	5.11E+0
Fe-55	26.045	4.34E+1
Co-57	0.305	5.09E-1
Co-58	6.515	1.09E+1
Co-60	12.521	2.09E+1
Ni-59	0.429	7.14E-1
Ni-63	48.695	8.11E+1
Zn-65	0.039	6.43E-2
Sr-89	0.001	1.40E-3
Sr-90	0.004	6.60E-3
Zr-95	0.001	1.14E-3
Nb-95	0.014	2.41E-2
Ag-110m	0.001	1.43E-3
Sn-113	0.006	1.01E-2
Sb-124	0.007	1.12E-2
Sb-125	0.435	7.26E-1
Cs-134	0.733	1.22E+0
Cs-137	0.785	1.31E+0
Ce-144	0.015	2.50E-2
Pu-238	0.000	9.03E-5
Pu-239	0.000	2.82E-5
Pu-240	0.000	2.82E-5
Pu-241	0.007	1.17E-2

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TABLE 5-A
SOLID WASTE (RADIOACTIVE SHIPMENTS)

b. Dry active waste, compressible waste, contaminated equipment, etc. (nuclides determined by estimate)		Percent	Ci
	H-3	0.978	1.76E-2
	C-14	0.030	5.47E-4
	Cr-51	0.955	1.72E-2
	Mn-54	0.029	5.24E-2
	Fe-55	46.736	8.42E-1
	Fe-59	0.302	5.43E-3
	Co-57	0.140	2.53E-3
	Co-58	17.818	3.21E-1
	Co-60	7.937	1.43E-1
	Ni-59	0.005	9.67E-5
	Ni-63	14.043	2.53E-1
	Zn-65	0.059	1.07E-3
	Sr-89	0.012	2.19E-4
	Zr-95	0.744	1.34E-2
	Nb-95	1.260	2.27E-2
	Tc-99	0.001	1.64E-5
	Ru-103	0.021	3.87E-4
	Ag-110m	0.019	3.35E-4
	Sn-113	0.053	9.56E-4
	Sn-117m	0.003	5.15E-5
	Sb-124	0.004	7.02E-5
	Sb-125	0.538	9.69E-3
	I-131	0.042	7.54E-4
	Cs-134	4.341	7.82E-2
	Cs-137	3.836	6.91E-2
	Ba-140	0.009	1.70E-4
	Ce-141	0.015	2.69E-4
	Ce-144	0.069	1.25E-3
	Cm-242	0.000	1.60E-6
c. Irradiated Components		N/A	N/A

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TABLE 5-B
SOLID WASTE (RADIOACTIVE SHIPMENTS)

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
4	Motor Freight (Hittman)	Barnwell Waste Mgmt Facility
6	Motor Freight (Hittman)	Duratek DAW Processing
3	Motor Freight (Hittman)	Duratek Green is Clean

4. Irradiated Fuel Shipments (Disposition)

Number of Shipments	Type Quantity	Mode of Transportation	Destination
None	N/A	N/A	N/A

5. Solidification of Waste

Was solidification performed? No

If yes, solidification media: N/A

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Radiological Impact

Introduction

Potential doses to maximum individuals and the population around Watts Bar are calculated for each quarter as required in Section 5.2 of the Offsite Dose Calculation Manual (ODCM). Measured plant releases for the reporting period are used to estimate these doses. Dispersion of radioactive effluents in the environment is estimated using meteorological data and riverflow data measured during the period. In this report, the doses resulting from releases are described and compared to limits established for Watts Bar.

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.

Dose Calculations

Estimated doses to 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. Many of these factors are obtained from NUREG/CR-1004. The values chosen will tend to overestimate the dose to this "maximum" person. The expected dose to actual individuals is lower. The calculated doses are presented in Tables 6A, 6B, 7A and 7B.

Doses From Airborne Effluents

For airborne effluents, 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 eaten by milk and beef animals.

Airborne Discharge Points

All releases from Watts Bar are considered ground-level releases. The ground-level Joint Frequency Distribution (JFD) is derived from wind speeds and directions measured 10 meters above ground and from the vertical temperature difference between 10 and 46 meters, and are presented for each quarter on pages E1-25 through E1-52.

Radiological Impact

Meteorological Data

Meteorological variables at Watts Bar are measured continuously. Measurements collected include wind speed, wind direction, and temperature at heights of 10, 46, and 91 meters above the ground. Quarterly joint frequency distributions (JFDs) are calculated for each release point using the appropriate levels of meteorological data. A joint frequency distribution gives the percentage of the time in a quarter 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 non-calm wind directions less than 0.7 m/s (1.5 mph). Stability classes are determined from the vertical temperature difference between two measurement levels.

External Exposure Dose

Dose estimates for maximum external air dose (gamma-air and beta-air doses) are made for points at and beyond the unrestricted area boundary as described in the Watts Bar 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 estimated for the nearest residence in each sector. The residence with the highest dose is then selected from all sectors.

Organ Dose

Doses to organs due to releases of airborne effluents are estimated for the inhalation, ground contamination, and ingestion pathways. The ingestion pathway is further divided into four possible contributing pathways: ingestion of cow/goat milk, ingestion of beef, and ingestion of vegetables. Doses from applicable pathways are calculated for each real 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 is consumed without commercial preparation and vegetable ingestion is included only for those locations where a garden is 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.

Doses from airborne effluents are presented in Tables 6A and 6B.

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).

Radiological Impact

The concentrations of radioactivity in the Tennessee River are estimated by a computer model which uses measured hydraulic data downstream of Watts Bar. Parameters used to determine the doses are based on guidance given by the NRC (in Regulatory Guide 1.109) for maximum ingestion rates, exposure times, etc. Wherever possible, parameters used in the dose calculation are site specific use factors determined by TVA. The models that are used to estimate doses, as well as the parameters input to the models, are described in detail in the Watts Bar ODCM.

Liquid Release Points and River Data

Radioactivity concentrations in the Tennessee River are calculated assuming that releases in liquid effluents are continuous. All routine liquid releases from Watts Bar, located at Tennessee River Mile 528.5, 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-tenth 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 Tennessee River Mile 510.0.

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 outfall. The maximum 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 (Chickamauga Dam). The maximum individual dose from drinking water is assumed to be that calculated at the nearest downstream public water supply (Dayton, TN). This could be interpreted as indicating that the maximum individual, as assumed for liquid releases from Watts Bar, is an individual who obtains all of his drinking water at Dayton, TN, consumes fish caught from the Tennessee River between Watts Bar and Chickamauga Dam, and spends 500 hours per year on the shoreline just below the outfall from Watts Bar. Dose estimates for the maximum individual due to liquid effluents for each quarter in the period are presented in Tables 7A and 7B, along with the average river flows past the plant site for the periods.

Population Doses

Population doses for highest exposed organ due to airborne effluents are calculated for an estimated 1,066,600 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 consumes milk, vegetables, and meat produced within the sector annulus in which he resides. Doses from external pathways and inhalation are based on the 50-mile human population distribution.

Population doses for total body and the maximum exposed organ 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 actual recreational data on the number of shoreline visits at downstream locations.

Population dose estimates for airborne and liquid effluents are presented in Tables 6A, 6B, 7A and 7B.

Radiological Impact

Direct Radiation

External gamma radiation levels were measured by thermoluminescent dosimeters (TLDs) deployed around WBN as part of the offsite Environmental Radiological Monitoring Program. The quarterly gamma radiation levels determined from these TLDs during this reporting period averaged 16.5 mR/quarter at onsite (at or near the site boundary) stations and 15.25 mR/quarter at offsite stations or 1.25 mR/quarter higher onsite than at offsite stations. This difference is consistent with levels measured for preoperation and construction phases of the WBN plant site where the average radiation levels onsite were generally 2-6 mR/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.

Dose To A Member Of The Public Inside The Unrestricted Area Boundary

As stated in the Watts Bar Offsite Dose Calculation Manual, an evaluation of the dose to a member of the public inside the unrestricted area boundary is performed for a hypothetical TVA employee who works just outside the restricted area boundary for an entire work year (2000 hours). Results from onsite TLD measurements indicated that the highest onsite TLD reading outside the Radiological Control Area was 217 mrem. Using this value, subtracting an annual background value of approximately 61 mrem/year (see previous section), and multiplying by the ratio of the occupancy times (2000/8760), the highest external dose to a member of the public inside the unrestricted area boundary would be 35.62 mrem. The doses due to radioactive effluents released to the atmosphere calculated in this report would not add a significant amount to this measured dose. This dose is well below the 10 CFR 20 annual limit of 100 mrem.

Total Dose

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

The annual dose to any organ other than thyroid for the maximum individual is conservatively estimated 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 environmental monitoring program. 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 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 environmental monitoring program. This dose is compared to the 40 CFR 190 limit for thyroid dose to determine compliance. Cumulative annual total doses are presented in Table 8.

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TABLE 6-A
Doses from Airborne Effluents

First Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	2.78E-02 mrad	5 mrad	< 1%	E/1280 meters
Beta Air	8.11E-02 mrad	10 mrad	< 1%	E/1280 meters
Submersion				
Total Body	1.31E-02 mrem	N/A	N/A	SE/1372 meters
Skin	3.19E-02 mrem	N/A	N/A	SE/1372 meters
Organ Doses				
Infant/Thyroid	4.29E-01 mrem	7.5 mrem	5.7%	SSW/3353 meters
Child/Total Body	1.19-02 mrem	7.5 mrem	< 1%	WSW/1829 meters

Population Doses

Total Body Dose 4.45E-02 man-rem
Maximum Organ Dose (organ) 7.11E-01 man-rem (thyroid)

Second Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	4.72E-03 mrad	5 mrad	< 1%	ESE/1250 meters
Beta Air	6.08E-03mrad	10 mrad	< 1%	ESE/1250 meters
Submersion				
Total Body	2.69E-03 mrem	N/A	N/A	SE/1372 meters
Skin	4.95E-03 mrem	N/A	N/A	SE/1372 meters
Organ Doses				
Child/Thyroid	9.64E-03 mrem	7.5 mrem	< 1%	WSW/1829 meters
Child/Total Body	6.86E-03 mrem	7.5 mrem	< 1%	WSW/1829 meters

Population Doses

Total Body Dose 3.46E-02 man-rem
Maximum Organ Dose (organ) 4.49E-02 man-rem (thyroid)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 150,000 man-rem/year (based on 140 mrem/yr for natural background).

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TABLE 6-B
Doses from Airborne Effluents

Third Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	7.57E-03 mrad	5 mrad	< 1%	ESE/1250 meters
Beta Air	1.37E-02 mrad	10 mrad	< 1%	ESE/1250 meters
Submersion				
Total Body	4.08E-03 mrem	N/A	N/A	SE/1372 meters
Skin	8.31E-03 mrem	N/A	N/A	SE/1372 meters
Organ Doses				
Child/Thyroid	5.66E-03 mrem	7.5 mrem	< 1%	ESE/6096 meters
Child/Total Body	5.65E-03 mrem	7.5 mrem	< 1%	ESE/6096 meters

Population Doses

Total Body Dose	2.71E-02 man-rem
Maximum Organ Dose (organ)	2.72E-02 man-rem (thyroid)

Fourth Quarter

Individual Doses

Pathway	Dose	Quarterly Limit	Percent of Limit	Location
External				
Gamma Air	2.32E-02 mrad	5 mrad	< 1%	ESE/1250 meters
Beta Air	3.24E-02 mrad	10 mrad	< 1%	ESE/1250 meters
Submersion				
Total Body	1.34E-02 mrem	N/A	N/A	SE/1372 meters
Skin	2.45E-02 mrem	N/A	N/A	SE/1372 meters
Organ Doses				
Child/Thyroid	4.22E-03 mrem	7.5 mrem	< 1%	S/2254 meters
Child/Total Body	4.10E-03 mrem	7.5 mrem	< 1%	S/2254 meters

Population Doses

Total Body Dose	1.95E-02 man-rem
Maximum Organ Dose (organ)	1.99E-02 man-rem (thyroid)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 150,000 man-rem/year (based on 140 mrem/yr for natural background).

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TABLE 7-A
Doses from Liquid Effluents

First Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	6.0E-03	1.5 mrem	< 1 %
Adult	Bone	7.1E-03	5 mrem	< 1 %
Child	Thyroid	6.9E-03	5 mrem	< 1 %

Average Riverflow past WBN (cubic feet per second): 31,932

Population Doses

Total Body Dose 2.7E-01 man-rem
Maximum Organ Dose (organ) 2.7E-01 man-rem (Bone)

Second Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	5.9E-03	1.5 mrem	< 1 %
Adult	Liver	7.4E-03	5 mrem	< 1 %
Child	Thyroid	1.5E-03	5 mrem	< 1 %

Average Riverflow past WBN (cubic feet per second): 20,093

Population Doses

Total Body Dose 5.3E-02 man-rem
Maximum Organ Dose (organ) 5.5E-02 man-rem (Liver)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 150,000 man-rem/year (based on 140 mrem/yr for natural background).

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TABLE 7-B
Doses from Liquid Effluents

Third Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	5.7E-04	1.5 mrem	< 1 %
Child	Liver	6.7E-04	5 mrem	< 1 %
Child	Thyroid	2.4E-04	5 mrem	< 1 %

Average Riverflow past WBN (cubic feet per second): 25,857

Population Doses

Total Body Dose 1.2E-02 man-rem
Maximum Organ Dose (organ) 1.2E-02 man-rem (Liver)

Fourth Quarter

Individual Doses (mrem)

Age Group	Organ	Dose	Quarterly Limit	Percent of Limit
Adult	Total Body	1.4E-03	1.5 mrem	< 1 %
Child	Bone	1.6E-03	5 mrem	< 1 %
Child	Thyroid	1.2E-03	5 mrem	< 1 %

Average Riverflow past WBN (cubic feet per second): 20,116

Population Doses

Total Body Dose 5.7E-02 man-rem
Maximum Organ Dose (organ) 5.8E-02 man-rem (Bone)

Population doses can be compared to the natural background dose for the entire 50-mile population of about 150,000 man-rem/year (based on 140 mrem/yr for natural background).

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TABLE 8
Total Dose from Fuel Cycle

Dose	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
Total Body or any Organ (except thyroid)					
Total body air submersion	1.31E-02	2.69E-03	4.08E-03	1.34E-02	
Critical organ dose (air)	1.19E-02	6.86E-03	5.65E-03	4.10E-03	
Total body dose (liquid)	6.00E-03	5.90E-03	5.70E-04	1.40E-03	
Maximum organ dose (liquid)	7.10E-03	7.40E-03	6.70E-04	1.60E-03	
Direct Radiation Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Total	**3.81E-02**	**2.29E-02**	**1.10E-02**	**2.05E-02**	
				Cumulative Total Dose (mrem)	**9.25E-02**
				Annual Dose Limit (mrem)	**25**
				Percent of Limit	**0.37%**
Thyroid					
Total body air submersion	1.31E-02	2.69E-03	4.08E-03	1.34E-02	
Thyroid dose (airborne)	4.29E-01	9.64E-03	5.66E-03	4.22E-03	
Total body dose (liquid)	6.00E-03	5.90E-03	5.70E-04	1.40E-03	
Thyroid dose (liquid)	6.90E-03	1.50E-03	2.40E-04	1.20E-03	
Direct Radiation Dose	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
Total	**4.55E-01**	**1.97E-02**	**1.06E-02**	**2.02E-02**	
				Cumulative Total Dose (mrem)	**5.06E-01**
				Annual Dose Limit (mrem)	**75**
				Percent of Limit	**0.67%**

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.140	0.000	0.000	0.000	0.140
NNE	0.000	0.000	0.000	0.000	0.140	0.234	0.094	0.000	0.000	0.468
NE	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.094
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	0.000	0.000	0.000	0.000	0.000	0.000
SSE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
S	0.000	0.000	0.000	0.000	0.000	0.140	0.000	0.000	0.000	0.140
SSW	0.000	0.000	0.000	0.000	0.187	0.609	0.000	0.000	0.000	0.796
SW	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.000	0.094
WSW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
W	0.000	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.094
WNW	0.000	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.094
NW	0.000	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.094
NNW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
SUBTOTAL	0.000	0.000	0.000	0.187	0.375	1.545	0.094	0.000	0.000	2.200

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2136
TOTAL HOURS OF STABILITY CLASS A	47
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	47
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2136
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 8.53

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.140	0.140	0.140	0.047	0.000	0.000	0.468
NNE	0.000	0.000	0.000	0.187	0.375	0.281	0.094	0.000	0.000	0.936
NE	0.000	0.000	0.047	0.234	0.047	0.000	0.000	0.000	0.000	0.328
ENE	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.094
E	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SSE	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.047
S	0.000	0.000	0.000	0.047	0.140	0.234	0.000	0.000	0.000	0.421
SSW	0.000	0.000	0.000	0.047	0.328	0.328	0.000	0.000	0.000	0.702
SW	0.000	0.000	0.047	0.047	0.140	0.000	0.000	0.000	0.000	0.234
WSW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
W	0.000	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.094
WNW	0.000	0.000	0.000	0.000	0.094	0.187	0.094	0.000	0.000	0.375
NW	0.000	0.000	0.000	0.000	0.047	0.187	0.140	0.000	0.000	0.375
NNW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
SUBTOTAL	0.000	0.000	0.094	0.890	1.358	1.498	0.421	0.000	0.000	4.260

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2136
TOTAL HOURS OF STABILITY CLASS B 91
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 91
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2136
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 7.82

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.094	0.047	0.140	0.000	0.000	0.000	0.281
NNE	0.000	0.000	0.000	0.281	0.140	0.281	0.187	0.000	0.000	0.890
NE	0.000	0.000	0.094	0.281	0.140	0.000	0.000	0.000	0.000	0.515
ENE	0.000	0.000	0.094	0.094	0.000	0.000	0.000	0.000	0.000	0.187
E	0.000	0.000	0.140	0.094	0.000	0.000	0.000	0.000	0.000	0.234
ESE	0.000	0.000	0.000	0.140	0.000	0.047	0.000	0.000	0.000	0.187
SE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SSE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
S	0.000	0.000	0.000	0.047	0.187	0.094	0.000	0.000	0.000	0.328
SSW	0.000	0.000	0.047	0.047	0.421	0.187	0.000	0.000	0.000	0.702
SW	0.000	0.000	0.000	0.047	0.094	0.047	0.000	0.000	0.000	0.187
WSW	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.094
W	0.000	0.000	0.000	0.000	0.000	0.047	0.047	0.000	0.000	0.094
WNW	0.000	0.000	0.000	0.047	0.047	0.328	0.000	0.000	0.000	0.421
NW	0.000	0.000	0.000	0.047	0.047	0.187	0.000	0.000	0.000	0.281
NNW	0.000	0.000	0.047	0.000	0.000	0.187	0.000	0.000	0.000	0.234
SUBTOTAL	0.000	0.000	0.421	1.264	1.217	1.545	0.234	0.000	0.000	4.682

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2136
TOTAL HOURS OF STABILITY CLASS C 100
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 100
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2136
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 6.94

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.002	0.000	0.515	0.983	1.451	2.715	0.094	0.000	0.000	5.761
NNE	0.002	0.094	0.375	1.124	1.498	2.013	0.281	0.000	0.000	5.386
NE	0.004	0.094	0.983	0.890	0.609	0.515	0.000	0.000	0.000	3.094
ENE	0.005	0.047	1.264	0.328	0.234	0.000	0.000	0.000	0.000	1.878
E	0.002	0.000	0.515	0.000	0.000	0.000	0.000	0.000	0.000	0.517
ESE	0.001	0.047	0.187	0.000	0.000	0.000	0.000	0.000	0.000	0.235
SE	0.002	0.047	0.562	0.000	0.094	0.047	0.000	0.000	0.000	0.752
SSE	0.002	0.140	0.328	0.375	0.047	0.000	0.000	0.000	0.000	0.891
S	0.004	0.000	0.936	1.077	0.328	0.468	0.094	0.000	0.000	2.906
SSW	0.006	0.094	1.264	1.873	1.498	1.545	0.140	0.000	0.000	6.419
SW	0.004	0.140	0.796	0.796	0.140	0.094	0.000	0.000	0.000	1.970
WSW	0.004	0.187	0.796	0.328	0.375	0.281	0.000	0.000	0.000	1.970
W	0.003	0.187	0.468	0.234	0.421	0.234	0.000	0.000	0.000	1.548
WNW	0.002	0.140	0.375	0.515	0.375	1.124	0.000	0.000	0.000	2.530
NW	0.002	0.094	0.328	0.375	0.562	1.358	0.281	0.047	0.000	3.045
NNW	0.002	0.000	0.421	0.234	0.468	1.311	0.234	0.000	0.000	2.670
SUBTOTAL	0.047	1.311	10.112	9.129	8.099	11.704	1.124	0.047	0.000	41.573

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2136
TOTAL HOURS OF STABILITY CLASS D 888
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D 888
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2136
TOTAL HOURS CALM 1

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 5.91

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.094	0.655	0.375	0.187	0.000	0.000	0.000	0.000	1.311
NNE	0.000	0.234	0.515	0.094	0.047	0.047	0.000	0.000	0.000	0.936
NE	0.000	0.094	0.983	0.515	0.140	0.047	0.000	0.000	0.000	1.779
ENE	0.000	0.047	0.936	0.234	0.000	0.000	0.000	0.000	0.000	1.217
E	0.000	0.328	0.187	0.000	0.000	0.047	0.000	0.000	0.000	0.562
ESE	0.000	0.234	0.187	0.047	0.047	0.000	0.000	0.000	0.000	0.515
SE	0.000	0.187	0.187	0.047	0.187	0.094	0.000	0.000	0.000	0.702
SSE	0.000	0.281	0.281	0.094	0.000	0.047	0.000	0.000	0.000	0.702
S	0.000	0.094	0.702	0.375	0.375	0.187	0.000	0.000	0.000	1.732
SSW	0.000	0.234	1.451	1.545	1.030	0.515	0.000	0.000	0.000	4.775
SW	0.000	0.375	1.077	0.515	0.094	0.047	0.000	0.000	0.000	2.107
WSW	0.000	0.281	0.749	0.094	0.047	0.000	0.000	0.000	0.000	1.170
W	0.000	0.375	0.749	0.140	0.000	0.000	0.000	0.000	0.000	1.264
WNW	0.000	0.375	0.562	0.328	0.281	0.000	0.000	0.000	0.000	1.545
NW	0.000	0.421	0.890	0.375	0.328	0.000	0.000	0.000	0.000	2.013
NNW	0.000	0.094	0.234	0.234	0.234	0.094	0.000	0.000	0.000	0.890
SUBTOTAL	0.000	3.745	10.346	5.009	2.996	1.124	0.000	0.000	0.000	23.221

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2136
TOTAL HOURS OF STABILITY CLASS E	496
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	496
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2136
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 3.43

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.234	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.281
NNE	0.000	0.234	0.187	0.047	0.000	0.000	0.000	0.000	0.000	0.468
NE	0.000	0.094	0.328	0.047	0.047	0.000	0.000	0.000	0.000	0.515
ENE	0.000	0.140	0.328	0.047	0.000	0.000	0.000	0.000	0.000	0.515
E	0.000	0.187	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.421
ESE	0.000	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.140
SE	0.000	0.140	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.234
SSE	0.000	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.094
S	0.000	0.140	0.468	0.094	0.000	0.000	0.000	0.000	0.000	0.702
SSW	0.000	0.328	0.515	0.187	0.000	0.000	0.000	0.000	0.000	1.030
SW	0.000	0.515	0.468	0.000	0.000	0.000	0.000	0.000	0.000	0.983
WSW	0.000	0.936	0.609	0.000	0.000	0.000	0.000	0.000	0.000	1.545
W	0.000	0.702	0.749	0.000	0.000	0.000	0.000	0.000	0.000	1.451
WNW	0.000	0.281	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.562
NW	0.000	0.562	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.796
NNW	0.000	0.140	0.328	0.000	0.000	0.000	0.000	0.000	0.000	0.468
SUBTOTAL	0.000	4.822	4.916	0.421	0.047	0.000	0.000	0.000	0.000	10.206

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2136
TOTAL HOURS OF STABILITY CLASS F	218
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	218
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2136
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 1.69

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JAN 1, 2005 - MAR 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.006	0.421	0.187	0.000	0.000	0.000	0.000	0.000	0.000	0.615
NNE	0.007	0.328	0.328	0.000	0.000	0.000	0.000	0.000	0.000	0.662
NE	0.010	0.468	0.468	0.000	0.000	0.000	0.000	0.000	0.000	0.946
ENE	0.015	0.515	0.936	0.000	0.000	0.000	0.000	0.000	0.000	1.466
E	0.008	0.468	0.281	0.000	0.000	0.000	0.000	0.000	0.000	0.757
ESE	0.004	0.234	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.378
SE	0.002	0.187	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.236
SSE	0.004	0.281	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.378
S	0.005	0.468	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.520
SSW	0.008	0.655	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.757
SW	0.011	0.655	0.421	0.000	0.000	0.000	0.000	0.000	0.000	1.088
WSW	0.017	0.936	0.749	0.047	0.000	0.000	0.000	0.000	0.000	1.750
W	0.020	1.451	0.468	0.000	0.000	0.000	0.000	0.000	0.000	1.939
WNW	0.007	0.609	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.709
NW	0.010	0.609	0.328	0.000	0.000	0.000	0.000	0.000	0.000	0.946
NNW	0.007	0.468	0.234	0.000	0.000	0.000	0.000	0.000	0.000	0.709
SUBTOTAL	0.140	8.755	4.916	0.047	0.000	0.000	0.000	0.000	0.000	13.858

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2136
TOTAL HOURS OF STABILITY CLASS G	296
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	296
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2136
TOTAL HOURS CALM	3

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/05/31

MEAN WIND SPEED = 1.34

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	CALM	WIND SPEED(MPH) 0.6-1.4	1.5-3.4	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	0.186	0.233	0.047	0.000	0.000	0.000	0.466
NNE	0.000	0.000	0.000	0.047	0.280	0.186	0.000	0.000	0.000	0.513
NE	0.000	0.000	0.000	0.000	0.140	0.047	0.000	0.000	0.000	0.186
ENE	0.000	0.000	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.186
E	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
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	0.047	0.000	0.000	0.000	0.047
SSW	0.000	0.000	0.000	0.047	0.373	0.140	0.000	0.000	0.000	0.559
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	0.047	0.000	0.000	0.000	0.047
WNW	0.000	0.000	0.000	0.000	0.000	0.233	0.000	0.000	0.000	0.233
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	0.047	0.093	0.000	0.000	0.000	0.140
SUBTOTAL	0.000	0.000	0.047	0.373	1.165	0.839	0.000	0.000	0.000	2.423

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS A	52
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	52
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 7.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.140	0.047	0.233	0.000	0.000	0.000	0.419
NNE	0.000	0.000	0.047	0.233	0.326	0.466	0.000	0.000	0.000	1.072
NE	0.000	0.000	0.047	0.093	0.093	0.047	0.000	0.000	0.000	0.280
ENE	0.000	0.000	0.093	0.047	0.047	0.140	0.000	0.000	0.000	0.326
E	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
ESE	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.047
SE	0.000	0.000	0.047	0.000	0.000	0.047	0.000	0.000	0.000	0.093
SSE	0.000	0.000	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.047
S	0.000	0.000	0.000	0.047	0.140	0.140	0.000	0.000	0.000	0.326
SSW	0.000	0.000	0.000	0.233	0.419	0.186	0.047	0.000	0.000	0.885
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	0.047	0.000	0.000	0.000	0.000	0.047
WNW	0.000	0.000	0.000	0.000	0.047	0.140	0.047	0.000	0.000	0.233
NW	0.000	0.000	0.000	0.047	0.000	0.140	0.000	0.000	0.000	0.186
NNW	0.000	0.000	0.000	0.000	0.000	0.047	0.000	0.000	0.000	0.047
SUBTOTAL	0.000	0.000	0.280	0.932	1.165	1.584	0.093	0.000	0.000	4.054

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS B	87
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	87
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 6.96

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.093	0.140	0.186	0.047	0.000	0.000	0.000	0.466
NNE	0.000	0.000	0.373	0.326	0.140	0.186	0.000	0.000	0.000	1.025
NE	0.000	0.000	0.047	0.233	0.093	0.047	0.000	0.000	0.000	0.419
ENE	0.000	0.000	0.280	0.140	0.000	0.000	0.000	0.000	0.000	0.419
E	0.000	0.000	0.186	0.047	0.047	0.000	0.000	0.000	0.000	0.280
ESE	0.000	0.000	0.233	0.047	0.000	0.000	0.000	0.000	0.000	0.280
SE	0.000	0.000	0.093	0.047	0.000	0.000	0.000	0.000	0.000	0.140
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	0.513	0.233	0.093	0.047	0.000	0.000	0.885
SSW	0.000	0.000	0.093	0.746	0.559	0.140	0.000	0.000	0.000	1.538
SW	0.000	0.000	0.000	0.233	0.000	0.000	0.000	0.000	0.000	0.233
WSW	0.000	0.000	0.000	0.093	0.000	0.000	0.000	0.000	0.000	0.093
W	0.000	0.000	0.000	0.093	0.047	0.000	0.000	0.000	0.000	0.140
WNW	0.000	0.000	0.000	0.000	0.093	0.186	0.047	0.000	0.000	0.326
NW	0.000	0.000	0.000	0.000	0.140	0.233	0.000	0.000	0.000	0.373
NNW	0.000	0.000	0.000	0.093	0.093	0.047	0.000	0.000	0.000	0.233
SUBTOTAL	0.000	0.000	1.398	2.749	1.631	0.979	0.093	0.000	0.000	6.850

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2146
TOTAL HOURS OF STABILITY CLASS C 147
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 147
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2146
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 5.39

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.047	0.652	0.699	0.513	0.326	0.000	0.000	0.000	2.237
NNE	0.000	0.047	0.699	0.373	0.513	0.373	0.047	0.000	0.000	2.050
NE	0.000	0.047	0.652	0.792	0.419	0.093	0.000	0.000	0.000	2.004
ENE	0.000	0.000	0.885	0.652	0.373	0.280	0.000	0.000	0.000	2.190
E	0.000	0.047	0.606	0.047	0.140	0.000	0.000	0.000	0.000	0.839
ESE	0.000	0.093	0.466	0.186	0.140	0.000	0.000	0.000	0.000	0.885
SE	0.000	0.093	0.513	0.093	0.047	0.047	0.000	0.000	0.000	0.792
SSE	0.000	0.047	0.839	0.140	0.093	0.047	0.000	0.000	0.000	1.165
S	0.000	0.186	2.004	1.351	0.233	0.513	0.000	0.000	0.000	4.287
SSW	0.000	0.093	1.911	2.610	0.932	0.466	0.000	0.000	0.000	6.011
SW	0.000	0.140	0.792	0.885	0.233	0.000	0.000	0.000	0.000	2.050
WSW	0.000	0.140	0.839	0.373	0.000	0.047	0.000	0.000	0.000	1.398
W	0.000	0.047	0.606	0.233	0.280	0.466	0.000	0.000	0.000	1.631
WNW	0.000	0.140	0.373	0.466	0.885	0.606	0.000	0.000	0.000	2.470
NW	0.000	0.000	0.466	0.233	0.746	0.233	0.000	0.000	0.000	1.678
NNW	0.000	0.000	0.606	0.513	0.186	0.419	0.000	0.000	0.000	1.724
SUBTOTAL	0.000	1.165	12.908	9.646	5.732	3.914	0.047	0.000	0.000	33.411

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS D	717
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	717
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 4.37

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.004	0.093	0.606	0.652	0.419	0.047	0.000	0.000	0.000	1.822
NNE	0.003	0.280	0.186	0.093	0.093	0.000	0.000	0.000	0.000	0.655
NE	0.003	0.093	0.419	0.186	0.000	0.000	0.000	0.000	0.000	0.702
ENE	0.006	0.280	0.652	0.280	0.000	0.000	0.000	0.000	0.000	1.217
E	0.003	0.140	0.373	0.140	0.093	0.000	0.000	0.000	0.000	0.749
ESE	0.002	0.233	0.140	0.093	0.000	0.000	0.000	0.000	0.000	0.468
SE	0.003	0.373	0.140	0.047	0.047	0.000	0.000	0.000	0.000	0.609
SSE	0.004	0.233	0.419	0.093	0.093	0.000	0.000	0.000	0.000	0.843
S	0.007	0.513	0.699	0.419	0.093	0.140	0.000	0.000	0.000	1.871
SSW	0.017	0.513	2.237	0.979	0.373	0.047	0.000	0.000	0.000	4.164
SW	0.012	0.932	1.118	0.140	0.047	0.047	0.000	0.000	0.000	2.296
WSW	0.007	0.326	0.885	0.000	0.047	0.000	0.000	0.000	0.000	1.265
W	0.008	0.746	0.513	0.373	0.047	0.000	0.000	0.000	0.000	1.685
WNW	0.007	0.513	0.606	0.186	0.140	0.000	0.000	0.000	0.000	1.451
NW	0.003	0.280	0.233	0.233	0.140	0.047	0.000	0.000	0.000	0.935
NNW	0.004	0.140	0.513	0.559	0.699	0.047	0.000	0.000	0.000	1.961
SUBTOTAL	0.093	5.685	9.739	4.473	2.330	0.373	0.000	0.000	0.000	22.693

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS E	487
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	487
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	2

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 2.95

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.233	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.419
NNE	0.000	0.280	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.373
NE	0.000	0.093	0.093	0.047	0.000	0.000	0.000	0.000	0.000	0.233
ENE	0.000	0.233	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.466
E	0.000	0.093	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.186
ESE	0.000	0.140	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.186
SE	0.000	0.093	0.047	0.047	0.000	0.047	0.000	0.000	0.000	0.233
SSE	0.000	0.140	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.186
S	0.000	0.280	0.326	0.000	0.000	0.000	0.000	0.000	0.000	0.606
SSW	0.000	0.699	1.025	0.000	0.000	0.000	0.000	0.000	0.000	1.724
SW	0.000	0.885	0.652	0.047	0.000	0.000	0.000	0.000	0.000	1.584
WSW	0.000	1.072	0.885	0.000	0.000	0.000	0.000	0.000	0.000	1.957
W	0.000	1.491	0.699	0.000	0.000	0.000	0.000	0.000	0.000	2.190
WNW	0.000	1.631	0.326	0.047	0.000	0.000	0.000	0.000	0.000	2.004
NW	0.000	1.118	0.419	0.047	0.000	0.000	0.000	0.000	0.000	1.584
NNW	0.000	0.466	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.652
SUBTOTAL	0.000	8.947	5.312	0.280	0.000	0.047	0.000	0.000	0.000	14.585

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS F	313
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	313
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 1.54

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

APR 1, 2005 - JUN 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.004	0.326	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.377
NNE	0.002	0.186	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.189
NE	0.002	0.047	0.093	0.000	0.000	0.000	0.000	0.000	0.000	0.141
ENE	0.007	0.419	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.566
E	0.004	0.326	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.330
ESE	0.001	0.047	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.094
SE	0.002	0.140	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.189
SSE	0.004	0.373	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.377
S	0.003	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.236
SSW	0.009	0.652	0.140	0.000	0.000	0.000	0.000	0.000	0.000	0.802
SW	0.015	0.792	0.466	0.000	0.000	0.000	0.000	0.000	0.000	1.273
WSW	0.026	1.491	0.699	0.000	0.000	0.000	0.000	0.000	0.000	2.216
W	0.038	2.423	0.792	0.000	0.000	0.000	0.000	0.000	0.000	3.253
WNW	0.027	2.097	0.186	0.000	0.000	0.000	0.000	0.000	0.000	2.310
NW	0.031	2.004	0.606	0.000	0.000	0.000	0.000	0.000	0.000	2.640
NNW	0.012	0.699	0.280	0.000	0.000	0.000	0.000	0.000	0.000	0.990
SUBTOTAL	0.186	12.255	3.541	0.000	0.000	0.000	0.000	0.000	0.000	15.983

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2146
TOTAL HOURS OF STABILITY CLASS G	343
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	343
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2146
TOTAL HOURS CALM	4

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/08/19

MEAN WIND SPEED = 1.21

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.092	0.414	0.276	0.184	0.000	0.000	0.000	0.967
NNE	0.000	0.000	0.092	0.460	0.460	0.092	0.000	0.000	0.000	1.105
NE	0.000	0.000	0.322	0.322	0.092	0.092	0.000	0.000	0.000	0.829
ENE	0.000	0.000	0.184	0.092	0.000	0.000	0.000	0.000	0.000	0.276
E	0.000	0.000	0.368	0.046	0.046	0.000	0.000	0.000	0.000	0.460
ESE	0.000	0.000	0.276	0.092	0.000	0.000	0.000	0.000	0.000	0.368
SE	0.000	0.000	0.138	0.092	0.000	0.000	0.000	0.000	0.000	0.230
SSE	0.000	0.000	0.184	0.046	0.000	0.000	0.000	0.000	0.000	0.230
S	0.000	0.000	0.184	0.046	0.092	0.000	0.000	0.000	0.000	0.322
SSW	0.000	0.000	0.138	0.414	0.092	0.000	0.000	0.000	0.000	0.645
SW	0.000	0.000	0.046	0.138	0.000	0.000	0.000	0.000	0.000	0.184
WSW	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
W	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
WNW	0.000	0.000	0.046	0.046	0.046	0.000	0.000	0.000	0.000	0.138
NW	0.000	0.000	0.000	0.092	0.092	0.000	0.000	0.000	0.000	0.184
NNW	0.000	0.000	0.092	0.092	0.184	0.046	0.000	0.000	0.000	0.414
SUBTOTAL	*0.000*	*0.000*	*2.210*	*2.394*	*1.381*	*0.414*	*0.000*	*0.000*	*0.000*	*6.400*

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2178
TOTAL HOURS OF STABILITY CLASS A 139
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A 139
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2172
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/19

MEAN WIND SPEED = 4.55

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.138	0.138	0.138	0.046	0.000	0.000	0.000	0.460
NNE	0.000	0.000	0.092	0.414	0.368	0.092	0.000	0.000	0.000	0.967
NE	0.000	0.000	0.230	0.276	0.046	0.000	0.000	0.000	0.000	0.552
ENE	0.000	0.000	0.184	0.138	0.000	0.000	0.000	0.000	0.000	0.322
E	0.000	0.000	0.230	0.230	0.000	0.000	0.000	0.000	0.000	0.460
ESE	0.000	0.000	0.046	0.138	0.000	0.000	0.000	0.000	0.000	0.184
SE	0.000	0.000	0.138	0.000	0.000	0.046	0.000	0.000	0.000	0.184
SSE	0.000	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.138
S	0.000	0.000	0.276	0.184	0.046	0.000	0.000	0.000	0.000	0.506
SSW	0.000	0.000	0.138	0.552	0.184	0.138	0.000	0.000	0.000	1.013
SW	0.000	0.000	0.138	0.092	0.000	0.000	0.000	0.000	0.000	0.230
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	0.046	0.046	0.000	0.000	0.000	0.000	0.092
NW	0.000	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.092
NNW	0.000	0.000	0.046	0.092	0.046	0.138	0.000	0.000	0.000	0.322
SUBTOTAL	0.000	0.000	1.796	2.394	0.875	0.460	0.000	0.000	0.000	5.525

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS B	120
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B	120
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/19

MEAN WIND SPEED = 4.48

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.184	0.506	0.138	0.046	0.000	0.000	0.000	0.875
NNE	0.000	0.000	0.138	0.599	0.322	0.092	0.000	0.000	0.000	1.151
NE	0.000	0.000	0.460	0.184	0.138	0.000	0.000	0.000	0.000	0.783
ENE	0.000	0.000	0.184	0.230	0.092	0.000	0.000	0.000	0.000	0.506
E	0.000	0.000	0.276	0.046	0.000	0.000	0.000	0.000	0.000	0.322
ESE	0.000	0.000	0.276	0.046	0.000	0.000	0.000	0.000	0.000	0.322
SE	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SSE	0.000	0.000	0.230	0.046	0.000	0.000	0.046	0.000	0.000	0.322
S	0.000	0.000	0.184	0.368	0.184	0.000	0.000	0.046	0.000	0.783
SSW	0.000	0.000	0.322	0.506	0.138	0.092	0.000	0.000	0.000	1.059
SW	0.000	0.000	0.138	0.276	0.000	0.000	0.000	0.000	0.000	0.414
WSW	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
W	0.000	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.138
WNW	0.000	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.138
NW	0.000	0.000	0.184	0.000	0.046	0.000	0.000	0.000	0.000	0.230
NNW	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.092
SUBTOTAL	0.000	0.046	2.901	2.993	1.105	0.230	0.046	0.046	0.000	7.366

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS C	160
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C	160
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/19

MEAN WIND SPEED = 4.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.506	0.875	0.368	0.276	0.000	0.000	0.000	2.026
NNE	0.000	0.000	0.460	0.967	0.368	0.414	0.000	0.000	0.000	2.210
NE	0.000	0.000	0.691	0.829	0.322	0.092	0.000	0.000	0.000	1.934
ENE	0.000	0.046	0.645	0.691	0.368	0.230	0.000	0.000	0.000	1.980
E	0.000	0.092	0.506	0.184	0.000	0.000	0.000	0.000	0.000	0.783
ESE	0.000	0.000	0.368	0.046	0.000	0.092	0.000	0.000	0.000	0.506
SE	0.000	0.046	0.645	0.046	0.184	0.092	0.000	0.000	0.000	1.013
SSE	0.000	0.000	0.737	0.138	0.092	0.230	0.046	0.000	0.000	1.243
S	0.000	0.184	1.105	0.967	0.506	0.184	0.230	0.046	0.000	3.223
SSW	0.000	0.138	1.796	1.934	0.645	0.322	0.138	0.000	0.000	4.972
SW	0.000	0.414	0.875	0.322	0.184	0.000	0.000	0.000	0.000	1.796
WSW	0.000	0.230	0.460	0.184	0.000	0.000	0.000	0.000	0.000	0.875
W	0.000	0.184	0.322	0.092	0.046	0.000	0.000	0.000	0.000	0.645
WNW	0.000	0.092	0.414	0.184	0.046	0.000	0.000	0.000	0.000	0.737
NW	0.000	0.046	0.322	0.184	0.000	0.046	0.046	0.000	0.000	0.645
NNW	0.000	0.000	0.414	0.184	0.184	0.138	0.000	0.000	0.000	0.921
SUBTOTAL	0.000	1.473	10.267	7.827	3.315	2.118	0.460	0.046	0.000	25.506

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS D	558
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	554
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/19

MEAN WIND SPEED = 4.29

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED (MPH) CALM	0.6-1.4	1.5-3.4	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	0.184	0.276	0.460	0.092	0.000	0.000	0.000	0.000	1.013
NNE	0.000	0.322	0.460	0.184	0.000	0.000	0.000	0.000	0.000	0.967
NE	0.000	0.322	0.506	0.368	0.092	0.092	0.000	0.000	0.000	1.381
ENE	0.000	0.092	0.829	0.000	0.092	0.000	0.000	0.000	0.000	1.013
E	0.000	0.276	0.460	0.000	0.046	0.000	0.000	0.000	0.000	0.783
ESE	0.000	0.230	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.414
SE	0.000	0.276	0.230	0.046	0.000	0.092	0.000	0.000	0.000	0.645
SSE	0.000	0.230	0.230	0.092	0.184	0.138	0.046	0.000	0.000	0.921
S	0.000	0.691	1.289	0.460	0.460	0.230	0.000	0.000	0.000	3.131
SSW	0.000	1.013	2.532	1.335	0.368	0.046	0.000	0.000	0.000	5.295
SW	0.000	0.691	1.243	0.138	0.000	0.000	0.000	0.000	0.000	2.072
WSW	0.000	1.013	0.783	0.046	0.000	0.000	0.000	0.000	0.000	1.842
W	0.000	1.059	0.783	0.046	0.046	0.000	0.000	0.000	0.000	1.934
WNW	0.000	1.473	1.197	0.138	0.046	0.000	0.000	0.000	0.000	2.855
NW	0.000	1.013	1.013	0.092	0.046	0.000	0.000	0.000	0.000	2.164
NNW	0.000	0.414	0.506	0.230	0.046	0.000	0.000	0.000	0.000	1.197
SUBTOTAL	0.000	9.300	12.523	3.637	1.519	0.599	0.046	0.000	0.000	27.624

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS E	602
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	600
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/19

MEAN WIND SPEED = 2.46

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.001	0.322	0.276	0.046	0.000	0.000	0.000	0.000	0.000	0.646
NNE	0.001	0.092	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.231
NE	0.001	0.230	0.230	0.046	0.000	0.000	0.000	0.000	0.000	0.508
ENE	0.001	0.276	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.462
E	0.001	0.092	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.231
ESE	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SE	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SSE	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.138
S	0.001	0.322	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.508
SSW	0.001	0.276	0.276	0.000	0.000	0.000	0.000	0.000	0.000	0.554
SW	0.003	0.737	0.506	0.000	0.000	0.000	0.000	0.000	0.000	1.246
WSW	0.006	1.243	1.013	0.000	0.000	0.000	0.000	0.000	0.000	2.262
W	0.008	2.578	0.506	0.000	0.000	0.000	0.000	0.000	0.000	3.092
WNW	0.010	3.361	0.875	0.000	0.000	0.000	0.000	0.000	0.000	4.246
NW	0.008	2.072	1.151	0.000	0.000	0.000	0.000	0.000	0.000	3.231
NNW	0.003	0.691	0.460	0.000	0.000	0.000	0.000	0.000	0.000	1.154
SUBTOTAL	0.046	12.477	6.123	0.092	0.000	0.000	0.000	0.000	0.000	18.738

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS F	407
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	407
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/19

MEAN WIND SPEED = 1.37

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

JUL 1, 2005 - SEP 30, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.184	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.230
NNE	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.138
NE	0.000	0.046	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.138
ENE	0.000	0.046	0.000	0.000	0.000	0.000	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	0.000	0.000
ESE	0.000	0.000	0.092	0.000	0.000	0.000	0.000	0.000	0.000	0.092
SE	0.000	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SSE	0.000	0.092	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.138
S	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSW	0.000	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.138
SW	0.000	0.276	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.414
WSW	0.000	0.599	0.184	0.000	0.000	0.000	0.000	0.000	0.000	0.783
W	0.000	1.473	0.414	0.000	0.000	0.000	0.000	0.000	0.000	1.888
WNW	0.000	1.427	0.368	0.000	0.000	0.000	0.000	0.000	0.000	1.796
NW	0.000	1.611	0.645	0.000	0.000	0.000	0.000	0.000	0.000	2.256
NNW	0.000	0.460	0.138	0.000	0.000	0.000	0.000	0.000	0.000	0.599
SUBTOTAL	0.000	6.538	2.302	0.000	0.000	0.000	0.000	0.000	0.000	8.840

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2178
TOTAL HOURS OF STABILITY CLASS G	192
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	192
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2172
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/19

MEAN WIND SPEED = 1.25

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.046	0.046	0.228	0.365	0.000	0.000	0.000	0.684
NNE	0.000	0.000	0.000	0.274	0.502	0.365	0.000	0.000	0.000	1.140
NE	0.000	0.000	0.000	0.319	0.091	0.046	0.000	0.000	0.000	0.456
ENE	0.000	0.000	0.000	0.046	0.000	0.046	0.000	0.000	0.000	0.091
E	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ESE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
S	0.000	0.000	0.046	0.182	0.000	0.091	0.000	0.000	0.000	0.319
SSW	0.000	0.000	0.000	0.137	0.502	0.684	0.000	0.000	0.000	1.322
SW	0.000	0.000	0.000	0.046	0.182	0.182	0.000	0.000	0.000	0.410
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	0.046	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.046	0.137	0.000	0.000	0.000	0.182
NW	0.000	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.046
NNW	0.000	0.000	0.000	0.000	0.137	0.046	0.000	0.000	0.000	0.182
SUBTOTAL	0.000	0.000	0.137	1.094	1.687	2.052	0.000	0.000	0.000	4.970

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2193
TOTAL HOURS OF STABILITY CLASS A	109
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS A	109
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2193
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/30

MEAN WIND SPEED = 6.97

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.274	0.046	0.182	0.000	0.000	0.000	0.502
NNE	0.000	0.000	0.046	0.410	0.593	0.365	0.000	0.000	0.000	1.414
NE	0.000	0.000	0.182	0.274	0.046	0.000	0.000	0.000	0.000	0.502
ENE	0.000	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.182
E	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.091
ESE	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
SE	0.000	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.137
SSE	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.046
S	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
SSW	0.000	0.000	0.046	0.410	0.228	0.182	0.046	0.000	0.000	0.912
SW	0.000	0.000	0.000	0.319	0.046	0.000	0.000	0.000	0.000	0.365
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	0.046	0.000	0.000	0.000	0.046
WNW	0.000	0.000	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.046
NW	0.000	0.000	0.000	0.091	0.046	0.046	0.000	0.000	0.000	0.182
NNW	0.000	0.000	0.000	0.228	0.000	0.000	0.000	0.000	0.000	0.228
SUBTOTAL	0.000	0.000	0.502	2.417	1.049	0.821	0.046	0.000	0.000	4.834

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2193
TOTAL HOURS OF STABILITY CLASS B 106
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS B 106
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2193
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/30

MEAN WIND SPEED = 5.48

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.091	0.182	0.137	0.319	0.000	0.000	0.000	0.730
NNE	0.000	0.000	0.091	0.182	0.365	0.319	0.000	0.000	0.000	0.958
NE	0.000	0.000	0.182	0.182	0.046	0.000	0.000	0.000	0.000	0.410
ENE	0.000	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.091
E	0.000	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.091
ESE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SE	0.000	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.137
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	0.182	0.137	0.046	0.046	0.000	0.000	0.000	0.410
SSW	0.000	0.000	0.046	0.365	0.137	0.182	0.046	0.000	0.000	0.775
SW	0.000	0.000	0.046	0.228	0.046	0.046	0.000	0.000	0.000	0.365
WSW	0.000	0.000	0.000	0.000	0.046	0.046	0.000	0.000	0.000	0.091
W	0.000	0.000	0.046	0.000	0.137	0.000	0.000	0.000	0.000	0.182
WNW	0.000	0.000	0.000	0.000	0.046	0.091	0.000	0.000	0.000	0.137
NW	0.000	0.000	0.000	0.046	0.091	0.046	0.000	0.000	0.000	0.182
NNW	0.000	0.000	0.000	0.000	0.046	0.091	0.000	0.000	0.000	0.137
SUBTOTAL	0.000	0.000	0.912	1.459	1.140	1.186	0.046	0.000	0.000	4.742

TOTAL HOURS OF VALID STABILITY OBSERVATIONS 2193
TOTAL HOURS OF STABILITY CLASS C 104
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS C 104
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS 2193
TOTAL HOURS CALM 0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/30

MEAN WIND SPEED = 5.67

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

2005
WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.456	0.866	2.006	1.505	0.000	0.000	0.000	4.834
NNE	0.000	0.046	0.274	1.140	1.186	0.684	0.000	0.000	0.000	3.329
NE	0.000	0.000	0.593	0.775	0.182	0.000	0.000	0.000	0.000	1.550
ENE	0.000	0.091	0.365	0.137	0.046	0.091	0.000	0.000	0.000	0.730
E	0.000	0.000	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.319
ESE	0.000	0.091	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.137
SE	0.000	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SSE	0.000	0.274	0.547	0.091	0.046	0.046	0.000	0.000	0.000	1.003
S	0.000	0.182	0.684	0.046	0.091	0.274	0.365	0.000	0.000	1.642
SSW	0.000	0.091	0.730	1.368	0.547	0.502	0.000	0.000	0.000	3.238
SW	0.000	0.091	0.365	0.775	0.182	0.228	0.000	0.000	0.000	1.642
WSW	0.000	0.046	0.502	0.274	0.046	0.046	0.000	0.000	0.000	0.912
W	0.000	0.228	0.547	0.319	0.547	0.274	0.000	0.000	0.000	1.915
WNW	0.000	0.091	0.365	0.730	0.958	0.228	0.000	0.000	0.000	2.371
NW	0.000	0.091	0.137	0.547	1.003	0.821	0.000	0.000	0.000	2.599
NNW	0.000	0.000	0.547	0.319	1.049	1.414	0.000	0.000	0.000	3.329
SUBTOTAL	0.000	1.414	6.566	7.387	7.889	6.110	0.365	0.000	0.000	29.731

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2193
TOTAL HOURS OF STABILITY CLASS D	652
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS D	652
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2193
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/30

MEAN WIND SPEED = 5.37

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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WATTS BAR NUCLEAR PLANT
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT

JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.228	0.638	0.730	0.547	0.137	0.000	0.000	0.000	2.280
NNE	0.000	0.046	0.410	0.274	0.091	0.000	0.000	0.000	0.000	0.821
NE	0.000	0.000	0.958	0.274	0.046	0.000	0.000	0.000	0.000	1.277
ENE	0.000	0.091	1.186	0.091	0.000	0.000	0.000	0.000	0.000	1.368
E	0.000	0.319	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.638
ESE	0.000	0.182	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.410
SE	0.000	0.046	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SSE	0.000	0.228	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.365
S	0.000	0.228	0.456	0.365	0.228	0.410	0.000	0.000	0.000	1.687
SSW	0.000	0.228	0.775	0.593	0.547	0.365	0.000	0.000	0.000	2.508
SW	0.000	0.274	1.414	0.137	0.182	0.000	0.000	0.000	0.000	2.006
WSW	0.000	0.274	1.322	0.182	0.046	0.000	0.000	0.000	0.000	1.824
W	0.000	0.547	0.912	0.228	0.137	0.000	0.000	0.000	0.000	1.824
WNW	0.000	0.684	0.684	0.547	0.182	0.046	0.000	0.000	0.000	2.143
NW	0.000	0.319	0.775	0.456	0.410	0.046	0.000	0.000	0.000	2.006
NNW	0.000	0.091	0.684	1.368	0.775	0.182	0.000	0.000	0.000	3.101
SUBTOTAL	0.000	3.785	10.944	5.244	3.192	1.186	0.000	0.000	0.000	24.350

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2193
TOTAL HOURS OF STABILITY CLASS E	534
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS E	534
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2193
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/30

MEAN WIND SPEED = 3.41

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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WATTS BAR NUCLEAR PLANT
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JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	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	0.137	0.365	0.091	0.000	0.000	0.000	0.000	0.000	0.593
NNE	0.000	0.000	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.228
NE	0.000	0.182	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.502
ENE	0.000	0.046	0.228	0.091	0.000	0.000	0.000	0.000	0.000	0.365
E	0.000	0.137	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.182
ESE	0.000	0.137	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.182
SE	0.000	0.000	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.046
SSE	0.000	0.091	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.228
S	0.000	0.137	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.319
SSW	0.000	0.319	0.365	0.046	0.000	0.000	0.000	0.000	0.000	0.730
SW	0.000	0.228	0.593	0.000	0.000	0.000	0.000	0.000	0.000	0.821
WSW	0.000	0.821	0.775	0.046	0.000	0.000	0.000	0.000	0.000	1.642
W	0.000	1.596	1.049	0.046	0.046	0.000	0.000	0.000	0.000	2.736
WNW	0.000	2.234	0.593	0.046	0.000	0.000	0.000	0.000	0.000	2.873
NW	0.000	1.596	0.730	0.046	0.000	0.000	0.000	0.000	0.000	2.371
NNW	0.000	0.821	0.638	0.091	0.046	0.000	0.000	0.000	0.000	1.596
SUBTOTAL	0.000	8.482	6.338	0.502	0.091	0.000	0.000	0.000	0.000	15.413

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2193
TOTAL HOURS OF STABILITY CLASS F	338
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS F	338
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2193
TOTAL HOURS CALM	0

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2005/01/30

MEAN WIND SPEED = 1.60

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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WATTS BAR NUCLEAR PLANT
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JOINT PERCENTAGE FREQUENCIES OF WIND SPEED BY WIND DIRECTION FOR

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

Watts Bar Nuclear Plant

OCT 1, 2005 - DEC 31, 2005

WIND DIRECTION	WIND SPEED(MPH) CALM	0.6-1.4	1.5-3.4	3.5-5.4	5.5-7.4	7.5-12.4	12.5-18.4	18.5-24.4	>=24.5	TOTAL
N	0.001	0.091	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.183
NNE	0.001	0.365	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.457
NE	0.001	0.046	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.183
ENE	0.001	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183
E	0.001	0.182	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.183
ESE	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SE	0.000	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.091
SSE	0.000	0.137	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.137
S	0.001	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.229
SSW	0.001	0.319	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.320
SW	0.003	0.684	0.274	0.000	0.000	0.000	0.000	0.000	0.000	0.960
WSW	0.007	1.459	0.866	0.000	0.000	0.000	0.000	0.000	0.000	2.332
W	0.010	2.417	1.094	0.000	0.000	0.000	0.000	0.000	0.000	3.521
WNW	0.008	2.234	0.593	0.046	0.000	0.000	0.000	0.000	0.000	2.881
NW	0.009	2.052	1.094	0.000	0.000	0.000	0.000	0.000	0.000	3.155
NNW	0.003	0.730	0.274	0.046	0.000	0.000	0.000	0.000	0.000	1.052
SUBTOTAL	0.046	11.309	4.514	0.091	0.000	0.000	0.000	0.000	0.000	15.960

TOTAL HOURS OF VALID STABILITY OBSERVATIONS	2193
TOTAL HOURS OF STABILITY CLASS G	350
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY CLASS G	350
TOTAL HOURS OF VALID WIND DIRECTION-WIND SPEED-STABILITY OBSERVATIONS	2193
TOTAL HOURS CALM	1

METEOROLOGICAL FACILITY: Watts Bar Nuclear Plant
STABILITY BASED ON DELTA-T BETWEEN 9.51 AND 45.63 METERS
WIND SPEED AND DIRECTION MEASURED AT 9.72 METER LEVEL

DATE PRINTED: 2006/01/30

MEAN WIND SPEED = 1.29

NOTE: TOTALS AND SUBTOTALS ARE OBTAINED FROM UNROUNDED NUMBERS

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ATTACHMENT 1 TO ENCLOSURE 1
Deviations from ODCM Controls/Surveillance Requirements

6/28/2005	1/2.2.2 Table 2.2-2 Item K	The weekly particulate filter obtained from the Auxiliary Building Exhaust radiation monitor 0-RE-90-101 had signs that flow had been in both directions. This resulted in a non-representative sample. No apparent cause could be determined to account for the reverse flow. The previous weeks filter and following weeks filter showed no activity.
04/17/2005	1/2.2.2 Table 2.2-2 Item K	During the weekly changeout of the tritium canister on the Auxiliary Building Exhaust it was discovered that the initial weight of the canister had not been documented. This resulted in being unable to quantify the tritium released via the Auxiliary Building Exhaust for the previous week. A grab sample was obtained, the tritium concentration was determined and used to estimate the tritium that was released.

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ATTACHMENT 2 TO ENCLOSURE 1
Radiation Monitors Inoperable for Greater than 30 days

None