

# **ATTACHMENT 1**

DRESDEN NUCLEAR POWER STATION  
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT  
January Through December 2004

DOCKET NUMBERS: 50-010/50-237/50-249

1. Regulatory Limits

a. For Noble Gases:

Dose Rate

- 1) Less than 500 mrem/year to the whole body.
- 2) Less than 3000 mrem/year to the skin.

Dose Gamma Radiation

- 1) Less than or equal to 5 mrad/quarter.
- 2) Less than or equal to 10 mrad/year.

Beta Radiation

- 1) Less than or equal to 10 mrad/quarter.
- 2) Less than or equal to 20 mrad/year.

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

Dose Rate

- 1) Less than 1500 mrem/year.

Dose

- 1) Less than or equal to 7.5 mrem/quarter to any organ.
- 2) Less than or equal to 15 mrem/year to any organ.

d. For Liquid:

- 1) Less than or equal to 1.5 mrem to the whole body during any calendar quarter.
- 2) Less than or equal to 5 mrem to any organ during any calendar quarter.
- 3) Less than or equal to 3 mrem to the whole body during any calendar year.
- 4) Less than or equal to 10 mrem to any organ during any calendar year.

2. Maximum Permissible Concentration

a., b., c. For fission and activation gases, iodines and particulates with half-lives greater than 8 days, allowable dose rates are calculated by solving equations 10-1 and 10-2 from the Offsite Dose Calculation Manual (ODCM).

d. For liquid effluents, allowable release limits are calculated by solving equations 10-3 and 10-4 from the ODCM.

3. Average Energy

The average energy of fission and activation gases was calculated for the gaseous effluents released from the site. The average energy is based on the percentage of each noble gas nuclide present and its average energy per disintegration ( $\bar{E}$  in MeV/dis) for gamma and beta emissions separately.

$$\begin{aligned}\bar{E}_{\text{GAMMA}} &= 7.60\text{E-}01 \text{ MeV/dis} \\ \bar{E}_{\text{BETA}} &= 4.63\text{E-}01 \text{ MeV/dis}\end{aligned}$$

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**4. Measurement and Approximations of Total Radioactivity**

- a. Fission and Activation Gases:
- b. Iodines:
- c. Particulates:

The Units 2/3 and Unit 1 Chimneys, Units 2/3 Reactor Building Vent and Unit 1 Chemical Cleaning Building effluents are continually sampled for iodines and particulates. These samples are changed weekly and analyzed by gamma isotopic. The particulate filters are composited and sent to a vendor for gross alpha, Sr-89/90, and Fe-55 analysis. Noble gas grab samples are obtained weekly and analyzed by gamma spectroscopy. Tritium samples are obtained monthly and analyzed by liquid scintillation.

For the Units 2/3 Chimney and Units 2/3 Reactor Building Vent effluents, the average flow at the release points is used to calculate the Curies released. For the Unit 1 Chimney and Unit 1 Chemical Cleaning Building effluents, the design basis flows are used to calculate Curies released.

**d. Liquid Effluents:**

The river discharge tanks are analyzed for gamma-emitting nuclides by gamma spectroscopy and for tritium by liquid scintillation prior to discharge. A representative portion of this sample is saved and composited with other discharges that occur during the sampling period. The composite is sent to a vendor for analyses of gross alpha, Fe-55, and Sr-89/90.

The tank volumes and activities are used to calculate the diluted activity released at the discharge point from batch discharges.

**e. Less than the Lower Limit of Detection (<LLD)**

Samples are analyzed such that the ODCM LLD requirements are met. When a nuclide is not detected then <LLD is reported.

**f. Equipment Out of Service**

- (1) The Unit 3 Service Water Effluent Radiation Monitor was out of service from November 22, 2004 and remained inoperable at the end of 2004. The monitor was declared inoperable due to low sample flow through the monitor. This inoperability was not corrected in a timely manner due to excessive lead time for replacement parts, the repair of a crack discovered in the sample header, and the development and implementation of an engineering modification to improve monitor sample flow. Contingency grab sampling and analysis was performed as required during the monitor's inoperability. The monitor was returned to operable status on April 9, 2005. This inoperability of greater than 30 days is being reported per Dresden ODCM Section 12.2.A.1.3.

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4. Measurement and Approximations of Total Radioactivity (continued)

g. Estimation of Data/Corrections:

- (1) On June 9, 2004 a Radioactive Material (RAM) and Radiological Environmental Monitoring Program (REMP) Self Assessment identified that gamma isotopic analyses were not being performed using adequate a priori LLD verifications as required by the Dresden ODCM. This resulted in several cases where the a posteriori Minimum Detectable Activity (MDA) for Xe-138 was greater than the ODCM LLD of  $1.00\text{E-}05$   $\mu\text{Ci/ml}$ . This occurred in three Unit 2 Service Water grab samples (on April 20, 2004; May 18, 2004; and May 25, 2004) and one Unit 3 Service Water grab sample (on April 20, 2004). No noble gases were detected in any Service Water samples during 2004. Because other gases that would be seen in an effluent mixture with longer half-lives were not detected (like Xe-135), and Xe-138 is not normally detected in Service Water effluents, it is determined that no release of Xe-138 occurred.
- (2) On November 30, 2004 Liquid Radwaste Discharge 04-003 was discharged to the environment and the Xe-138 LLD was not met due to excessive delay in the analysis. This was discovered on December 2, 2004 during additional review of the River Discharge Card. No noble gases were detected in any Liquid Radwaste Discharge samples during 2004. Xe-138 was not identified during the analysis of discharge 04-003, and the calculated a posteriori MDA for Xe-138 of the release was  $1.96\text{E-}04$   $\mu\text{Ci/ml}$ . Because other gases that would be seen in an effluent mixture with longer half-lives were not detected (like Xe-135), and Xe-138 is not normally detected in Liquid Radwaste Discharge effluents, it is determined that no release of Xe-138 occurred.
- (3) On December 9, 2004 Liquid Radwaste Discharge 04-010 was discharged to the environment. ODCM requirements for the discharge were met for the discharge, but the records for the tritium analysis for the release could not be located afterward. This was discovered on December 23, 2004 during administrative processing of the River Discharge Card, and attempts to locate the documentation were unsuccessful. For reporting purposes, the discharge tritium concentration was estimated using the average of reactor water tritium concentrations of Unit 2 ( $7.82\text{E-}03$   $\mu\text{Ci/ml}$ ) and Unit 3 ( $8.37\text{E-}03$   $\mu\text{Ci/ml}$ ) from the monthly reactor water tritium analysis performed on December 22, 2004, for a result of  $8.10\text{E-}03$   $\mu\text{Ci/ml}$ . Reactor water tritium concentration was used due to the long half-life of tritium, the negligible impact radwaste processing has on the isotope, and to provide a conservative estimate of the discharge's activity. This value was also comparable to the tritium concentration of the previous discharge ( $8.05\text{E-}03$   $\mu\text{Ci/ml}$ ).

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**SUMMATION OF ALL GASEOUS RELEASES**

	Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error, %
<b>A. FISSION &amp; ACTIVATION GASES</b>						
1. Total Release	Ci	3.62E+01	2.92E+01	2.86E+01	1.23E+01	20.8%
2. Average Release Rate for the Period	μCi/sec	4.61E+00	3.71E+00	3.59E+00	1.55E+00	
3. Percent of Technical Specification Limit	%	*	*	*	*	

<b>B. IODINES</b>						
1. Total Iodine-131	Ci	8.10E-04	8.82E-04	8.79E-04	5.17E-04	15.7%
2. Average Release Rate of I-131 for the Period	μCi/sec	1.03E-04	1.12E-04	1.11E-04	6.51E-05	
3. Percent of Technical Specification Limit	%	*	*	*	*	
4. Total Iodine-131, Iodine-133 and Iodine-135	Ci	3.39E-03	3.94E-03	4.52E-03	1.91E-03	

<b>C. PARTICULATES</b>						
1. Particulates with half-lives > 8 days	Ci	1.58E-03	1.35E-03	1.53E-03	1.09E-03	21.5%
2. Average Release Rate for the Period	μCi/sec	2.01E-04	1.71E-04	1.93E-04	1.37E-04	
3. Percent of Technical Specification Limit	%	*	*	*	*	
4. Gross Alpha Radioactivity	Ci	<LLD	<LLD	<LLD	<LLD	

<b>D. TRITIUM</b>						
1. Total Release	Ci	5.62E+00	7.07E+00	6.65E+00	4.10E+00	7.62%
2. Average Release Rate for the Period	μCi/sec	7.14E-01	8.99E-01	8.37E-01	5.16E-01	
3. Percent of Technical Specification Limit	%	*	*	*	*	

\*The information is contained in the Radiological Impact on Man section of the report. Total airborne release data are provided which include fission and activation gases, iodines, particulates, and tritium.

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TABLE OF LOWER LIMITS OF DETECTABILITY  
 FOR AIRBORNE EFFLUENTS

1.	FISSION/ACTIVATION GASES	μCi/ml
	Kr-87	1.00E-04
	Kr-88	1.00E-04
	Xe-133	1.00E-04
	Xe-133m	1.00E-04
	Xe-135	1.00E-04
	Xe-138	1.00E-04
2.	IODINES	μCi/ml
	I-131	1.00E-12
	I-133	1.00E-10
3.	PARTICULATES	μCi/ml
	Sr-89	1.00E-11
	Sr-90	1.00E-11
	Mn-54	1.00E-11
	Co-58	1.00E-11
	Fe-59	1.00E-11
	Co-60	1.00E-11
	Zn-65	1.00E-11
	Mo-99	1.00E-11
	Cs-134	1.00E-11
	Cs-137	1.00E-11
	Ce-141	1.00E-11
	Ce-144	1.00E-11
4.	OTHER	μCi/ml
	H-3	1.00E-06
	Gross Alpha	1.00E-11

The above values are the ODCM-required LLDs. The actual analyses always met the required LLDs.

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D1 MAIN CHIMNEY

GASEOUS EFFLUENTS

DOCKET NUMBER: 50-010

GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

XX

**CONTINUOUS MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci	*	*	*	*	*
Kr-85	Ci	*	*	*	*	*
Kr-85m	Ci	*	*	*	*	*
Kr-87	Ci	*	*	*	*	*
Kr-88	Ci	*	*	*	*	*
Xe-133	Ci	*	*	*	*	*
Xe-133m	Ci	*	*	*	*	*
Xe-135	Ci	*	*	*	*	*
Xe-135m	Ci	*	*	*	*	*
Xe-138	Ci	*	*	*	*	*
TOTAL	Ci	None	None	None	None	None
<b>IODINES</b>						
I-131	Ci	*	*	*	*	*
I-133	Ci	*	*	*	*	*
I-135	Ci	*	*	*	*	*
TOTAL	Ci	None	None	None	None	None
<b>PARTICULATES</b>						
Fe-55	Ci	*	*	*	*	*
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
Be-7	Ci	*	*	*	*	*
Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	4.08E-06	3.38E-06	2.69E-06	3.06E-06	1.32E-05
Co-57	Ci	*	*	*	*	*
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	*	*	*	*	*
Co-60	Ci	2.12E-06	2.87E-06	2.44E-07	8.82E-07	6.12E-06
Zn-65	Ci	*	*	*	*	*
Sr-85	Ci	*	*	*	*	*
Zr-95	Ci	*	*	*	*	*
Mo-99	Ci	*	*	*	*	*
Ru-103	Ci	*	*	*	*	*
Cd-109	Ci	*	*	*	*	*
Ag-110m	Ci	*	*	*	*	*
Sn-113	Ci	*	*	*	*	*
Sb-124	Ci	*	*	*	*	*
Sb-125	Ci	*	*	*	*	*
Cs-134	Ci	*	*	*	*	*
Cs-136	Ci	*	*	*	*	*
Cs-137	Ci	*	*	2.03E-06	*	2.03E-06
Ba-133	Ci	*	*	*	*	*
Ba-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*
TOTAL	Ci	6.20E-06	6.25E-06	4.96E-06	3.94E-06	2.14E-05

\* The activity of this nuclide is less than the LLD.

**DRESDEN NUCLEAR POWER STATION**  
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January Through December 2004

D1 MAIN CHIMNEY

GASEOUS EFFLUENTS

DOCKET NUMBER: 50-010

GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

XX

**BATCH MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci					
Kr-85	Ci					
Kr-85m	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-133m	Ci					
Xe-135	Ci					
Xe-135m	Ci					
Xe-138	Ci					
<b>TOTAL</b>	Ci	None	None	None	None	None
<b>IODINES</b>						
I-131	Ci					
I-133	Ci					
I-135	Ci					
<b>TOTAL</b>	Ci	None	None	None	None	None
<b>PARTICULATES</b>						
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
Be-7	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-57	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
Sr-85	Ci					
Zr-95	Ci					
Mo-99	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sn-113	Ci					
Sb-124	Ci					
Sb-125	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Ba-133	Ci					
Ba-140	Ci					
Ce-141	Ci					
Ce-144	Ci					
<b>TOTAL</b>	Ci	None	None	None	None	None

\* The activity of this nuclide is less than the LLD.



**DRESDEN NUCLEAR POWER STATION**  
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D2/3 REACTOR BUILDING VENT

GASEOUS EFFLUENTS

DOCKET NUMBERS: 50-237/50-249

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GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

**CONTINUOUS MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci	*	*	*	*	*
Kr-85	Ci	*	*	*	*	*
Kr-85m	Ci	*	*	*	*	*
Kr-87	Ci	*	*	*	*	*
Kr-88	Ci	*	*	*	*	*
Xe-133	Ci	*	*	*	3.16E-06	3.16E-06
Xe-133m	Ci	*	*	*	*	*
Xe-135	Ci	5.48E-05	*	*	2.05E-05	7.54E-05
Xe-135m	Ci	*	*	*	*	*
Xe-138	Ci	*	*	*	*	*
TOTAL	Ci	5.48E-05	None	None	2.37E-05	7.85E-05
<b>IODINES</b>						
I-131	Ci	2.92E-05	3.74E-06	6.84E-07	2.01E-05	5.38E-05
I-133	Ci	1.40E-04	*	4.43E-06	2.33E-05	1.68E-04
I-135	Ci	1.19E-04	*	*	*	1.19E-04
TOTAL	Ci	2.89E-04	3.74E-06	5.11E-06	4.34E-05	3.41E-04
<b>PARTICULATES</b>						
Fe-55	Ci	2.82E-05	4.06E-05	1.31E-04	8.06E-05	2.80E-04
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
Be-7	Ci	*	*	*	*	*
Cr-51	Ci	2.88E-06	*	*	1.21E-05	1.50E-05
Mn-54	Ci	1.52E-04	7.76E-05	2.48E-04	1.10E-04	5.88E-04
Co-57	Ci	*	*	*	*	*
Co-58	Ci	4.24E-06	*	5.21E-05	5.35E-06	6.17E-05
Fe-59	Ci	4.45E-06	2.86E-06	1.14E-05	4.43E-06	2.31E-05
Co-60	Ci	1.85E-04	7.21E-05	2.34E-04	1.73E-04	6.65E-04
Zn-65	Ci	2.45E-04		1.04E-04	1.36E-04	4.84E-04
Sr-85	Ci	*	*	*	*	*
Nb-95	Ci	*	*	*	*	*
Mo-99	Ci	*	*	1.94E-05	2.02E-06	2.14E-05
Ru-103	Ci	*	6.52E-07	*	*	6.52E-07
Cd-109	Ci	*	*	*	*	*
Ag-110m	Ci	*	*	*	2.82E-06	2.82E-06
Sn-113	Ci	*	*	*	*	*
Sn-117m	Ci	*	*	*	*	*
Sb-124	Ci	*	*	*	*	*
Cs-137	Ci	1.14E-05	*	*	2.01E-06	1.34E-05
Ba-133	Ci	*	*	*	*	*
Ba-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*
Hg-203	Ci	*	*	*	*	*
TOTAL	Ci	6.33E-04	1.94E-04	8.00E-04	5.29E-04	2.16E-03

\* The activity of this nuclide is less than the LLD.

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D2/3 REACTOR BUILDING VENT

GASEOUS EFFLUENTS

DOCKET NUMBERS: 50-237/50-249

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XX  
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GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

**BATCH MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci					
Kr-85	Ci					
Kr-85m	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-133m	Ci					
Xe-135	Ci					
Xe-135m	Ci					
Xe-138	Ci					
TOTAL	Ci	None	None	None	None	None
<b>IODINES</b>						
I-131	Ci					
I-133	Ci					
I-135	Ci					
TOTAL	Ci	None	None	None	None	None
<b>PARTICULATES</b>						
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
Be-7	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-57	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
Sr-85	Ci					
Zr-95	Ci					
Mo-99	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sn-113	Ci					
Sb-124	Ci					
Sb-125	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Ba-133	Ci					
Ba-140	Ci					
Ce-141	Ci					
Ce-144	Ci					
TOTAL	Ci	None	None	None	None	None

\* The activity of this nuclide is less than the LLD.

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D2/3 MAIN CHIMNEY

GASEOUS EFFLUENTS

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GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

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**CONTINUOUS MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci	3.76E+00	3.69E+00	3.73E+00	2.27E+00	1.35E+01
Kr-85	Ci	*	*	*	*	*
Kr-85m	Ci	9.60E-01	7.81E-01	7.94E-01	4.88E-01	3.02E+00
Kr-87	Ci	2.71E+00	6.90E-01	1.25E+00	3.78E-01	5.03E+00
Kr-88	Ci	2.45E+00	1.10E+00	9.78E-01	6.11E-01	5.14E+00
Xe-131m	Ci	*	*	*	*	*
Xe-133	Ci	1.30E+00	7.50E-01	7.53E-01	4.77E-01	3.28E+00
Xe-133m	Ci	*	*	*	*	*
Xe-135	Ci	7.75E+00	9.90E+00	1.16E+01	2.40E+00	3.16E+01
Xe-135m	Ci	3.84E+00	2.47E+00	1.94E+00	1.16E+00	9.41E+00
Xe-138	Ci	1.35E+01	9.77E+00	7.56E+00	4.57E+00	3.54E+01
<b>TOTAL</b>	<b>Ci</b>	<b>3.62E+01</b>	<b>2.92E+01</b>	<b>2.86E+01</b>	<b>1.23E+01</b>	<b>1.06E+02</b>
<b>IODINES</b>						
I-131	Ci	7.81E-04	8.78E-04	9.01E-04	4.97E-04	3.06E-03
I-133	Ci	2.32E-03	2.79E-03	3.09E-03	1.33E-03	9.54E-03
I-135	Ci	*	2.69E-04	5.25E-04	3.38E-05	8.28E-04
<b>TOTAL</b>	<b>Ci</b>	<b>3.10E-03</b>	<b>3.94E-03</b>	<b>4.52E-03</b>	<b>1.86E-03</b>	<b>1.34E-02</b>
<b>PARTICULATES</b>						
Fe-55	Ci	6.93E-06	4.23E-05	2.63E-06	*	5.19E-05
Be-7	Ci	*	*	*	*	*
Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	9.67E-05	1.13E-04	8.43E-05	8.60E-05	3.80E-04
Co-57	Ci	*	*	*	*	*
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	5.24E-05	*	*	*	5.24E-05
Co-60	Ci	1.28E-04	1.88E-04	9.99E-05	1.26E-04	5.42E-04
Zn-65	Ci	*	8.12E-06	*	*	8.12E-06
Sr-85	Ci	*	*	*	*	*
Y-88	Ci	*	*	*	*	*
Sr-89	Ci	1.53E-04	1.05E-04	1.08E-04	8.25E-05	4.49E-04
Sr-90	Ci	*	*	*	*	*
Zr-95	Ci	*	*	*	*	*
Mo-99	Ci	9.62E-06	*	1.96E-05	6.97E-06	3.62E-05
Ru-103	Ci	*	*	*	*	*
Cd-109	Ci	*	*	*	*	*
Ag-110m	Ci	4.20E-06	1.42E-05	2.20E-06	1.48E-06	2.21E-05
Sn-113	Ci	*	*	*	*	*
Sn-117m	Ci	*	*	*	*	*
Cs-136	Ci	*	*	*	*	*
Cs-137	Ci	2.62E-07	3.04E-06	*	*	3.30E-06
Ba-140	Ci	4.88E-04	4.32E-04	4.10E-04	1.79E-04	1.51E-03
Hg-203	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*
<b>TOTAL</b>	<b>Ci</b>	<b>9.40E-04</b>	<b>9.06E-04</b>	<b>7.27E-04</b>	<b>4.82E-04</b>	<b>3.05E-03</b>

\* The activity of this nuclide is less than the LLD.

**DRESDEN NUCLEAR POWER STATION**  
**UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT**  
January Through December 2004

D2/3 MAIN CHIMNEY

GASEOUS EFFLUENTS

DOCKET NUMBERS: 50-237/50-249

GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

XX

**BATCH MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci					
Kr-85	Ci					
Kr-85m	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-133m	Ci					
Xe-135	Ci					
Xe-135m	Ci					
Xe-138	Ci					
TOTAL	Ci	None	None	None	None	None
<b>IODINES</b>						
I-131	Ci					
I-133	Ci					
I-135	Ci					
TOTAL	Ci	None	None	None	None	None
<b>PARTICULATES</b>						
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
Be-7	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-57	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
Sr-85	Ci					
Zr-95	Ci					
Mo-99	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sn-113	Ci					
Sb-124	Ci					
Sb-125	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Ba-133	Ci					
Ba-140	Ci					
Ce-141	Ci					
Ce-144	Ci					
TOTAL	Ci	None	None	None	None	None

\* The activity of this nuclide is less than the LLD.

**DRESDEN NUCLEAR POWER STATION**  
**UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT**  
January Through December 2004

CHEMICAL CLEANING BUILDING

GASEOUS EFFLUENTS

DOCKET NUMBERS: 50-010/50-237/50-249

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XX  
\_\_\_\_\_  
GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

**CONTINUOUS MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci	*	*	*	*	*
Kr-85	Ci	*	*	*	*	*
Kr-85m	Ci	*	*	*	*	*
Kr-87	Ci	*	*	*	*	*
Kr-88	Ci	*	*	*	*	*
Xe-133	Ci	*	*	*	*	*
Xe-133m	Ci	*	*	*	*	*
Xe-135	Ci	*	*	*	*	*
Xe-135m	Ci	*	*	*	*	*
Xe-138	Ci	*	*	*	*	*
TOTAL	Ci	None	None	None	None	None
<b>IODINES</b>						
I-131	Ci	*	*	*	*	*
I-133	Ci	*	*	*	*	*
I-135	Ci	*	*	*	*	*
TOTAL	Ci	None	None	None	None	None
<b>PARTICULATES</b>						
Fe-55	Ci	*	*	*	*	*
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
Be-7	Ci	*	*	*	*	*
Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	4.25E-07	1.85E-06	2.26E-06	1.15E-06	5.69E-06
Co-57	Ci	*	*	*	*	*
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	*	*	*	*	*
Co-60	Ci	*	1.25E-06	3.20E-07	4.51E-07	2.02E-06
Zn-65	Ci	*	*	*	*	*
Sr-85	Ci	*	*	*	*	*
Zr-95	Ci	*	*	*	*	*
Mo-99	Ci	*	*	*	*	*
Ru-103	Ci	*	*	*	*	*
Ag-110m	Ci	*	*	*	*	*
Sn-113	Ci	*	*	*	*	*
Sb-124	Ci	*	*	*	*	*
Sb-125	Ci	*	*	*	*	*
Cs-134	Ci	*	*	*	*	*
Cs-136	Ci	*	*	*	*	*
Cs-137	Ci	*	*	*	*	*
Ba-133	Ci	*	*	*	*	*
Ba-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Ce-144	Ci	*	*	*	*	*
TOTAL	Ci	4.25E-07	3.10E-06	2.58E-06	1.60E-06	7.71E-06

\* The activity of this nuclide is less than the LLD.

**DRESDEN NUCLEAR POWER STATION**  
**UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT**  
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CHEMICAL CLEANING BUILDING

GASEOUS EFFLUENTS

DOCKET NUMBERS: 50-010/50-237/50-249

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GROUND LEVEL RELEASES  
SEMI-ELEVATED RELEASES  
ELEVATED RELEASES

**BATCH MODE**

NUCLIDES RELEASED	UNIT	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR	TOTAL
<b>FISSION GASES</b>						
Ar-41	Ci					
Kr-85	Ci					
Kr-85m	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-133m	Ci					
Xe-135	Ci					
Xe-135m	Ci					
Xe-138	Ci					
<b>TOTAL</b>	<b>Ci</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>
<b>IODINES</b>						
I-131	Ci					
I-133	Ci					
I-135	Ci					
<b>TOTAL</b>	<b>Ci</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>
<b>PARTICULATES</b>						
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
Be-7	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-57	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
Sr-85	Ci					
Zr-95	Ci					
Mo-99	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sn-113	Ci					
Sb-124	Ci					
Sb-125	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Ba-133	Ci					
Ba-140	Ci					
Ce-141	Ci					
Ce-144	Ci					
<b>TOTAL</b>	<b>Ci</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>	<b>None</b>

\* The activity of this nuclide is less than the LLD.

DRESDEN NUCLEAR POWER STATION  
 UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT  
 January Through December 2004

DOCKET NUMBERS: 50-010/50-237/50-249

TABLE OF LOWER LIMITS OF DETECTABILITY  
 FOR LIQUID EFFLUENTS

1.	FISSION/ACTIVATION GASES	μCi/ml
	Kr-87	1.00E-05
	Kr-88	1.00E-05
	Xe-133	1.00E-05
	Xe-133m	1.00E-05
	Xe-135	1.00E-05
	Xe-138	1.00E-05
2.	IODINES	μCi/ml
	I-131	1.00E-06
3.	PARTICULATES	μCi/ml
	Fe-55	1.00E-06
	Sr-89	5.00E-08
	Sr-90	5.00E-08
	Mn-54	5.00E-07
	Co-58	5.00E-07
	Fe-59	5.00E-07
	Co-60	5.00E-07
	Zn-65	5.00E-07
	Mo-99	5.00E-07
	Cs-134	5.00E-07
	Cs-137	5.00E-07
	Ce-141	5.00E-07
	Ce-144	5.00E-06
4.	OTHER	μCi/ml
	H-3	1.00E-05
	Gross Alpha	1.00E-07

The above values are the ODCM-required LLDs. Except as stated in section 4.g, actual analyses always met the required LLDs.

**DRESDEN NUCLEAR POWER STATION**  
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DOCKET NUMBERS: 50-010/50-237/50-249

**SUMMATION OF ALL LIQUID RELEASES**

	Units	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Est. Total Error, %
A. FISSION & ACTIVATION PRODUCTS						
1. Total Release (not including H-3, gases, alpha)	Ci	1.33E-06	7.55E-06	<LLD	1.06E-02	17.4%
2. Average Diluted Conc. During Period	μCi/ml	7.63E-10	3.76E-09	<LLD	1.65E-08	
3. Percent of Technical Specification Limit	%	*	*	*	*	
B. TRITIUM						
1. Total Release	Ci	<LLD	<LLD	<LLD	1.95E+01	7.89%
2. Average Diluted Conc. During Release	μCi/ml	<LLD	<LLD	<LLD	3.03E-05	
3. Percent of Technical Specification Limit	%	*	*	*	*	
C. DISSOLVED AND ENTRAINED GASES						
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	20.3%
2. Average Diluted Conc. During Period	μCi/ml	<LLD	<LLD	<LLD	<LLD	
3. Percent of Technical Specification Limit	%	*	*	*	*	
D. GROSS ALPHA ACTIVITY						
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	5.58%
E. VOLUME OF WASTE RELEASED (prior to dilution)						
	Liters	2.14E+05	2.46E+05	1.64E+05	3.77E+06	1.00%
F. VOLUME OF DILUTION WATER USED DURING PERIOD						
	Liters	1.53E+06	1.76E+06	1.17E+06	6.40E+08	5.00%

\*The information is contained in the Radiological Impact on Man section of the report.



**DRESDEN NUCLEAR POWER STATION**  
**UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT**  
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RADWASTE LIQUID EFFLUENTS

DOCKET NUMBERS: 50-010/50-237/50-249

1. Number of Batch Releases: 12
2. Total Time for Batch Releases: 4.20E+03 minutes
3. Maximum Time Period for a Batch Release: 4.25E+02 minutes
4. Average Time Period for a Batch Release: 3.50E+02 minutes
5. Minimum Time Period for a Batch Release: 3.32E+02 minutes
6. Average Stream Flow During Periods of Release of Effluent into a Flowing Stream: 1.51E+05 lpm

**BATCH MODE**

	Unit	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Total
Fe-55	Ci				*	*
Sr-89	Ci				*	*
Sr-90	Ci				*	*
I-131	Ci				*	*
I-132	Ci				*	*
I-133	Ci				*	*
I-134	Ci				*	*
I-135	Ci				*	*
Cr-51	Ci				4.24E-04	4.24E-04
Mn-54	Ci				4.28E-03	4.28E-03
Co-58	Ci				1.45E-04	1.45E-04
Fe-59	Ci				3.39E-04	3.39E-04
Co-60	Ci				3.81E-03	3.81E-03
Zn-65	Ci				1.43E-03	1.43E-03
As-76	Ci				*	*
Zr-95	Ci				*	*
Sr-91	Ci				*	*
Mo-99	Ci				*	*
Tc-99m	Ci				*	*
Ru-103	Ci				*	*
Ag-110m	Ci				1.40E-04	1.40E-04
Sb-124	Ci				1.96E-05	1.96E-05
Cs-134	Ci				*	*
Cs-136	Ci				*	*
Cs-137	Ci				1.59E-05	1.59E-05
Ba-139	Ci				*	*
Ba-140	Ci				*	*
La-140	Ci				*	*
Ce-141	Ci				*	*
(above) Total	Ci	None	None	None	1.06E-02	1.06E-02
H-3	Ci				1.94E+01	1.94E+01
Kr-87	Ci				*	*
Kr-88	Ci				*	*
Xe-133	Ci				*	*
Xe-133m	Ci				*	*
Xe-135	Ci				*	*
Xe-138	Ci				*	*

\* The activity of this nuclide is less than the LLD.

DRESDEN NUCLEAR POWER STATION  
 UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT  
 January Through December 2004

RADWASTE LIQUID EFFLUENTS

DOCKET NUMBERS: 50-010/50-237/50-249

CONTINUOUS MODE

	Unit	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Total
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
I-131	Ci					
I-132	Ci					
I-133	Ci					
I-134	Ci					
I-135	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
As-76	Ci					
Zr-95	Ci					
Sr-91	Ci					
Mo-99	Ci					
Tc-99m	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sb-124	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Cs-138	Ci					
Ba-140	Ci					
La-140	Ci					
Ce-141	Ci					
(above) Total	Ci	None	None	None	None	None
H-3	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-133m	Ci					
Xe-135	Ci					
Xe-138	Ci					

\* The activity of this nuclide is less than the LLD.

**DRESDEN NUCLEAR POWER STATION**  
**UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT**  
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LPCI SYSTEM EFFLUENTS

DOCKET NUMBERS: 50-237/50-249

1. Number of Batch Releases: 66
2. Total Time for Batch Releases: 8.18E+01 minutes
3. Maximum Time Period for a Batch Release: 1.24E+00 minutes
4. Average Time Period for a Batch Release: 1.24E+00 minutes
5. Minimum Time Period for a Batch Release: 1.24E+00 minutes
6. Average Stream Flow During Periods of Release of Effluent into a Flowing Stream: 9.46E+04 lpm

BATCH MODE						
	Unit	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Total
Fe-55	Ci	*	*	*	*	*
Sr-89	Ci	*	*	*	*	*
Sr-90	Ci	*	*	*	*	*
I-131	Ci	*	*	*	*	*
I-132	Ci	*	*	*	*	*
I-133	Ci	*	*	*	*	*
I-134	Ci	*	*	*	*	*
I-135	Ci	*	*	*	*	*
Cr-51	Ci	*	*	*	*	*
Mn-54	Ci	*	4.24E-06	*	8.39E-06	1.26E-05
Co-58	Ci	*	*	*	*	*
Fe-59	Ci	*	*	*	*	*
Co-60	Ci	*	*	*	4.64E-06	4.64E-06
Zn-65	Ci	*	*	*	*	*
As-76	Ci	*	*	*	*	*
Zr-95	Ci	*	*	*	*	*
Sr-91	Ci	*	*	*	*	*
Mo-99	Ci	*	*	*	*	*
Tc-99m	Ci	*	*	*	*	*
Ru-103	Ci	*	*	*	*	*
Ag-110m	Ci	*	*	*	*	*
Sb-124	Ci	*	*	*	*	*
Cs-134	Ci	*	*	*	*	*
Cs-136	Ci	*	*	*	*	*
Cs-137	Ci	1.33E-06	*	*	6.12E-06	7.45E-06
Ba-139	Ci	*	3.31E-06	*	*	3.31E-06
Ba-140	Ci	*	*	*	*	*
La-140	Ci	*	*	*	*	*
Ce-141	Ci	*	*	*	*	*
Np-239	Ci	*	*	*	*	*
(above) Total	Ci	1.33E-06	7.55E-06	None	1.92E-05	2.80E-05
H-3	Ci	*	*	*	7.33E-02	7.33E-02
Kr-87	Ci	*	*	*	*	*
Kr-88	Ci	*	*	*	*	*
Xe-133	Ci	*	*	*	*	*
Xe-135	Ci	*	*	*	*	*
Xe-138	Ci	*	*	*	*	*

\* The activity of this nuclide is less than the LLD.

DRESDEN NUCLEAR POWER STATION  
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LPCI SYSTEM EFFLUENTS

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CONTINUOUS MODE						
	Unit	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Total
Fe-55	Ci					
Sr-89	Ci					
Sr-90	Ci					
I-131	Ci					
I-132	Ci					
I-133	Ci					
I-134	Ci					
I-135	Ci					
Cr-51	Ci					
Mn-54	Ci					
Co-58	Ci					
Fe-59	Ci					
Co-60	Ci					
Zn-65	Ci					
As-76	Ci					
Zr-95	Ci					
Sr-91	Ci					
Mo-99	Ci					
Tc-99m	Ci					
Ru-103	Ci					
Ag-110m	Ci					
Sb-124	Ci					
Cs-134	Ci					
Cs-136	Ci					
Cs-137	Ci					
Cs-138	Ci					
Ba-140	Ci					
La-140	Ci					
Ce-141	Ci					
Np-239	Ci					
(above) Total	Ci	None	None	None	None	None
H-3	Ci					
Kr-87	Ci					
Kr-88	Ci					
Xe-133	Ci					
Xe-135	Ci					
Xe-138	Ci					

\* The activity of this nuclide is less than the LLD.

DRESDEN NUCLEAR POWER STATION  
 UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT  
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DOCKET NUMBERS: 50-010/50-237/50-249

UNITS 1, 2 & 3 SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (NOT IRRADIATED FUEL)

1. Type of Waste	Units	12-month period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator bottoms, etc.	m <sup>3</sup>	1.52E+02	25%
	Ci	2.49E+03	
b. Dry compressible waste, contaminated equipment, etc.	m <sup>3</sup>	1.46E+03	25%
	Ci	9.01E-01	
c. Irradiated components, control rods, etc.	m <sup>3</sup>	7.30E+00	25%
	Ci	3.13E+04	
d. Other (describe) - Contaminated Oil, Pump Impeller	m <sup>3</sup>	1.22E+02	25%
	Ci	6.92E+01	

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

a. Spent resins, filter sludges, evaporator bottoms, etc.

	Percent %	Curies
Fe-55	64.0	1.60E+03
Co-60	22.8	5.70E+02
Mn-54	5.45	1.36E+02
Zn-65	3.30	8.22E+01
Cs-137	2.99	7.46E+01

b. Dry compressible waste, contaminated equipment, etc.

	Percent %	Curies
Co-60	57.7	5.20E-01
Mn-54	18.9	1.70E-01
Fe-55	16.3	1.47E-01
Cs-137	2.06	1.86E-02
Ni-63	1.18	1.06E-02
Zn-65	1.12	1.00E-02

c. Irradiated components, control rods, etc.

	Percent %	Curies
Fe-55	52.0	1.63E+04
Co-60	37.0	1.16E+04
Ta-182	5.76	1.80E+03
Ni-63	2.87	8.98E+02
Mn-54	2.18	6.84E+02

**DRESDEN NUCLEAR POWER STATION**  
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**UNIT 1, 2 & 3 SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (Cont.)**

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

**d. Other - Contaminated Oil, Pump Impeller**

	<u>Percent %</u>	<u>Curies</u>
Co-60	36.5	2.52E+01
Fe-55	34.9	2.42E+01
Mn-54	20.4	1.41E+01
K-40	1.68	1.16E+00
Fe-59	1.63	1.13E+00
Cr-51	1.08	7.47E-01

**3. Solid Waste Description**

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
28	Motor Freight (exclusive use only)	GTS Duratek, Oak Ridge, TN
13	Motor Freight (exclusive use only)	Envirocare, Clive UT
9	Motor Freight (exclusive use only)	CNS, Barnwell, SC
9	Motor Freight (exclusive use only)	Alaron, Wampum, PA
6	Motor Freight (exclusive use only)	Studsvik Processing Facility, Erwin, TN
1	Motor Freight (exclusive use only)	GTS Duratek, Kingston, TN

**B. IRRADIATED FUEL SHIPMENTS (Disposition)**

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

**C. CHANGES TO THE PROCESS CONTROL PROGRAM (PCP)**

The station Process Control Program was not changed during 2004. Revision 3 of RW-AA-100, "Process Control Program for Radioactive Wastes" was issued on October 25, 2004, and implemented administrative enhancements only, with no significant effect to the Process Control Program.

DRESDEN NUCLEAR POWER STATION  
UNITS 1, 2 AND 3 RADIOACTIVE EFFLUENT RELEASE REPORT  
January Through December 2004

DOCKET NUMBER: 50-010/50-237/50-249

ABNORMAL RELEASES\*

A. LIQUID

1. Number of Releases: 1
2. Total Activity Releases: 2.12E+01 Ci

B. GASEOUS

1. Number of Releases: 1
2. Total Activity Releases: 2.37E-04 Ci

- A.1 On July 31, 2004 samples drawn from site storm sewers and monitoring wells indicated the presence of a leak in the underground High Pressure Coolant Injection (HPCI) suction piping from the contaminated Condensate Storage Tank (CST). This leakage entered the site storm sewer system and was released to the environment via the Unit 1 Intake canal. Trending data of the Unit 1 Intake indicated the leak started during the monthly composite sampling period that began on November 12, 2003, which is seen by the tritium concentration divergence (increase in Unit 1 Intake tritium concentration) between the Units 2 and 3 Intake and the Unit 1 Intake. The leak was stopped on October 20, 2004 when the piping was drained, opened, and an inflatable bladder was installed to seal the system. Tritium and Co-60 were detected in the storm sewer and Wastewater Treatment Facility (WWTF) effluents during this event. To determine tritium activity released during the event, pressure testing was performed and determined that the final leak rate from the HPCI suction piping was 1.31 gallons per minute, and this value was applied to the entire leak duration for conservatism, and tritium concentration of the CST was used as the released concentration. Measured Co-60 concentrations and estimated flow rates for the storm sewer and WWTF effluent were used to determine the Co-60 activity released. For this event, an estimated total of 5.66E-06 Ci of Co-60 and 2.12E+01 Ci of tritium were released to the environment. Due to the date of discovery of the leak, all activity released during this event (in 2003 and 2004) and the resultant dose to the public are attributed to 2004. An estimated 3.08E+00 Ci of tritium (no Co-60) was released during 2003, which would have resulted in an additional total body and organ dose of 1.93E-05 mrem to the child receptor (most conservative receptor). Dose to the public in 2003 was evaluated, and assigning dose from this event to 2003 would not have resulted in the violation of any regulatory or ODCM limit.
- B.1 An unplanned actuation of the Unit 3 Isolation Condenser occurred at 1327 on May 5, 2004 due to a scram of the reactor, and continued until 0644 on May 6, 2004. In the past, low-level contamination was introduced into the shell side of the condenser/heat exchanger, which vents directly to the environment. As a result, actuation of this system prompts sampling and isotopic analysis of the shell side contents and the downspouts under the exhaust. Mn-54, Co-60, and Zn-65 was detected, and the maximum activity concentration of each isotope was used to determine the activity released to the environment. Volume of the release was based on makeup pump run times and changes in shell-side level. For this event, an estimated total activity of 2.37E-04 Ci was released to the environment.

\*These releases are included in the Effluents Summation of all Releases Tables and in the Radiological Impact on Man.

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UNMONITORED RELEASES\*

A. LIQUID

1. Number of Releases: 2
2. Total Activity Releases: 4.11E-01 Ci

B. GASEOUS

1. Number of Releases: 4
2. Total Activity Releases: 2.21E-04 Ci

- A.1 Water in on-site storm sewers is routinely sampled and analyzed for tritium content. In addition to the HPCI suction leak described under Abnormal Release A.1, tritium was detected after the leak was repaired in October 2004. The highest storm drain concentrations measured during October, November, and December of 2004 was used to calculate the released activity for each month. The total activity released is based on an estimated typical discharge flow of 10 gallons per minute. An estimated 4.09E-01 Ci of tritium was released to the environment from October 20 through December 31, 2004.
- A.2 Grab samples of the Wastewater Treatment Facility (WWTF) effluent are routinely collected and analyzed for radioactivity. Gamma isotopic analysis identified Co-60 and Mn-54 in samples taken in 2004. An estimated total of 1.85E-03 Ci was released via the WWTF during 2004.
- B.1 The Unit 1 Main Turbine Floor (MTF) is used as an area to work on contaminated equipment. The ventilation, which exhausts through the Unit 1 Main Chimney, is no longer operational and the floor is at ambient pressure with the outside environment. With radiological work activities being performed on the MTF, the potential exists for airborne activity to be released to the environment through various potential release points. The estimated release through these points is 3.60E-05 Ci of Cs-137 during 2004.
- B.2 The Chemistry Laboratory Ventilation system exhausts directly into the environment and is not monitored. The calculated activity released to the environment in 2004 is 1.51E-04 Ci of noble gases and 1.36E-05 Ci of iodines and particulates.
- B.3 The Unit 2/3 Heating Steam system has low-level contamination present. During operation of the system, some steam is vented directly into the environment. An estimated total activity of 2.65E-06 Ci of Co-60 was released to the environment from this system during 2004.
- B.4 Past radiological surveys have identified low-level contamination in the East Turbine Building Ventilation ductwork. This system vents directly to the environment and is not monitored. Surveys in 2004 detected Mn-54, Co-60, and Cs-137 in the system. An estimated total activity of 1.80E-05 Ci was released to the environment from this system during 2004.

\*These releases are included in the Effluents Summation of all Releases Tables and in the Radiological Impact on Man.



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**RADIOLOGICAL IMPACT ON MAN\***

**UNIT 1**

**1. Airborne Releases**

	Maximum Doses from Airborne Releases					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Gamma Air (mrad)	5.0 mrad	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	10.0 mrad	0.00E+00 (e)
Beta Air (mrad)	10.0 mrad	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	20.0 mrad	0.00E+00 (e)
Total Body (mrem)	2.5 mrem	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	5.0 mrem	0.00E+00 (e)
Skin (mrem)	7.5 mrem	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	0.00E+00 (e)	15.0 mrem	0.00E+00 (e)
Organ (mrem)	7.5 mrem	2.30E-06 (c,t)	9.68E-06 (a)	1.12E-05 (c)	7.86E-04 (i,c)	15.0 mrem	8.01E-04 (c)
Critical Organ		Lung	GI_LLI	Liver	Liver (i) Bone (c)		Liver

**2. Liquid Releases**

	Maximum Doses from Aquatic Effluents					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Total Body (mrem)	1.5 mrem	None	None	None	None	3.0 mrem	None
Organ (mrem)	5.0 mrem	None	None	None	None	10.0 mrem	None
Critical Organ		None	None	None	None		None

\* The doses reported include abnormal and unmonitored releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

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DOCKET NUMBER: 50-237

**RADIOLOGICAL IMPACT ON MAN\***

**UNIT 2**

**1. Airborne Releases**

	Maximum Doses from Airborne Releases					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Gamma Air (mrad)	5.0 mrad	1.51E-04 (e)	1.19E-04 (e)	8.54E-05 (e)	7.88E-05 (e)	10.0 mrad	4.35E-04 (e)
Beta Air (mrad)	10.0 mrad	1.12E-05 (e)	9.02E-06 (e)	7.46E-06 (e)	4.98E-06 (e)	20.0 mrad	3.27E-05 (e)
Total Body (mrem)	2.5 mrem	1.27E-04 (e)	8.99E-05 (e)	6.44E-05 (e)	5.95E-05 (e)	5.0 mrem	3.28E-04 (e)
Skin (mrem)	7.5 mrem	1.27E-04 (e)	9.96E-05 (e)	7.21E-05 (e)	6.51E-05 (e)	15.0 mrem	3.63E-04 (e)
Organ (mrem)	7.5 mrem	5.14E-04 (c)	1.63E-03 (c)	3.69E-03 (c)	2.71E-03 (c)	15.0 mrem	8.39E-03 (c)
Critical Organ		Lung	Thyroid	Thyroid	Thyroid		Thyroid

**2. Liquid Releases**

	Maximum Doses from Aquatic Effluents					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Total Body (mrem)	1.5 mrem	4.26E-07 (a)	3.89E-09 (c)	0.00E+00 (e)	9.06E-05 (c)	3.0 mrem	9.07E-05 (c)
Organ (mrem)	5.0 mrem	6.67E-07 (t)	5.52E-08 (a)	0.00E+00 (e)	1.19E-04 (a)	10.0 mrem	1.19E-04 (a)
Critical Organ		Liver	GI_LLI	None	GI_LLI		GI_LLI

\* The doses reported include abnormal and unmonitored releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

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**RADIOLOGICAL IMPACT ON MAN\***

**UNIT 3**

**1. Airborne Releases**

	Maximum Doses from Airborne Releases					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Gamma Air (mrad)	5.0 mrad	6.28E-04 (e)	4.35E-04 (e)	4.20E-04 (e)	1.91E-04 (e)	10.0 mrad	1.67E-03 (e)
Beta Air (mrad)	10.0 mrad	4.21E-05 (e)	2.92E-05 (e)	3.17E-05 (e)	1.17E-05 (e)	20.0 mrad	1.15E-04 (e)
Total Body (mrem)	2.5 mrem	4.74E-04 (e)	3.28E-04 (e)	3.17E-04 (e)	1.44E-04 (e)	5.0 mrem	1.26E-03 (e)
Skin (mrem)	7.5 mrem	5.21E-04 (e)	3.60E-04 (e)	3.51E-04 (e)	1.58E-04 (e)	15.0 mrem	1.39E-03 (e)
Organ (mrem)	7.5 mrem	1.24E-03 (c)	6.71E-03 (c)	4.81E-03 (c)	2.92E-03 (c)	15.0 mrem	1.55E-02 (c)
Critical Organ		Thyroid	Thyroid	Thyroid	Thyroid		Thyroid

**2. Liquid Releases**

	Maximum Doses from Aquatic Effluents					Yearly Obj.	Annual Dose
	Quarterly Obj.	1 <sup>st</sup> QTR	2 <sup>nd</sup> QTR	3 <sup>rd</sup> QTR	4 <sup>th</sup> QTR		
Total Body (mrem)	1.5 mrem	0.00E+00 (e)	0.00E+00 (e)	1.33E-04 (c)	9.41E-05 (c)	3.0 mrem	2.27E-04 (c)
Organ (mrem)	5.0 mrem	0.00E+00 (e)	0.00E+00 (e)	1.33E-04 (c)	1.39E-04 (a)	10.0 mrem	2.51E-04 (c)
Critical Organ		None	None	GI_LLI	GI_LLI		Liver

\* The doses reported include abnormal and unmonitored releases. These doses are the highest among the four analyzed receptors as described in parentheses [(i)=infant, (c)=child, (t)=teenager, (a)=adult, (e)=every receptor has the same value].

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**Summary of Offsite Dose Calculation Manual (ODCM) Changes by Dresden Station in 2004**

**The Dresden ODCM was not revised in 2004.**

**DRESDEN NUCLEAR POWER STATION  
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**METEOROLOGICAL DATA**

1. The following table represents the percentage of valid hours of recoverable meteorological data for 2004:

Parameter	Percentage of valid parameter hours in 2004				
	1 <sup>st</sup> Quarter	2 <sup>nd</sup> Quarter	3 <sup>rd</sup> Quarter	4 <sup>th</sup> Quarter	Year
35 ft. Wind Speed	99.1%	99.9%	97.4%	93.7%	97.5%
150 ft. Wind Speed	99.6%	99.9%	99.7%	98.7%	99.5%
300 ft. Wind Speed	99.6%	99.9%	99.7%	97.2%	99.1%
35 ft. Wind Direction	99.5%	99.6%	99.0%	99.4%	99.4%
150 ft. Wind Direction	99.6%	99.8%	99.7%	99.5%	99.6%
300 ft. Wind Direction	99.6%	99.8%	99.5%	99.4%	99.6%
35 ft. Temperature	99.9%	99.9%	99.6%	99.5%	99.7%
150-35 ft. delta T	97.9%	99.9%	99.2%	99.5%	99.1%
300-35 ft. delta T	99.9%	99.9%	99.2%	99.5%	99.6%

2. Dresden station was able to achieve an average of 99.2% meteorological data recovery for the year. This exceeds the minimum criterion of 90% delineated in Regulatory Guide 1.23.
3. The remaining pages of this report contain the Dresden Station meteorological site quarterly joint-frequency wind rose tables for 2004.

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	8	0	0	0	10
NNE	0	2	4	0	0	0	6
NE	0	5	2	0	0	0	7
ENE	0	3	6	0	0	0	9
E	0	1	6	0	0	0	7
ESE	0	0	3	0	0	0	3
SE	0	0	2	1	0	0	3
SSE	0	5	5	10	0	0	20
S	0	4	2	4	8	0	18
SSW	0	2	11	5	1	0	19
SW	0	0	0	0	0	0	0
WSW	0	6	3	0	0	0	9
W	0	1	10	0	5	0	16
WNW	0	3	19	0	1	0	23
NW	0	3	9	6	3	0	21
NNW	0	1	14	2	0	0	17
Variable	0	0	0	0	0	0	0
Total	0	38	104	28	18	0	188

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	1	0	0	0	1
NNE	0	2	1	0	0	0	3
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	0	3	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	0	0	2	0	0	0	2
SSE	0	1	1	3	0	0	5
S	0	0	4	0	1	0	5
SSW	0	0	0	1	0	0	1
SW	0	1	0	2	1	0	4
WSW	1	0	1	0	1	1	4
W	0	0	2	1	1	0	4
WNW	0	0	5	0	2	0	7
NW	0	0	1	2	0	0	3
NNW	0	1	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	1	5	24	9	6	1	46

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	0	0	0	3
NNE	0	2	0	0	0	0	2
NE	0	0	2	0	0	0	2
ENE	0	0	2	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	1	3	0	0	0	4
SE	0	2	0	0	0	0	2
SSE	0	1	0	2	0	0	3
S	0	1	2	2	2	0	7
SSW	0	1	1	1	0	0	3
SW	0	0	0	4	0	0	4
WSW	0	0	1	1	0	0	2
W	0	0	1	0	0	0	1
WNW	0	1	5	3	4	0	13
NW	0	0	3	1	1	0	5
NNW	0	2	2	1	0	0	5
Variable	0	0	0	0	0	0	0
Total	0	13	24	15	7	0	59

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0



# Dresden Nuclear Station

Period of Record: January - March 2004  
 Stability Class - Neutral - 150Ft-35Ft Delta-T (F)  
 Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	4	15	9	0	0	0	28
NNE	2	12	14	1	0	0	29
NE	1	17	36	1	0	0	55
ENE	3	30	31	0	0	0	64
E	2	16	28	16	0	0	62
ESE	2	14	55	15	0	0	86
SE	4	4	10	8	0	0	26
SSE	1	1	13	11	1	0	27
S	1	13	24	29	2	1	70
SSW	3	8	32	21	7	1	72
SW	1	1	18	22	0	0	42
WSW	4	3	6	9	1	2	25
W	2	12	49	24	3	1	91
WNW	4	27	50	21	7	0	109
NW	3	18	33	10	1	0	65
NNW	4	35	46	11	0	0	96
Variable	0	0	0	0	0	0	0
Total	41	226	454	199	22	5	947

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	20	5	0	0	0	28
NNE	6	13	1	0	0	0	20
NE	3	22	7	0	0	0	32
ENE	5	17	0	0	0	0	22
E	4	15	4	0	0	0	23
ESE	9	21	17	2	0	0	49
SE	9	6	15	1	0	0	31
SSE	10	21	20	14	0	0	65
S	7	23	25	10	2	0	67
SSW	5	15	24	10	3	0	57
SW	2	12	16	9	1	0	40
WSW	2	6	13	5	0	0	26
W	4	36	36	21	0	0	97
WNW	13	33	32	6	0	0	84
NW	14	16	22	2	0	0	54
NNW	16	21	9	0	0	0	46
Variable	0	0	0	0	0	0	0
Total	112	297	246	80	6	0	741

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	0	0	0	0	2
NNE	1	1	0	0	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	7	10	1	0	0	0	18
SE	4	4	0	0	0	0	8
SSE	1	3	1	0	0	0	5
S	3	5	2	0	0	0	10
SSW	5	7	0	0	0	0	12
SW	7	18	6	0	0	0	31
WSW	3	5	2	0	0	0	10
W	3	1	1	0	0	0	5
WNW	3	0	0	0	0	0	3
NW	4	1	0	0	0	0	5
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	43	56	13	0	0	0	112

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	2	0	0	0	0	2
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	2	2	0	0	0	0	4
SSW	0	0	0	0	0	0	0
SW	1	6	0	0	0	0	7
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	4	10	0	0	0	0	14

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	1	0	0	0	1
ENE	0	0	1	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	3	1	0	4
S	0	0	0	0	1	1	2
SSW	0	0	0	1	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	1	0	0	0	1
W	0	0	0	2	0	2	4
WNW	0	0	0	5	0	2	7
NW	0	0	0	0	1	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	4	11	3	5	23

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	0	0	2	3	0	0	5
NNE	0	0	0	2	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	3	0	0	0	3
E	0	0	2	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	1	0	1
S	0	0	0	1	2	2	5
SSW	0	0	0	3	0	0	3
SW	0	0	0	0	0	0	0
WSW	0	0	3	1	0	0	4
W	0	0	3	1	0	1	5
WNW	0	0	0	2	0	1	3
NW	0	0	1	1	3	0	5
NNW	0	0	1	2	1	0	4
Variable	0	0	0	0	0	0	0
Total	0	0	15	16	7	4	42

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	3	0	0	3
NNE	0	0	2	2	0	0	4
NE	0	0	2	0	0	0	2
ENE	0	0	3	0	0	0	3
E	0	0	4	1	0	0	5
ESE	0	0	3	1	0	0	4
SE	0	1	1	0	0	0	2
SSE	0	0	0	2	2	0	4
S	0	0	2	1	2	3	8
SSW	0	0	0	4	0	1	5
SW	0	0	1	0	4	2	7
WSW	0	0	2	0	1	0	3
W	0	0	3	5	2	3	13
WNW	0	0	4	7	0	1	12
NW	0	0	2	5	2	0	9
NNW	0	0	1	4	2	0	7
Variable	0	0	0	0	0	0	0
Total	0	1	30	35	15	10	91

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Neutral - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	11	6	20	5	0	42
NNE	2	6	14	16	8	1	47
NE	1	8	17	31	4	0	61
ENE	4	22	42	23	3	0	94
E	2	4	20	19	14	3	62
ESE	0	10	23	41	16	0	90
SE	0	3	8	13	3	0	27
SSE	2	2	11	14	18	7	54
S	2	4	20	18	34	8	86
SSW	0	7	24	27	22	4	84
SW	0	3	8	10	19	7	47
WSW	4	9	7	8	12	10	50
W	1	9	22	67	55	24	178
WNW	2	10	29	48	23	24	136
NW	2	8	22	38	19	9	98
NNW	3	11	31	47	21	8	121
Variable	0	0	0	0	0	0	0
Total	25	127	304	440	276	105	1277

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 3

Hours of missing stability measurements in all stability classes: 3



# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	4	8	6	1	0	20
NNE	0	7	8	11	2	0	28
NE	0	4	12	4	0	0	20
ENE	0	2	22	0	0	0	24
E	0	0	13	3	0	0	16
ESE	0	2	7	8	10	0	27
SE	1	2	12	11	12	1	39
SSE	1	12	9	21	10	4	57
S	1	9	9	21	28	7	75
SSW	1	3	16	18	25	11	74
SW	2	2	5	17	20	1	47
WSW	1	2	13	20	11	0	47
W	0	3	7	32	13	0	55
WNW	1	4	9	25	2	0	41
NW	2	3	10	16	8	0	39
NNW	0	2	11	8	2	0	23
Variable	0	0	0	0	0	0	0
Total	11	61	171	221	144	24	632

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 5

Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	3	2	0	1	0	6
NNE	0	0	1	0	0	0	1
NE	0	1	0	0	0	0	1
ENE	1	0	0	0	0	0	1
E	0	0	0	1	0	0	1
ESE	0	2	1	1	0	0	4
SE	0	1	3	6	1	0	11
SSE	0	2	9	1	0	0	12
S	0	0	2	3	5	0	10
SSW	0	0	1	1	0	0	2
SW	0	2	3	7	4	0	16
WSW	0	7	4	10	2	0	23
W	0	1	5	0	0	0	6
WNW	0	3	0	0	0	0	3
NW	0	2	4	0	0	0	6
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	24	36	30	13	0	104

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: January - March 2004

Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	1	0	0	1
SSW	0	0	1	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	0	1	1	0	0	2
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	2	2	0	0	4

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 3

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	2	15	15	2	0	0	34
NNE	1	22	9	2	0	0	34
NE	0	20	3	6	0	0	29
ENE	1	17	5	0	0	0	23
E	0	11	7	0	0	0	18
ESE	0	1	2	1	0	0	4
SE	0	3	3	0	0	0	6
SSE	0	6	1	1	0	0	8
S	0	3	4	0	0	0	7
SSW	0	4	8	7	5	0	24
SW	0	6	8	14	7	0	35
WSW	1	8	24	8	1	0	42
W	1	15	10	6	0	0	32
WNW	0	12	9	10	1	0	32
NW	0	14	10	3	0	0	27
NNW	1	15	12	6	1	0	35
Variable	0	0	0	0	0	0	0
Total	7	172	130	66	15	0	390

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	0	3	0	0	0	4
NNE	2	2	0	0	0	0	4
NE	0	3	1	2	0	0	6
ENE	0	2	3	0	0	0	5
E	0	2	0	0	0	0	2
ESE	0	0	1	1	0	0	2
SE	0	1	2	1	0	0	4
SSE	0	2	1	0	0	0	3
S	0	3	5	2	0	0	10
SSW	0	2	4	4	2	0	12
SW	1	3	2	6	2	0	14
WSW	0	6	7	2	0	0	15
W	2	4	2	0	0	0	8
WNW	0	5	1	0	0	0	6
NW	0	7	1	1	0	0	9
NNW	0	2	1	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	6	44	34	20	4	0	108

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	0	0	0	0	4
NNE	3	1	1	0	0	0	5
NE	0	3	1	0	0	0	4
ENE	1	4	2	0	0	0	7
E	1	5	1	0	0	0	7
ESE	1	8	3	1	0	0	13
SE	0	0	4	0	0	0	4
SSE	0	5	0	0	0	0	5
S	0	6	0	3	0	0	9
SSW	0	3	5	4	1	0	13
SW	0	2	4	3	1	0	10
WSW	1	3	6	2	0	0	12
W	0	5	3	0	0	0	8
WNW	0	2	0	0	0	0	2
NW	1	3	4	0	0	0	8
NNW	2	1	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	11	54	35	13	2	0	115

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Neutral - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	5	19	3	0	0	0	27
NNE	5	13	7	0	0	0	25
NE	1	20	20	1	0	0	42
ENE	1	31	16	1	0	0	49
E	1	24	13	2	0	0	40
ESE	0	10	15	3	0	0	28
SE	1	10	10	10	0	0	31
SSE	3	21	10	5	0	0	39
S	4	11	23	15	3	0	56
SSW	4	14	25	18	8	3	72
SW	4	11	10	22	1	0	48
WSW	3	11	17	13	1	0	45
W	0	13	6	8	0	0	27
WNW	1	15	10	5	0	0	31
NW	1	15	3	2	0	0	21
NNW	4	16	4	1	1	0	26
Variable	0	0	0	0	0	0	0
Total	38	254	192	106	14	3	607

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)  
 Winds Measured at 35 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	15	27	8	1	0	0	51
NNE	14	21	1	0	0	0	36
NE	7	25	9	0	0	0	41
ENE	9	21	2	0	0	0	32
E	6	32	4	0	0	0	42
ESE	4	24	7	0	0	0	35
SE	7	12	6	0	0	0	25
SSE	5	21	9	2	0	0	37
S	11	34	35	15	0	0	95
SSW	13	34	31	10	16	1	105
SW	13	19	23	8	3	0	66
WSW	9	11	7	0	0	0	27
W	12	18	4	1	0	0	35
WNW	8	25	4	1	0	0	38
NW	12	19	4	0	0	0	35
NNW	8	18	8	1	0	0	35
Variable	0	0	0	0	0	0	0
Total	153	361	162	39	19	1	735

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0



# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)  
 Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	4	1	0	0	0	0	5
NNE	1	1	0	0	0	0	2
NE	2	2	0	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	2	0	0	0	0	2
ESE	3	4	0	0	0	0	7
SE	1	6	1	0	0	0	8
SSE	1	4	0	0	0	0	5
S	3	3	1	0	0	0	7
SSW	12	7	1	0	0	0	20
SW	12	23	1	0	0	0	36
WSW	9	6	0	0	0	0	15
W	6	6	1	0	0	0	13
WNW	6	1	0	0	0	0	7
NW	16	0	0	0	0	0	16
NNW	9	0	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	85	66	5	0	0	0	156

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)  
 Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	0	0	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	3	1	0	0	0	0	4
SSW	6	2	0	0	0	0	8
SW	9	7	0	0	0	0	16
WSW	2	0	0	0	0	0	2
W	3	0	0	0	0	0	3
WNW	2	2	0	0	0	0	4
NW	7	0	0	0	0	0	7
NNW	4	0	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	37	13	0	0	0	0	50

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	3	3	3	0	10
NNE	0	1	9	2	2	0	14
NE	0	1	1	0	3	0	5
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	1	0	1
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	2	3	1	0	1	7
W	0	1	0	0	0	2	3
WNW	0	0	2	1	3	2	8
NW	0	0	1	2	5	0	8
NNW	0	2	6	4	0	0	12
Variable	0	0	0	0	0	0	0
Total	0	8	26	13	17	5	69

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 2

# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	1	7	4	0	14
NNE	1	0	6	3	1	0	11
NE	0	2	3	1	2	0	8
ENE	0	3	0	0	0	0	3
E	0	0	6	0	0	0	6
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	2	1	0	0	0	3
S	0	2	0	0	0	0	2
SSW	0	0	0	3	1	2	6
SW	0	1	1	0	2	0	4
WSW	0	1	2	4	2	0	9
W	0	0	2	1	1	2	6
WNW	0	0	4	3	1	1	9
NW	0	2	5	2	1	0	10
NNW	0	2	0	4	0	1	7
Variable	0	0	0	0	0	0	0
Total	1	17	32	28	15	6	99

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 2

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	5	3	0	0	8
NNE	0	0	4	2	1	0	7
NE	0	5	3	2	0	0	10
ENE	0	6	5	2	0	0	13
E	0	1	5	2	0	0	8
ESE	0	0	0	2	0	0	2
SE	0	1	3	0	0	0	4
SSE	0	0	3	1	0	0	4
S	0	0	1	2	0	2	5
SSW	0	0	2	5	2	4	13
SW	0	1	1	5	2	7	16
WSW	0	3	3	10	1	2	19
W	0	4	8	3	2	1	18
WNW	0	3	5	4	0	2	14
NW	0	1	5	0	1	1	8
NNW	0	3	5	2	1	2	13
Variable	0	0	0	0	0	0	0
Total	0	28	58	45	10	21	162

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 1  
 Hours of missing stability measurements in all stability classes: 2

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Neutral - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	6	23	14	3	0	47
NNE	2	7	16	24	6	0	55
NE	0	7	21	28	9	0	65
ENE	2	9	43	13	2	0	69
E	1	11	23	16	0	0	51
ESE	1	9	15	13	5	0	43
SE	0	8	10	12	14	1	45
SSE	2	6	17	4	5	0	34
S	0	8	15	20	16	9	68
SSW	2	7	13	31	26	14	93
SW	0	12	15	19	23	18	87
WSW	1	5	20	19	11	13	69
W	1	10	23	8	12	3	57
WNW	1	4	13	10	4	4	36
NW	0	1	19	14	4	2	40
NNW	2	5	10	13	2	3	35
Variable	0	0	0	0	0	0	0
Total	16	115	296	258	142	67	894

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 1  
 Hours of missing stability measurements in all stability classes: 2

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	3	7	24	8	2	45
NNE	2	5	22	17	1	0	47
NE	3	8	9	8	5	0	33
ENE	2	14	11	6	0	0	33
E	5	13	22	6	1	0	47
ESE	0	5	11	4	1	0	21
SE	1	9	19	6	2	0	37
SSE	0	4	6	16	2	1	29
S	0	2	15	41	45	11	114
SSW	1	4	16	44	28	19	112
SW	0	9	25	32	20	4	90
WSW	1	2	13	12	2	0	30
W	0	1	16	16	1	0	34
WNW	0	4	6	16	6	0	32
NW	1	6	13	13	0	0	33
NNW	0	1	7	8	7	1	24
Variable	0	0	0	0	0	0	0
Total	17	90	218	269	129	38	761

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 5  
 Hours of missing stability measurements in all stability classes: 2

# Dresden Nuclear Station

Period of Record: April - June 2004  
 Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	2	6	1	0	10
NNE	0	2	3	2	2	0	9
NE	0	2	2	0	0	0	4
ENE	0	3	0	1	0	0	4
E	0	1	1	0	0	0	2
ESE	0	0	1	1	0	0	2
SE	1	2	3	5	0	0	11
SSE	0	0	1	1	0	0	2
S	1	0	1	3	4	0	9
SSW	1	1	2	5	0	0	9
SW	1	1	2	17	1	0	22
WSW	0	1	2	11	0	0	14
W	1	5	10	3	0	0	19
WNW	0	2	7	4	1	0	14
NW	1	2	7	2	0	0	12
NNW	1	3	3	1	0	0	8
Variable	0	0	0	0	0	0	0
Total	7	26	47	62	9	0	151

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 4  
 Hours of missing stability measurements in all stability classes: 2



# Dresden Nuclear Station

Period of Record: April - June 2004

Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	2	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	1
SE	0	1	0	0	0	0	1
SSE	0	0	0	1	0	0	1
S	0	0	0	0	1	0	1
SSW	0	0	0	3	1	0	4
SW	0	1	1	3	0	0	5
WSW	0	4	3	1	0	0	8
W	0	1	1	2	0	0	4
WNW	0	0	3	4	0	0	7
NW	0	0	0	0	0	0	0
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	8	9	16	2	0	35

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 2

Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	13	0	0	0	0	16
NNE	3	34	13	0	0	0	50
NE	3	36	16	0	0	0	55
ENE	0	20	5	0	0	0	25
E	2	10	6	0	0	0	18
ESE	1	8	1	0	0	0	10
SE	2	5	7	2	0	0	16
SSE	1	1	4	2	0	0	8
S	1	6	9	0	0	0	16
SSW	1	9	20	1	0	0	31
SW	1	11	22	7	0	0	41
WSW	2	16	9	5	0	0	32
W	0	13	20	2	0	0	35
WNW	2	20	6	0	0	0	28
NW	4	12	5	0	0	0	21
NNW	4	38	1	0	0	0	43
Variable	0	0	0	0	0	0	0
Total	30	252	144	19	0	0	445

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	1	0	0	0	0	2
NNE	2	0	0	0	0	0	2
NE	2	3	2	0	0	0	7
ENE	0	2	1	0	0	0	3
E	0	1	1	0	0	0	2
ESE	1	2	1	0	0	0	4
SE	0	2	4	2	0	0	8
SSE	0	5	2	0	0	0	7
S	2	5	3	0	0	0	10
SSW	0	1	6	0	0	0	7
SW	0	2	3	0	0	0	5
WSW	3	7	2	1	0	0	13
W	0	6	5	0	0	0	11
WNW	1	4	5	0	0	0	10
NW	1	1	0	0	0	0	2
NNW	0	5	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	13	47	35	3	0	0	98

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	0	0	0	0	2
NNE	1	0	0	0	0	0	1
NE	1	2	0	0	0	0	3
ENE	1	3	0	0	0	0	4
E	0	1	1	0	0	0	2
ESE	1	5	1	0	0	0	7
SE	1	4	2	0	0	0	7
SSE	0	4	3	1	0	0	8
S	2	4	7	1	0	0	14
SSW	1	5	1	1	0	0	8
SW	1	3	2	0	0	0	6
WSW	0	2	4	0	0	0	6
W	1	4	5	0	0	0	10
WNW	0	2	0	0	0	0	2
NW	1	5	0	0	0	0	6
NNW	2	2	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	13	48	26	3	0	0	90

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Neutral - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	13	0	0	0	0	16
NNE	2	5	2	0	0	0	9
NE	4	22	4	0	0	0	30
ENE	1	14	1	0	0	0	16
E	5	23	1	0	0	0	29
ESE	5	12	4	0	0	0	21
SE	5	26	13	0	0	0	44
SSE	0	27	14	1	0	0	42
S	6	25	19	7	0	0	57
SSW	7	28	6	6	1	0	48
SW	9	21	9	0	0	0	39
WSW	4	9	10	1	0	0	24
W	2	22	14	0	0	0	38
WNW	8	12	5	0	0	0	25
NW	6	9	0	0	0	0	15
NNW	6	6	0	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	73	274	102	15	1	0	465

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	14	12	0	0	0	0	26
NNE	12	13	0	0	0	0	25
NE	13	36	0	0	0	0	49
ENE	5	13	0	0	0	0	18
E	3	29	0	0	0	0	32
ESE	11	27	3	0	0	0	41
SE	7	12	6	0	0	0	25
SSE	10	21	20	0	0	0	51
S	22	32	22	7	0	0	83
SSW	18	24	6	0	0	0	48
SW	22	13	2	1	0	0	38
WSW	10	12	1	0	0	0	23
W	10	28	5	0	0	0	43
WNW	12	14	2	0	0	0	28
NW	30	16	0	0	0	0	46
NNW	25	12	0	0	0	0	37
Variable	0	0	0	0	0	0	0
Total	224	314	67	8	0	0	613

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	10	4	0	0	0	0	14
NNE	8	2	0	0	0	0	10
NE	2	0	0	0	0	0	2
ENE	0	1	0	0	0	0	1
E	4	2	0	0	0	0	6
ESE	19	34	0	0	0	0	53
SE	16	8	0	0	0	0	24
SSE	17	8	1	0	0	0	26
S	15	11	2	0	0	0	28
SSW	12	3	0	0	0	0	15
SW	20	10	0	0	0	0	30
WSW	10	3	0	0	0	0	13
W	15	1	0	0	0	0	16
WNW	13	2	0	0	0	0	15
NW	13	1	0	0	0	0	14
NNW	21	2	0	0	0	0	23
Variable	0	0	0	0	0	0	0
Total	195	92	3	0	0	0	290

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	1	0	0	0	0	0	1
ENE	1	1	0	0	0	0	2
E	4	0	0	0	0	0	4
ESE	11	11	0	0	0	0	22
SE	8	3	0	0	0	0	11
SSE	2	1	0	0	0	0	3
S	3	0	0	0	0	0	3
SSW	5	0	0	0	0	0	5
SW	12	0	0	0	0	0	12
WSW	10	1	0	0	0	0	11
W	2	0	0	0	0	0	2
WNW	3	0	0	0	0	0	3
NW	10	0	0	0	0	0	10
NNW	6	0	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	79	17	0	0	0	0	96

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0



# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	4	2	0	0	7
NNE	0	2	8	7	13	0	30
NE	0	4	9	2	0	0	15
ENE	0	0	6	0	0	0	6
E	0	1	1	1	0	0	3
ESE	0	1	1	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	2	0	0	0	2
SW	0	0	1	2	0	0	3
WSW	0	1	2	1	1	0	5
W	0	1	1	0	0	0	2
WNW	0	1	1	0	0	0	2
NW	0	2	0	1	0	0	3
NNW	0	0	7	2	0	0	9
Variable	0	0	0	0	0	0	0
Total	0	14	43	18	14	0	89

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	4	3	1	0	0	8
NNE	0	1	6	4	3	2	16
NE	0	4	6	2	0	0	12
ENE	0	3	3	1	0	0	7
E	0	1	3	2	0	0	6
ESE	0	2	0	0	0	0	2
SE	0	2	3	1	1	0	7
SSE	0	1	2	1	0	0	4
S	0	1	2	1	0	0	4
SSW	0	1	8	2	0	0	11
SW	0	3	1	5	0	0	9
WSW	0	4	7	2	1	0	14
W	0	5	2	0	1	0	8
WNW	0	1	2	1	0	0	4
NW	0	0	1	2	0	0	3
NNW	0	1	4	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	34	53	26	6	2	121

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	3	2	0	0	7
NNE	0	3	6	1	2	0	12
NE	0	3	7	1	1	0	12
ENE	0	2	3	1	0	0	6
E	1	0	3	0	0	0	4
ESE	0	3	3	0	0	0	6
SE	0	7	7	1	0	0	15
SSE	0	0	2	3	1	0	6
S	0	1	7	6	0	0	14
SSW	0	2	7	3	1	0	13
SW	0	2	7	4	1	0	14
WSW	0	6	6	1	3	0	16
W	0	2	3	4	3	0	12
WNW	0	5	5	2	0	0	12
NW	0	5	1	1	0	0	7
NNW	0	4	4	3	0	0	11
Variable	0	0	0	0	0	0	0
Total	1	47	74	33	12	0	167

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 2

Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: July - September 2004  
 Stability Class - Neutral - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	6	11	13	3	0	33
NNE	2	7	13	9	7	0	38
NE	0	9	21	11	5	0	46
ENE	1	9	15	1	0	0	26
E	1	9	7	12	0	0	29
ESE	0	15	8	7	0	0	30
SE	2	20	16	14	0	0	52
SSE	1	17	21	14	11	1	65
S	2	23	31	22	5	1	84
SSW	4	18	22	12	4	1	61
SW	4	9	19	10	4	0	46
WSW	3	12	10	11	9	0	45
W	3	6	11	43	1	0	64
WNW	3	13	13	8	3	0	40
NW	0	11	9	3	0	0	23
NNW	1	8	13	5	0	0	27
Variable	0	0	0	0	0	0	0
Total	27	192	240	195	52	3	709

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 1  
 Hours of missing stability measurements in all stability classes: 17

Dresden Nuclear Station

Period of Record: July - September 2004  
 Stability Class - Slightly Stable ~ 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	7	12	11	4	0	35
NNE	0	1	13	32	7	0	53
NE	0	4	13	11	0	0	28
ENE	3	20	18	0	0	0	41
E	1	6	12	22	1	0	42
ESE	1	5	14	5	2	0	27
SE	1	9	12	9	1	0	32
SSE	1	10	9	16	9	1	46
S	0	14	23	33	16	3	89
SSW	2	6	24	25	4	0	61
SW	1	6	18	13	1	0	39
WSW	0	4	15	4	1	0	24
W	1	4	18	29	0	0	52
WNW	2	7	10	13	0	0	32
NW	3	5	21	9	4	0	42
NNW	1	4	7	4	2	0	18
Variable	0	0	0	0	0	0	0
Total	18	112	239	236	52	4	661

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 2  
 Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: July - September 2004

Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	3	9	3	0	15
NNE	0	0	11	19	4	0	34
NE	0	2	2	3	0	0	7
ENE	0	5	1	0	0	0	6
E	1	0	4	1	0	0	6
ESE	1	3	7	11	7	0	29
SE	2	4	10	14	0	0	30
SSE	4	7	22	10	3	0	46
S	1	9	15	21	2	0	48
SSW	0	4	9	19	4	0	36
SW	1	6	7	8	0	0	22
WSW	2	3	6	4	0	0	15
W	7	7	13	2	0	0	29
WNW	3	6	4	3	0	0	16
NW	1	5	14	2	0	0	22
NNW	1	3	3	3	1	0	11
Variable	0	0	0	0	0	0	0
Total	24	64	131	129	24	0	372

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 1

Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: July - September 2004  
 Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	2	4	0	0	0	6
NNE	0	2	0	0	0	0	2
NE	0	2	0	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	1	1	1	2	1	0	6
SSE	0	1	2	4	0	0	7
S	1	4	2	5	0	0	12
SSW	0	1	1	1	1	0	4
SW	2	0	1	1	1	0	5
WSW	0	1	5	0	0	0	6
W	2	0	2	1	0	0	5
WNW	0	0	1	2	0	0	3
NW	1	0	3	0	0	0	4
NNW	0	2	1	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	7	17	23	16	3	0	66

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 17

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Extremely Unstable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	5	2	0	0	0	7
NNE	0	0	0	0	0	0	0
NE	0	2	6	0	0	0	8
ENE	0	5	3	0	0	0	8
E	0	5	8	1	0	0	14
ESE	0	0	3	1	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	2	0	3	0	0	5
SW	0	1	0	1	0	0	2
WSW	1	1	5	3	0	0	10
W	0	1	10	3	0	0	14
WNW	0	4	7	0	0	0	11
NW	0	5	2	5	0	0	12
NNW	0	8	13	4	0	0	25
Variable	0	0	0	0	0	0	0
Total	1	39	59	21	0	0	120

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0



# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Moderately Unstable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	1	0	0	0	2
NNE	0	1	0	0	0	0	1
NE	0	1	1	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	2	2	0	0	0	4
ESE	0	1	1	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	2	0	0	0	2
S	0	1	1	0	0	0	2
SSW	0	1	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	1	5	4	0	0	0	10
W	0	1	4	1	0	0	6
WNW	0	1	2	0	0	0	3
NW	0	0	1	0	0	0	1
NNW	0	1	2	1	0	0	4
Variable	0	0	0	0	0	0	0
Total	1	16	22	2	0	0	41

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004  
 Stability Class - Slightly Unstable - 150Ft-35Ft Delta-T (F)  
 Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	0	0	0	0	0	1
NNE	0	1	0	0	0	0	1
NE	0	3	1	2	0	0	6
ENE	0	1	0	0	0	0	1
E	1	2	2	0	0	0	5
ESE	0	1	3	0	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	2	2	0	0	0	4
S	0	0	3	2	0	0	5
SSW	0	1	1	2	0	0	4
SW	0	0	0	3	0	0	3
WSW	0	3	10	0	0	0	13
W	0	1	3	0	0	0	4
WNW	0	0	1	0	0	0	1
NW	0	4	0	2	0	0	6
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	2	20	27	11	0	0	60

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 0  
 Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Neutral - 150Ft-35Ft Delta-T (F)

Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	5	10	12	2	0	0	29
NNE	11	20	2	4	0	0	37
NE	3	34	6	7	2	0	52
ENE	2	35	18	0	0	0	55
E	7	24	34	1	0	0	66
ESE	1	12	18	1	0	0	32
SE	4	8	7	3	0	0	22
SSE	4	15	36	12	0	0	67
S	3	16	27	16	8	2	72
SSW	0	9	20	19	2	0	50
SW	1	11	16	16	1	0	45
WSW	2	13	9	7	2	3	36
W	2	8	24	32	1	0	67
WNW	3	19	43	13	11	0	89
NW	0	19	21	10	1	0	51
NNW	2	11	30	24	0	0	67
Variable	0	0	0	0	0	0	0
Total	50	264	323	167	28	5	837

Hours of calm in this stability class: 0

Hours of missing wind measurements in this stability class: 0

Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Slightly Stable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	11	19	3	0	0	0	33
NNE	14	16	7	1	0	0	38
NE	4	21	5	1	0	0	31
ENE	5	21	0	0	0	0	26
E	3	28	6	1	0	0	38
ESE	5	31	5	0	0	0	41
SE	3	21	18	2	0	0	44
SSE	3	27	16	5	0	0	51
S	6	39	31	17	5	0	98
SSW	7	21	25	2	7	1	63
SW	1	24	19	6	2	0	52
WSW	3	4	5	3	0	0	15
W	11	16	31	2	0	0	60
WNW	3	20	25	1	0	0	49
NW	8	19	6	1	0	0	34
NNW	12	27	6	1	0	0	46
Variable	0	0	0	0	0	0	0
Total	99	354	208	43	14	1	719

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Moderately Stable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	4	0	0	0	0	7
NNE	7	4	0	0	0	0	11
NE	3	2	0	0	0	0	5
ENE	1	0	0	0	0	0	1
E	1	1	0	0	0	0	2
ESE	1	12	0	0	0	0	13
SE	5	1	0	0	0	0	6
SSE	8	7	0	0	0	0	15
S	4	1	0	0	0	0	5
SSW	8	7	3	0	0	0	18
SW	6	24	7	0	0	0	37
WSW	1	10	1	0	0	0	12
W	2	2	0	0	0	0	4
WNW	1	4	0	0	0	0	5
NW	6	1	0	0	0	0	7
NNW	9	13	0	0	0	0	22
Variable	0	0	0	0	0	0	0
Total	66	93	11	0	0	0	170

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Extremely Stable - 150Ft-35Ft Delta-T (F)  
Winds Measured at 35 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	3	0	0	0	0	0	3
NNE	2	0	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	1	0	0	0	0	0	1
E	5	0	0	0	0	0	5
ESE	8	9	0	0	0	0	17
SE	3	1	0	0	0	0	4
SSE	0	0	0	0	0	0	0
S	1	2	0	0	0	0	3
SSW	11	2	0	0	0	0	13
SW	2	7	0	0	0	0	9
WSW	5	0	0	0	0	0	5
W	2	0	0	0	0	0	2
WNW	0	0	0	0	0	0	0
NW	5	0	0	0	0	0	5
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	51	21	0	0	0	0	72

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 0

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Extremely Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	2	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	0	1	1	0	0	2
ENE	0	0	2	0	0	0	2
E	0	0	4	3	0	0	7
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	3	0	1	0	4
NNW	0	0	1	2	1	0	4
Variable	0	0	0	0	0	0	0
Total	0	0	11	8	2	0	21

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 11

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Moderately Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	1	1	0	0	3
NNE	0	0	1	0	0	0	1
NE	0	0	1	3	1	0	5
ENE	0	0	4	0	0	0	4
E	0	0	5	1	0	0	6
ESE	0	0	1	1	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	1	0	0	1
S	0	0	0	0	0	0	0
SSW	0	0	0	1	2	1	4
SW	0	2	0	0	0	0	2
WSW	0	1	3	2	2	0	8
W	0	0	6	1	1	0	8
WNW	0	1	6	0	0	0	7
NW	0	0	1	0	3	0	4
NNW	0	0	5	3	2	1	11
Variable	0	0	0	0	0	0	0
Total	0	5	34	14	11	2	66

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 11



# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Slightly Unstable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	2	0	1	0	3
NNE	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	2
ENE	0	0	2	0	0	0	2
E	0	1	6	3	0	0	10
ESE	0	0	3	1	0	0	4
SE	0	0	1	0	0	0	1
SSE	0	0	1	2	0	0	3
S	0	2	0	3	1	2	8
SSW	0	0	2	1	3	0	6
SW	0	1	0	0	1	0	2
WSW	1	1	3	1	4	0	10
W	0	1	8	2	2	0	13
WNW	0	2	6	2	0	0	10
NW	0	0	1	1	0	1	3
NNW	0	0	6	1	1	1	9
Variable	0	0	0	0	0	0	0
Total	1	9	42	17	13	4	86

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 11

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Neutral - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	1	7	12	16	6	2	44
NNE	0	9	35	7	5	6	62
NE	0	8	30	12	7	3	60
ENE	0	31	33	21	1	0	86
E	1	8	31	26	11	1	78
ESE	1	4	11	10	1	0	27
SE	2	5	8	16	6	0	37
SSE	3	9	19	35	11	3	80
S	1	8	21	33	10	23	96
SSW	0	3	11	37	23	1	75
SW	0	5	22	16	24	3	70
WSW	0	12	21	11	6	10	60
W	1	2	13	31	33	14	94
WNW	0	2	16	42	17	17	94
NW	1	4	16	31	9	12	73
NNW	0	6	19	25	35	12	97
Variable	0	0	0	0	0	0	0
Total	11	123	318	369	205	107	1133

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 18  
Hours of missing stability measurements in all stability classes: 11

# Dresden Nuclear Station

Period of Record: October - December 2004  
 Stability Class - Slightly Stable - 300Ft-35Ft Delta-T (F)  
 Winds Measured at 300 Feet

Wind Direction -----	Wind Speed (in mph)						Total -----
	1-3 -----	4-7 -----	8-12 -----	13-18 -----	19-24 -----	> 24 -----	
N	1	7	9	11	3	0	31
NNE	0	4	4	20	3	0	31
NE	4	4	8	8	0	0	24
ENE	1	4	15	0	0	0	20
E	2	2	8	17	0	0	29
ESE	0	1	3	22	0	0	26
SE	3	3	4	20	0	0	30
SSE	1	8	13	21	9	0	52
S	1	7	11	15	8	11	53
SSW	0	3	17	34	10	10	74
SW	0	3	8	25	15	5	56
WSW	0	4	11	17	4	1	37
W	0	0	10	28	6	0	44
WNW	0	3	4	13	13	0	33
NW	0	4	7	15	4	1	31
NNW	1	5	11	16	4	0	37
Variable	0	0	0	0	0	0	0
Total	14	62	143	282	79	28	608

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 32  
 Hours of missing stability measurements in all stability classes: 11

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Moderately Stable - 300Ft-35Ft Delta-T (F)

Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	1	10	8	2	0	21
NNE	0	0	3	11	1	0	15
NE	0	1	1	6	0	0	8
ENE	3	0	4	0	0	0	7
E	0	3	1	0	0	0	4
ESE	1	0	0	2	3	0	6
SE	0	2	3	5	0	0	10
SSE	0	5	5	5	0	0	15
S	0	5	6	14	1	0	26
SSW	0	1	3	3	3	0	10
SW	0	1	1	8	7	0	17
WSW	0	0	3	6	3	0	12
W	0	0	4	5	0	0	9
WNW	0	1	3	2	0	0	6
NW	0	0	2	2	1	0	5
NNW	0	2	7	2	1	0	12
Variable	0	0	0	0	0	0	0
Total	4	22	56	79	22	0	183

Hours of calm in this stability class: 0  
 Hours of missing wind measurements in this stability class: 1  
 Hours of missing stability measurements in all stability classes: 11

# Dresden Nuclear Station

Period of Record: October - December 2004

Stability Class - Extremely Stable - 300Ft-35Ft Delta-T (F)  
Winds Measured at 300 Feet

Wind Direction	Wind Speed (in mph)						Total
	1-3	4-7	8-12	13-18	19-24	> 24	
N	0	0	0	2	0	0	2
NNE	2	3	1	0	0	0	6
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	1	2	0	0	3
ESE	0	0	1	0	0	0	1
SE	0	2	3	1	0	0	6
SSE	0	0	0	1	0	0	1
S	0	0	1	9	0	0	10
SSW	0	0	3	3	2	0	8
SW	0	0	0	2	1	0	3
WSW	0	0	5	0	0	0	5
W	0	0	2	1	0	0	3
WNW	0	0	1	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	2	5	18	21	3	0	49

Hours of calm in this stability class: 0  
Hours of missing wind measurements in this stability class: 0  
Hours of missing stability measurements in all stability classes: 11