BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)

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RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
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GENERAL OVERVIEW/DISCUSSION

General Overview/Discussion

This report quantifies the radioactive gaseous, liquid, solid radwaste releases, and summarizes the local meteorological data for the period from January 01, 2013 through December 31, 2013. This report has been prepared utilizing the methodology and parameters specified in the calculation of offsite doses resulting from radioactive gaseous and liquid effluents found in Braidwood's Offsite Dose Calculation Manual (ODCM). It has been formatted consistent with Exelon Procedure CY-AA-170-2000 and exceeds the requirements specified in Regulatory Guide 1.21 revision 1, "MEASURING, EVALUATING, AND REPORTING RADIOACTIVITY IN SOLID WASTES AND RELEASES OF RADIOACTIVE MATERIALS IN LIQUID AND GASEOUS EFFLUENTS FROM LIGHT-WATER-COOLED NUCLEAR POWER PLANTS."

The quantity of radioactive material released from Braidwood Nuclear Power Plant was determined from in-house and vendor laboratory analysis of continuous on-line sampling media and batch sample media from all ODCM specified effluent pathways. These pathways include the Unit 1 and 2 Station Vent Stacks, Exelon Pond remediation, Turbine Building Remediation, Vacuum Breaker number one remediation, Condensate Polisher Sump, Waste Water Treatment facility, and Circulating Water Blowdown.

The volume and quantity of radioactive waste shipped offsite from Braidwood Nuclear Power Plant for processing and disposal were determined from data maintained in the radwaste shipping database. Radwaste processed for shipment was in accordance with Exelon procedure RW-AA-100, "PROCESS CONTROL PROGRAM FOR RADIOACTIVE WASTES" and consistent with the UFSAR.

Meteorological data was obtained from the 320 foot meteorological tower located on the Braidwood Station premises.

Gaseous Effluents

Gaseous radioactive releases for the 2013 timeframe are captured in the tables titled, "Summation of All Releases" for Unit 1 and 2, respectively. Radioactive noble gases released for the timeframe totaled 1.25E+00 Curies. Releases of radioiodines and particulates with a half-life greater than eight days totaled 1.07E-03 Curies. Gaseous tritium releases totaled 4.04E+02 Curies. Gaseous C-14 was calculated to total 8.48E+00 Curies. No gross alpha was detected in gaseous effluents.

Noble gases released in gaseous effluents resulted in a maximum total body dose of 2.31E-05 mrad, with a corresponding skin dose of 1.14E-04 mrad. The release of radioactive particulates, C-14, tritium, and radioiodines in gaseous effluents during the reporting period resulted in a total body dose to the maximally exposed hypothetical individual of 5.47E-01 mrem. The maximum hypothetical dose to any organ from radioactive particulates, C-14, tritium, and radioiodines was 2.27E+00 mrem.

Liquid Effluents

Liquid radioactive releases for the 2013 timeframe are captured in the table titled, "Liquid Effluents Supplemental Release Information" and in Appendix C, "Unit Specific Annual Effluent Summaries." One hundred forty-eight liquid batch releases occurred during the reporting period. Additionally, radioactive liquid effluents were continually being released through Circulating Water Blowdown. These discharges contained 4.08E+03 Curies of tritium and 1.60E-01 Curies of fission and activation products. The resultant maximum total body dose was 5.92E-02 mrem, with a corresponding organ dose of 1.61E-01 mrem.

40 CFR190 Compliance

The Braidwood ODCM defines the total dose for the uranium fuel cycle as the sum of doses due to radioactivity in airborne and liquid effluents and the doses due to direct radiation from contained sources at the nuclear power station. The total dose, D^{Tot}, in the unrestricted area to a member of the public due to plant operations is given by: $\mathbf{D^{Tot} = D^{Ex} + D_{aj}^{Liq} + D_{aj}^{NNG}}$

Where:

$\mathbf{D^{Tot}}$ Total Dose to Member of Public [mrem]

Total off-site dose to a member of public due to plant operations.

$\mathbf{D^{Ex}}$ Total External Total Body Dose [mrem]

Total body dose due to external exposure to noble gases, N-16 skyshine and on-site storage facilities.

$\mathbf{D_{aj}^{Liq}}$ Liquid Effluent Dose [mrem]

Dose due to liquid effluents to age group **a** and organ **j**. The age group and organ with the highest dose from liquid effluents is used.

$\mathbf{D_{aj}^{NNG}}$ Non-Noble Gaseous Effluent Dose [mrem]

Dose due to non-noble gaseous effluents to age group **a** and organ **j**. The age group and organ with the highest dose from non-noble gas effluents is used.

Exposures measured on the Independent Spent Fuel Storage Installation (ISFSI) and Onsite Steam Generator Storage Facility (OSGSF) dosimeters are statistically indiscernible from natural background. N-16 skyshine is not applicable to Pressurized Water Reactors. The resultant 40CFR190 dose calculated for a member of the public is 2.43E+00 mrem.

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Meteorological Data

The Braidwood Station meteorological monitoring program produced 52,475 hours of valid data out of a possible 52,560 parameter hours during 2013 (366 days x 24 hours/day x 6 measured priority parameters), which represents an overall data recovery rate of 99.8%. Priority parameters are all parameters except dew point temperature and precipitation. For the year, winds measured at 34 ft. most frequently came from the West-Northwest (8.84%) and fell into the 3.6 - 7.5 mph wind speed class (42.11%). Calms (wind speeds at or below the sensor threshold) were measured 0.05% of the time and speeds greater than 24.5 mph were measured 0.02% of the time. Stability based on the 199 - 30 ft. differential temperature most frequently fell into the neutral classification (39.43%).

The following are the maximum annual calculated cumulative offsite doses resulting from Braidwood airborne releases in 2013 based on concurrent meteorological data:

Unit 1:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	1.490 $x10^{-5}$ mrad	North
beta air [2]	2.380 $x10^{-5}$ mrad	North
whole body [3]	2.018 $x10^{-1}$ mrem	North
skin [4]	2.220 x 10^{-5} mrem	North
organ [5] (child-bone)	8.903 $x10^{-1}$ mrem	North

Unit 1 Compliance Status

10 CFR 50 Appendix I	**Yearly Objective**	**% of Appendix I**
gamma air	10.0 mrad	0.00E+00
beta air	20.0 mrad	0.00E+00
whole body	5.0 mrem	4.04E+00
skin	15.0 mrem	0.00E+00
organ	15.0 mrem	5.94E+00

Unit 2:

Dose	*Maximum Value*	*Sector Affected*
gamma air [1]	1.490 $x10^{-5}$ mrad	North
beta air [2]	2.380 $x10^{-5}$ mrad	North
whole body [3]	2.294 $x10^{-1}$ mrem	North
skin [4]	2.220 $x10^{-5}$ mrem	North
organ [5] (child-bone)	9.169 $x10^{-1}$ mrem	North

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Unit 2 Compliance Status

10 CFR 50 Appendix I	Yearly Objective	% of Appendix I
gamma air	10.0 mrad	0.00E+00
beta air	20.0 mrad	0.00E+00
whole body	5.0 mrem	4.59E+00
skin	15.0 mrem	0.00E+00
organ	15.0 mrem	6.11E+00

(1) Gamma Air Dose - GASPAR II, NUREG-0597
(2) Beta Air Dose - GASPAR II, NUREG-0597
(3) Whole Body Dose - GASPAR II, NUREG-0597
(4) Skin Dose - GASPAR II, NUREG-0597
(5) Inhalation and Food Pathways Dose - GASPAR II, NUREG-0597

Offsite Ambient Radiation Measurements

It is estimated that the average radiation dose received by an individual in the United States is about 360 mrem/yr and that nuclear power stations account for less than two parts in a thousand of this radiation. These figures are based on data in Table 8.1 of NCRP 93. The table includes the following data:

Source	Average Individual Dose (mrem/yr)
Natural sources (average in U.S.)	300
Medical (whole-body equivalent)	53
Nuclear fuel cycle	0.05
Other	~7
Total	About 360

The radiological effects of nuclear power station operation on the environment are characterized as "usually so small that they are masked by normal fluctuations in natural background sources and by the normal uncertainties of the measurement process." Review of the Braidwood Optically Stimulated Luminescent Dosimetry (OSLD) data yielded no measurable increase above the normal fluctuation in natural background levels.

Radioactive Solid Waste Disposal

Radioactive wastes shipped offsite are captured in the table titled, "Solid Wastes Shipped Offsite for Burial or Disposal (Not irradiated fuel)." Approximately 1.54E+03 cubic meters of solid waste were shipped offsite containing approximately 7.43E+02 Curies during the 2013 reporting period.

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Facility: BRAIDWOOD NUCLEAR POWER STATION

Licensee: EXELON GENERATION COMPANY, LLC

1. Regulatory Limits

a. For Fission and Activation Gases:

Dose Rate

1) Less than 500 mrem/year to the whole body (instantaneous limit, per site).
2) Less than 3,000 mrem/year to the skin (instantaneous limit, per site).

Dose Gamma Radiation

1) Less than or equal to 5 mrad/quarter (per unit).
2) Less than or equal to 10 mrad/year (per unit).

Dose Beta Radiation

1) Less than or equal to 10 mrad/quarter (per unit).
2) Less than or equal to 20 mrad/year (per unit).

b. Iodine: (summed with particulate, see below)

c. Particulates with half-lives > 8 days:

Dose Rate

1) Less than 1,500 mrem/year to any organ (instantaneous limit, per site).

Dose

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

d. Liquid Effluents

Dose

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

2. Effluent Concentration Limits

a. Fission and Activation Gases: 10CFR20 Appendix B Table 2
b. Iodine: 10CFR20 Appendix B Table 2
c. Particulates: 10CFR20 Appendix B Table 2
d. Liquid Effluents: 10 X 10CFR20 Appendix B Table 2

3. Average Energy

The ODCM limits the dose equivalent rates due to the release of noble gases to less than or equal to 500 mrem/yr to the total body, and less than or equal to 3,000 mrem/yr to the skin. Therefore, the average beta and gamma energies ($\bar{E}$) for gaseous effluents as described in Regulatory Guide 1.21 are not applicable.

4. Measurements and Approximations of Total Radioactivity

a. Fission and activation gases:

Before being discharged, containment batch releases are analyzed for noble gas and tritium via gamma spectroscopy and liquid scintillation, respectively. Gaseous decay tanks are analyzed for noble gases before being discharged via gamma spectroscopy. Released activity is normally calculated using volume of release, which is determined by change in tank or containment pressure.

The Auxiliary Building ventilation exhaust system is continually monitored for radioiodines and particulates. These samples are pulled every seven days and analyzed via gamma spectroscopy.

Noble gas samples are pulled and analyzed weekly by gamma spectroscopy. The average flow at the release points and nuclide specific activity concentrations are used to calculate the activity released.

Volumes and activities of effluents discharged from systems that are common to both units are divided between both units.

The secondary side of both units contain tritium. Very small amounts of tritium are continually released to the atmosphere from secondary components through packing leaks, tank vents, the main condenser, etc. Bounding calculations have been performed to show that very large leaks (1000 gpd) for extended periods (1 month) at normal secondary tritium concentrations, would provide an insignificant increase (1.00E-5 mrem) in offsite dose.

b. Iodines:

Radioiodines in the Auxiliary Building ventilation exhaust system are continually being collected via activated charcoal cartridges in the diverted sample process flow . The iodine cartridges are pulled weekly and analyzed via gamma spectroscopy. Radioiodine concentrations greater than the LLD are multiplied by the volume of air discharged during the sampling timeframe.

Radioiodines are analyzed in liquid effluent streams through performance of batch release tank grab samples and weekly liquid effluent composite samples. The analyses are performed via gamma spectroscopy.

Volumes and activities of effluents discharged from systems that are common to both units are divided between both units. Effluents that are unit specific are assigned to the appropriate unit.

c. Particulates, half-lives > 8 days:

Particulates in the Auxiliary Building ventilation exhaust system are continually being collected via filter media in the diverted sample process flow. Particulate filter media are pulled weekly and analyzed via gamma spectroscopy. Particulate concentrations greater than LLD are multiplied by the volume of air discharged during the sampling timeframe. A composite sample is created from 3 month's particulate sample media for Sr-89/90, Fe-55, and gross alpha analysis by an offsite vendor. The vendor supplied data are utilized in conjunction with the volume of air released through the Auxiliary Building ventilation to quantify Sr-89/90, Fe-55, and gross alpha releases.

Volumes and activities of effluents discharged from systems that are common to both units are divided between both units. Effluents that are unit specific are assigned to the appropriate unit.

d. Liquid effluents:

Liquid effluents are categorized as either batch release or continuous release. All liquid releases are analyzed for principal gamma emitters, radioiodines, dissolved and entrained gases, gross alpha, and tritium onsite via gamma spectroscopy, gas flow proportional counting, or liquid scintillation, as appropriate. An offsite laboratory analyzes liquid composites for Sr-89/90 and Fe-55. Vendor results are applied to the applicable volume of liquids discharged during the timeframe. Volumes and activities of effluents discharged from systems or locations are divided between both units.

e. Gross alpha

Gross alpha is analyzed in both the gaseous and liquid effluent pathways. Weekly gaseous particulate media is composited for offsite vendor analysis. Gross alpha activity greater than vendor LLD values are assigned to the applicable timeframe and gaseous volume released. Liquid effluent gross alpha analysis is performed through compositing monthly discharges and gas flow proportional counting.

f. Carbon-14

Carbon-14 is assessed for continuous gaseous effluents through the use of Electric Power Research Institute's (EPRI) industry accepted production mechanism and production rate study 1021106. C-14 production is a function of each unit's full power operation and gaseous volume released. C-14 is not evaluated through laboratory sample analysis.

g. Estimated Total Error Present

Estimated total error is calculated periodically and communicated as part of the Effluent and Waste Disposal Summaries.

h. Less than the lower limit of detection (<LLD)

Samples are analyzed such that the Offsite Dose Calculation Manual (ODCM) LLD requirements are met. When a nuclide is not detected during the quarter then <LLD is reported.

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5. Batch Releases

GASEOUS EFFLUENTS
SUPPLEMENTAL RELEASE INFORMATION

UNIT COMMON

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr.	**Total**
1. Total Number of Batch Releases	3.00E+00	1.00E+01	1.6E+01	2.00E+00	**3.10E+01**
2. Total Time Period for Batch Releases (minutes)	1.01E+03	1.19E+03	1.79E+03	2.93E+02	**4.28E+03**
3. Maximum Time Period for a Batch Release (minutes)	4.87E+02	1.85E+02	5.49E+02	1.59E+02	**5.49E+02**
4. Average Time Period for a Batch Release (minutes)	3.36E+02	1.19E+02	1.12E+02	1.47E+02	**1.79E+02**
5. Minimum Time Period for a Batch Release (minutes)	6.50E+01	9.00E+01	4.40E+01	1.34E+02	**4.40E+01**

UNIT ONE

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr.	**Total**
1. Total Number of Batch Releases	3.20E+01	2.90E+01	3.30E+01	1.8E+01	**1.12E+02**
2. Total Time Period for Batch Releases (minutes)	2.14E+03	2.46E+03	1.62E+04	2.17E+03	**2.30E+04**
3. Maximum Time Period for a Batch Release (minutes)	8.11E+02	7.87E+02	4.54E+03	1.48E+03	**4.54E+03**
4. Average Time Period for a Batch Release (minutes)	6.70E+01	8.50E+01	4.91E+02	1.20E+02	**1.91E+02**
5. Minimum Time Period for a Batch Release (minutes)	2.10E+01	1.60E+01	1.40E+01	2.90E+01	**1.40E+01**

UNIT TWO

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr.	**Total**
1. Total Number of Batch Releases	2.50E+01	2.40E+01	2.60E+01	2.00E+01	**9.50E+01**
2. Total Time Period for Batch Releases (minutes)	4.14E+3	6.98E+03	1.34E+04	2.39E+03	**2.69E+04**
3. Maximum Time Period for a Batch Release (minutes)	1.04E+03	1.82E+03	1.02E+4	7.06E+02	**1.02E+04**
4. Average Time Period for a Batch Release (minutes)	1.66E+02	2.91E+02	5.15E+02	1.20E+02	**2.73E+02**
5. Minimum Time Period for a Batch Release (minutes)	1.20E+01	2.40E+01	1.80E+01	2.00E+01	**1.20E+01**

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5. Batch Releases

LIQUID EFFLUENTS
SUPPLEMENTAL RELEASE INFORMATION

UNIT COMMON

A. Batch Release	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr.	**Total**
1. Total Number of Batch Releases	1.20E+01	1.90E+01	8.40E+01	3.30E+01	**1.48E+02**
2. Total Time Period for Batch Releases (minutes)	4.58E+04	6.94E+04	2.16E+04	3.32E+04	**1.70E+05**
3. Maximum Time Period for a Batch Release (minutes)	7.52E+03	8.89E+03	2.57E+03	5.15E+03	**8.89E+03**
4. Average Time Period for a Batch Release (minutes)	3.82E+03	3.65E+03	2.56E+02	1.01E+03	**2.18E+03**
5. Minimum Time Period for a Batch Release (minutes)	9.76E+02	1.47E+03	1.60E+02	1.57E+02	**1.57E+02**
6. Average Stream Flow *During Periods of Release* of Effluent into a Flowing Stream (liters/min)	7.93E+06	1.67E+07	2.95E+06	3.69E+06	**7.82E+06**

6. Abnormal Releases

a. Liquid
   Number of abnormal releases 0
   Total Activity (Ci) released 0

b. Gaseous
   Number of abnormal releases 1
   Total Activity (Ci) released 1.48E-02

The gaseous abnormal release is discussed in greater detail in Appendix B.

7. ODCM Revisions

The ODCM was revised in 2013 in order to adopt Reg Guide 1.23 revision 1. The change was made in order to adopt Reg Guide 1.23 revision 1 MET tower instrument calibration accuracies as they better reflect current regulatory requirements and best practices. Adoption of Reg Guide 1.23 revision 1 has no impact on the control of effluents or their quantification. Reducing the calibration accuracy of the MET tower's dew point instruments from ± 0.5 degrees Celsius to ± 1.5 degrees Celsius will not impact offsite dose to the public as dew point is not a variable in offsite dose calculations. The atmospheric moisture measurements were required to assess the physical and aesthetic impacts of increased water vapors during initial plant citing. The adoption of Reg Guide 1.23 revision 1 requires wind speed system accuracy to be ± 0.45 mph or 5% of observed wind speed. The wind speed accuracy change is reflective of wind speed system limitations and is an enhancement to the established criteria as it is difficult to calibrate the wind speed instruments to ± 0.5 mph at very high wind speeds. Revision 8 of the ODCM is being submitted concurrently with this Annual Radioactive Effluent Release Report on a CD as a searchable .PDF due to the size of the document.

BRAIDWOOD NUCLEAR POWER STATION
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GAS RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and Activation Gas Releases						
1. Total Release Activity	Ci	6.82E-04	1.98E-01	3.65E-01	6.38E-02	7.59E+00
2. Average Release Rate	µCi/sec	8.77E-05	2.52E-02	4.59E-02	8.03E-03	
3. Percent of ODCM Limit - gamma	%	1.09E-07	3.30E-05	1.23E-04	7.56E-05	
4. Percent of ODCM Limit - beta	%	2.64E-07	7.79E-05	1.75E-04	4.72E-05	
B. Iodine Releases						
1. Total Iodine	Ci	2.43E-07	5.36E-07	5.38E-04	2.62E-07	3.32E+01
2. Average Release Rate	µCi/sec	3.13E-08	6.82E-08	6.77E-05	3.30E-08	
3. Percent of ODCM Limit	%	1.74E-06	2.87E-06	3.18E-04	1.12E-06	
C. Particulate (> 8 day half-life) Releases						
1. Particulates with half-lives > 8 days	Ci	<LLD	<LLD	<LLD	<LLD	1.98E+01
2. Average Release Rate	µCi/sec	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM Limit	%	N/A	N/A	N/A	N/A	
4. Gross Alpha Radioactivity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	5.60E+01	3.08E+01	4.81E+01	4.72E+00	8.07E+00
2. Average Release Rate	µCi/sec	7.20E+00	3.92E+00	6.05E+00	5.94E-01	
3. Percent of ODCM Limit	%	1.59E-01	8.75E-02	1.38E-01	1.34E-02	
E. *Gross Alpha Releases*						
1. Total Release Activity	Ci	<LLD	<LLD	<LLD	<LLD	1.98E+01
2. Average Release Rate	µCi/sec	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM limit	%	N/A	N/A	N/A	N/A	
F. Carbon-14 Releases						
1. Total Release Activity	Ci	1.10E+00	1.11E+00	8.64E-01	1.11E+00	
2. Average Release Rate	µCi/sec	1.41E-01	1.41E-01	1.09E-01	1.40E-01	

Note: LLD Values are included in Appendix A of this report.

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GAS RELEASES
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CONTINUOUS MODE AND BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1. Fission Gases									
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.61E-03	1.19E-02
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.19E-03	1.76E-03
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.32E-05	<LLD
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	6.82E-04	1.94E-01	3.00E-01	2.67E-02
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	1.98E-03	4.19E-03	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	2.07E-03	5.21E-02	2.34E-02
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	<LLD	<LLD	<LLD	6.82E-04	1.98E-01	3.65E-01	6.38E-02
2. Iodines									
I-131	Ci	<LLD	<LLD	1.40E-05	<LLD	7.99E-08	1.30E-07	6.89E-07	5.00E-08
I-132	Ci	<LLD	<LLD	5.01E-04	<LLD	<LLD	2.33E-08	1.61E-05	<LLD
I-133	Ci	<LLD	<LLD	6.50E-06	<LLD	1.63E-07	3.77E-07	4.96E-07	1.93E-07
I-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	5.47E-09	7.94E-09	1.87E-08
Total for Period	Ci	<LLD	<LLD	5.21E-04	<LLD	2.43E-07	5.36E-07	1.73E-05	2.62E-07
3. Particulates									
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Tc-99m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
GAS RELEASES
UNIT 1 (Docket Number 50-456)
CONTINUOUS MODE AND BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Sn-117m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Nd-147	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
4. Tritium	Ci	5.52E+01	2.96E+01	4.73E+01	4.40E+00	8.13E-01	1.18E+00	8.43E-01	3.14E-01
5. Gross Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
6. Carbon-14	Ci	1.10E+00	1.11E+00	8.64E-01	1.11E+00	N/A	N/A	N/A	N/A

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
GAS RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error%
A. Fission and Activation Gas Releases						
1. Total Activity Released	Ci	6.82E-04	1.98E-01	3.65E-01	6.38E-02	7.59E+00
2. Average Release Rate	µCi/sec	8.77E-05	2.52E-02	4.59E-02	8.03E-03	
3. Percent of ODCM Limit - gamma	%	1.09E-07	3.30E-05	1.23E-04	7.56E-05	
4. Percent of ODCM Limit - beta	%	2.64E-07	7.79E-05	1.75E-04	4.72E-05	
B. *Iodine* Releases						
1. Total Iodine	Ci	<LLD	9.08E-07	3.58E-04	<LLD	3.32E+01
2. Average Release Rate	µCi/sec	<LLD	1.16E-07	4.50E-05	<LLD	
3. Percent of ODCM Limit	%	N/A	2.15E-06	1.39E-04	N/A	
C. Particulate (> 8 day half-life) Releases						
1. Particulates with half-lives > 8 days	Ci	<LLD	1.95E-05	1.42E-04	1.06E-05	1.98E+01
2. Average Release Rate	µCi/sec	<LLD	2.48E-06	1.77E-05	1.33E-06	
3. Percent of OCDM Limit	%	N/A	2.32E-06	1.96E-02	5.01E-07	
4. Gross Alpha Radioactivity	Ci	<LLD	<LLD	<LLD	<LLD	
D. Tritium Releases						
1. Total Release Activity	Ci	8.31E+01	8.18E+01	6.83E+01	3.14E+01	8.07E+00
2. Average Release Rate	µCi/sec	1.07E+01	1.04E+01	8.59E+00	3.95E+00	
3. Percent of ODCM Limit	%	2.37E-01	2.32E-01	1.94E-01	8.92E-02	
E. Gross Alpha Releases						
1. Total Release Activity	Ci	<LLD	<LLD	<LLD	<LLD	1.98E+01
2. Average Release Rate	µCi/sec	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM Limit	%	N/A	N/A	N/A	N/A	
F. Carbon-14 Releases						
1. Total Release Activity	Ci	1.10E+00	1.05E+00	1.03E+00	1.12E+00	
2. Average Release Rate	µCi/sec	1.41E-01	1.34E-01	1.30E-01	1.41E-01	

Note: LLD Values are included in Appendix A of this report.

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
GAS RELEASES
UNIT 2 (Docket Number 50-457)
CONTINUOUS MODE AND BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1. Fission Gases									
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLDF	6.61E-03	1.19E-02
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.19E-03	1.76E-03
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.32E-05	<LLD
Xe-131m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	6.82E-04	1.94E-01	3.00E-01	2.67E-02
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	1.98E-03	4.19E-03	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	2.07E-03	5.21E-02	2.34E-02
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	<LLD	<LLD	<LLD	6.82E-04	1.98E-01	3.65E-01	6.38E-02
2. Iodines									
I-131	Ci	<LLD	6.85E-08	6.30E-06	<LLD	<LLD	3.32E-08	9.66E-08	<LLD
I-132	Ci	<LLD	<LLD	3.51E-04	<LLD	<LLD	8.06E-07	3.39E-07	<LLD
I-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	3.74E-08	<LLD
I-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	6.85E-08	3.57E-04	<LLD	<LLD	8.39E-07	4.73E-07	<LLD
3. Particulates									
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	1.15E-04	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Tc-99m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
GAS RELEASES
UNIT 2 (Docket Number 50-457)
CONTINUOUS MODE AND BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Sn-117m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
La-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-141	Ci	<LLD	1.95E-05	2.63E-05	4.22E-06	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Nd-147	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	1.95E-05	1.42E-04	4.22E-06	<LLD	<LLD	<LLD	<LLD
4. Tritium	Ci	8.20E+01	8.10E+01	6.82E+01	3.12E+01	1.06E+00	8.11E-01	1.31E-01	1.80E-01
5. Gross Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
6. Carbon-14	Ci	1.10E+00	1.05E+00	1.03E+00	1.12E+00	N/A	N/A	N/A	N/A

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 1 (Docket Number 50-456)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and Activation Products						
1. Total Release (not including Tritium, Dissolved Noble Gases, or Alpha)	Ci	2.56E-04	1.67E-03	6.07E-02	1.72E-02	2.64E+00
2. Average Diluted Concentration	µCi/ml	4.74E-11	3.52E-10	1.32E-08	4.13E-09	
3. Percent of applicable limit	%	*	*	*	*	
B. Tritium						
1. Total Release	Ci	1.88E+02	3.29E+02	1.23E+03	2.91E+02	5.85E+00
2. Average Diluted Concentration	µCi/ml	3.49E-05	6.94E-05	2.67E-04	6.99E-05	
3. % of Limit (1E-2 µCi/ml)	%	3.49E-01	6.94E-01	2.67E+00	6.99E-01	
C. Dissolved Noble Gases						
1. Total Release	Ci	0.00E+00	0.00E+00	1.42E-05	0.00E+00	2.64E+00
2. Average Diluted Concentration	µCi/ml	0.00E+00	0.00E+00	3.08E-12	0.00E+00	
3. % of Limit (2E-4 µCi/ml)	%	0.00E+00	0.00E+00	1.54E-06	0.00E+00	
D. Gross Alpha						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+01
E. Volume of Waste Released (prior to dilution)	liters	4.86E+05	8.78E+05	1.61E+06	7.50E+05	
F. Volume of Dilution Water	liters	1.08E+10	9.46E+09	9.22E+09	8.33E+09	

Note: LLD Values are included in Appendix A of this report.

*This limit is equal to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10CFR20.1001-20.2402.

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 1 (Docket Numbers 50-456)
CONTINUOUS MODE & BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.46E-03	2.96E-03
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.70E-04	2.78E-04
Fe-55	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.51E-03	2.90E-03
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.30E-05	1.32E-05
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	6.93E-05	1.09E-04	5.67E-03	4.34E-03
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.07E-04	3.04E-04
Co-60	Ci	<LLD	<LLD	<LLD	<LLD	1.72E-04	2.61E-04	1.33E-02	3.53E-03
Ni-63	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	1.00E-03	2.84E-06	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.23E-05	<LLD
Nb-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.07E-03	4.19E-04
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.67E-04	2.23E-04
Nb-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.26E-04	1.13E-03
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.26E-04	6.75E-05
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.70E-04	7.66E-05
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	1.19E-05	2.52E-04	2.57E-02	9.38E-04
I-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-123m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.30E-06	8.15E-06
H-3	Ci	2.38E+01	1.90E+01	8.52E+01	5.56E+01	1.64E+02	3.10E+02	1.15E+03	2.36E+02
La-140	Ci	<LLD	<LLD	<LLD	<LLD	2.74E-06	<LLD	<LLD	<LLD
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	4.66E-04	<LLD
Ba-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.65E-06
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.42E-05	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-91	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-125m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	4.22E-05	<LLD	<LLD
Ru-103	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	4.89E-06	<LLD
Sb-122	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.75E-07	<LLD

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 1 (Docket Numbers 50-456)
CONTINUOUS MODE & BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
W-187	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-129m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	2.38E+01	1.90E+01	8.52E+01	5.56E+01	1.64E+02	3.10E+02	1.15E+03	2.36E+02

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 2 (Docket Number 50-457)
SUMMATION OF ALL RELEASES

	Units	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Est. Total Error %
A. Fission and Activation Products						
1. Total Release (not including Tritium, Dissolved Noble Gases, or Alpha)	Ci	2.56E-04	1.67E-03	6.07E-02	1.72E-02	2.64E+00
2. Average Diluted Concentration	µCi/ml	4.74E-11	3.52E-10	1.32E-08	4.13E-09	
3. Percent of applicable limit	%	*	*	*	*	
B. Tritium						
1. Total Release	Ci	1.88E+02	3.29E+02	1.23E+03	2.91E+02	5.85E+00
2. Average Diluted Concentration	µCi/ml	3.49E-05	6.94E-05	2.67E-04	6.99E-05	
3. % of Limit (1E-2 µCi/ml)	%	3.49E-01	6.94E-01	2.67E+00	6.99E-01	
C. Dissolved Noble Gases						
1. Total Activity Released	Ci	0.00E+00	0.00E+00	1.42E-05	0.00E+00	2.64E+00
2. Average Diluted Concentration	µCi/ml	0.00E+00	0.00E+00	3.08E-12	0.00E+00	
3. % of Limit (2E-4 µCi/ml)	%	0.00E+00	0.00E+00	1.54E-06	0.00E+00	
D. Gross Alpha						
1. Total Release	Ci	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+01
E. Volume of Waste Released (prior to dilution)	liters	4.86E+05	8.78E+05	1.61E+06	7.50E+05	
F. Volume of Dilution Water	liters	1.08E+10	9.46E+09	9.22E+09	8.33E+09	

Note: LLD Values are included in Appendix A of this report.

*This limit is equal to 10 times the concentration values in Appendix B, Table 2, Column 2 to 10CFR20.1001-2402.

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 2 (Docket Numbers 50-457)
CONTINUOUS MODE & BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.46E-03	2.96E-03
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.70E-04	2.78E-04
Fe-55	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.51E-03	2.90E-03
Co-57	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.30E-05	1.32E-05
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	6.93E-05	1.09E-04	5.67E-03	4.34E-03
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.07E-04	3.04E-04
Co-60	Ci	<LLD	<LLD	<LLD	<LLD	1.72E-04	2.61E-04	1.33E-02	3.53E-03
Ni-63	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	1.00E-03	2.84E-06	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.23E-05	<LLD
Nb-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.07E-03	4.19E-04
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.67E-04	2.23E-04
Nb-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.26E-04	1.13E-03
Zr-97	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.26E-04	6.75E-05
Sn-113	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.70E-04	7.66E-05
Sb-125	Ci	<LLD	<LLD	<LLD	<LLD	1.19E-05	2.52E-04	2.57E-02	9.38E-04
I-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-123m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	5.30E-06	8.15E-06
H-3	Ci	2.38E+01	1.90E+01	8.52E+01	5.56E+01	1.64E+02	3.10E+02	1.15E+03	2.36E+02
La-140	Ci	<LLD	<LLD	<LLD	<LLD	2.74E-06	<LLD	<LLD	<LLD
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	4.66E-04	<LLD
Ba-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	6.65E-06
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	1.42E-05	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-91	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-125m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	4.22E-05	<LLD	<LLD
Ru-103	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	4.89E-06	<LLD
Sb-122	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	8.75E-07	<LLD

BRAIDWOOD NUCLEAR POWER STATION
ANNUAL EFFLUENT REPORT FOR 2013
LIQUID RELEASES
UNIT 2 (Docket Numbers 50-456)
CONTINUOUS MODE & BATCH MODE

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Te-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
W-187	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Te-129m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	2.38E+01	1.90E+01	8.52E+01	5.56E+01	1.64E+02	3.10E+02	1.15E+03	2.36E+02

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
SOLID RADIOACTIVE WASTE
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)

A. Solid Waste Shipped Offsite for Burial or Disposal (Not irradiated fuel)

1. Types of Waste

Types of Waste	Total Quantity (m^3)	Total Activity (Ci)	Period	Est. Total Error %
a. Spent resins, filter sludges, evaporator bottoms, etc	1.06E+02	7.38E+02	Jan - Dec 2013	2.50E+01
b. Dry compressible waste, contaminated equip, etc	1.71E-02	1.12E+00	Jan - Dec 2013	2.50E+01
c. Irradiated components, control rods, etc	0.00E+00	0.00E+00	Jan - Dec 2013	2.50E+01
d. Other (oil, reverse osmosis reject water, soil, Lagoon sediment)	1.43E+03	3.98E+00	Jan - Dec 2013	2.50E+01

2. Estimate of major nuclide composition (by waste type)

	Major Nuclide Composition	%
a.	Ni-63	5.07E+01
	Co-60	1.41E+01
	Cs-137	1.35E+01
	Fe-55	1.09E+01
	Cs-134	4.68E+00
	H-3	3.43E+00
	Ni-59	5.60E-01
	Sb-125	5.50E-01
	C-14	4.70E-01
	Mn-54	4.60E-01
b.	Fe-55	4.79E+01
	Co-60	1.53E+01
	Co-58	1.11E+01
	Ni-63	1.05E+01
	H-3	9.39E+01
	Mn-54	1.44E+01
	Cr-51	7.70E-02
	Zr-95	6.40E-01

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
SOLID RADIOACTIVE WASTE
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)

2. Estimate of major nuclide composition (by waste type) (cont.)

Major Nuclide Composition		%
c.	N/A	N/A
d.	H-3	9.88E+01
	Co-60	5.80E-01
	Cs-137	5.20E-01
	Fe-55	5.00E-02

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
7	Hittman Transportation	Duratek - Bear Creek Road
4	Hittman Transportation	Duratek Services - Gallaher Rd.
102	Visionary Solutions, LLC	Toxco Materials Management Center
10	Hittman Transportation	Waste Control Specialists, LLC.
6	Hittman Transportation	EnergySolutions LLC.

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
RWS13-001	1/31/13	EnergySolutions LLC.	AU	GDP	14-210L cask, resin, no solidification agent/absorbent
RWS13-002	2/5/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-003	2/12/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-004	2/13/13	Duratek Services - Gallaher Rd.	AU	GDP	(8) B-25 boxes, resin, no solidification agent/absorbent
RWS13-005	2/19/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-006	2/26/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-007	3/5/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-008	3/12/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-009	3/19/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-010	3/14/13	Duratek - Bear Creek Road	AU	GDP	14-215H cask, DAW, granular absorbent
RWS13-011	5/7/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-012	5/15/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-013	5/23/13	Waste Control Specialists, LLC.	B	Type B	8-120B cask, resin, no solidification agent/absorbent
RWS13-014	5/29/13	Duratek - Bear Creek Road	AU	GDP	20' Seavans, DAW, no solidification agent/absorbent

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
RWS13-015	6/7/13	EnergySolutions LLC.	AU	GDP	14-215H cask, resin, no solidification agent/absorbent
RWS13-016	6/18/13	EnergySolutions LLC.	AU	GDP	14-215H cask, resin, no solidification agent/absorbent
RWS13-017	7/10/13	Duratek - Bear Creek Road	AU	GDP	20' Seavan, DAW, no solidification agent/absorbent
RWS13-018	8/20/13	Duratek Services -Gallaher Rd.	AU	GDP	(8) B-25 boxes, resin, no solidification agent/absorbent
RWS13-019	8/22/13	Duratek Services -Gallaher Rd.	AU	GDP	20' Seavan of DAW, (2) B-25 boxes of resin, no solidification agent/absorbent
RWS13-020	9/6/13	EnergySolutions LLC.	AU	GDP	14-210H cask, resin, no solidification agent/absorbent
RWS13-021	9/27/13	EnergySolutions LLC.	AU	GDP	14-195H cask, resin, no solidification agent/absorbent
RWS13-022	10/3/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-023	10/3/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-024	10/4/13	EnergySolutions LLC.	AU	GDP	14-195H cask, resin, no solidification agent/absorbent
RWS13-025	10/7/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-026A	10/7/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-027	10/8/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-028	10/8/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-029	10/9/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-030	10/10/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-031	10/10/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-032	10/10/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-033	10/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-034	10/15/13	Duratek - Bear Creek Road	AU	GDP	20' Seavans, DAW, no solidification agent/absorbent
RWS13-035	10/14/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-036	10/14/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-037	10/14/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-038	10/15/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-039	10/16/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-040	10/16/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-041	10/16/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-042	10/17/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
RWS13-043	10/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-044	10/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-045	10/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-046	10/21/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-047	10/21/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-048	10/21/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-049	10/22/13	Duratek - Bear Creek Road	AU	GDP	20' Shielded Sealand, DAW, no solidification agent/absorbent
RWS13-050	10/22/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-051	10/31/13	Duratek - Bear Creek Road	AU	GDP	20' Seavan, oil, no solidification agent/absorbent
RWS13-052	10/23/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-053	10/23/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-054	10/23/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-055	10/24/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-056	10/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-057	10/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-058	10/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-059	10/28/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-060	10/28/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-061	10/28/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-062	10/29/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-063	10/30/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-064	10/30/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-065	10/31/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-066	10/31/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-067	11/1/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-068	11/1/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-069	11/4/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-070	11/4/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-071	11/4/13	Toxco Materials Management	AU	GDP	Intermodal, lagoon dirt, corn cob

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
		Center			absorbent
RWS13-072	11/5/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-073	11/6/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-074	11/6/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-075	11/6/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-076	11/7/13	Duratek - Bear Creek Road	AU	GDP	20' Sealand, resin & sludge, no solidification agent/absorbent
RWS13-077	11/7/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-078	11/8/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-079	11/8/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-080	11/8/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-081	11/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-082	11/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-083	11/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-084	11/12/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-085	11/13/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-086	11/13/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-087	11/13/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-088	11/14/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-089	11/15/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-090	11/15/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-091	11/15/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-092	11/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-093	11/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-094	11/18/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-095	11/19/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-096	11/20/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-097	11/20/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-098	11/20/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-099	11/21/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
RWS13-100	11/22/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-101	11/22/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-102	11/22/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-103	11/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-104	11/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-105	11/25/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-106	11/26/13	Duratek Services - Gallaher Rd.	AU	GDP	20' Sealand, resin & sand, no solidification agent/absorbent
RWS13-107	11/27/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-108	11/27/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-109	11/27/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-110	12/2/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-111	12/3/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-112	12/3/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-113	12/3/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-114	12/4/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-115	12/5/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-116	12/5/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-117	12/5/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-118	12/6/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-119	12/10/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-120	12/9/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-121	12/9/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-122	12/9/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-123	12/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-124	12/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-125	12/11/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-126	12/12/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-127	12/13/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent
RWS13-128	12/13/13	Toxco Materials Management	AU	GDP	Intermodal, lagoon dirt, corn cob

Shipment Number	Date Shipped	Destination	Waste Class	Type of Container	Remarks
		Center			absorbent
RWS13-129	12/13/13	Toxco Materials Management Center	AU	GDP	Intermodal, lagoon dirt, corn cob absorbent

B. Irradiated Fuel Shipments (disposition)

No irradiated fuel shipments for January through December, 2013.

C. Changes to the Process Control Program

Exelon procedure RW-AA-100 governs the radioactive waste process control program. The process control program establishes parameters which provide reasonable assurance that all Low Level Radioactive Wastes (LLRW), processed by in-plant waste process systems on-site or by on-site vendor supplied waste processing systems, meet the acceptance criteria to a Licensed Burial Facility, as required by 10CFR Part 20, 10CFR Part 61, 10CFR Part 71, 49CFR Parts 171-172, "Technical Position on Waste Form (Revision 1)" [1/91], "Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification" [5/83], and the Station Technical Specifications, as applicable. The process control program was revised in 2012. There have been no changes to RW-AA-100 in 2013 at Braidwood.

Wind Direction and Stability Classes

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
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	2	0	0	0	2
E	0	3	2	0	0	0	5
ESE	0	0	0	0	0	0	0
SE	0	0	3	0	0	0	3
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	2	2	0	0	4
W	0	6	10	4	0	0	20
WNW	0	3	12	16	0	0	31
NW	0	1	27	0	0	0	28
NNW	0	0	9	3	0	0	12
Variable	0	0	0	0	0	0	0
Total	0	13	68	26	0	0	107

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	1	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	2	0	0	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	1	4	3	1	0	9
SSW	0	2	4	1	3	0	10
SW	0	0	1	0	0	0	1
WSW	0	0	2	2	0	0	4
W	0	1	2	1	0	0	4
WNW	0	6	5	5	0	0	16
NW	0	6	6	0	0	0	12
NNW	0	1	5	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	23	29	12	4	0	68

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	3	0	0	0	3
NNE	0	2	1	0	0	0	3
NE	0	3	0	0	0	0	3
ENE	1	3	0	0	0	0	4
E	0	3	1	0	0	0	4
ESE	0	1	0	0	0	0	1
SE	0	3	0	0	0	0	3
SSE	0	2	0	0	0	0	2
S	0	0	3	3	0	0	6
SSW	0	0	2	1	2	0	5
SW	0	0	0	3	0	0	3
WSW	0	0	3	1	0	0	4
W	0	3	7	4	0	0	14
WNW	0	6	8	5	0	0	19
NW	0	6	4	0	0	0	10
NNW	0	6	8	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	1	38	40	17	2	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: 2

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	8	48	3	0	0	63
NNE	3	17	19	4	0	0	43
NE	2	12	19	4	0	0	37
ENE	9	25	11	1	0	0	46
E	7	33	7	0	0	0	47
ESE	1	22	3	0	0	0	26
SE	1	19	30	2	0	0	52
SSE	0	18	24	7	0	0	49
S	1	6	19	10	6	0	42
SSW	1	4	13	17	9	0	44
SW	2	10	45	16	1	0	74
WSW	1	26	39	7	6	0	79
W	3	29	31	24	7	0	94
WNW	7	71	86	42	0	0	206
NW	7	53	29	1	0	0	90
NNW	2	49	94	9	0	0	154
Variable	0	0	0	0	0	0	0
Total	51	402	517	147	29	0	1146

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	6	4	0	0	0	16
NNE	5	7	1	0	0	0	13
NE	6	3	2	0	0	0	11
ENE	8	7	6	3	0	0	24
E	16	7	0	0	0	0	23
ESE	6	14	8	0	0	0	28
SE	0	10	30	1	0	0	41
SSE	0	7	22	1	0	0	30
S	0	19	23	15	1	0	58
SSW	0	11	19	20	10	0	60
SW	2	7	18	10	0	0	37
WSW	4	26	7	2	0	0	39
W	12	22	3	1	0	0	38
WNW	23	30	7	3	0	0	63
NW	20	22	5	0	0	0	47
NNW	15	21	3	1	0	0	40
Variable	1	0	0	0	0	0	1
Total	124	219	158	57	11	0	569

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	0	0	0	0	0	6
NNE	5	0	0	0	0	0	5
NE	4	0	0	0	0	0	4
ENE	8	0	0	0	0	0	8
E	13	1	0	0	0	0	14
ESE	6	2	0	0	0	0	8
SE	2	0	0	0	0	0	2
SSE	1	3	0	0	0	0	4
S	1	1	0	0	0	0	2
SSW	0	1	2	0	0	0	3
SW	4	1	0	0	0	0	5
WSW	3	14	0	0	0	0	17
W	12	9	0	0	0	0	21
WNW	7	0	0	0	0	0	7
NW	7	0	0	0	0	0	7
NNW	5	0	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	84	32	2	0	0	0	118

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	2	0	0	0	0	0	2
ENE	3	0	0	0	0	0	3
E	15	0	0	0	0	0	15
ESE	4	0	0	0	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	1	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	2	1	0	0	0	0	3
W	5	2	0	0	0	0	7
WNW	2	0	0	0	0	0	2
NW	2	0	0	0	0	0	2
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	37	4	0	0	0	0	41

Hours of calm in this stability class: 6
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 2

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
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	1	1	0	0	2
E	0	1	3	1	0	0	5
ESE	0	0	0	0	0	0	0
SE	0	0	3	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	1	1	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	6	1	0	7
W	0	0	10	7	7	6	30
WNW	0	2	8	9	12	0	31
NW	0	0	10	13	3	0	26
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	3	35	39	24	6	107

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	1
NE	0	1	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	1	0	0	0	1
ESE	0	1	1	0	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	1	4	3	3	4	15
SSW	0	0	2	1	0	1	4
SW	0	0	1	1	0	0	2
WSW	0	0	0	4	0	0	4
W	0	3	1	1	1	2	8
WNW	0	2	7	4	3	2	18
NW	0	0	4	5	0	0	9
NNW	0	0	0	2	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	9	22	21	7	9	68

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	4	0	0	4
NNE	0	3	0	0	0	0	3
NE	0	2	0	0	0	0	2
ENE	0	1	2	0	0	0	3
E	1	2	0	3	0	0	6
ESE	0	0	1	0	0	0	1
SE	0	2	0	0	0	0	2
SSE	0	0	2	0	0	0	2
S	0	0	2	3	2	1	8
SSW	0	0	1	0	0	2	3
SW	0	0	0	0	3	0	3
WSW	0	0	0	4	2	0	6
W	0	3	4	6	5	2	20
WNW	0	1	7	5	2	1	16
NW	0	4	5	6	0	0	15
NNW	0	1	0	3	0	0	4
Variable	0	0	0	0	0	0	0
Total	1	19	24	34	14	6	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: 2

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	8	21	20	1	0	53
NNE	1	3	14	8	4	0	30
NE	1	4	10	18	3	0	36
ENE	4	11	16	5	0	0	36
E	2	6	15	24	4	0	51
ESE	0	2	14	14	1	0	31
SE	0	2	17	25	14	0	58
SSE	0	2	18	14	1	5	40
S	1	1	8	11	10	15	46
SSW	0	1	6	16	11	4	38
SW	0	13	22	33	7	0	75
WSW	0	9	21	33	6	7	76
W	2	17	32	30	36	21	138
WNW	5	7	55	58	49	11	185
NW	0	25	46	59	7	0	137
NNW	1	7	37	63	9	0	117
Variable	0	0	0	0	0	0	0
Total	20	118	352	431	163	63	1147

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	5	9	3	0	0	18
NNE	1	1	4	1	0	0	7
NE	2	4	1	5	1	1	14
ENE	3	5	6	5	1	0	20
E	0	4	6	1	0	0	11
ESE	0	3	17	13	7	0	40
SE	0	1	6	24	17	0	48
SSE	0	0	2	11	11	2	26
S	0	1	16	16	14	12	59
SSW	0	3	13	21	11	16	64
SW	0	4	10	12	5	1	32
WSW	0	4	15	9	1	1	30
W	4	7	29	7	2	0	49
WNW	1	8	33	15	1	3	61
NW	0	12	42	8	2	0	64
NNW	0	12	13	4	0	0	29
Variable	0	1	0	0	0	0	1
Total	12	75	222	155	73	36	573

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	8	4	0	0	0	14
NNE	1	3	1	0	0	0	5
NE	1	2	1	0	0	0	4
ENE	0	3	0	0	0	0	3
E	0	5	2	2	0	0	9
ESE	0	1	4	1	0	0	6
SE	0	0	3	1	0	0	4
SSE	2	1	0	0	0	0	3
S	0	2	3	0	0	0	5
SSW	0	2	2	0	0	0	4
SW	0	3	4	1	0	0	8
WSW	0	1	5	1	0	0	7
W	0	3	8	4	0	0	15
WNW	1	5	12	0	0	0	18
NW	0	5	0	0	0	0	5
NNW	1	2	5	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	8	46	54	10	0	0	118

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

Braidwood Generating Station

Period of Record: January - March 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	0	0	0	0	4
NNE	0	0	1	0	0	0	1
NE	1	1	2	0	0	0	4
ENE	1	1	1	0	0	0	3
E	1	1	2	2	0	0	6
ESE	0	1	5	2	0	0	8
SE	1	0	1	0	0	0	2
SSE	0	1	0	0	0	0	1
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	1	1	0	0	0	0	2
WSW	0	1	3	0	0	0	4
W	0	1	4	0	0	0	5
WNW	0	1	2	0	0	0	3
NW	0	0	0	0	0	0	0
NNW	1	2	0	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	7	15	21	4	0	0	47

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	0	0	0	2
NNE	0	5	9	0	0	0	14
NE	1	10	15	0	0	0	26
ENE	0	11	1	0	0	0	12
E	0	10	1	0	0	0	11
ESE	1	5	1	0	0	0	7
SE	0	11	18	0	0	0	29
SSE	0	14	6	2	0	0	22
S	0	5	6	4	0	0	15
SSW	0	0	6	14	0	0	20
SW	0	0	5	4	2	0	11
WSW	1	1	5	0	0	0	7
W	0	7	5	4	0	0	16
WNW	0	5	17	1	0	0	23
NW	0	9	24	3	0	0	36
NNW	0	2	7	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	3	96	127	32	2	0	260

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	0	0	0	0	2
NNE	1	5	5	0	0	0	11
NE	1	8	8	0	0	0	17
ENE	0	4	0	0	0	0	4
E	1	6	0	0	0	0	7
ESE	1	4	0	0	0	0	5
SE	0	2	0	0	0	0	2
SSE	0	7	2	0	0	0	9
S	0	3	5	4	0	0	12
SSW	0	0	3	5	0	0	8
SW	0	2	3	2	0	0	7
WSW	0	5	1	0	1	0	7
W	0	10	4	2	0	0	16
WNW	0	4	2	0	0	0	6
NW	0	6	0	1	0	0	7
NNW	0	3	2	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	5	70	35	14	1	0	125

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	3	0	0	0	5
NNE	0	3	7	0	0	0	10
NE	0	5	8	0	0	0	13
ENE	1	2	0	0	0	0	3
E	1	0	0	0	0	0	1
ESE	0	4	1	0	0	0	5
SE	0	4	3	0	0	0	7
SSE	0	2	2	1	0	0	5
S	0	1	5	5	0	0	11
SSW	0	2	3	9	3	0	17
SW	0	3	6	2	0	0	11
WSW	0	2	1	1	1	0	5
W	0	6	1	1	0	0	8
WNW	1	5	3	0	0	0	9
NW	1	3	3	0	0	0	7
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	5	44	47	19	4	0	119

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	25	13	1	0	0	41
NNE	3	32	29	2	0	0	66
NE	5	46	43	0	0	0	94
ENE	7	43	20	0	0	0	70
E	8	21	4	0	0	0	33
ESE	5	20	0	0	0	0	25
SE	4	16	11	0	0	0	31
SSE	1	16	19	6	0	0	42
S	1	13	27	21	2	0	64
SSW	0	7	30	25	2	1	65
SW	1	6	38	14	1	0	60
WSW	0	25	23	16	2	0	66
W	5	15	22	14	2	0	58
WNW	2	9	3	1	0	0	15
NW	3	11	5	0	0	0	19
NNW	5	14	19	1	0	0	39
Variable	0	0	0	0	0	0	0
Total	52	319	306	101	9	1	788

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	13	1	0	0	0	17
NNE	5	36	13	0	0	0	54
NE	15	13	0	0	0	0	28
ENE	34	36	4	0	0	0	74
E	26	34	1	0	0	0	61
ESE	12	33	1	0	0	0	46
SE	3	31	9	0	0	0	43
SSE	7	33	29	4	0	0	73
S	1	28	41	9	2	0	81
SSW	1	10	16	5	4	1	37
SW	2	16	13	3	0	0	34
WSW	2	23	6	1	0	0	32
W	12	7	9	2	0	0	30
WNW	14	15	6	0	0	0	35
NW	12	13	1	0	0	0	26
NNW	7	11	3	0	0	0	21
Variable	1	0	0	0	0	0	1
Total	157	352	153	24	6	1	693

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	3	0	0	0	0	12
NNE	4	3	0	0	0	0	7
NE	3	0	0	0	0	0	3
ENE	12	2	0	0	0	0	14
E	22	2	0	0	0	0	24
ESE	16	8	0	0	0	0	24
SE	7	6	0	0	0	0	13
SSE	5	2	0	0	0	0	7
S	0	2	0	0	0	0	2
SSW	1	0	0	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	8	6	0	0	0	0	14
W	9	3	0	0	0	0	12
WNW	6	1	0	0	0	0	7
NW	2	0	0	0	0	0	2
NNW	5	2	0	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	110	40	0	0	0	0	150

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	0	0	0	0	0	4
NNE	3	1	0	0	0	0	4
NE	1	0	0	0	0	0	1
ENE	3	0	0	0	0	0	3
E	9	0	0	0	0	0	9
ESE	2	0	0	0	0	0	2
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	1	0	0	0	0	1
SW	0	0	0	0	0	0	0
WSW	1	1	0	0	0	0	2
W	3	1	0	0	0	0	4
WNW	1	0	0	0	0	0	1
NW	5	1	0	0	0	0	6
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	35	5	0	0	0	0	40

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	3	0	0	5
NNE	0	2	10	1	0	0	13
NE	0	4	12	8	0	0	24
ENE	1	5	4	0	0	0	10
E	0	7	4	1	0	0	12
ESE	0	6	7	2	0	0	15
SE	0	4	8	14	1	0	27
SSE	0	8	6	4	1	0	19
S	0	4	2	3	5	1	15
SSW	0	0	0	8	12	1	21
SW	0	0	1	3	2	1	7
WSW	0	2	2	3	0	1	8
W	0	3	5	7	1	0	16
WNW	0	2	13	17	4	0	36
NW	0	0	8	21	2	0	31
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	1	48	84	95	28	4	260

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	3	0	0	6
NNE	0	2	1	3	0	0	6
NE	1	2	6	6	0	0	15
ENE	1	1	3	0	0	0	5
E	0	7	2	0	0	0	9
ESE	1	2	2	1	0	0	6
SE	0	0	2	0	0	0	2
SSE	0	1	7	3	0	1	12
S	0	2	1	4	1	0	8
SSW	0	0	2	3	4	0	9
SW	0	1	2	2	1	0	6
WSW	0	5	3	0	0	1	9
W	0	5	4	6	1	0	16
WNW	0	1	3	1	0	0	5
NW	0	1	6	2	0	1	10
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	3	33	45	34	7	3	125

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	3	2	0	0	7
NNE	0	2	4	4	0	0	10
NE	0	1	3	6	0	0	10
ENE	0	2	1	0	0	0	3
E	1	0	0	0	0	0	1
ESE	0	1	3	1	0	0	5
SE	0	1	3	3	1	0	8
SSE	0	1	2	2	1	1	7
S	0	0	1	4	2	2	9
SSW	0	0	1	5	8	4	18
SW	0	0	5	4	0	0	9
WSW	0	5	1	1	0	1	8
W	0	3	1	1	1	0	6
WNW	0	2	6	2	1	0	11
NW	0	2	2	1	0	0	5
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	2	21	37	37	14	8	119

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	10	20	12	1	0	44
NNE	2	12	24	24	7	0	69
NE	1	13	41	38	2	0	95
ENE	2	10	33	5	1	0	51
E	0	12	14	10	1	0	37
ESE	2	4	9	11	0	0	26
SE	2	4	10	10	3	0	29
SSE	0	5	13	15	7	1	41
S	1	2	11	25	21	10	70
SSW	0	2	7	36	17	10	72
SW	1	3	17	17	3	3	44
WSW	1	7	23	18	7	11	67
W	0	3	17	18	12	6	56
WNW	0	3	10	2	3	0	18
NW	0	13	6	7	1	0	27
NNW	1	10	22	7	1	0	41
Variable	0	0	0	0	0	0	0
Total	14	113	277	255	87	41	787

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: 0

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	15	2	1	0	24
NNE	1	2	28	11	0	0	42
NE	0	7	26	2	0	0	35
ENE	0	19	39	6	1	0	65
E	1	10	41	15	0	0	67
ESE	0	0	14	21	2	0	37
SE	0	7	17	21	3	0	48
SSE	1	6	18	37	13	1	76
S	2	3	14	44	17	7	87
SSW	0	2	8	12	8	5	35
SW	1	6	15	9	3	0	34
WSW	0	7	14	7	2	0	30
W	0	9	13	9	2	1	34
WNW	1	1	17	12	3	0	34
NW	1	3	22	7	0	0	33
NNW	0	3	9	2	0	0	14
Variable	0	0	0	0	0	0	0
Total	8	91	310	217	55	14	695

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	2	8	2	0	0	15
NNE	1	1	7	1	0	0	10
NE	1	0	2	0	0	0	3
ENE	0	4	1	0	0	0	5
E	0	2	9	2	0	0	13
ESE	1	0	11	4	0	0	16
SE	1	1	17	5	0	0	24
SSE	1	4	4	2	0	0	11
S	0	4	3	1	0	0	8
SSW	0	1	1	0	0	0	2
SW	0	1	0	0	0	0	1
WSW	0	2	7	1	0	0	10
W	0	2	9	1	0	0	12
WNW	0	2	11	0	0	0	13
NW	0	3	2	0	0	0	5
NNW	0	1	4	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	8	30	96	20	0	0	154

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

Braidwood Generating Station

Period of Record: April - June 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

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

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

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	5	0	0	0	12
NNE	0	9	10	0	0	0	19
NE	1	28	9	0	0	0	38
ENE	2	32	1	0	0	0	35
E	1	23	0	0	0	0	24
ESE	1	20	0	0	0	0	21
SE	3	14	1	0	0	0	18
SSE	0	31	1	0	0	0	32
S	0	30	6	1	0	0	37
SSW	0	13	24	3	0	0	40
SW	0	11	34	3	0	0	48
WSW	1	18	23	4	0	0	46
W	0	31	1	0	0	0	32
WNW	0	23	9	0	0	0	32
NW	1	12	14	0	0	0	27
NNW	0	9	17	0	0	0	26
Variable	0	1	0	0	0	0	1
Total	10	312	155	11	0	0	488

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	2	0	0	0	6
NNE	1	5	5	0	0	0	11
NE	0	7	0	0	0	0	7
ENE	1	8	0	0	0	0	9
E	1	6	0	0	0	0	7
ESE	1	3	0	0	0	0	4
SE	1	3	0	0	0	0	4
SSE	2	3	0	0	0	0	5
S	0	5	0	0	0	0	5
SSW	0	1	4	0	0	0	5
SW	0	4	6	0	0	0	10
WSW	0	8	4	0	0	0	12
W	0	5	1	0	0	0	6
WNW	0	6	0	0	0	0	6
NW	1	9	0	0	0	0	10
NNW	0	3	3	0	0	0	6
Variable	1	0	0	0	0	0	1
Total	9	80	25	0	0	0	114

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	2	1	0	0	0	5
NNE	2	4	2	1	0	0	9
NE	0	7	4	0	0	0	11
ENE	1	4	0	0	0	0	5
E	1	2	0	0	0	0	3
ESE	1	2	0	0	0	0	3
SE	0	2	0	0	0	0	2
SSE	0	5	0	0	0	0	5
S	0	6	0	0	0	0	6
SSW	0	3	3	1	0	0	7
SW	0	5	4	0	0	0	9
WSW	1	6	2	0	0	0	9
W	0	6	1	0	0	0	7
WNW	1	3	1	0	0	0	5
NW	1	2	0	0	0	0	3
NNW	0	7	2	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	10	66	20	2	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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	12	3	0	0	0	24
NNE	1	20	12	1	0	0	34
NE	1	36	7	0	0	0	44
ENE	13	21	1	0	0	0	35
E	12	9	0	0	0	0	21
ESE	3	9	0	0	0	0	12
SE	5	10	0	0	0	0	15
SSE	4	23	0	0	0	0	27
S	3	16	6	0	0	0	25
SSW	0	11	29	3	0	0	43
SW	2	28	34	0	0	0	64
WSW	1	22	4	0	0	0	27
W	3	17	4	0	0	0	24
WNW	7	8	0	0	0	0	15
NW	6	9	0	0	0	0	15
NNW	7	13	5	0	0	0	25
Variable	0	0	0	0	0	0	0
Total	77	264	105	4	0	0	450

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	8	1	0	0	0	18
NNE	6	40	6	0	0	0	52
NE	12	18	1	0	0	0	31
ENE	44	14	0	0	0	0	58
E	39	2	0	0	0	0	41
ESE	19	26	0	0	0	0	45
SE	6	23	0	0	0	0	29
SSE	17	46	0	0	0	0	63
S	6	48	17	0	0	0	71
SSW	1	31	33	0	0	0	65
SW	1	28	44	1	0	0	74
WSW	12	21	2	0	0	0	35
W	15	11	0	0	0	0	26
WNW	19	7	0	0	0	0	26
NW	12	2	0	0	0	0	14
NNW	8	9	0	0	0	0	17
Variable	0	0	0	0	0	0	0
Total	226	334	104	1	0	0	665

Hours of calm in this stability class: 7
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	1	0	0	0	0	8
NNE	8	1	0	0	0	0	9
NE	9	0	0	0	0	0	9
ENE	19	0	0	0	0	0	19
E	52	0	0	0	0	0	52
ESE	21	5	0	0	0	0	26
SE	6	3	0	0	0	0	9
SSE	7	4	0	0	0	0	11
S	4	1	1	0	0	0	6
SSW	2	3	1	0	0	0	6
SW	7	8	0	0	0	0	15
WSW	11	6	0	0	0	0	17
W	9	0	0	0	0	0	9
WNW	6	0	0	0	0	0	6
NW	6	0	0	0	0	0	6
NNW	3	1	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	177	33	2	0	0	0	212

Hours of calm in this stability class: 20
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	0	0	0	0	0	3
NNE	5	0	0	0	0	0	5
NE	4	0	0	0	0	0	4
ENE	13	0	0	0	0	0	13
E	18	0	0	0	0	0	18
ESE	5	0	0	0	0	0	5
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	3	0	0	0	0	0	3
SSW	0	0	0	0	0	0	0
SW	2	0	0	0	0	0	2
WSW	12	2	0	0	0	0	14
W	9	0	0	0	0	0	9
WNW	5	0	0	0	0	0	5
NW	6	0	0	0	0	0	6
NNW	4	0	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	90	2	0	0	0	0	92

Hours of calm in this stability class: 53
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	4	7	1	0	0	13
NNE	0	4	9	3	0	0	16
NE	1	12	24	2	0	0	39
ENE	4	9	18	0	0	0	31
E	0	23	6	0	0	0	29
ESE	0	18	4	0	0	0	22
SE	0	10	6	0	0	0	16
SSE	1	19	11	0	0	0	31
S	0	18	21	1	1	0	41
SSW	0	3	23	5	1	2	34
SW	0	4	29	10	0	0	43
WSW	0	10	20	16	1	0	47
W	0	21	16	0	1	0	38
WNW	0	9	16	12	0	0	37
NW	0	9	10	8	3	0	30
NNW	0	3	14	3	0	0	20
Variable	0	1	0	0	0	0	1
Total	7	177	234	61	7	2	488

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	3	1	0	0	6
NNE	0	8	0	4	0	0	12
NE	1	2	2	1	0	0	6
ENE	1	5	2	0	0	0	8
E	1	5	1	0	0	0	7
ESE	0	4	1	0	0	0	5
SE	0	3	0	0	0	0	3
SSE	0	1	2	0	0	0	3
S	0	5	1	1	0	0	7
SSW	0	0	3	1	0	0	4
SW	0	1	8	2	0	0	11
WSW	0	2	6	2	0	0	10
W	0	4	3	2	0	0	9
WNW	0	2	2	0	0	0	4
NW	0	6	6	1	0	0	13
NNW	0	1	2	2	0	0	5
Variable	0	1	0	0	0	0	1
Total	3	52	42	17	0	0	114

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	0	0	0	0	2
NNE	0	6	0	2	0	0	8
NE	0	2	5	2	2	0	11
ENE	0	1	3	0	0	0	4
E	1	1	2	0	0	0	4
ESE	0	0	1	1	0	0	2
SE	0	2	1	0	0	0	3
SSE	0	0	2	0	0	0	2
S	0	5	4	0	0	0	9
SSW	0	0	3	1	1	0	5
SW	0	3	4	1	0	0	8
WSW	0	4	6	1	0	0	11
W	1	6	1	0	0	0	8
WNW	0	2	2	1	0	0	5
NW	1	2	1	0	0	0	4
NNW	1	4	5	2	0	0	12
Variable	0	0	0	0	0	0	0
Total	4	40	40	11	3	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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	6	9	4	0	0	26
NNE	2	6	14	7	1	0	30
NE	1	4	35	6	0	0	46
ENE	2	11	12	3	0	0	28
E	0	8	14	0	0	0	22
ESE	1	2	10	1	0	0	14
SE	1	8	6	1	0	0	16
SSE	1	8	14	1	0	0	24
S	0	2	14	4	1	0	21
SSW	0	3	10	25	3	1	42
SW	1	11	45	13	0	0	70
WSW	1	10	18	3	0	0	32
W	0	12	10	4	0	0	26
WNW	0	8	4	3	0	0	15
NW	1	4	6	3	0	0	14
NNW	2	8	11	2	1	0	24
Variable	0	0	0	0	0	0	0
Total	20	111	232	80	6	1	450

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	4	9	1	0	0	16
NNE	1	1	30	12	0	0	44
NE	1	7	35	2	1	0	46
ENE	1	11	27	0	0	0	39
E	0	7	42	2	0	0	51
ESE	0	3	28	10	0	0	41
SE	1	5	14	9	0	0	29
SSE	0	2	31	4	0	0	37
S	2	6	39	13	1	0	61
SSW	1	4	44	51	0	0	100
SW	0	6	35	40	2	0	83
WSW	0	5	22	5	0	0	32
W	0	3	21	2	0	0	26
WNW	2	5	21	1	0	0	29
NW	1	2	12	0	0	0	15
NNW	2	2	19	0	0	0	23
Variable	0	0	0	0	0	0	0
Total	14	73	429	152	4	0	672

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	6	0	0	0	9
NNE	1	3	8	0	0	0	12
NE	0	3	5	0	0	0	8
ENE	0	12	5	0	0	0	17
E	1	7	22	2	0	0	32
ESE	0	3	13	14	0	0	30
SE	0	7	12	5	0	0	24
SSE	0	5	6	0	0	0	11
S	0	5	3	0	0	0	8
SSW	0	2	15	0	0	0	17
SW	0	5	9	0	1	0	15
WSW	0	2	8	0	0	0	10
W	0	3	6	1	0	0	10
WNW	0	4	6	0	0	0	10
NW	1	6	6	0	0	0	13
NNW	0	2	4	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	3	72	134	22	1	0	232

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: 9

Braidwood Generating Station

Period of Record: July - September 2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 203 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	7	2	0	0	0	9
NNE	0	8	2	0	0	0	10
NE	1	1	4	0	0	0	6
ENE	1	5	2	0	0	0	8
E	2	10	3	0	0	0	15
ESE	0	4	6	4	0	0	14
SE	0	3	3	1	0	0	7
SSE	0	4	0	0	0	0	4
S	2	2	0	0	0	0	4
SSW	3	2	0	0	0	0	5
SW	0	8	1	0	0	0	9
WSW	3	4	6	1	0	0	14
W	2	5	4	3	0	0	14
WNW	0	1	1	5	0	0	7
NW	0	6	3	0	0	0	9
NNW	0	7	2	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	14	77	39	14	0	0	144

Hours of calm in this stability class:
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 9

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	1	1	0	0	0	0	2
ENE	1	2	0	0	0	0	3
E	0	13	0	0	0	0	13
ESE	0	1	0	0	0	0	1
SE	0	4	2	0	0	0	6
SSE	1	7	3	1	0	0	12
S	0	4	1	0	0	0	5
SSW	0	5	1	4	0	0	10
SW	0	3	6	5	0	0	14
WSW	0	1	11	7	0	0	19
W	0	2	7	6	0	0	15
WNW	0	5	8	3	0	0	16
NW	0	7	10	0	0	0	17
NNW	0	2	13	4	0	0	19
Variable	0	0	0	0	0	0	0
Total	3	57	62	30	0	0	152

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	1	0	0	0	2
NNE	0	1	0	0	0	0	1
NE	0	2	0	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	4	0	0	0	0	4
ESE	0	3	0	0	0	0	3
SE	3	2	0	0	0	0	5
SSE	1	4	0	0	0	0	5
S	0	2	2	0	0	0	4
SSW	0	1	4	2	0	0	7
SW	0	0	5	2	0	0	7
WSW	0	4	6	3	0	0	13
W	0	3	8	1	0	0	12
WNW	0	5	4	0	0	0	9
NW	0	1	2	0	0	0	3
NNW	0	1	3	1	0	0	5
Variable	0	0	0	0	0	0	0
Total	4	35	35	9	0	0	83

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	0	0	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	5	0	0	0	0	5
ESE	0	2	0	0	0	0	2
SE	0	4	1	0	0	0	5
SSE	1	7	2	0	0	0	10
S	0	0	4	3	0	0	7
SSW	0	4	5	4	1	0	14
SW	1	1	7	6	0	0	15
WSW	0	2	7	2	0	0	11
W	0	3	7	2	0	0	12
WNW	0	5	5	0	0	0	10
NW	0	4	0	0	0	0	4
NNW	0	3	5	2	0	0	10
Variable	0	0	0	0	0	0	0
Total	2	42	43	19	1	0	107

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	7	19	1	0	0	31
NNE	4	8	5	0	0	0	17
NE	3	21	1	0	0	0	25
ENE	9	15	0	0	0	0	24
E	6	14	0	0	0	0	20
ESE	2	16	0	0	0	0	18
SE	0	18	18	0	0	0	36
SSE	2	30	45	8	0	0	85
S	1	21	51	15	3	0	91
SSW	1	13	52	57	6	0	129
SW	1	21	58	16	1	0	97
WSW	4	29	31	1	1	0	66
W	3	56	59	11	3	0	132
WNW	11	52	33	7	0	0	103
NW	7	34	10	0	0	0	51
NNW	8	27	50	8	0	0	93
Variable	0	0	0	0	0	0	0
Total	66	382	432	124	14	0	1018

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)
Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	1	0	0	0	0	6
NNE	4	15	4	0	0	0	23
NE	3	11	3	0	0	0	17
ENE	15	7	0	0	0	0	22
E	17	5	0	0	0	0	22
ESE	8	26	0	0	0	0	34
SE	4	39	6	0	0	0	49
SSE	5	34	17	1	0	0	57
S	1	18	20	8	0	0	47
SSW	5	14	39	15	0	0	73
SW	6	36	24	1	0	0	67
WSW	8	36	1	0	0	0	45
W	15	31	12	2	0	0	60
WNW	28	35	10	0	0	0	73
NW	20	17	0	0	0	0	37
NNW	5	5	1	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	149	330	137	27	0	0	643

Hours of calm in this stability class: 4
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	2	0	0	0	0	0	2
NE	1	0	0	0	0	0	1
ENE	2	0	0	0	0	0	2
E	7	0	0	0	0	0	7
ESE	7	5	0	0	0	0	12
SE	1	0	0	0	0	0	1
SSE	1	0	0	0	0	0	1
S	1	1	0	0	0	0	2
SSW	4	7	4	0	0	0	15
SW	8	3	0	0	0	0	11
WSW	11	14	0	0	0	0	25
W	14	4	0	0	0	0	18
WNW	13	0	0	0	0	0	13
NW	4	0	0	0	0	0	4
NNW	8	1	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	84	35	4	0	0	0	123

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 34 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	1	0	0	0	0	0	1
NE	5	0	0	0	0	0	5
ENE	4	0	0	0	0	0	4
E	10	0	0	0	0	0	10
ESE	3	1	0	0	0	0	4
SE	1	0	0	0	0	0	1
SSE	4	0	0	0	0	0	4
S	0	0	0	0	0	0	0
SSW	1	0	0	0	0	0	1
SW	1	0	0	0	0	0	1
WSW	3	4	0	0	0	0	7
W	8	0	0	0	0	0	8
WNW	4	0	0	0	0	0	4
NW	4	0	0	0	0	0	4
NNW	2	0	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	51	5	0	0	0	0	56

Hours of calm in this stability class: 18
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 3

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Extremely Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	1	0	0	0	0	1
ENE	0	4	0	0	0	0	4
E	0	5	7	0	0	0	12
ESE	0	3	0	0	0	0	3
SE	0	5	1	2	0	0	8
SSE	0	1	5	2	1	0	9
S	0	3	3	1	0	0	7
SSW	0	2	2	0	5	1	10
SW	0	1	2	3	3	0	9
WSW	0	1	6	9	2	0	18
W	0	2	0	8	7	1	18
WNW	0	1	3	8	5	1	18
NW	0	1	11	13	0	0	25
NNW	0	0	2	4	4	0	10
Variable	0	0	0	0	0	0	0
Total	0	30	42	50	27	3	152

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Moderately Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	1	0	0	2
NNE	0	1	0	0	0	0	1
NE	0	1	1	0	0	0	2
ENE	0	0	1	0	0	0	1
E	0	1	2	0	0	0	3
ESE	0	2	2	0	0	0	4
SE	1	2	0	0	0	0	3
SSE	1	4	2	0	0	0	7
S	0	1	2	0	0	0	3
SSW	0	0	4	2	2	0	8
SW	0	0	3	3	1	0	7
WSW	0	4	2	3	3	0	12
W	0	2	4	5	2	0	13
WNW	0	2	2	3	2	0	9
NW	0	0	2	2	0	0	4
NNW	0	0	2	1	1	0	4
Variable	0	0	0	0	0	0	0
Total	2	20	30	20	11	0	83

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Slightly Unstable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	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	2	3	0	0	0	5
ESE	0	2	0	1	0	0	3
SE	0	3	1	0	0	0	4
SSE	1	3	4	1	1	0	10
S	0	0	0	2	3	2	7
SSW	0	2	2	5	2	2	13
SW	1	2	3	6	3	0	15
WSW	0	2	1	6	1	0	10
W	0	2	2	7	2	0	13
WNW	0	3	1	6	0	0	10
NW	0	0	6	1	0	0	7
NNW	0	0	5	3	1	0	9
Variable	0	0	0	0	0	0	0
Total	2	22	28	38	13	4	107

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Neutral - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	3	7	2	14	1	0	27
NNE	1	5	3	1	0	0	10
NE	0	5	17	4	0	0	26
ENE	1	11	10	0	0	0	22
E	2	6	15	1	0	0	24
ESE	0	3	10	1	0	0	14
SE	0	6	10	22	0	0	38
SSE	0	8	13	33	13	1	68
S	0	2	29	41	19	9	100
SSW	0	3	11	64	51	13	142
SW	4	6	40	38	7	1	96
WSW	0	4	24	25	1	0	54
W	0	13	43	46	14	4	120
WNW	3	7	37	48	20	4	119
NW	1	13	29	29	0	0	72
NNW	0	9	31	39	7	0	86
Variable	0	0	0	0	0	0	0
Total	15	108	324	406	133	32	1018

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Slightly Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	3	0	0	0	7
NNE	0	3	13	5	0	0	21
NE	0	5	11	4	0	0	20
ENE	0	7	11	0	0	0	18
E	0	4	10	0	0	0	14
ESE	0	1	15	13	0	0	29
SE	0	3	24	26	0	0	53
SSE	0	3	24	27	4	0	58
S	1	2	7	22	6	1	39
SSW	1	6	5	29	26	0	67
SW	3	4	33	33	2	0	75
WSW	0	2	30	4	0	0	36
W	0	5	43	9	4	0	61
WNW	2	9	32	31	5	0	79
NW	0	9	32	11	0	0	52
NNW	0	3	14	1	0	0	18
Variable	0	0	0	0	0	0	0
Total	7	70	307	215	47	1	647

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Moderately Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	4	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	2	1	0	0	0	4
E	0	0	2	0	0	0	2
ESE	0	0	4	3	0	0	7
SE	0	2	2	4	0	0	8
SSE	0	0	3	0	0	0	3
S	0	2	1	0	0	0	3
SSW	0	0	1	4	0	0	5
SW	0	1	8	4	0	0	13
WSW	0	3	11	4	0	0	18
W	0	2	15	8	0	0	25
WNW	0	0	9	1	0	0	10
NW	0	0	12	1	0	0	13
NNW	0	1	8	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	1	13	81	29	0	0	124

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

Braidwood Generating Station

Period of Record: October - December2013
Stability Class - Extremely Stable - 199Ft-30Ft Delta-T (F)

Winds Measured at 203 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	2	0	0	0	4
NNE	1	1	4	0	0	0	6
NE	0	5	0	0	0	0	5
ENE	1	1	1	0	0	0	3
E	0	0	4	0	0	0	4
ESE	0	0	5	1	0	0	6
SE	0	1	0	3	0	0	4
SSE	0	2	4	0	0	0	6
S	0	1	1	0	0	0	2
SSW	1	1	0	0	0	0	2
SW	0	3	3	0	0	0	6
WSW	0	1	2	2	0	0	5
W	0	0	1	3	0	0	4
WNW	0	1	6	0	0	0	7
NW	0	1	2	1	0	0	4
NNW	0	2	2	2	0	0	6
Variable	0	0	0	0	0	0	0
Total	3	22	37	12	0	0	74

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

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 COMBINED (Docket Numbers 50-456 and 50-457)
WIND STABILITY CLASSES

Classification of Atmospheric Stability

Stability Condition	Pasquill Categories	$\sigma\beta$[a] (Degrees)	Temperature change with height (^{0}C/100m)
Extremely Unstable	A	25.0	<-1.9
Moderately Stable	B	20.0	-1.9 to -1.7
Slightly Unstable	C	15.0	-1.7 to -1.5
Neutral	D	10.0	-1.5 to -0.5
Slightly Stable	E	5.0	-0.5 to 1.5
Moderately Stable	F	2.5	1.5 to 4.0
Extremely Stable	G	1.7	>4.0

[a] Standard deviation of horizontal wind direction fluctuation over a period of 15 minutes to 1 hour. The values shown are averages for each stability classification.

Braidwood Generating Station January-March, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

Number of Observations = 2148

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
-	N	0.19	0.14	0.09	0.42	0.33	0.05	0.05	0.00	0.05	0.05	0.09	0.05	0.14	0.33	0.33	0.09	2.37				2.37				
3	SS	0.28	0.23	0.28	0.37	0.74	0.28	0.00	0.00	0.00	0.00	0.09	0.19	0.56	1.07	0.93	0.70	5.73					5.73			
	MS	0.28	0.23	0.19	0.37	0.61	0.28	0.09	0.05	0.05	0.00	0.19	0.14	0.56	0.33	0.33	0.23	3.91						3.91		
	ES	0.00	0.00	0.09	0.14	0.70	0.19	0.00	0.00	0.00	0.00	0.00	0.09	0.23	0.09	0.09	0.09	1.72							1.72	
																										13.78

	EU	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.14	0.05	0.00	0.61	0.61							
	MU	0.00	0.05	0.05	0.00	0.09	0.05	0.05	0.00	0.05	0.09	0.00	0.00	0.05	0.28	0.28	0.05	1.07		1.07						
4	SU	0.00	0.09	0.14	0.14	0.14	0.05	0.14	0.09	0.00	0.00	0.00	0.00	0.14	0.28	0.28	0.28	1.77			1.77					
-	N	0.37	0.79	0.56	1.16	1.54	1.02	0.88	0.84	0.28	0.19	0.47	1.21	1.35	3.31	2.47	2.28	18.72				18.72				
7	SS	0.28	0.33	0.14	0.33	0.33	0.65	0.47	0.33	0.88	0.51	0.33	1.21	1.02	1.40	1.02	0.98	10.20					10.20			
	MS	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.14	0.05	0.05	0.05	0.65	0.42	0.00	0.00	0.00	1.49						1.49		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.00	0.00	0.00	0.19							0.19	
																										34.03
	EU	0.00	0.00	0.00	0.09	0.09	0.00	0.14	0.00	0.00	0.05	0.00	0.09	0.47	0.56	1.26	0.42	3.17	3.17							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.19	0.05	0.09	0.09	0.23	0.28	0.23	1.35		1.35						
8	SU	0.14	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.14	0.09	0.00	0.14	0.33	0.37	0.19	0.37	1.86			1.86					
-	N	2.23	0.88	0.88	0.51	0.33	0.14	1.40	1.12	0.88	0.61	2.09	1.82	1.44	4.00	1.35	4.38	24.07				24.07				
1	SS	0.19	0.05	0.09	0.28	0.00	0.37	1.40	1.02	1.07	0.88	0.84	0.33	0.14	0.33	0.23	0.14	7.36					7.36			
2	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09						0.09		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										37.9
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.09	0.19	0.74	0.00	0.14	1.21	1.21							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.09	0.05	0.23	0.00	0.00	0.56		0.56						
3	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.14	0.05	0.19	0.23	0.00	0.00	0.79			0.79					
-	N	0.14	0.19	0.19	0.05	0.00	0.00	0.09	0.33	0.47	0.79	0.74	0.33	1.12	1.96	0.05	0.42	6.84				6.84				
1	SS	0.00	0.00	0.00	0.14	0.00	0.00	0.05	0.05	0.70	0.93	0.47	0.09	0.05	0.14	0.00	0.05	2.65					2.65			
8	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										12.06

Braidwood Generating Station January-March, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.19		0.19						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
-	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.42	0.05	0.28	0.33	0.00	0.00	0.00	1.35				1.35				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.51					0.51			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										2.14
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	TOT	4.1	3.03	2.7	4.05	5.12	3.17	4.75	3.96	5.5	5.77	5.59	6.98	9.22	16	9.12	10.85	99.95	4.98	3.2	4.6	53.4	26.5	5.49	1.9	99.95

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.09	0.23	0.00	0.14	0.00	0.05	0.05	0.00	0.19	0.93	1.44	1.30	0.56	4.98	Extremely Unstable
0.00	0.05	0.05	0.00	0.09	0.05	0.05	0.00	0.42	0.47	0.05	0.19	0.19	0.74	0.56	0.28	3.17	Moderately Unstable
0.14	0.14	0.14	0.19	0.19	0.05	0.14	0.09	0.28	0.23	0.14	0.19	0.65	0.88	0.47	0.65	4.56	Slightly Unstable
2.93	2.00	1.72	2.14	2.19	1.21	2.42	2.28	1.96	2.05	3.45	3.68	4.38	9.59	4.19	7.17	53.35	Neutral
0.74	0.61	0.51	1.12	1.07	1.30	1.91	1.40	2.70	2.79	1.72	1.82	1.77	2.93	2.19	1.86	26.49	Slightly Stable
0.28	0.23	0.19	0.37	0.65	0.37	0.09	0.19	0.09	0.14	0.23	0.79	0.98	0.33	0.33	0.23	5.49	Moderately Stable
0.00	0.00	0.09	0.14	0.70	0.19	0.00	0.00	0.00	0.05	0.00	0.14	0.33	0.09	0.09	0.09	1.91	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	CALM			
0.74	0.61	0.65	1.35	2.37	0.79	0.14	0.05	0.09	0.05	0.37	0.47	1.49	1.82	1.68	1.12	13.78		<	3.5	mph
0.65	1.26	0.88	1.63	2.28	1.86	1.54	1.40	1.26	0.88	0.84	3.12	3.35	5.40	4.10	3.58	34.03	3.6	-	7.5	mph
2.56	0.98	0.98	0.88	0.47	0.51	2.93	2.14	2.28	1.91	2.98	2.47	2.47	5.49	3.31	5.54	37.90	7.6	-	12.5	mph
0.14	0.19	0.19	0.19	0.00	0.00	0.14	0.37	1.49	1.82	1.35	0.65	1.58	3.31	0.05	0.61	12.06	12.6	-	18.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.12	0.05	0.28	0.33	0.00	0.00	0.00	2.14	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		>	24.5	mph

Braidwood Generating Station January-March, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

Number of Observations = 2159

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
1	SU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
-	N	0.14	0.05	0.05	0.19	0.09	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.09	0.23	0.00	0.05	0.93				0.93				
3	SS	0.05	0.05	0.09	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05	0.00	0.00	0.56					0.56			
	MS	0.09	0.05	0.05	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.37						0.37		
	ES	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05	0.32							0.32	
																										2.22

	EU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.14	0.14							
	MU	0.00	0.05	0.05	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.14	0.09	0.00	0.00	0.42		0.42						
4	SU	0.00	0.14	0.09	0.05	0.09	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.19	0.05	0.88			0.88					
-	N	0.37	0.14	0.19	0.51	0.28	0.09	0.09	0.09	0.05	0.05	0.60	0.42	0.79	0.32	1.16	0.32	5.47				5.47				
7	SS	0.23	0.05	0.19	0.23	0.19	0.14	0.05	0.00	0.05	0.14	0.19	0.19	0.32	0.37	0.56	0.56	3.43					3.43			
	MS	0.37	0.14	0.09	0.14	0.23	0.05	0.00	0.05	0.09	0.09	0.14	0.05	0.14	0.23	0.23	0.09	2.13						2.13		
	ES	0.14	0.00	0.05	0.05	0.05	0.05	0.00	0.05	0.00	0.05	0.05	0.05	0.05	0.05	0.00	0.09	0.69							0.69	
																										13.15
	EU	0.00	0.00	0.00	0.05	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.46	0.37	0.46	0.00	1.62	1.62							
	MU	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.19	0.09	0.05	0.00	0.05	0.32	0.19	0.00	1.02		1.02						
8	SU	0.00	0.00	0.00	0.09	0.00	0.05	0.00	0.09	0.09	0.05	0.00	0.00	0.19	0.32	0.23	0.00	1.11			1.11					
-	N	0.97	0.65	0.46	0.74	0.69	0.65	0.79	0.83	0.37	0.28	1.02	0.97	1.48	2.55	2.13	1.71	16.30				16.30				
1	SS	0.42	0.19	0.05	0.28	0.28	0.79	0.28	0.09	0.74	0.60	0.46	0.69	1.34	1.53	1.95	0.60	10.28					10.28			
2	MS	0.19	0.05	0.05	0.00	0.09	0.19	0.14	0.00	0.14	0.09	0.19	0.23	0.37	0.56	0.00	0.23	2.50						2.50		
	ES	0.00	0.05	0.09	0.05	0.09	0.23	0.05	0.00	0.00	0.00	0.00	0.14	0.19	0.09	0.00	0.00	0.97							0.97	
																										33.81
	EU	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.28	0.32	0.42	0.60	0.05	1.81	1.81							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.05	0.19	0.05	0.19	0.23	0.09	0.97		0.97						
3	SU	0.19	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.14	0.00	0.00	0.19	0.28	0.23	0.28	0.14	1.57			1.57					
-	N	0.93	0.37	0.83	0.23	1.11	0.65	1.16	0.65	0.51	0.74	1.53	1.53	1.39	2.69	2.73	2.92	19.96				19.96				
1	SS	0.14	0.05	0.23	0.23	0.05	0.60	1.11	0.51	0.74	0.97	0.56	0.42	0.32	0.69	0.37	0.19	7.18					7.18			
8	MS	0.00	0.00	0.00	0.00	0.09	0.05	0.05	0.00	0.00	0.00	0.05	0.05	0.19	0.00	0.00	0.00	0.46						0.46		
	ES	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19							0.19	
																										32.14

Braidwood Generating Station January-March, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.32	0.56	0.14	0.00	1.11	1.11							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.32		0.32						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.14	0.09	0.23	0.09	0.00	0.00	0.65			0.65					
-	N	0.05	0.19	0.14	0.00	0.19	0.05	0.65	0.05	0.46	0.51	0.32	0.28	1.67	2.27	0.32	0.42	7.55				7.55				
2	SS	0.00	0.00	0.05	0.05	0.00	0.32	0.79	0.51	0.65	0.51	0.23	0.05	0.09	0.05	0.09	0.00	3.38					3.38			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										13.02
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.00	0.00	0.28	0.28							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.05	0.00	0.00	0.09	0.09	0.00	0.00	0.42		0.42						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.00	0.00	0.09	0.05	0.00	0.00	0.28			0.28					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23	0.69	0.19	0.00	0.32	0.97	0.51	0.00	0.00	2.92				2.92				
2	SS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.09	0.56	0.74	0.05	0.05	0.00	0.14	0.00	0.00	1.67					1.67			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										5.56
	TOT	4.31	2.18	2.83	3.1	4.12	4.08	5.47	3.33	6.3	5.28	5.65	6.21	12.3	15.4	11.9	7.6	99.95	4.96	3.2	4.5	53.1	26.5	5.47	2.2	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.00	0.09	0.23	0.00	0.14	0.00	0.09	0.00	0.00	0.32	1.39	1.44	1.20	0.05	4.96	Extremely Unstable
0.00	0.05	0.05	0.00	0.05	0.09	0.05	0.00	0.69	0.19	0.09	0.19	0.37	0.83	0.42	0.09	3.15	Moderately Unstable
0.19	0.14	0.09	0.14	0.28	0.05	0.09	0.09	0.37	0.14	0.14	0.28	0.93	0.74	0.69	0.19	4.54	Slightly Unstable
2.45	1.39	1.67	1.67	2.36	1.44	2.69	1.85	2.13	1.76	3.47	3.52	6.39	8.57	6.35	5.42	53.13	Neutral
0.83	0.32	0.65	0.93	0.51	1.85	2.22	1.20	2.73	2.96	1.48	1.39	2.27	2.83	2.96	1.34	26.54	Slightly Stable
0.65	0.23	0.19	0.14	0.42	0.28	0.19	0.14	0.23	0.19	0.37	0.32	0.69	0.83	0.23	0.37	5.47	Moderately Stable
0.19	0.05	0.19	0.14	0.28	0.37	0.09	0.05	0.00	0.05	0.09	0.19	0.23	0.14	0.00	0.14	2.18	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-				
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		CALM		
	0.32	0.14	0.23	0.37	0.19	0.00	0.05	0.09	0.05	0.00	0.05	0.00	0.28	0.32	0.00	0.14	2.22		<	3.5	mph
	1.11	0.51	0.65	0.97	0.88	0.37	0.23	0.19	0.23	0.32	0.97	0.69	1.57	1.20	2.13	1.11	13.15	3.6	-	7.5	mph
	1.57	0.93	0.65	1.20	1.34	1.95	1.44	1.02	1.53	1.11	1.71	2.04	4.08	5.74	4.96	2.55	33.81	7.6	-	12.5	mph
	1.25	0.42	1.07	0.51	1.53	1.39	2.32	1.16	1.57	1.76	2.18	2.64	2.55	4.21	4.21	3.38	32.14	12.6	-	18.5	mph
	0.05	0.19	0.19	0.05	0.19	0.37	1.44	0.56	1.39	1.02	0.69	0.46	2.36	3.10	0.56	0.42	13.02	18.6	-	24.5	mph
	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.32	1.48	1.07	0.05	0.37	1.44	0.79	0.00	0.00	5.56		>	24.5	mph

Braidwood Generating Station April-June, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 2176

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.14	0.14							
	MU	0.05	0.05	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.23		0.23						
1	SU	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.23			0.23					
-	N	0.09	0.14	0.23	0.32	0.37	0.23	0.18	0.05	0.05	0.00	0.05	0.00	0.23	0.09	0.14	0.23	2.39				2.39				
3	SS	0.14	0.23	0.69	1.56	1.19	0.55	0.14	0.32	0.05	0.05	0.09	0.09	0.55	0.64	0.55	0.32	7.17					7.17			
	MS	0.41	0.18	0.14	0.55	1.01	0.74	0.32	0.23	0.00	0.05	0.05	0.37	0.41	0.28	0.09	0.23	5.06						5.06		
	ES	0.18	0.14	0.05	0.14	0.41	0.09	0.05	0.00	0.00	0.00	0.00	0.05	0.14	0.05	0.23	0.09	1.61							1.61	
																										16.82

	EU	0.05	0.23	0.46	0.51	0.46	0.23	0.51	0.64	0.23	0.00	0.00	0.05	0.32	0.23	0.41	0.09	4.41	4.41							
	MU	0.05	0.23	0.37	0.18	0.28	0.18	0.09	0.32	0.14	0.00	0.09	0.23	0.46	0.18	0.28	0.14	3.22		3.22						
4	SU	0.05	0.14	0.23	0.09	0.00	0.18	0.18	0.09	0.05	0.09	0.14	0.09	0.28	0.23	0.14	0.05	2.02			2.02					
-	N	1.15	1.47	2.11	1.98	0.97	0.92	0.74	0.74	0.60	0.32	0.28	1.15	0.69	0.41	0.51	0.64	14.66				14.66				
7	SS	0.60	1.65	0.60	1.65	1.56	1.52	1.42	1.52	1.29	0.46	0.74	1.06	0.32	0.69	0.60	0.51	16.18					16.18			
	MS	0.14	0.14	0.00	0.09	0.09	0.37	0.28	0.09	0.09	0.00	0.00	0.28	0.14	0.05	0.00	0.09	1.84						1.84		
	ES	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.05	0.00	0.23							0.23	
																										42.56
	EU	0.05	0.41	0.69	0.05	0.05	0.05	0.83	0.28	0.28	0.28	0.23	0.23	0.23	0.78	1.10	0.32	5.84	5.84							
	MU	0.00	0.23	0.37	0.00	0.00	0.00	0.00	0.09	0.23	0.14	0.14	0.05	0.18	0.09	0.00	0.09	1.61		1.61						
8	SU	0.14	0.32	0.37	0.00	0.00	0.05	0.14	0.09	0.23	0.14	0.28	0.05	0.05	0.14	0.14	0.05	2.16			2.16					
-	N	0.60	1.33	1.98	0.92	0.18	0.00	0.51	0.87	1.24	1.38	1.75	1.06	1.01	0.14	0.23	0.87	14.06				14.06				
1	SS	0.05	0.60	0.00	0.18	0.05	0.05	0.41	1.33	1.88	0.74	0.60	0.28	0.41	0.28	0.05	0.14	7.03					7.03			
2	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										30.7
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.64	0.18	0.00	0.18	0.05	0.14	0.00	1.47	1.47							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.23	0.09	0.00	0.09	0.00	0.05	0.00	0.64		0.64						
3	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.23	0.41	0.09	0.05	0.05	0.00	0.00	0.00	0.87			0.87					
-	N	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.28	0.97	1.15	0.64	0.74	0.64	0.05	0.00	0.05	4.64				4.64				
1	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.41	0.23	0.14	0.05	0.09	0.00	0.00	0.00	1.10					1.10			
8	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										8.73

Braidwood Generating Station April-June, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.05		0.05						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.05	0.00	0.00	0.00	0.00	0.18			0.18					
-	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.09	0.09	0.00	0.00	0.00	0.41				0.41				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.28					0.28			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
.	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										1.01
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.09
	TOT	3.81	7.63	8.36	8.27	6.71	5.24	5.79	7.26	8.5	6.85	5.7	6.11	6.62	4.41	4.73	3.91	99.95	12	5.7	5.5	36.2	31.9	6.89	1.8	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.09	0.64	1.19	0.55	0.51	0.32	1.33	1.01	0.69	0.92	0.51	0.32	0.74	1.06	1.65	0.41	11.95	Extremely Unstable
0.09	0.51	0.78	0.18	0.32	0.23	0.09	0.41	0.55	0.37	0.32	0.32	0.74	0.28	0.32	0.23	5.74	Moderately Unstable
0.23	0.46	0.60	0.14	0.05	0.23	0.32	0.23	0.51	0.78	0.51	0.23	0.37	0.41	0.32	0.09	5.47	Slightly Unstable
1.88	3.03	4.32	3.22	1.52	1.15	1.42	1.93	2.94	2.99	2.76	3.03	2.67	0.69	0.87	1.79	36.21	Neutral
0.78	2.48	1.29	3.40	2.80	2.11	1.98	3.35	3.72	1.70	1.56	1.47	1.38	1.61	1.19	0.97	31.85	Slightly Stable
0.55	0.32	0.14	0.64	1.10	1.10	0.60	0.32	0.09	0.05	0.05	0.64	0.55	0.32	0.09	0.32	6.89	Moderately Stable
0.18	0.18	0.05	0.14	0.41	0.09	0.05	0.00	0.00	0.05	0.00	0.09	0.18	0.05	0.28	0.09	1.84	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	CALM			
0.92	0.74	1.19	2.62	3.08	1.70	0.69	0.60	0.09	0.09	0.18	0.55	1.33	1.10	1.06	0.87	16.82		<	3.5	mph
2.02	3.91	3.77	4.50	3.35	3.40	3.22	3.40	2.39	0.92	1.24	2.90	2.25	1.79	1.98	1.52	42.56	3.6	-	7.5	mph
0.83	2.90	3.40	1.15	0.28	0.14	1.88	2.67	3.86	2.67	2.99	1.65	1.88	1.42	1.52	1.47	30.70	7.6	-	12.5	mph
0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.60	1.98	2.67	1.15	0.83	1.06	0.09	0.18	0.05	8.73	12.6	-	18.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.41	0.14	0.18	0.09	0.00	0.00	0.00	1.01	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09		>	24.5	mph

Braidwood Generating Station April-June, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 218
3

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
	MU	0.00	0.00	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14		0.14						
1	SU	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
-	N	0.05	0.09	0.05	0.09	0.00	0.09	0.09	0.00	0.05	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.64				0.64				
3	SS	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.05	0.09	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.37					0.37			
	MS	0.14	0.05	0.05	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37						0.37		
	ES	0.00	0.09	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.23							0.23	
																										1.88

	EU	0.05	0.09	0.18	0.23	0.32	0.27	0.18	0.37	0.18	0.00	0.00	0.09	0.14	0.09	0.00	0.00	2.20	2.20							
	MU	0.09	0.09	0.09	0.05	0.32	0.09	0.00	0.05	0.09	0.00	0.05	0.23	0.23	0.05	0.05	0.05	1.51		1.51						
4	SU	0.05	0.09	0.05	0.09	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.23	0.14	0.09	0.09	0.00	0.96			0.96					
-	N	0.46	0.55	0.60	0.46	0.55	0.18	0.18	0.23	0.09	0.09	0.14	0.32	0.14	0.14	0.60	0.46	5.18				5.18				
7	SS	0.27	0.09	0.32	0.87	0.46	0.00	0.32	0.27	0.14	0.09	0.27	0.32	0.41	0.05	0.14	0.14	4.17					4.17			
	MS	0.09	0.05	0.00	0.18	0.09	0.00	0.05	0.18	0.18	0.05	0.05	0.09	0.09	0.09	0.14	0.05	1.37						1.37		
	ES	0.14	0.14	0.18	0.05	0.00	0.05	0.00	0.05	0.05	0.05	0.00	0.05	0.00	0.00	0.00	0.09	0.82							0.82	
																										16.22

	EU	0.05	0.46	0.55	0.18	0.18	0.32	0.37	0.27	0.09	0.00	0.05	0.09	0.23	0.60	0.37	0.05	3.85	3.85							
	MU	0.05	0.05	0.27	0.14	0.09	0.09	0.09	0.32	0.05	0.09	0.09	0.14	0.18	0.14	0.27	0.00	2.06		2.06						
8	SU	0.14	0.18	0.14	0.05	0.00	0.14	0.14	0.09	0.05	0.05	0.23	0.05	0.05	0.27	0.09	0.05	1.69			1.69					
-	N	0.92	1.10	1.88	1.51	0.64	0.41	0.46	0.60	0.50	0.32	0.78	1.05	0.78	0.46	0.27	1.01	12.69				12.69				
1	SS	0.69	1.28	1.19	1.79	1.88	0.64	0.78	0.82	0.64	0.37	0.69	0.64	0.60	0.78	1.01	0.41	14.20					14.20			
2	MS	0.37	0.32	0.09	0.05	0.41	0.50	0.78	0.18	0.14	0.05	0.00	0.32	0.41	0.50	0.09	0.18	4.40						4.40		
	ES	0.09	0.05	0.00	0.00	0.05	0.09	0.09	0.00	0.00	0.00	0.05	0.00	0.09	0.05	0.00	0.05	0.60							0.60	
																										39.49

	EU	0.14	0.05	0.37	0.00	0.05	0.09	0.64	0.18	0.14	0.37	0.14	0.14	0.32	0.78	0.96	0.00	4.35	4.35							
1	MU	0.14	0.14	0.27	0.00	0.00	0.05	0.00	0.14	0.18	0.14	0.09	0.00	0.27	0.05	0.09	0.00	1.56		1.56						
3	SU	0.09	0.18	0.27	0.00	0.00	0.05	0.14	0.09	0.18	0.23	0.18	0.05	0.05	0.09	0.05	0.05	1.69			1.69					
-	N	0.55	1.10	1.74	0.23	0.46	0.50	0.46	0.69	1.15	1.65	0.78	0.82	0.82	0.09	0.32	0.32	11.68				11.68				
1	SS	0.09	0.50	0.09	0.27	0.69	0.96	0.96	1.69	2.02	0.55	0.41	0.32	0.41	0.55	0.32	0.09	9.94					9.94			
8	MS	0.09	0.05	0.00	0.00	0.09	0.18	0.23	0.09	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.92						0.92		
	ES	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.05	0.00	0.32							0.32	
																										30.46

Braidwood Generating Station April-June, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.23	0.55	0.09	0.00	0.05	0.18	0.09	0.00	1.28	1.28							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.18	0.05	0.00	0.05	0.00	0.00	0.00	0.32		0.32						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.37	0.00	0.00	0.05	0.05	0.00	0.00	0.64			0.64					
-	N	0.05	0.32	0.09	0.05	0.05	0.00	0.14	0.32	0.96	0.78	0.14	0.32	0.55	0.14	0.05	0.05	3.99				3.99				
2	SS	0.05	0.00	0.00	0.05	0.00	0.09	0.14	0.60	0.78	0.37	0.14	0.09	0.09	0.14	0.00	0.00	2.52					2.52			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										8.75
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.18	0.18							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.14		0.14						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.18	0.00	0.05	0.00	0.00	0.00	0.00	0.37			0.37					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.46	0.46	0.14	0.50	0.27	0.00	0.00	0.00	1.88				1.88				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.32	0.23	0.00	0.00	0.05	0.00	0.00	0.00	0.64					0.64			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										3.21
	TOT	4.86	7.19	8.52	6.46	6.41	4.99	6.41	7.65	9.1	7.24	4.67	6.09	6.69	5.45	5.13	3.16	100	11.9	5.7	5.5	36.1	31.8	7.05	2	100

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.23	0.60	1.10	0.46	0.55	0.69	1.24	0.87	0.69	0.96	0.32	0.37	0.73	1.65	1.42	0.05	11.91	Extremely Unstable
0.27	0.27	0.69	0.23	0.41	0.27	0.09	0.55	0.37	0.41	0.27	0.41	0.73	0.23	0.46	0.05	5.73	Moderately Unstable
0.32	0.46	0.46	0.14	0.05	0.23	0.37	0.32	0.41	0.82	0.41	0.37	0.27	0.50	0.23	0.09	5.45	Slightly Unstable
2.02	3.16	4.35	2.34	1.69	1.19	1.33	1.88	3.21	3.30	2.02	3.07	2.57	0.82	1.24	1.88	36.05	Neutral
1.10	1.92	1.60	2.98	3.07	1.69	2.20	3.48	3.99	1.60	1.56	1.37	1.56	1.56	1.51	0.64	31.84	Slightly Stable
0.69	0.46	0.14	0.23	0.60	0.73	1.10	0.50	0.37	0.09	0.05	0.46	0.55	0.60	0.23	0.27	7.05	Moderately Stable
0.23	0.32	0.18	0.09	0.05	0.18	0.09	0.05	0.05	0.05	0.05	0.05	0.27	0.09	0.05	0.18	1.97	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CALM
0.23	0.27	0.14	0.23	0.09	0.18	0.14	0.09	0.14	0.00	0.09	0.05	0.05	0.05	0.05	0.09	1.88	< 3.5 mph
1.15	1.10	1.42	1.92	1.74	0.64	0.78	1.19	0.73	0.27	0.50	1.33	1.15	0.50	1.01	0.78	16.22	3.6 - 7.5 mph
2.29	3.44	4.12	3.71	3.25	2.20	2.70	2.29	1.47	0.87	1.88	2.29	2.34	2.79	2.11	1.74	39.49	7.6 - 12.5 mph
1.10	2.06	2.75	0.50	1.28	1.88	2.43	2.89	3.71	2.93	1.60	1.37	2.06	1.60	1.79	0.50	30.46	12.6 - 18.5 mph
0.09	0.32	0.09	0.09	0.05	0.09	0.37	1.01	2.11	2.24	0.41	0.41	0.78	0.50	0.14	0.05	8.75	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.92	0.92	0.18	0.64	0.32	0.00	0.05	0.00	3.21	> 24.5 mph

Braidwood Generating Station July-September, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 2121

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.09
	EU	0.00	0.00	0.05	0.09	0.05	0.05	0.14	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.47	0.47							
	MU	0.00	0.05	0.00	0.05	0.05	0.05	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.38		0.38						
1	SU	0.09	0.09	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.00	0.47			0.47					
-	N	0.42	0.05	0.05	0.61	0.57	0.14	0.24	0.19	0.14	0.00	0.09	0.05	0.14	0.33	0.28	0.33	3.63				3.63				
3	SS	0.42	0.28	0.57	2.07	1.84	0.90	0.28	0.80	0.28	0.05	0.05	0.57	0.71	0.90	0.57	0.38	10.66					10.66			
	MS	0.33	0.38	0.42	0.90	2.45	0.99	0.28	0.33	0.19	0.09	0.33	0.52	0.42	0.28	0.28	0.14	8.35						8.35		
	ES	0.14	0.24	0.19	0.61	0.85	0.24	0.05	0.00	0.14	0.00	0.09	0.57	0.42	0.24	0.28	0.19	4.24							4.24	
																										28.19

	EU	0.33	0.42	1.32	1.51	1.08	0.94	0.66	1.46	1.41	0.61	0.52	0.85	1.46	1.08	0.57	0.42	14.66	14.66							
	MU	0.19	0.24	0.33	0.38	0.28	0.14	0.14	0.14	0.24	0.05	0.19	0.38	0.24	0.28	0.42	0.14	3.77		3.77						
4	SU	0.09	0.19	0.33	0.19	0.09	0.09	0.09	0.24	0.28	0.14	0.24	0.28	0.28	0.14	0.09	0.33	3.11			3.11					
-	N	0.57	0.94	1.70	0.99	0.42	0.42	0.47	1.08	0.75	0.52	1.32	1.04	0.80	0.38	0.42	0.61	12.45				12.45				
7	SS	0.38	1.89	0.85	0.66	0.09	1.23	1.08	2.17	2.26	1.46	1.32	0.99	0.52	0.33	0.09	0.42	15.75					15.75			
	MS	0.05	0.05	0.00	0.00	0.00	0.24	0.14	0.19	0.05	0.14	0.38	0.28	0.00	0.00	0.00	0.05	1.56						1.56		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.09							0.09	
																										51.39

	EU	0.24	0.47	0.42	0.05	0.00	0.00	0.05	0.05	0.28	1.13	1.60	1.08	0.05	0.42	0.66	0.80	7.31	7.31							
	MU	0.09	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.28	0.19	0.05	0.00	0.00	0.14	1.18		1.18						
8	SU	0.05	0.09	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.19	0.09	0.05	0.05	0.00	0.09	0.94			0.94					
-	N	0.14	0.57	0.33	0.05	0.00	0.00	0.00	0.00	0.28	1.37	1.60	0.19	0.19	0.00	0.00	0.24	4.95				4.95				
1	SS	0.05	0.28	0.05	0.00	0.00	0.00	0.00	0.00	0.80	1.56	2.07	0.09	0.00	0.00	0.00	0.00	4.90					4.90			
2	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09						0.09		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										19.38

	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.14	0.19	0.00	0.00	0.00	0.00	0.52	0.52							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
3	SU	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
-	N	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.19				0.19				
1	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
8	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.85

Braidwood Generating Station July-September, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
-	N	0.00	0.00	0.00	0 00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	TOT	3.58	6.55	6.79	8.20	7.83	5.47	3.68	6.74	7.21	7.83	10.47	7.54	5.33	4.48	3.82	4.29	99.91	23.01	5.37	4.62	21.22	31.35	10.00	4.34	99.91

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.57	0.90	1.79	1.65	1.13	0.99	0.85	1.51	1.74	1.89	2.26	2.17	1.51	1.51	1.27	1.23	23.01	Extremely Unstable
0.28	0.52	0.33	0.42	0.33	0.19	0.19	0.24	0.24	0.24	0.47	0.57	0.28	0.28	0.47	0.28	5.37	Moderately Unstable
0.24	0.42	0.52	0.24	0.14	0.14	0.09	0.24	0.28	0.33	0.42	0.42	0.33	0.24	0.14	0.42	4.62	Slightly Unstable
1.13	1.60	2.07	1.65	0.99	0.57	0.71	1.27	1.18	2.03	3.02	1.27	1.13	0.71	0.71	1.18	21.22	Neutral
0.85	2.45	1.46	2.73	1.93	2.12	1.37	2.97	3.35	3.06	3.49	1.65	1.23	1.23	0.66	0.80	31.35	Slightly Stable
0.38	0.42	0.42	0.90	2.45	1.23	0.42	0.52	0.28	0.28	0.71	0.80	0.42	0.28	0.28	0.19	10.00	Moderately Stable
0.14	0.24	0.19	0.61	0.85	0.24	0.05	0.00	0.14	0.00	0.09	0.66	0.42	0.24	0.28	0.19	4.34	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	CALM
1.41	1.08	1.27	4.38	5.85	2.40	1.04	1.41	0.75	0.14	0.57	1.79	1.70	1.79	1.56	1.04	28.19	< 3.5 mph
1.60	3.72	4.53	3.72	1.98	3.06	2.59	5.28	5.00	2.92	3.96	3.91	3.30	2.22	1.60	1.98	51.39	3.6 - 7.5 mph
0.57	1.65	0.99	0.09	0.00	0.00	0.05	0.05	1.41	4.43	5.75	1.65	0.33	0.47	0.66	1.27	19.38	7.6 - 12.5 mph
0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.33	0.19	0.19	0.00	0.00	0.00	0.00	0.85	12.6 - 18.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	18.6 - 24.5 mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	> 24.5 mph

Braidwood Generating Station July-September, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 2200

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05		0.05						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.09
	EU	0.05	0.00	0.05	0.18	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32							
	MU	0.00	0.00	0.05	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14		0.14						
1	SU	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.05	0.18			0.18					
-	N	0.32	0.09	0.05	0.09	0.00	0.05	0.05	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.05	0.09	0.91				0.91				
3	SS	0.09	0.05	0.05	0.05	0.00	0.00	0.05	0.00	0.09	0.05	0.00	0.00	0.00	0.09	0.05	0.09	0.64					0.64			
	MS	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.14						0.14		
	ES	0.00	0.00	0.05	0.05	0.09	0.00	0.00	0.00	0.09	0.14	0.00	0.14	0.09	0.00	0.00	0.00	0.64							0.64	
																										2.95

	EU	0.18	0.18	0.55	0.41	1.05	0.82	0.45	0.86	0.8	0.14	0.18	0.45	0.95	0.41	0.41	0.14	8	8							
	MU	0.09	0.36	0.09	0.23	0.23	0.18	0.14	0.05	0.2	0	0.05	0.09	0.18	0.09	0.27	0.05	2.32		2.3						
4	SU	0.09	0.27	0.09	0.05	0.05	0	0.09	0	0.2	0	0.14	0.18	0.27	0.09	0.09	0.18	1.82			1.8					
-	N	0.27	0.27	0.18	0.5	0.36	0.09	0.36	0.36	0.1	0.14	0.5	0.45	0.55	0.36	0.18	0.36	5.05				5.05				
7	SS	0.18	0.05	0.32	0.5	0.32	0.14	0.23	0.09	0.3	0.18	0.27	0.23	0.14	0.23	0.09	0.09	3.32					3.32			
	MS	0.14	0.14	0.14	0.55	0.32	0.14	0.32	0.23	0.2	0.09	0.23	0.09	0.14	0.18	0.27	0.09	3.27						3.27		
	ES	0.32	0.36	0.05	0.23	0.45	0.18	0.14	0.18	0.1	0.09	0.36	0.18	0.23	0.05	0.27	0.32	3.5							3.5	
																										27.27
	EU	0.32	0.41	1.09	0.82	0.27	0.18	0.27	0.50	0.95	1.05	1.32	0.91	0.73	0.73	0.45	0.64	10.64	10.64							
	MU	0.14	0.00	0.09	0.09	0.05	0.05	0.00	0.09	0.05	0.14	0.36	0.27	0.14	0.09	0.27	0.09	1.91		1.91						
8	SU	0.00	0.00	0.23	0.14	0.09	0.05	0.05	0.09	0.18	0.14	0.18	0.27	0.05	0.09	0.05	0.23	1.82			1.82					
-	N	0.41	0.64	1.59	0.55	0.64	0.45	0.27	0.64	0.64	0.45	2.05	0.82	0.45	0.18	0.27	0.50	10.55				10.55				
1	SS	0.41	1.36	1.59	1.23	1.91	1.27	0.64	1.41	1.77	2.00	1.59	1.00	0.95	0.95	0.55	0.86	19.50					19.50			
2	MS	0.27	0.36	0.23	0.23	1.00	0.59	0.55	0.27	0.14	0.68	0.41	0.36	0.27	0.27	0.27	0.18	6.09						6.09		
	ES	0.09	0.09	0.18	0.09	0.14	0.27	0.14	0.00	0.00	0.00	0.05	0.27	0.18	0.05	0.14	0.09	1.77							1.77	
																										52.27
	EU	0.05	0.14	0.09	0.00	0.00	0.00	0.00	0.00	0.05	0.23	0.45	0.73	0.00	0.55	0.36	0.14	2.77	2.77							
1	MU	0.05	0.18	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.09	0.09	0.09	0.00	0.05	0.09	0.77		0.77						
3	SU	0.00	0.09	0.09	0.00	0.00	0.05	0.00	0.00	0.00	0.05	0.05	0.05	0.00	0.05	0.00	0.09	0.50			0.50					
-	N	0.18	0.32	0.27	0.14	0.00	0.05	0.05	0.05	0.18	1.14	0.59	0.14	0.18	0.14	0.14	0.09	3.64				3.64				
1	SS	0.05	0.55	0.09	0.00	0.09	0.45	0.41	0.18	0.59	2.32	1.82	0.23	0.09	0.05	0.00	0.00	6.91					6.91			
8	MS	0.00	0.00	0.00	0.00	0.09	0.64	0.23	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	1.00						1.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.18	0.05	0.00	0.00	0.00	0.00	0.05	0.14	0.23	0.00	0.00	0.64							0.64	
																										16.23

Braidwood Generating Station July-September, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.05	0.05	0.00	0.14	0.00	0.32	0.32							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9	SU	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14			0.14					
-	N	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.05	0.27				0.27				
2	SS	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.18					0.18			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.95
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05				0.05				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.14
	TOT	3.68	6	7.36	6.14	7.27	5.82	4.45	5.09	6.9	9.41	10.9	7.09	5.95	4.86	4.45	4.5	99.91	22.2	5.2	4.5	20.5	30.6	10.6	6.6	99.91

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.59	0.73	1.77	1.41	1.32	1.00	0.73	1.41	1.86	1.55	1.95	2.14	1.73	1.68	1.36	0.91	22.18	Extremely Unstable
0.27	0.55	0.27	0.36	0.32	0.23	0.14	0.14	0.32	0.18	0.50	0.45	0.41	0.18	0.59	0.23	5.18	Moderately Unstable
0.09	0.36	0.50	0.18	0.18	0.09	0.14	0.09	0.41	0.23	0.36	0.50	0.36	0.23	0.18	0.55	4.45	Slightly Unstable
1.18	1.36	2.09	1.27	1.00	0.64	0.73	1.09	0.95	1.91	3.18	1.45	1.18	0.68	0.64	1.09	20.45	Neutral
0.73	2.00	2.09	1.77	2.32	1.86	1.32	1.68	2.77	4.55	3.77	1.45	1.18	1.32	0.68	1.05	30.55	Slightly Stable
0.41	0.55	0.36	0.77	1.45	1.36	1.09	0.50	0.36	0.77	0.68	0.45	0.45	0.45	0.59	0.27	10.55	Moderately Stable
0.41	0.45	0.27	0.36	0.68	0.64	0.32	0.18	0.18	0.23	0.41	0.64	0.64	0.32	0.41	0.41	6.55	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	CALM			
0.45	0.18	0.23	0.41	0.23	0.05	0.09	0.09	0.18	0.18	0.05	0.18	0.14	0.09	0.18	0.23	2.95		<	3.5	mph
1.27	1.64	1.41	2.45	2.77	1.55	1.73	1.77	1.95	0.64	1.73	1.68	2.45	1.41	1.59	1.23	27.27	3.6	-	7.5	mph
1.64	2.86	5.00	3.14	4.09	2.86	1.91	3.00	3.73	4.45	5.95	3.91	2.77	2.36	2.00	2.59	52.27	7.6	-	12.5	mph
0.32	1.27	0.59	0.14	0.18	1.36	0.73	0.23	0.86	3.77	3.00	1.27	0.55	1.00	0.55	0.41	16.23	12.6	-	18.5	mph
0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.00	0.14	0.23	0.14	0.05	0.05	0.00	0.14	0.05	0.95	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.14		>	24.5	mph

Braidwood Generating Station October-December, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

Number of Observations = 2182

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00								
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.14							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18		0.18						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
-	N	0.18	0.18	0.14	0.41	0.27	0.09	0.00	0.09	0.05	0.05	0.05	0.18	0.14	0.50	0.32	0.37	3.02				3.02				
3	SS	0.23	0.18	0.14	0.69	0.78	0.37	0.18	0.23	0.05	0.23	0.27	0.37	0.69	1.28	0.92	0.23	6.83					6.83			
	MS	0.00	0.09	0.05	0.09	0.32	0.32	0.05	0.05	0.05	0.18	0.37	0.50	0.64	0.60	0.18	0.37	3.85						3.85		
	ES	0.00	0.05	0.23	0.18	0.46	0.14	0.05	0.18	0.00	0.05	0.05	0.14	0.37	0.18	0.18	0.09	2.34							2.34	
																										16.45

	EU	0.00	0.00	0.05	0.09	0.60	0.05	0.18	0.32	0.18	0.23	0.14	0.05	0.09	0.23	0.32	0.09	2.61	2.61							
	MU	0.05	0.05	0.09	0.05	0.18	0.14	0.09	0.18	0.09	0.05	0.00	0.18	0.14	0.23	0.05	0.05	1.60		1.60						
4	SU	0.09	0.00	0.00	0.00	0.23	0.09	0.18	0.32	0.00	0.18	0.05	0.09	0.14	0.23	0.18	0.14	1.92			1.92					
-	N	0.32	0.37	0.96	0.69	0.64	0.73	0.82	1.37	0.96	0.60	0.96	1.33	2.57	2.38	1.56	1.24	17.51				17.51				
7	SS	0.05	0.69	0.50	0.32	0.23	1.19	1.79	1.56	0.82	0.64	1.65	1.65	1.42	1.60	0.78	0.23	15.12					15.12			
	MS	0.00	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.05	0.32	0.14	0.64	0.18	0.00	0.00	0.05	1.60						1.60		
	ES	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.23							0.23	
																										40.60
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.05	0.05	0.27	0.50	0.32	0.37	0.46	0.60	2.84	2.84							
	MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.18	0.23	0.27	0.37	0.18	0.09	0.14	1.60		1.60						
8	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.09	0.18	0.23	0.32	0.32	0.32	0.23	0.00	0.23	1.97			1.97					
-	N	0.87	0.23	0.05	0.00	0.00	0.00	0.82	2.06	2.34	2.38	2.66	1.42	2.70	1.51	0.46	2.29	19.80				19.80				
1	SS	0.00	0.18	0.14	0.00	0.00	0.00	0.27	0.78	0.92	1.79	1.10	0.05	0.55	0.46	0.00	0.05	6.28					6.28			
2	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.18						0.18		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										32.68
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.18	0.23	0.32	0.27	0.14	0.00	0.18	1.37	1.37							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.14	0.05	0.00	0.00	0.05	0.41		0.41						
3	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.18	0.27	0.09	0.09	0.00	0.00	0.09	0.87			0.87					
-	N	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.37	0.69	2.61	0.73	0.05	0.50	0.32	0.00	0.37	5.68				5.68				
1	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.37	0.69	0.05	0.00	0.09	0.00	0.00	0.00	1.24					1.24			
8	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										9.58

	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.05			0.05					
-	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.27	0.05	0.05	0.14	0.00	0.00	0.00	0.64				0.64				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.69
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	TOT	1.88	2.02	2.38	2.57	3.71	3.39	4.72	7.97	7.2	11.4	9.72	8.52	11.8	10.5	5.5	6.83	100	6.97	3.8	4.9	46.7	29.5	5.64	2.6	100

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.09	0.14	0.60	0.05	0.27	0.55	0.23	0.46	0.64	0.87	0.69	0.73	0.78	0.87	6.97	Extremely Unstable
0.09	0.05	0.09	0.05	0.18	0.14	0.23	0.23	0.18	0.32	0.32	0.60	0.55	0.41	0.14	0.23	3.80	Moderately Unstable
0.09	0.00	0.00	0.00	0.23	0.09	0.23	0.46	0.32	0.64	0.69	0.50	0.55	0.46	0.18	0.46	4.90	Slightly Unstable
1.42	0.78	1.15	1.10	0.92	0.82	1.65	3.90	4.17	5.91	4.45	3.02	6.05	4.72	2.34	4.26	46.65	Neutral
0.27	1.05	0.78	1.01	1.01	1.56	2.25	2.61	2.15	3.35	3.07	2.06	2.75	3.35	1.70	0.50	29.47	Slightly Stable
0.00	0.09	0.05	0.09	0.32	0.55	0.05	0.05	0.09	0.69	0.50	1.15	0.82	0.60	0.18	0.41	5.64	Moderately Stable
0.00	0.05	0.23	0.18	0.46	0.18	0.05	0.18	0.00	0.05	0.05	0.32	0.37	0.18	0.18	0.09	2.57	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CALM			
0.41	0.50	0.60	1.42	1.83	0.92	0.41	0.69	0.14	0.50	0.78	1.19	1.83	2.57	1.60	1.05	16.45		<	3.5	mph
0.50	1.10	1.60	1.15	1.88	2.47	3.07	3.76	2.11	2.02	2.93	4.12	4.54	4.67	2.89	1.79	40.60	3.6	-	7.5	mph
0.92	0.41	0.18	0.00	0.00	0.00	1.24	3.07	3.57	4.81	4.58	2.57	4.26	2.75	1.01	3.30	32.68	7.6	-	12.5	mph
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.46	1.19	3.76	1.37	0.60	1.01	0.46	0.00	0.69	9.58	12.6	-	18.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.32	0.05	0.05	0.14	0.00	0.00	0.00	0.69	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		>	24.5	mph

Braidwood Generating Station October-December, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T (F)

Number of Observations = 2205

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00					0.00			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.00
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
1	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.09			0.09					
-	N	0.14	0.05	0.00	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.14	0.05	0.00	0.68				0.68				
3	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.14	0.00	0.00	0.09	0.00	0.00	0.32					0.32			
	MS	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05						0.05		
	ES	0.00	0.05	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.14							0.14	
																										1.36

	EU	0.00	0.00	0.05	0.18	0.23	0.14	0.23	0.05	0.14	0.09	0.05	0.05	0.09	0.05	0.05	0.00	1.36	1.36						
	MU	0.00	0.05	0.05	0.00	0.05	0.09	0.09	0.18	0.05	0.00	0.00	0.18	0.09	0.09	0.00	0.00	0.91		0.91					
4	SU	0.05	0.00	0.00	0.00	0.09	0.09	0.14	0.14	0.00	0.09	0.09	0.09	0.09	0.14	0.00	0.00	1.00			1.00				
-	N	0.32	0.23	0.23	0.50	0.27	0.14	0.27	0.36	0.09	0.14	0.27	0.18	0.59	0.32	0.59	0.41	4.90				4.90			
7	SS	0.18	0.14	0.23	0.32	0.18	0.05	0.14	0.14	0.09	0.27	0.18	0.09	0.23	0.41	0.41	0.14	3.17					3.17		
	MS	0.00	0.00	0.00	0.09	0.00	0.00	0.09	0.00	0.09	0.00	0.05	0.14	0.09	0.00	0.00	0.05	0.59						0.59	
	ES	0.09	0.05	0.23	0.05	0.00	0.00	0.05	0.09	0.05	0.05	0.14	0.05	0.00	0.05	0.05	0.09	1.00							1.00
																									12.93
	EU	0.00	0.00	0.00	0.00	0.32	0.00	0.05	0.23	0.14	0.09	0.09	0.27	0.00	0.14	0.50	0.09	1.90	1.90						
	MU	0.05	0.00	0.05	0.05	0.09	0.09	0.00	0.09	0.09	0.18	0.14	0.09	0.18	0.09	0.09	0.09	1.36		1.36					
8	SU	0.00	0.00	0.00	0.00	0.14	0.00	0.05	0.18	0.00	0.09	0.14	0.05	0.09	0.05	0.27	0.23	1.27			1.27				
-	N	0.09	0.14	0.77	0.45	0.68	0.45	0.45	0.59	1.32	0.50	1.81	1.09	1.95	1.68	1.32	1.41	14.69				14.69			
1	SS	0.14	0.59	0.50	0.50	0.45	0.68	1.09	1.09	0.32	0.23	1.50	1.36	1.95	1.45	1.45	0.63	13.92					13.92		
2	MS	0.18	0.00	0.00	0.05	0.09	0.18	0.09	0.14	0.05	0.05	0.36	0.50	0.68	0.41	0.54	0.36	3.67						3.67	
	ES	0.09	0.18	0.00	0.05	0.18	0.23	0.00	0.18	0.05	0.00	0.14	0.09	0.05	0.27	0.09	0.09	1.68							1.68
																									38.50
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.05	0.00	0.14	0.41	0.36	0.36	0.59	0.18	2.27	2.27						
1	MU	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.14	0.14	0.23	0.14	0.09	0.05	0.91		0.91					
3	SU	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.05	0.09	0.23	0.27	0.27	0.32	0.27	0.05	0.14	1.72			1.72				
-	N	0.63	0.05	0.18	0.00	0.05	0.05	1.00	1.50	1.86	2.90	1.72	1.13	2.09	2.18	1.32	1.77	18.41				18.41			
1	SS	0.00	0.23	0.18	0.00	0.00	0.59	1.18	1.22	1.00	1.32	1.50	0.18	0.41	1.41	0.50	0.05	9.75					9.75		
8	MS	0.00	0.00	0.00	0.00	0.00	0.14	0.18	0.00	0.00	0.18	0.18	0.18	0.36	0.05	0.05	0.00	1.32						1.32	
	ES	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.00	0.00	0.00	0.00	0.09	0.14	0.00	0.05	0.09	0.54							0.54
																									34.92

Braidwood Generating Station October-December,2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.23	0.14	0.09	0.32	0.23	0.00	0.18	1.22	1.22							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.05	0.14	0.09	0.09	0.00	0.05	0.50		0.50						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.14	0.09	0.14	0.05	0.09	0.00	0.00	0.05	0.59			0.59					
-	N	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.86	2.31	0.32	0.05	0.63	0.91	0.00	0.32	6.03				6.03				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.27	1.18	0.09	0.00	0.18	0.23	0.00	0.00	2.13					2.13			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										10.48
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.05	0.05	0.00	0.00	0.14	0.14							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.18			0.18					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.41	0.59	0.05	0.00	0.18	0.18	0.00	0.00	1.45				1.45				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05					0.05			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										1.81
	TOT	2.04	1.72	2.45	2.36	2.9	2.99	5.35	7.3	7.3	11.2	10	6.94	11.5	11.4	8.03	6.44	100	6.89	3.8	4.9	46.2	29.3	5.62	3.4	100

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.00	0.00	0.05	0.18	0.54	0.14	0.36	0.41	0.32	0.45	0.41	0.82	0.82	0.82	1.13	0.45	6.89	Extremely Unstable
0.09	0.05	0.09	0.05	0.14	0.18	0.14	0.32	0.14	0.36	0.32	0.54	0.59	0.41	0.18	0.18	3.76	Moderately Unstable
0.05	0.00	0.00	0.00	0.23	0.14	0.18	0.45	0.32	0.59	0.68	0.45	0.59	0.45	0.32	0.41	4.85	Slightly Unstable
1.22	0.45	1.18	1.00	1.09	0.63	1.72	3.08	4.54	6.44	4.35	2.45	5.44	5.40	3.27	3.90	46.17	Neutral
0.32	0.95	0.91	0.82	0.63	1.32	2.40	2.63	1.77	3.04	3.40	1.63	2.77	3.58	2.36	0.82	29.34	Slightly Stable
0.18	0.00	0.00	0.18	0.09	0.32	0.36	0.14	0.14	0.23	0.59	0.82	1.13	0.45	0.59	0.41	5.62	Moderately Stable
0.18	0.27	0.23	0.14	0.18	0.27	0.18	0.27	0.09	0.09	0.27	0.23	0.18	0.32	0.18	0.27	3.36	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	CALM			
0.14	0.09	0.00	0.14	0.09	0.00	0.05	0.09	0.05	0.09	0.36	0.00	0.00	0.23	0.05	0.00	1.36		<	3.5	mph
0.63	0.45	0.77	1.13	0.82	0.50	1.00	0.95	0.50	0.63	0.77	0.77	1.18	1.04	1.09	0.68	12.93	3.6	-	7.5	mph
0.54	0.91	1.32	1.09	1.95	1.63	1.72	2.49	1.95	1.13	4.17	3.45	4.90	4.08	4.26	2.90	38.50	7.6	-	12.5	mph
0.68	0.27	0.36	0.00	0.05	0.86	2.59	2.86	2.99	4.72	3.95	2.40	3.90	4.40	2.63	2.27	34.92	12.6	-	18.5	mph
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.86	1.27	3.90	0.73	0.32	1.32	1.45	0.00	0.59	10.48	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.54	0.73	0.05	0.00	0.23	0.23	0.00	0.00	1.81		>	24.5	mph

Braidwood Generating Station January-December, 2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 8627

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01		0.01						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02					0.02			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.05
	EU	0	0	0.03	0.03	0.01	0.02	0.03	0.01	0	0	0	0.02	0	0	0.01	0	0.19	0.19							
	MU	0.01	0.02	0.01	0.01	0.02	0.02	0.05	0.03	0	0	0	0	0	0	0.01	0	0.2		0.2						
1	SU	0.03	0.02	0	0.03	0.02	0.01	0	0.01	0	0	0.01	0.01	0	0.02	0.02	0	0.21			0.2					
-	N	0.22	0.13	0.13	0.44	0.38	0.13	0.12	0.08	0.1	0.02	0.07	0.07	0.16	0.31	0.27	0.26	2.85				2.85				
3	SS	0.27	0.23	0.42	1.17	1.14	0.52	0.15	0.34	0.1	0.08	0.13	0.3	0.63	0.97	0.74	0.41	7.58					7.58			
	MS	0.26	0.22	0.2	0.48	1.09	0.58	0.19	0.16	0.1	0.08	0.23	0.38	0.51	0.37	0.22	0.24	5.27						5.27		
	ES	0.08	0.1	0.14	0.27	0.6	0.16	0.03	0.05	0	0.01	0.03	0.21	0.29	0.14	0.2	0.12	2.47							2.5	
																										18.77

	EU	0.09	0.16	0.45	0.52	0.57	0.30	0.34	0.60	0.45	0.21	0.16	0.23	0.53	0.42	0.34	0.15	5.53	5.53							
	MU	0.07	0.14	0.21	0.15	0.21	0.13	0.09	0.16	0.13	0.05	0.07	0.20	0.22	0.24	0.26	0.09	2.41		2.4						
4	SU	0.06	0.10	0.17	0.10	0.12	0.10	0.15	0.19	0.08	0.10	0.10	0.12	0.21	0.22	0.17	0.20	2.20			2.2					
-	N	0.60	0.89	1.33	1.21	0.89	0.78	0.73	1.01	0.65	0.41	0.75	1.18	1.36	1.62	1.24	1.19	15.85				15.9				
7	SS	0.32	1.14	0.52	0.74	0.56	1.15	1.19	1.39	1.31	0.77	1.01	1.23	0.82	1.01	0.63	0.53	14.32					14.3			
	MS	0.05	0.05	0.00	0.02	0.03	0.23	0.10	0.10	0.06	0.13	0.14	0.46	0.19	0.01	0.00	0.05	1.62						1.62		
	ES	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.09	0.03	0.00	0.01	0.00	0.19							0.2	
																										42.11
	EU	0.07	0.22	0.28	0.05	0.03	0.01	0.28	0.12	0.15	0.37	0.52	0.48	0.27	0.53	0.87	0.53	4.78	4.78							
	MU	0.03	0.12	0.09	0.00	0.00	0.00	0.00	0.02	0.13	0.17	0.17	0.15	0.17	0.13	0.09	0.15	1.44		1.44						
8	SU	0.08	0.12	0.14	0.00	0.01	0.01	0.05	0.05	0.14	0.15	0.20	0.15	0.19	0.20	0.08	0.19	1.74			1.74					
-	N	0.96	0.75	0.81	0.37	0.13	0.03	0.68	1.02	1.19	1.44	2.03	1.12	1.34	1.41	0.51	1.95	15.76				15.76				
1	SS	0.07	0.28	0.07	0.12	0.01	0.10	0.52	0.79	1.17	1.24	1.15	0.19	0.28	0.27	0.07	0.08	6.40					6.40			
2	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.09						0.09		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										30.21
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.07	0.24	0.14	0.15	0.16	0.23	0.03	0.08	1.15	1.15							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.09	0.05	0.06	0.05	0.06	0.01	0.01	0.41		0.41						
3	SU	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.13	0.17	0.13	0.05	0.08	0.06	0.00	0.02	0.66			0.66					
-	N	0.06	0.08	0.05	0.01	0.00	0.00	0.02	0.24	0.53	1.18	0.53	0.28	0.57	0.58	0.01	0.21	4.36				4.36				
1	SS	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.07	0.37	0.46	0.17	0.03	0.06	0.03	0.00	0.01	1.26					1.26			
8	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										7.84

Braidwood Generating Station January-December,2013

34 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.02	0.02							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.06		0.06						
9	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.01	0.00	0.00	0.00	0.00	0.08			0.08					
-	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.20	0.03	0.10	0.14	0.00	0.00	0.00	0.60				0.60				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.20					0.20			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.96
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01				0.01				
2	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01					0.01			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.02
	TOT	3.34	4.8	5.05	5.76	5.83	4.31	4.74	6.49	7.1	7.97	7.86	7.29	8.25	8.84	5.8	6.47	99.95	11.7	4.5	4.9	39.4	29.8	6.99	2.7	99.95

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-
0.16	0.38	0.77	0.60	0.61	0.34	0.65	0.77	0.67	0.82	0.85	0.88	0.96	1.18	1.25	0.77	11.67	Extremely Unstable
0.12	0.28	0.31	0.16	0.23	0.15	0.14	0.22	0.35	0.35	0.29	0.42	0.44	0.43	0.37	0.26	4.52	Moderately Unstable
0.17	0.26	0.31	0.14	0.15	0.13	0.20	0.26	0.35	0.50	0.44	0.34	0.48	0.50	0.28	0.41	4.89	Slightly Unstable
1.84	1.85	2.32	2.03	1.40	0.94	1.55	2.35	2.57	3.26	3.42	2.76	3.57	3.93	2.03	3.60	39.43	Neutral
0.66	1.65	1.01	2.06	1.70	1.77	1.88	2.58	2.98	2.72	2.46	1.75	1.79	2.28	1.44	1.03	29.79	Slightly Stable
0.30	0.27	0.20	0.50	1.12	0.81	0.29	0.27	0.14	0.29	0.37	0.85	0.70	0.38	0.22	0.29	6.99	Moderately Stable
0.08	0.12	0.14	0.27	0.60	0.17	0.03	0.05	0.03	0.03	0.03	0.30	0.32	0.14	0.21	0.12	2.65	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	CALM			
0.87	0.73	0.93	2.43	3.27	1.45	0.57	0.68	0.27	0.20	0.48	1.00	1.59	1.82	1.47	1.02	18.77		<	3.5	mph
1.19	2.49	2.69	2.75	2.38	2.70	2.61	3.45	2.68	1.68	2.24	3.51	3.36	3.52	2.64	2.21	42.11	3.6	-	7.5	mph
1.22	1.48	1.39	0.53	0.19	0.16	1.53	1.99	2.79	3.45	4.07	2.09	2.25	2.54	1.62	2.90	30.21	7.6	-	12.5	mph
0.06	0.09	0.05	0.05	0.00	0.00	0.03	0.36	1.18	2.16	1.02	0.57	0.92	0.96	0.06	0.34	7.84	12.6	-	18.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.46	0.06	0.13	0.14	0.00	0.00	0.00	0.96	18.6	-	24.5	mph
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.02		>	24.5	mph

Braidwood Generating Station January-December, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

Number of Observations = 8747

Values are Percent Occurrence

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01							
	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01		0.01						
C	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00					
A	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				0.00				
L	SS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01					0.01			
M	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										0.03
	EU	0.01	0.00	0.01	0.06	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.09							
	MU	0.00	0.00	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09		0.09						
1	SU	0.01	0.00	0.00	0.00	0.03	0.00	0.00	0.01	0.00	0.00	0.01	0.00	0.01	0.00	0.01	0.01	0.10			0.10					
-	N	0.16	0.07	0.03	0.10	0.05	0.03	0.03	0.01	0.02	0.00	0.07	0.02	0.02	0.09	0.02	0.05	0.79				0.79				
3	SS	0.03	0.03	0.03	0.05	0.01	0.00	0.01	0.01	0.06	0.02	0.05	0.00	0.05	0.07	0.02	0.02	0.47					0.47			
	MS	0.06	0.03	0.02	0.01	0.01	0.01	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.23						0.23		
	ES	0.01	0.03	0.02	0.05	0.03	0.00	0.01	0.00	0.02	0.05	0.01	0.03	0.03	0.00	0.00	0.02	0.33							0.33	
																										2.1

	EU	0.06	0.07	0.19	0.21	0.41	0.31	0.22	0.32	0.29	0.06	0.06	0.15	0.30	0.16	0.11	0.03	2.94	2.94							
	MU	0.05	0.14	0.07	0.07	0.15	0.10	0.06	0.07	0.10	0.00	0.02	0.13	0.16	0.08	0.08	0.02	1.29		1.29						
4	SU	0.05	0.13	0.06	0.05	0.06	0.03	0.09	0.05	0.06	0.02	0.06	0.13	0.16	0.09	0.09	0.06	1.17			1.17					
-	N	0.35	0.30	0.30	0.49	0.37	0.13	0.23	0.26	0.08	0.10	0.38	0.34	0.51	0.29	0.63	0.39	5.14				5.14				
7	SS	0.22	0.08	0.26	0.48	0.29	0.08	0.18	0.13	0.14	0.17	0.23	0.21	0.27	0.26	0.30	0.23	3.52					3.52			
	MS	0.15	0.08	0.06	0.24	0.16	0.05	0.11	0.11	0.15	0.06	0.11	0.09	0.11	0.13	0.16	0.07	1.84						1.84		
	ES	0.17	0.14	0.13	0.09	0.13	0.07	0.05	0.09	0.05	0.06	0.14	0.08	0.07	0.03	0.08	0.15	1.51							1.51	
																										17.41
	EU	0.09	0.22	0.41	0.26	0.23	0.13	0.21	0.25	0.30	0.29	0.37	0.32	0.35	0.46	0.45	0.19	4.52	4.52							
	MU	0.06	0.01	0.10	0.07	0.07	0.07	0.03	0.13	0.09	0.13	0.16	0.13	0.14	0.16	0.21	0.05	1.59		1.59						
8	SU	0.03	0.05	0.09	0.07	0.06	0.06	0.06	0.11	0.08	0.08	0.14	0.09	0.09	0.18	0.16	0.13	1.47			1.47					
-	N	0.59	0.63	1.18	0.81	0.66	0.49	0.49	0.66	0.71	0.39	1.42	0.98	1.17	1.21	0.99	1.15	13.55				13.55				
1	SS	0.41	0.86	0.83	0.95	1.13	0.85	0.70	0.86	0.87	0.80	1.06	0.93	1.21	1.18	1.23	0.63	14.50					14.50			
2	MS	0.25	0.18	0.09	0.08	0.40	0.37	0.39	0.15	0.11	0.22	0.24	0.35	0.43	0.43	0.23	0.24	4.17						4.17		
	ES	0.07	0.09	0.07	0.05	0.11	0.21	0.07	0.05	0.01	0.00	0.06	0.13	0.13	0.11	0.06	0.06	1.26							1.26	
																										41.05
	EU	0.05	0.05	0.11	0.01	0.02	0.02	0.18	0.07	0.07	0.15	0.18	0.39	0.25	0.53	0.63	0.09	2.80	2.80							
1	MU	0.06	0.08	0.08	0.00	0.00	0.01	0.00	0.03	0.09	0.08	0.09	0.10	0.16	0.09	0.11	0.06	1.05		1.05						
3	SU	0.07	0.07	0.09	0.00	0.03	0.03	0.03	0.03	0.10	0.13	0.13	0.14	0.16	0.16	0.09	0.10	1.37			1.37					
-	N	0.57	0.46	0.75	0.15	0.40	0.31	0.66	0.72	0.93	1.61	1.15	0.90	1.12	1.27	1.12	1.27	13.40				13.40				
1	SS	0.07	0.33	0.15	0.13	0.21	0.65	0.91	0.90	1.09	1.29	1.07	0.29	0.31	0.67	0.30	0.08	8.45					8.45			
8	MS	0.02	0.01	0.00	0.00	0.07	0.25	0.17	0.02	0.01	0.05	0.06	0.07	0.16	0.01	0.01	0.01	0.93						0.93		
	ES	0.00	0.01	0.00	0.00	0.02	0.09	0.05	0.00	0.00	0.00	0.00	0.03	0.10	0.07	0.02	0.02	0.42							0.42	
																										28.42

Braidwood Generating Station January-December, 2013

203 ft. Wind Speed and Direction 199Ft-30Ft Delta-T(F)

	SPEED	WIND DIRECTION CLASSES																	STABILITY CLASSES							
	CLASS	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	EU	MU	SU	N	SS	MS	ES	TOTAL
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.08	0.21	0.06	0.05	0.18	0.24	0.09	0.05	0.98	0.98							
1	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.07	0.02	0.03	0.05	0.06	0.00	0.01	0.29		0.29						
9	SU	0.00	0.00	0.02	0.00	0.00	0.00	0.01	0.02	0.08	0.13	0.07	0.03	0.09	0.03	0.00	0.01	0.50			0.50					
-	N	0.03	0.14	0.06	0.01	0.06	0.01	0.19	0.24	0.58	0.94	0.19	0.16	0.71	0.82	0.09	0.21	4.45				4.45				
2	SS	0.01	0.00	0.02	0.02	0.00	0.10	0.23	0.32	0.43	0.51	0.14	0.03	0.09	0.10	0.02	0.00	2.05					2.05			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01						0.01		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										8.28
	EU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.01	0.01	0.08	0.01	0.00	0.00	0.17	0.17							
G	MU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	0.01	0.00	0.01	0.02	0.02	0.01	0.00	0.14		0.14						
T	SU	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	0.09	0.00	0.01	0.02	0.01	0.00	0.00	0.21			0.21					
	N	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.39	0.32	0.05	0.21	0.35	0.17	0.00	0.00	1.57				1.57				
2	SS	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.03	0.23	0.24	0.01	0.01	0.01	0.03	0.00	0.00	0.58					0.58			
4	MS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00		
	ES	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00							0.00	
																										2.66
	TOT	3.72	4.28	5.29	4.52	5.18	4.47	5.42	5.85	7.4	8.3	7.82	6.59	9.1	9.26	7.35	5.42	99.97	11.5	4.5	4.8	38.9	29.6	7.18	3.5	99.97

Wind Direction by Stability

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-STABILITY CLASSES-

0.21	0.33	0.73	0.54	0.66	0.46	0.62	0.67	0.74	0.74	0.67	0.91	1.17	1.39	1.28	0.37	11.51	Extremely Unstable
0.16	0.23	0.27	0.16	0.23	0.19	0.10	0.25	0.38	0.29	0.30	0.40	0.53	0.41	0.41	0.14	4.46	Moderately Unstable
0.16	0.24	0.26	0.11	0.18	0.13	0.19	0.24	0.38	0.45	0.40	0.40	0.54	0.48	0.35	0.31	4.82	Slightly Unstable
1.71	1.59	2.32	1.57	1.53	0.97	1.61	1.98	2.71	3.36	3.26	2.62	3.89	3.85	2.86	3.06	38.89	Neutral
0.74	1.30	1.31	1.62	1.63	1.68	2.03	2.25	2.81	3.04	2.56	1.46	1.94	2.32	1.87	0.96	29.58	Slightly Stable
0.48	0.31	0.17	0.33	0.64	0.67	0.69	0.32	0.27	0.32	0.42	0.51	0.71	0.58	0.41	0.33	7.18	Moderately Stable
0.25	0.27	0.22	0.18	0.30	0.37	0.17	0.14	0.08	0.10	0.21	0.27	0.33	0.22	0.16	0.25	3.52	Extremely Stable

Wind Direction by Wind Speed

N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	TOTAL	-WIND SPEED CLASSES-			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	CALM			
0.29	0.17	0.15	0.29	0.15	0.06	0.08	0.09	0.10	0.07	0.14	0.06	0.11	0.17	0.07	0.11	2.10		<	3.5	mph
1.04	0.93	1.06	1.62	1.55	0.77	0.94	1.03	0.86	0.47	0.99	1.12	1.59	1.04	1.45	0.95	17.41	3.6	-	7.5	mph
1.51	2.03	2.78	2.29	2.66	2.16	1.94	2.21	2.17	1.90	3.44	2.93	3.52	3.74	3.33	2.45	41.05	7.6	-	12.5	mph
0.83	1.01	1.19	0.29	0.75	1.37	2.01	1.78	2.29	3.30	2.69	1.92	2.26	2.80	2.29	1.63	28.42	12.6	-	18.5	mph
0.05	0.14	0.10	0.03	0.06	0.11	0.45	0.61	1.22	1.85	0.49	0.31	1.12	1.26	0.21	0.27	8.28	18.6	-	24.5	mph
0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.14	0.73	0.71	0.07	0.25	0.49	0.25	0.01	0.00	2.66		>	24.5	mph

APPENDIX A

LLD Tables

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
LLD VALUES FOR GASEOUS RELEASES

Isotope	LLD (µCi/ml)
Gross Alpha	6.24E-15
H-3	1.81E-06
Mn-54	1.59E-12
Co-58	1.56E-12
Fe-59	3.62E-12
Co-60	9.00E-13
Zn-65	5.11E-12
Kr-87	8.51E-06
Kr-88	1.09E-05
Sr-89	2.19E-14
Sr-90	2.73E-15
Mo-99	1.36E-12
I-131	9.75E-13
I-133	1.56E-12
Xe-133	9.42E-06
Xe-133m	2.80E-05
Cs-134	1.61E-12
Xe-135	3.22E-06
Cs-137	2.31E-12
Xe-138	4.51E-05
Ce-141	2.17E-12
Ce-144	8.76E-12

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
LLD VALUES FOR LIQUID RELEASES

Isotope	LLD (μCi/ml)
Gross Alpha	5.59E-08
H-3	1.81E-06
Mn-54	7.28E-08
Fe-55	9.27E-07
Co-58	6.61E-08
Fe-59	1.27E-07
Co-60	7.60E-08
Ni-63	6.58E-07
Zn-65	1.88E-07
Kr-87	1.81E-07
Kr-88	2.26E-07
Sr-89	4.38E-08
Sr-90	1.03E-08
Nb-95	1.06E-08
Zr-95	1.72E-08
Mo-99	4.85E-07
I-131	1.28E-07
Xe-133	1.76E-07
Xe-133m	4.28E-07
Cs-134	6.01E-08
Xe-135	5.44E-08
Cs-137	6.42E-08
Xe-138	5.26E-06
Ba-140	3.13E-08
La-140	1.28E-08
Ce-141	1.05E-07
Ce-144	4.07E-07

APPENDIX B

Supplemental Information

Instrument Issues

On 2/4/13, it was found that the Waste Water Treatment ODCM compositor was not functional when the Chemistry Technician arrived at the sample location to collect the weekly composite sample. The Ground Fault Circuit Interrupter had tripped at some point during the week. The Waste Water Treatment compositor was last observed to be operational during Chemistry rounds on 1/31/13. The Ground Fault Circuit Interrupter was reset and the compositor was verified to be operational. There were approximately two liters of water in the composite jug for analysis, however, there was not as much water as typically expected from a week's operation. This issue was entered into the Corrective Action Program as IR 1471548.

On 4/15/13, the ODCM Exelon Pond compositor did not contain the needed two liters of sample to perform the weekly and monthly analysis. The flow totalizer indicated 6,910,205 gallons of Exelon Pond water remediation to Circulating Water Blowdown. The lack of sample was caused by fouling of the solenoid actuated sampling valve. Water from the Exelon Pond had been trending less than 200 pCi/L tritium for the entirety of 2013 as monitored for RGPP. Additionally, remediated Exelon Pond water was composited downstream as part of Circulating Water Blowdown. This issue was entered into the Corrective Action Program as IR 1502199.

On 4/22/13, the ODCM Exelon Pond compositor did not have the needed two liters of sample to perform the weekly and monthly analysis. The flow totalizer indicated 303,658 gallons of Exelon Pond water remediation to Circulating Water Blowdown. The lack of sample was caused by fouling of the solenoid actuated sampling valve. Water from the Exelon Pond had been trending less than 200 pCi/L tritium for the entirety of 2013 as monitored for RGPP. Additionally, remediated Exelon Pond water was composited downstream as part of Circulating Water Blowdown. This issue was entered into the Corrective Action Program as IR 1505176.

On 10/12/13, a Chemistry Technician found the Condensate Polisher Sump compositor not functioning as designed. A screw attaching the peristaltic pump's cam had backed out resulting in the motor's shaft spinning without engaging the cam. The screw was tightened and the peristaltic tubing replaced. The flow totalizer indicated 31 gallons of Condensate Polisher Sump water having been discharged to the cooling lake prior to the issue's discovery. Following the pump's repair, enough sample was obtained for the weekly composite taken on 10/14/13. Tritium activity discharged to the cooling lake was accounted correctly as the flow totalizer equipment was operable and tritium composite samples were obtained as needed. This issue was entered into the Corrective Action Program as IR 1571295.

On 11/06/2013, it was discovered that a particulate filter paper was missing for the Unit 1 station vent stack 1PR28J skid. The timeframe that the missed sample covered was 7/24/13 11:25 to 7/31/13 11:42. Review of the gamma spectroscopy report from the analysis of the missing sample revealed that particulate nuclides were all less than the LLD. At some point after the sample was counted in the Braidwood count room, the sample was lost or discarded. The missing sample was not a part of the 3rd quarter composite sent to Teledyne Brown for difficult to measure analysis. The missing sample represented 7.6% of the quarter's timeframe for which difficult to measure analysis was not able to be performed. Vendor results for all required difficult to measure nuclides for the 3rd quarter were less than MDC. This issue was entered into the Corrective Action Program as IR 1581875.

During liquid release L-13-140, the 0PR01J liquid release tank process radiation monitor went into high alarm. The alarm resulted in the process radiation monitor going into interlock and securing the liquid release. 0PR01J was declared inoperable and RETS 2.1-1a was initiated. The release was terminated with approximately 7,500 gallons having been discharged. Liquid release tank radionuclide concentrations were consistent with typical batch release tank concentrations. Liquid effluent concentration limits were not challenged during the release. The setpoints requested by Rad Protection allowed the process radiation monitor to be in the ALERT range prior to the release start. The process radiation monitor was decontaminated in order to declare the instrument operable. This issue was entered into the Corrective Action Program as IR 1575565.

On 1/7/14, it was discovered that the final totalizer reading for the Vacuum Breaker #1 remediation pump was not displaying a correct value. Remediation of the Exelon Pond had not occurred during the 12/31/13 thru 1/7/14 timeframe, yet the totalizer displayed a value that would indicate -57 gallons had been remediated. It is anticipated that the cold winter weather and stagnant water in the piping resulted in the erroneous flow totalizer reading. This issue was entered into the Corrective Action Program as IR 1604964.

Abnormal Release

On July 2, 2013, during the performance of BwOP GS-5, Transferring Gland Sealing Steam (GS) to Unit Supply, 2GS04M, U-2 Gland Steam Rupture Disk ruptured while performing step F.5, 'Fully OPEN 2MS167', Main Steam Supply Isolation to Gland Steam (Ref. 1). Initially GS was being supplied by Auxiliary Steam via the Pressure Regulating valve and 2GS004 'Supply valve Bypass' valve, which was full open in the MCR to maintain 80-125 psig on 2PI-GS001. Local Operators heard a bang and re-closed 2MS167. After closing 2MS167, 2PI-GS001 indicated 30 psig in the Unit 2 GS header.

The Chemistry Department has been tasked with reviewing this event for reporting in the Annual Radioactive Effluent Release Report (Ref. 2). As such, an estimate of the quantity of tritium laden water released during the event was needed. The System Manager has indicated that there are no secondary system inventory indications that can be used for estimating total water release during the event. As such, this Engineering Technical Evaluation will develop estimates for steam flow rates to be used by the Chemistry Department for the Annual Release Report.

Detailed Evaluation

Issue Reports 1531951 and 1557942 provide information on the event that can be used to determine two steam flow rates.

- The first phase of the event can be taken at the time of rupture disc opening when the GS header pressure is assumed to be 500 psig.
- The second phase of the event will be evaluated after 2MS167 was closed resulting in a reported GS header pressure of 30 psig.

To determine the steam flow rates through the GS rupture disc exhaust piping, equations for compressible flow (Darcy Equation) from Reference 3 will be used. This requires an understanding of the piping configuration. There are no known as-built isometric drawings for the 2GS04B-6" pipe. The following is an outline of the piping routing from the 2GS04M to the exhaust point on the turbine building roof based on a plant walkdown and a review of the available Gland Steam Isometric Drawing (ref. 5). The piping run described below is visible from the 426' elevation of the turbine building.

- 2GS04M is located at J.2-25.2 at 426' elevation, plus 15'
- Pipe 2GS04B-6" leaves 2GS04M vertically and turns North to J.2-24
- At J.2-24, the exhaust header turns West to E-24
- At E-24, the exhaust header turns South (through a number of 45 degree bends)
- At E-28, the exhaust header turns vertical through an abrupt enlargement to exhaust out 2GS59A-10"
- In the exhaust path, there are a total of
  - Nine 90 degree bends (R/D = 1.5)
  - Nine 45 degree bends (R/D = 1.5)
  - One gradual enlargement (approx 45 degrees) from 4" to 6"
  - One sudden enlargement from 6" to 10"
  - Based on referenced structural drawings, there is approximately 200 feet of 6" pipe between 2GS04M and the vertical exhaust.
  - There is approximately 14 feet of 10" exhaust pipe at the turbine building roof

Evaluation of Pipe Resistance Coefficients

To estimate the steam flow rate, the flow is assumed to be in complete turbulence. This assumption will be validated at the end of this evaluation. The assumption of complete turbulence permits the use of standard pipe and fitting resistance values. The resistance values will be based on flow in 6" pipe, therefore; the K-values will be adjusted to 6" pipe values using the applicable β factor.
From Reference 3, Eq. 6-29;

$$\beta_4 = \frac{d_1}{d_2} = \frac{4.026}{6.065} = 0.664$$

$$\beta_{10} = \frac{d_1}{d_2} = \frac{6.065}{10.020} = 0.605$$

The evaluation will be completed using the resistance for clean steel piping in complete turbulence with pipe friction data as provided in Reference 3, page A-27.

6" Pipe (Ref. 3, Eq. 6-21)

$$K_{pipe-6} = f\frac{L}{D} = 0.015 \cdot \frac{200\,ft \cdot 12\,in \cdot ft^{-1}}{6.065\,in} = 5.94$$

10" Pipe (Ref. 3, Eq. 6-21)

$$K_{pipe-10} = f\frac{L}{D}\beta_{10}^4 = 0.013 \cdot \frac{14\,ft \cdot 12\,in \cdot ft^{-1}}{10.020\,in} \cdot (0.605)^4 = 0.029$$

90 deg. Bends (Ref. 3, pg A-30)

$$K_{90} = N \cdot 14f_t = 9 \cdot 14(0.015) = 1.89$$

45 deg. Bends (Ref. 4)

Reference 3 does not provide K-values for 45 degree bends. The chart provided in Reference 4 will be used for total resistance for the 45 degree bends. To correlate the two references, adjusting the curve for the existing flow Reynolds number in the rupture disc exhaust system, the curve R/D=1 will be used as this curve produces the same K-value for the 90 deg. Bend as produced in Ref. 3.

$$K_{45} = N \cdot K = 9 \cdot 0.14 = 1.26$$

Exhaust Header Entrance (Ref. 3, Eq. 2-37)

Branch line resistance in a T-connection is provided by Reference 3, Eq. 2-37. However, system and branch flows are unknown. As such, the branch connection resistance will be conservatively taken as 1.0. This value is adjusted to a K-value in terms of the 6" pipe.

$$K_{branch} = \frac{1.0}{\beta_4^4} = \frac{1.0}{0.664^4} = 5.14$$

Exhaust Header Exit (Ref. 3, pg A-30)

This value is adjusted to a K-value in terms of the 6" pipe.

$$K_{exit} = 1.0\beta_{10}^{\ 4} = 1.0(0.605)^4 = 0.13$$

4" to 6" Enlarger (gradual) (Ref. 3, pg A-27)

$$K_{4-6} = \frac{2.6\left(sin\frac{\theta}{2}\right)\left(1-\beta_4^{\ 2}\right)^2}{\beta_4^{\ 4}}$$

$$K_{4-6} = \frac{2.6\left(sin\frac{45}{2}\right)\left(1-(0.664)^2\right)^2}{(0.664)^4} = 1.60$$

6" to 10" Enlarger (Abrupt) (Ref. 3, Eq. 2-17)

$$K_{6-10} = \left(1-\beta_{10}^{\ 2}\right)^2$$

$$K_{6-10} = (1-(0.605)^2)^2 = 0.4$$

Total Resistance

$$K_{total} = K_{pipe-6} + K_{pipe-10} + K_{90} + K_{45} + K_{branch} + K_{exit} + K_{4-6} + K_{6-10}$$

$$K_{total} = 5.94 + 0.029 + 1.89 + 1.26 + 5.14 + 0.13 + 1.60 + 0.4$$

$$K_{total} = 16.39$$

System Flow Evaluation

System flows will be evaluated using the Darcy equation from Reference 3, Eq. 6-27

$$W = 1890\ Yd^2\sqrt{\frac{\Delta P}{K\bar{V}}}$$

Flow at 500 psig GS Header Pressure

At 500 psig header pressure, the rupture disc exhaust header pressure loss ratio is

$$\frac{\Delta P_a}{P_a} = \frac{500\ psid}{500 + 14.7} = 0.971$$

Based on a Total system K-value of 16.39, using the table for steam in Reference 3, page A-23;

$\left(\frac{\Delta P}{P}\right)_{max} = 0.814$ And $Y = 0.718$

Since $\frac{\Delta P_a}{P_a} > \left(\frac{\Delta P}{P}\right)_{max}$ the flow in the system is choked.

$$\Delta P = \left(\frac{\Delta P}{P}\right)_{max} \cdot P = 0.814 \cdot 500psi = 407\ psid$$

At 500 psig, $\bar{V} = 0.92815\ ft^3 lbm^{-1}$

$$W = 1890\ Yd^2 \sqrt{\frac{\Delta P}{K\bar{V}}} = 1890(0.718)(6.065)^2 \sqrt{\frac{407\ psid}{(16.39)(0.92815)}} = 258{,}194\ lbmhr^{-1}$$

Converting this to a volumetric flow in terms of condensed steam at standard conditions (68 deg. F) with $\bar{V}_f = 0.01605\ ft^3 lbm^{-1}$

$$Q_{500} = (258{,}194 lbmhr^{-1})(0.01605 ft^3 lbm^{-1})\left(\frac{1hr}{60min}\right)\left(\frac{28.317\ l}{1ft^3}\right) = 1956\ lpm$$

Flow at 30 psig GS Header Pressure

At 30 psig header pressure, the rupture disc exhaust header pressure loss ratio is

$$\frac{\Delta P_a}{P_a} = \frac{30\ psid}{30 + 14.7} = 0.671\ psid$$

Based on a Total system K-value of 16.37, using the table for steam in Reference 3, page A-23;

$\left(\frac{\Delta P}{P}\right)_{max} = 0.814$ And $Y = 0.718$

Since $\frac{\Delta P_a}{P_a} < \left(\frac{\Delta P}{P}\right)_{max}$ the flow in the system is not choked.

At 30 psig, $\bar{V} = 9.4023\ ft^3 lbm^{-1}$

$$W = 1890\ Yd^2 \sqrt{\frac{\Delta P}{K\bar{V}}} = 1890(0.718)(6.065)^2 \sqrt{\frac{30\ psid}{(16.39)(9.4023)}} = 22{,}024\ lbmhr^{-1}$$

Converting this to a volumetric flow in terms of condensed steam at standard conditions (68 deg. F) with $\bar{V}_f = 0.01605\ ft^3 lbm^{-1}$

$$Q_{30} = (22{,}024 lbmhr^{-1})(0.01605 ft^3 lbm^{-1})\left(\frac{1hr}{60min}\right)\left(\frac{28.317 l}{1ft^3}\right) = 167\ lpm$$

To validate the assumption of turbulent flow, the results of the above computations will be used to estimate piping system Reynolds number as follows.

From Reference 3, Eq. 6.3, the Reynolds number is

$$R_s = 124.0\,\frac{dv\rho}{\mu}$$

Where

$d = Pipe\ internal\ diameter\ (in) = 6.065\ in\ for\ 6\ in\ sched\ 40\ pipe$
$v = Mean\ velocity\ in\ ft \cdot sec^{-1}$
$\rho = weight\ density\ of\ fluid\ (lbm \cdot ft^{-3})$
$\mu = dynamic\ viscosity\ in\ centipoise$

For Phase 1, flow at 500 psig

Using a flow rate of 258,194 $lbm \cdot hr^{-1}$

$\rho = weight\ density\ of\ fluid\ (lbm \cdot ft^{-3}) = 1.077\ lbm \cdot ft^{-3}\ at\ 500\ psig$
$\mu = dynamic\ viscosity\ in\ centipoise = 0.018\ at\ 500\ psig$

$$v = Mean\ velocity\ in\ ft \cdot sec^{-1} = \frac{Flow\ Rate}{Pipe\ Cross-section\ Area}$$

$$v = \frac{258{,}194\ lbm \cdot h^{-1}\left(\frac{1\ hr}{3600\ sec}\right)\left(\frac{1\ ft^3}{1.077\ lbm}\right)}{\frac{\pi}{4}\left(6.065\ in\left(\frac{1\ ft}{12\ in}\right)\right)^2} = 331.9\ ft \cdot\ sec^{-1}$$

$$R_s = 124.0\,\frac{dv\rho}{\mu} = 124.0\,\frac{6.065\ \cdot 331.9 \cdot 1.077}{0.018} = 1.50\ E07$$

From Ref. 3, Page A-26, for 6" pipe at this Reynolds number, $f = 0.015$

For Phase 2, flow at 30 psig

Using a flow rate of 22,024 $lbm \cdot hr^{-1}$

$\rho = weight\ density\ of\ fluid\ (lbm \cdot ft^{-3}) = 0.0727\ lbm \cdot ft^{-3}\ at\ 30\ psig$
$\mu = dynamic\ viscosity\ in\ centipoise = 0.014\ at\ 30\ psig$

$$v = Mean\ velocity\ in\ ft \cdot sec^{-1} = \frac{Flow\ Rate}{Pipe\ Cross-section\ Area}$$

$$v = \frac{22{,}024\ lbm \cdot h^{-1}\left(\frac{1\ hr}{3600\ sec}\right)\left(\frac{1\ ft^3}{0.0727\ lbm}\right)}{\frac{\pi}{4}\left(6.065\ in\left(\frac{1\ ft}{12\ in}\right)\right)^2} = 419.4\ ft \cdot sec^{-1}$$

$$R_e = 124.0\,\frac{dv\rho}{\mu} = 124.0\,\frac{6.065 \cdot 419.4 \cdot 0.0727}{0.014} = 1.64\ E06$$

From Ref. 3, Page A-26, for 6" pipe at this Reynolds number, $f = 0.0155$

The above shows that flow though the exhaust piping is sufficiently turbulent (non-laminar) to use the nominal Darcy Friction Factor for turbulent flow in 6" nominal pipe; $f_t = 0.015$.

Conclusions/Findings

This evaluation has computed the flow rates under two separate operating conditions corresponding to the time the 2MS167 valve was open and closed. With the valve open, it was assumed that the GS header pressure was 500 psig. This is conservative since the rupture disc fails at 500 psig and opening of the rupture disc exhaust path will result in a significant reduction in GS header pressure. Since the magnitude of this reduction in unknown the flow rate is estimated assuming constant header pressure which will produce a conservatively high flow rate. The second flow rate was estimated based on the Issue Report documented GS header pressure of 30 psig.

To determine the total volume of water released during the event, the operating time in each of the two operating regimes must be used as follows.

$$V_{total} = Q_{500}t_{500} + Q_{30}t_{30}$$

Where

$V_{total} = Total\ volume\ released\ in\ liters$
$Q_{500} = 1{,}956\ lpm$
$t_{500} = time\ (minutes)at\ 500\ psig$
$Q_{30} = 167\ lpm$
$t_{30} = time\ (minutes)at\ 30\ psig$

References

1. Issue Report 01531951, 2GS04M U-2 Gland Steam Rupture Disk (Ruptured), July 2, 2013
2. Issue Report 01557942, ECR Needed To Calculate Steam Release, September 12, 2013
3. Crane Flow of Fluids Through Valves, Fittings and Pipe, Technical Paper 410, printed 2010.
4. Hydraulic Institute curve IIIB-5B, Resistance Coefficients for Bends of Uniform Diameter and Smooth Surface at Reynolds No. 2.25E05
5. Drawing M-597, sheet 5, Turbine Building El. 426'-0" Gland Steam System (GS), Rev. B
Other Drawings as referenced in the EC References

Station personnel observations, the referenced Issue Reports, and the engineering analysis provided the basis for bounding the radionuclide activities and calculated dose. Once the 2GS04M ruptured, the system went from 500 psig to 30 psig within one minute and remained at that pressure for approximately 24 hours. 8,555.9 cubic feet of water was released as steam based on the bounding criteria. The tritium concentration of the secondary system at the time of issue occurrence was 61,100 pCi/L. Abnormal release permit 2013372 was created to document the abnormal release and has been included for reference. The dose associated with the abnormal release is contained within the quarterly and annual running dose for all gaseous releases.

GASEOUS RELEASE PERMIT REPORT

Permit Number: 2013372

Release Point: 21 Abnormal Gas Batch Releases
Release Mode: 2 Batch
Permit Status: C Closed

Comments:

Unk start time.24hr duration.1 min @ 500 psi,1439 min @ 30 psi.EC395561

=== RELEASE DATA ==========

Release Number	n/a
Permit Start Date/Time	07/02/2013 12:00
Permit End Date/Time	07/03/2013 12:00
Release Duration (minutes)	1.44E+03
Release Method	Volume Given
Volume (cc)	2.42E+08
Flowrate (cc/sec)	2.80E+03
Volume (cf)	8.55E+03
Flowrate (cfm)	5.94E+00

=== LIMITS ANALYSIS ==========

=== NUCLIDE DATA ==========

Nuclide	Activity uCi	uCi/cc	Rel Rate uCi/sec
AR-41	0.00E+00	0.00E+00	0.00E+00
F&AG	0.00E+00	0.00E+00	0.00E+00
H-3	1.48E+04	6.11E-05	1.71E-01
H-3	1.48E+04	6.11E-05	1.71E-01
Total	1.48E+04	6.11E-05	1.71E-01

GASEOUS RELEASE PERMIT REPORT

Permit Number: 2013372

=== I&P DOSE LIMIT ANALYSIS ========== QUARTER 3 ==========

Period - Limit	Age Group	Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
Qtr 3 - Admin. Any Organ	CHILD	BONE	5.08E-01	5.63E+00	9.04E+00
Qtr 3 - T.Spec Any Organ	CHILD	BONE	5.08E-01	7.50E+00	6.78E+00

=== NG DOSE LIMIT ANALYSIS ========== QUARTER 3 ==========

Period - Limit	Dose (mrad)	Limit (mrad)	Max % of Limit
Qtr 3 - Admin. Gamma	1.23E-05	3.75E+00	3.27E-04
Qtr 3 - Admin. Beta	3.49E-05	7.50E+00	4.65E-04
Qtr 3 - T.Spec Gamma	1.23E-05	5.00E+00	2.45E-04
Qtr 3 - T.Spec Beta	3.49E-05	1.00E+01	3.49E-04

=== I&P DOSE LIMIT ANALYSIS ========== ANNUAL 2013 ==========

Period - Limit	Age Group	Organ	Dose (mrem)	Limit (mrem)	Max % of Limit
2013 - Admin. Any Organ	CHILD	BONE	2.27E+00	1.13E+01	2.02E+01
2013 - T.Spec Any Organ	CHILD	BONE	2.27E+00	1.50E+01	1.52E+01

=== NG DOSE LIMIT ANALYSIS ========== ANNUAL 2013 ==========

Period - Limit	Dose (mrad)	Limit (mrad)	Max % of Limit
2013 - Admin. Gamma	2.31E-05	7.50E+00	3.08E-04
2013 - Admin. Beta	6.00E-05	1.50E+01	4.00E-04
2013 - T.Spec Gamma	2.31E-05	1.00E+01	2.31E-04
2013 - T.Spec Beta	6.00E-05	2.00E+01	3.00E-04

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
KANKAKEE RIVER FLOW

DATE	CFS	DATE	CFS	DATE	CFS
1/1/13	2,020	2/1/13	9,140	3/1/13	6,070
1/2/13	2,230	2/2/13	8,370	3/2/13	6,400
1/3/13	2,070	2/3/13	7,690	3/3/13	6,160
1/4/13	2,020	2/4/13	6,780	3/4/13	5,560
1/5/13	1,730	2/5/13	5,970	3/5/13	5,170
1/6/13	1,700	2/6/13	5,480	3/6/13	4,830
1/7/13	1,960	2/7/13	4,830	3/7/13	4,500
1/8/13	1,730	2/8/13	4,540	3/8/13	4,210
1/9/13	1,870	2/9/13	4,420	3/9/13	4,170
1/10/13	1,680	2/10/13	4,260	3/10/13	6,980
1/11/13	1,870	2/11/13	4,750	3/11/13	16,200
1/12/13	2,100	2/12/13	5,430	3/12/13	14,400
1/13/13	2,610	2/13/13	5,560	3/13/13	12,200
1/14/13	3,220	2/14/13	5,340	3/14/13	10,100
1/15/13	4,340	2/15/13	5,080	3/15/13	8,320
1/16/13	4,710	2/16/13	4,660	3/16/13	7,580
1/17/13	4,170	2/17/13	4,170	3/17/13	6,980
1/18/13	3,880	2/18/13	3,920	3/18/13	6,440
1/19/13	3,370	2/19/13	3,760	3/19/13	5,840
1/20/13	2,820	2/20/13	3,250	3/20/13	5,390
1/21/13	2,750	2/21/13	3,600	3/21/13	4,960
1/22/13	5,080	2/22/13	3,030	3/22/13	4,460
1/23/13	4,090	2/23/13	3,220	3/23/13	4,130
1/24/13	4,340	2/24/13	2,920	3/24/13	3,880
1/25/13	2,960	2/25/13	2,920	3/25/13	3,720
1/26/13	3,400	2/26/13	2,960	3/26/13	3,560
1/27/13	2,960	2/27/13	3,000	3/27/13	3,440
1/28/13	2,850	2/28/13	3,880	3/28/13	3,400
1/29/13	2,420			3/29/13	3,600
1/30/13	4,130			3/30/13	4,090
1/31/13	8,160			3/31/13	4,830
TOTAL	95,240	TOTAL	132,930	TOTAL	191,570
AVG	3,072	AVG	4,748	AVG	6,180
Historical Avg 1941-1976 4586 CFS		Historical Avg 1941-1976 5579 CFS		Historical Avg 1941-1976 6625 CFS	

Note – Kankakee River Flows obtained from USGS at noon local time.

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
KANKAKEE RIVER FLOW

DATE	CFS	DATE	CFS	DATE	CFS
4/1/13	4,910	5/1/13	9,900	6/1/13	18,300
4/2/13	4,500	5/2/13	8,860	6/2/13	21,200
4/3/13	3,960	5/3/13	7,890	6/3/13	20,300
4/4/13	3,560	5/4/13	7,180	6/4/13	19,200
4/5/13	3,400	5/5/13	6,590	6/5/13	17,800
4/6/13	3,290	5/6/13	6,020	6/6/13	15,700
4/7/13	3,180	5/7/13	5,610	6/7/13	13,100
4/8/13	3,220	5/8/13	5,210	6/8/13	10,600
4/9/13	3,180	5/9/13	4,910	6/9/13	8,540
4/10/13	3,070	5/10/13	4,910	6/10/13	7,380
4/11/13	6,780	5/11/13	4,620	6/11/13	6,440
4/12/13	11,200	5/12/13	4,540	6/12/13	5,700
4/13/13	12,000	5/13/13	4,340	6/13/13	15,000
4/14/13	11,400	5/14/13	4,210	6/14/13	12,200
4/15/13	9,620	5/15/13	3,920	6/15/13	9,840
4/16/13	12,800	5/16/13	3,760	6/16/13	9,090
4/17/13	15,900	5/17/13	3,560	6/17/13	8,640
4/18/13	31,400	5/18/13	3,480	6/18/13	8,110
4/19/13	38,700	5/19/13	3,600	6/19/13	7,580
4/20/13	28,600	5/20/13	3,920	6/20/13	6,980
4/21/13	26,800	5/21/13	*5,100	6/21/13	6,210
4/22/13	25,600	5/22/13	6,160	6/22/13	5,560
4/23/13	22,800	5/23/13	*5,750	6/23/13	5,210
4/24/13	20,400	5/24/13	5,000	6/24/13	5,790
4/25/13	17,500	5/25/13	4,380	6/25/13	6,160
4/26/13	15,500	5/26/13	4,000	6/26/13	6,070
4/27/13	14,000	5/27/13	4,870	6/27/13	6,250
4/28/13	12,300	5/28/13	12,100	6/28/13	5,650
4/29/13	10,800	5/29/13	16,200	6/29/13	5,520
4/30/13	9,520	5/30/13	16,600	6/30/13	5,210
		5/31/13	16,300		
TOTAL	389,890	TOTAL	203,490	TOTAL	299,330
AVG	12,996	AVG	6,564	AVG	9,978
Historical Avg 1941-1976 7463 CFS		Historical Avg 1941-1976 6608 CFS		Historical Avg 1941-1976 4847 CFS	

*Estimated Kankakee River Flow

Note – Kankakee River Flows obtained from USGS at noon local time.

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
KANKAKEE RIVER FLOW

DATE	CFS	DATE	CFS	DATE	CFS
7/1/13	5,300	8/1/13	1,210	9/1/13	603
7/2/13	6,110	8/2/13	1,180	9/2/13	619
7/3/13	6,160	8/3/13	1,350	9/3/13	686
7/4/13	5,700	8/4/13	1,300	9/4/13	686
7/5/13	5,300	8/5/13	1,470	9/5/13	686
7/6/13	5,040	8/6/13	1,730	9/6/13	619
7/7/13	4,660	8/7/13	1,790	9/7/13	603
7/8/13	4,540	8/8/13	1,810	9/8/13	555
7/9/13	4,340	8/9/13	1,730	9/9/13	571
7/10/13	4,050	8/10/13	1,730	9/10/13	540
7/11/13	3,840	8/11/13	1,680	9/11/13	525
7/12/13	3,640	8/12/13	1,620	9/12/13	525
7/13/13	3,440	8/13/13	1,520	9/13/13	511
7/14/13	3,330	8/14/13	1,370	9/14/13	540
7/15/13	3,110	8/15/13	1,270	9/15/13	571
7/16/13	2,820	8/16/13	1,210	9/16/13	587
7/17/13	2,550	8/17/13	1,140	9/17/13	619
7/18/13	2,510	8/18/13	1,050	9/18/13	652
7/19/13	2,290	8/19/13	968	9/19/13	721
7/20/13	2,070	8/20/13	888	9/20/13	739
7/21/13	2,070	8/21/13	830	9/21/13	1,320
7/22/13	1,960	8/22/13	948	9/22/13	1,600
7/23/13	1,760	8/23/13	968	9/23/13	1,760
7/24/13	1,650	8/24/13	849	9/24/13	1,760
7/25/13	1,550	8/25/13	830	9/25/13	1,620
7/26/13	1,490	8/26/13	793	9/26/13	1,420
7/27/13	1,420	8/27/13	775	9/27/13	1,270
7/28/13	1,350	8/28/13	703	9/28/13	1,210
7/29/13	1,270	8/29/13	669	9/29/13	1,140
7/30/13	1,300	8/30/13	603	9/30/13	1,090
7/31/13	1,250	8/31/13	587		
TOTAL	97,870	TOTAL	36,571	TOTAL	26,348
AVG	3,157	AVG	1,180	AVG	878
Historical Avg 1941-1976 3094 CFS		Historical Avg 1941-1976 1613 CFS		Historical Avg 1941-1976 1353 CFS	

Note – Kankakee River Flows obtained from USGS at noon local time.

BRAIDWOOD NUCLEAR POWER STATION
RADIOACTIVE EFFLUENT RELEASE REPORT FOR 2013
UNIT 1 AND 2 (Docket Numbers 50-456 and 50-457)
KANKAKEE RIVER FLOW

DATE	CFS	DATE	CFS	DATE	CFS
10/1/13	1,070	11/1/13	2,040	12/1/13	2,420
10/2/13	1,120	11/2/13	2,380	12/2/13	2,380
10/3/13	1,210	11/3/13	2,450	12/3/13	2,350
10/4/13	1,230	11/4/13	2,580	12/4/13	2,320
10/5/13	1,140	11/5/13	2,680	12/5/13	2,230
10/6/13	2,200	11/6/13	2,780	12/6/13	2,170
10/7/13	1,570	11/7/13	2,820	12/7/13	2,100
10/8/13	1,620	11/8/13	2,780	12/8/13	2,380
10/9/13	1,650	11/9/13	2,610	12/9/13	1,990
10/10/13	1,600	11/10/13	2,510	12/10/13	1,870
10/11/13	1,520	11/11/13	2,380	12/11/13	1,700
10/12/13	1,470	11/12/13	2,260	12/12/13	2,170
10/13/13	1,420	11/13/13	2,170	12/13/13	1,440
10/14/13	1,370	11/14/13	2,100	12/14/13	1,320
10/15/13	1,300	11/15/13	2,040	12/15/13	1,760
10/16/13	1,230	11/16/13	2,040	12/16/13	1,870
10/17/13	1,230	11/17/13	2,130	12/17/13	2,230
10/18/13	1,120	11/18/13	2,130	12/18/13	2,130
10/19/13	1,090	11/19/13	2,260	12/19/13	1,870
10/20/13	1,120	11/20/13	2,420	12/20/13	2,070
10/21/13	1,070	11/21/13	2,650	12/21/13	2,200
10/22/13	1,140	11/22/13	2,850	12/22/13	2,780
10/23/13	1,160	11/23/13	2,920	12/23/13	3,180
10/24/13	1,120	11/24/13	2,890	12/24/13	4,210
10/25/13	1,120	11/25/13	2,780	12/25/13	4,790
10/26/13	1,030	11/26/13	2,750	12/26/13	5,650
10/27/13	1,070	11/27/13	2,450	12/27/13	4,340
10/28/13	1,030	11/28/13	2,680	12/28/13	4,340
10/29/13	1,010	11/29/13	2,450	12/29/13	3,880
10/30/13	988	11/30/13	2,420	12/30/13	5,210
10/31/13	1,990			12/31/13	3,800
TOTAL	40,008	TOTAL	74,400	TOTAL	85,150
AVG	1,291	AVG	2,480	AVG	2,747
Historical Avg 1941-1976 1836 CFS		Historical Avg 1941-1976 2547 CFS		Historical Avg 1941-1976 3379 CFS	

Note – Kankakee River Flows obtained from USGS at noon local time.

APPENDIX C

Unit Specific Annual Effluent Summaries

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 1

=== MULTIPLE RELEASE POINT MESSAGE ==========
Undiluted and Diluted Flowrate(s) and Concentration(s) cannot be combined.

=== RELEASE DATA ==========
Total Release Duration (minutes)..... 1.879E+06
Total Undiluted Volume Released (gallons)..... NA
Average Undiluted Flowrate (gpm)..... NA
Total Dilution Volume (gallons)..... NA
Average Dilution Flowrate (gpm)..... NA

=== NUCLIDE DATA ==========

Nuclide	uCi
CO-57	7.61E+01
NB-97	1.66E+03
SN-113	3.46E+02
SB-122	8.74E-01
SB-124	4.66E+02
SB-125	2.69E+04
TE-123M	1.34E+01
CR-51	8.42E+03
MN-54	1.15E+03
FE-59	5.10E+02
CO-58	1.02E+04
CO-60	1.73E+04
ZN-65	2.23E+01
ZR-95	7.89E+02
NB-95	1.48E+03
MO-99	4.21E+01
RU-103	4.89E+00
AG-110M	1.93E+02
CS-134	6.65E+00
LA-140	2.73E+00
Gamma	6.95E+04
XE-133	1.42E+01
D&EG	1.42E+01
H-3	2.04E+09
FE-55	9.41E+03
NI-63	1.00E+03

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LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05

=== NUCLIDE DATA ==========

Nuclide	uCi
Beta	2.04E+09
Total	2.04E+09

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 1
Receptor.....: 0 Liquid Receptor

=== PERIOD DOSE BY AGEGROUP, PATHWAY, ORGAN (mrem) ==========

Age/Path	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
APWtr	1.92E-05	1.80E-02	1.80E-02	1.80E-02	1.80E-02	1.82E-02	0.00E+00	1.80E-02
AFWFSp	9.54E-04	8.05E-03	7.47E-03	7.58E-03	7.55E-03	6.23E-02	0.00E+00	7.94E-03
TPWtr	1.83E-05	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.28E-02	0.00E+00	1.27E-02
TFWFSp	9.88E-04	6.32E-03	5.74E-03	5.84E-03	5.83E-03	4.45E-02	0.00E+00	6.18E-03
CPWtr	5.55E-05	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.45E-02	0.00E+00	2.44E-02
CFWFSp	1.28E-03	5.26E-03	4.75E-03	4.83E-03	4.83E-03	1.86E-02	0.00E+00	5.20E-03
IPWtr	4.29E-05	2.40E-02	2.40E-02	2.40E-02	2.40E-02	2.40E-02	0.00E+00	2.40E-02

=== PERIOD DOSE BY AGEGROUP, ORGAN (mrem) ====================================

Agegroup	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
ADULT	9.73E-04	2.61E-02	2.55E-02	2.56E-02	2.56E-02	8.04E-02	0.00E+00	2.60E-02
TEEN	1.01E-03	1.90E-02	1.84E-02	1.86E-02	1.85E-02	5.73E-02	0.00E+00	1.89E-02
CHILD	1.34E-03	2.97E-02	2.92E-02	2.92E-02	2.92E-02	4.31E-02	0.00E+00	2.96E-02
INFANT	4.29E-05	2.40E-02	2.40E-02	2.40E-02	2.40E-02	2.40E-02	0.00E+00	2.40E-02

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 1
Receptor.....: 0 Liquid Receptor

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ===

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	ADULT	GILLI	8.04E-02	31-day	1.50E-01	5.36E+01	2.00E-01	4.02E+01
Qrtr->End	ADULT	GILLI	8.04E-02	Quarter	3.75E+00	2.15E+00	5.00E+00	1.61E+00
Year->End	ADULT	GILLI	8.04E-02	Annual	7.50E+00	1.07E+00	1.00E+01	8.04E-01

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	3.17E+01
CR-51	7.84E-02
MN-54	4.45E-01
FE-55	7.22E-02
FE-59	1.22E-01
CO-58	5.53E-01
CO-60	2.50E+00
NI-63	1.33E-02
ZN-65	2.98E-02
ZR-95	9.20E-03
NB-95	6.45E+01
MO-99	3.53E-04
RU-103	8.88E-05
AG-110M	3.59E-03
CS-134	2.37E-03
LA-140	4.74E-04

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ===

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	2.96E-02	31-day	4.50E-02	6.58E+01	6.00E-02	4.94E+01
Qrtr->End	CHILD	TBODY	2.96E-02	Quarter	1.13E+00	2.63E+00	1.50E+00	1.98E+00
Year->End	CHILD	TBODY	2.96E-02	Annual	2.25E+00	1.32E+00	3.00E+00	9.88E-01

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.85E+01
CR-51	9.42E-04

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
MN-54	8.13E-02
FE-55	1.14E-01
FE-59	4.35E-02
CO-58	1.89E-01
CO-60	9.04E-01
NI-63	1.18E-01
ZN-65	6.24E-02
ZR-95	8.74E-06
NB-95	1.71E-02
MO-99	1.25E-04
RU-103	1.24E-06
AG-110M	2.39E-05
CS-134	6.65E-02
LA-140	5.94E-09

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LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 2

=== MULTIPLE RELEASE POINT MESSAGE ==========
Undiluted and Diluted Flowrate(s) and Concentration(s) cannot be combined.

=== RELEASE DATA ==========
Total Release Duration (minutes)..... 1.879E+06
Total Undiluted Volume Released (gallons)..... NA
Average Undiluted Flowrate (gpm)..... NA
Total Dilution Volume (gallons)..... NA
Average Dilution Flowrate (gpm)..... NA

=== NUCLIDE DATA ==========

Nuclide	uCi
CO-57	7.61E+01
NB-97	1.66E+03
SN-113	3.46E+02
SB-122	8.74E-01
SB-124	4.66E+02
SB-125	2.69E+04
TE-123M	1.34E+01
CR-51	8.42E+03
MN-54	1.15E+03
FE-59	5.10E+02
CO-58	1.02E+04
CO-60	1.73E+04
ZN-65	2.23E+01
ZR-95	7.89E+02
NB-95	1.48E+03
MO-99	4.21E+01
RU-103	4.89E+00
AG-110M	1.93E+02
CS-134	6.65E+00
LA-140	2.73E+00
Gamma	6.95E+04
XE-133	1.42E+01
D&EG	1.42E+01
H-3	2.04E+09
FE-55	9.41E+03
NI-63	1.00E+03

RETDAS v3.6.3 <BRA> VSSI

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05

=== NUCLIDE DATA ==========

Nuclide	uCi
---	---
---	---
Beta	2.04E+09
---	---
Total	2.04E+09

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 2
Receptor.....: 0 Liquid Receptor

=== PERIOD DOSE BY AGEGROUP, PATHWAY, ORGAN (mrem) ==========

Age/Path	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
APWtr	1.92E-05	1.80E-02	1.80E-02	1.80E-02	1.80E-02	1.82E-02	0.00E+00	1.80E-02
AFWFSp	9.54E-04	8.05E-03	7.47E-03	7.58E-03	7.55E-03	6.23E-02	0.00E+00	7.94E-03
TPWtr	1.83E-05	1.27E-02	1.27E-02	1.27E-02	1.27E-02	1.28E-02	0.00E+00	1.27E-02
TFWFSp	9.88E-04	6.32E-03	5.74E-03	5.84E-03	5.83E-03	4.45E-02	0.00E+00	6.18E-03
CPWtr	5.55E-05	2.44E-02	2.44E-02	2.44E-02	2.44E-02	2.45E-02	0.00E+00	2.44E-02
CFWFSp	1.28E-03	5.26E-03	4.75E-03	4.83E-03	4.83E-03	1.86E-02	0.00E+00	5.20E-03
IPWtr	4.29E-05	2.40E-02	2.40E-02	2.40E-02	2.40E-02	2.40E-02	0.00E+00	2.40E-02

=== PERIOD DOSE BY AGEGROUP, ORGAN (mrem) ==========

Agegroup	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
ADULT	9.73E-04	2.61E-02	2.55E-02	2.56E-02	2.56E-02	8.04E-02	0.00E+00	2.60E-02
TEEN	1.01E-03	1.90E-02	1.84E-02	1.86E-02	1.85E-02	5.73E-02	0.00E+00	1.89E-02
CHILD	1.34E-03	2.97E-02	2.92E-02	2.92E-02	2.92E-02	4.31E-02	0.00E+00	2.96E-02
INFANT	4.29E-05	2.40E-02	2.40E-02	2.40E-02	2.40E-02	2.40E-02	0.00E+00	2.40E-02

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Unit.....: 2
Receptor.....: 0 Liquid Receptor

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ===

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	ADULT	GILLI	8.04E-02	31-day	1.50E-01	5.36E+01	2.00E-01	4.02E+01
Qrtr->End	ADULT	GILLI	8.04E-02	Quarter	3.75E+00	2.15E+00	5.00E+00	1.61E+00
Year->End	ADULT	GILLI	8.04E-02	Annual	7.50E+00	1.07E+00	1.00E+01	8.04E-01

Critical Pathway.....: 1 Fresh Water Fish - Sport (FFSP)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	3.17E+01
CR-51	7.84E-02
MN-54	4.45E-01
FE-55	7.22E-02
FE-59	1.22E-01
CO-58	5.53E-01
CO-60	2.50E+00
NI-63	1.33E-02
ZN-65	2.98E-02
ZR-95	9.20E-03
NB-95	6.45E+01
MO-99	3.53E-04
RU-103	8.88E-05
AG-110M	3.59E-03
CS-134	2.37E-03
LA-140	4.74E-04

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ===

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	2.96E-02	31-day	4.50E-02	6.58E+01	6.00E-02	4.94E+01
Qrtr->End	CHILD	TBODY	2.96E-02	Quarter	1.13E+00	2.63E+00	1.50E+00	1.98E+00
Year->End	CHILD	TBODY	2.96E-02	Annual	2.25E+00	1.32E+00	3.00E+00	9.88E-01

Critical Pathway.....: 0 Potable Water (PWtr)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	9.85E+01
CR-51	9.42E-04

LIQUID RELEASE AND DOSE SUMMARY REPORT
------ (PERIOD BASIS - BY UNIT) ------

Release ID.....: 1 All Liquid Release Types
Period Start Date.....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (mins): 5.256E+05
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
MN-54	8.13E-02
FE-55	1.14E-01
FE-59	4.35E-02
CO-58	1.89E-01
CO-60	9.04E-01
NI-63	1.18E-01
ZN-65	6.24E-02
ZR-95	8.74E-06
NB-95	1.71E-02
MO-99	1.25E-04
RU-103	1.24E-06
AG-110M	2.39E-05
CS-134	6.65E-02
LA-140	5.94E-09

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1

=== RELEASE DATA ==========

Total Release Duration (minutes)	5.547E+05
Total Release Volume (cf)	7.910E+10
Average Release Flowrate (cfm)	1.426E+05
Average Period Flowrate (cfm)	1.505E+05

=== NUCLIDE DATA ==========

Nuclide	uCi	Average uCi/cc	ECrcent Ratio	EC
AR-41	1.85E+04	8.28E-12	8.28E-04	1.00E-08
KR-85M	2.95E+03	1.32E-12	1.32E-05	1.00E-07
KR-87	0.00E+00	0.00E+00	0.00E+00	2.00E-08
XE-133M	6.18E+03	2.76E-12	4.60E-06	6.00E-07
KR-89	0.00E+00	0.00E+00	0.00E+00	1.00E-09
KR-88	8.32E+01	3.71E-14	4.13E-06	9.00E-09
XE-131M	0.00E+00	0.00E+00	0.00E+00	2.00E-06
XE-135	7.76E+04	3.46E-11	4.95E-04	7.00E-08
XE-133	5.22E+05	2.33E-10	4.66E-04	5.00E-07
F&AG	6.27E+05	2.80E-10	1.81E-03	
I-131	1.50E+01	6.69E-15	3.35E-05	2.00E-10
I-132	5.17E+02	2.31E-13	1.15E-05	2.00E-08
I-133	7.72E+00	3.45E-15	3.45E-06	1.00E-09
I-135	3.22E-02	1.44E-17	2.39E-09	6.00E-09
Iodine	5.39E+02	2.41E-13	4.85E-05	
C-14	4.18E+06	1.87E-09	6.22E-01	3.00E-09
Other	4.18E+06	1.87E-09	6.22E-01	
H-3	1.40E+08	6.23E-08	6.23E-01	1.00E-07
H-3	1.40E+08	6.23E-08	6.23E-01	
Total	1.44E+08	6.45E-08	1.25E+00	

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 610
Compass Point.....: 0.0

=== PERIOD DOSE BY AGEGROUP, PATHWAY, ORGAN (mrem) ==========

Age/Path	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
AGPD	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	0.00E+00	4.79E-07
AINHL	2.80E-03	4.22E-03	4.23E-03	4.22E-03	4.22E-03	4.22E-03	0.00E+00	4.22E-03
AVEG	1.38E-01	3.42E-02	3.45E-02	3.42E-02	3.42E-02	3.42E-02	0.00E+00	3.42E-02
AGMILK	4.14E-03	5.40E-03	6.70E-03	5.40E-03	5.39E-03	5.39E-03	0.00E+00	5.39E-03
ACMEAT	5.13E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	0.00E+00	1.12E-02
ACMILK	5.59E-02	1.34E-02	1.45E-02	1.34E-02	1.34E-02	1.34E-02	0.00E+00	1.34E-02
TGPD	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	0.00E+00	4.79E-07
TINHL	4.00E-03	4.47E-03	4.49E-03	4.47E-03	4.47E-03	4.47E-03	0.00E+00	4.47E-03
TVEG	2.23E-01	5.24E-02	5.26E-02	5.24E-02	5.24E-02	5.24E-02	0.00E+00	5.24E-02
TGMILK	7.49E-03	7.44E-03	9.49E-03	7.44E-03	7.43E-03	7.43E-03	0.00E+00	7.43E-03
TCMEAT	4.33E-02	9.22E-03	9.25E-03	9.22E-03	9.22E-03	9.22E-03	0.00E+00	9.22E-03
TCMILK	1.03E-01	2.35E-02	2.53E-02	2.35E-02	2.35E-02	2.35E-02	0.00E+00	2.35E-02
CGPD	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	0.00E+00	4.79E-07
CINHL	5.53E-03	4.33E-03	4.34E-03	4.33E-03	4.33E-03	4.33E-03	0.00E+00	4.33E-03
CVEG	5.39E-01	1.20E-01	1.20E-01	1.20E-01	1.20E-01	1.20E-01	0.00E+00	1.20E-01
CGMILK	2.40E-01	6.01E-02	6.41E-02	6.01E-02	6.00E-02	6.00E-02	0.00E+00	6.01E-02
CCMEAT	8.14E-02	1.70E-02	1.70E-02	1.70E-02	1.70E-02	1.70E-02	0.00E+00	1.70E-02
CCMILK	2.54E-01	5.53E-02	5.87E-02	5.53E-02	5.53E-02	5.53E-02	0.00E+00	5.53E-02
IGPD	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	4.79E-07	0.00E+00	4.79E-07
IINHL	4.08E-03	2.71E-03	2.72E-03	2.71E-03	2.71E-03	2.71E-03	0.00E+00	2.71E-03
IGMILK	4.97E-01	1.20E-01	1.30E-01	1.20E-01	1.20E-01	1.20E-01	0.00E+00	1.20E-01
ICMILK	4.97E-01	1.13E-01	1.21E-01	1.13E-01	1.13E-01	1.13E-01	0.00E+00	1.13E-01

=== PERIOD DOSE BY AGEGROUP, ORGAN (mrem) ==========

Agegroup	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
ADULT	2.52E-01	6.84E-02	7.11E-02	6.84E-02	6.84E-02	6.84E-02	0.00E+00	6.84E-02
TEEN	3.81E-01	9.70E-02	1.01E-01	9.71E-02	9.70E-02	9.70E-02	0.00E+00	9.70E-02
CHILD	1.12E+00	2.56E-01	2.64E-01	2.56E-01	2.56E-01	2.56E-01	0.00E+00	2.56E-01
INFANT	9.99E-01	2.36E-01	2.54E-01	2.36E-01	2.36E-01	2.36E-01	0.00E+00	2.36E-01

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 610
Compass Point.....: 0.0

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	BONE	1.12E+00	31-day	2.25E-01	4.98E+02	3.00E-01	3.73E+02
Qrtr->End	CHILD	BONE	1.12E+00	Quarter	5.63E+00	1.99E+01	7.50E+00	1.49E+01
Year->End	CHILD	BONE	1.12E+00	Annual	1.13E+01	9.95E+00	1.50E+01	7.47E+00

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	0.00E+00
C-14	1.00E+02
I-131	2.13E-03
I-132	3.35E-05
I-133	1.62E-05
I-135	4.57E-09

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	2.56E-01	31-day	1.50E-01	1.71E+02	2.00E-01	1.28E+02
Qrtr->End	CHILD	TBODY	2.56E-01	Quarter	5.25E+00	4.88E+00	7.50E+00	3.42E+00
Year->End	CHILD	TBODY	2.56E-01	Annual	1.05E+01	2.44E+00	1.50E+01	1.71E+00

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	1.16E+01
C-14	8.86E+01
I-131	5.34E-03
I-132	1.45E-04
I-133	3.51E-05
I-135	1.94E-08

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 1
Receptor.....: 4 Composite Crit. Receptor - NG
Distance (meters)....: 610
Compass Point.....: 0.0

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Gamma) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	1.16E-05	31-day	1.50E-01	7.71E-03	2.00E-01	5.78E-03
Qrtr->End	Gamma	1.16E-05	Quarter	3.75E+00	3.08E-04	5.00E+00	2.31E-04
Year->End	Gamma	1.16E-05	Annual	7.50E+00	1.54E-04	1.00E+01	1.16E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	3.36E+01
KR-85M	7.08E-01
KR-87	0.00E+00
XE-133M	3.94E-01
KR-89	0.00E+00
KR-88	2.47E-01
XE-131M	0.00E+00
XE-135	2.91E+01
XE-133	3.59E+01

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Beta)) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Beta	3.00E-05	31-day	3.00E-01	9.99E-03	4.00E-01	7.50E-03
Qrtr->End	Beta	3.00E-05	Quarter	7.50E+00	4.00E-04	1.00E+01	3.00E-04
Year->End	Beta	3.00E-05	Annual	1.50E+01	2.00E-04	2.00E+01	1.50E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	7.47E+00
KR-85M	7.13E-01
KR-87	0.00E+00
XE-133M	1.12E+00
KR-89	0.00E+00
KR-88	2.99E-02
XE-131M	0.00E+00
XE-135	2.34E+01
XE-133	6.72E+01

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2

=== RELEASE DATA ==========

Total Release Duration (minutes)	5.476E+05
Total Release Volume (cf)	6.989E+10
Average Release Flowrate (cfm)	1.276E+05
Average Period Flowrate (cfm)	1.330E+05

=== NUCLIDE DATA ==========

Nuclide	uCi	Average uCi/cc	ECrcent Ratio	EC
AR-41	1.85E+04	9.37E-12	9.37E-04	1.00E-08
KR-85M	2.95E+03	1.49E-12	1.49E-05	1.00E-07
KR-85	0.00E+00	0.00E+00	0.00E+00	7.00E-07
KR-87	0.00E+00	0.00E+00	0.00E+00	2.00E-08
XE-133M	6.18E+03	3.12E-12	5.20E-06	6.00E-07
KR-89	0.00E+00	0.00E+00	0.00E+00	1.00E-09
KR-88	8.32E+01	4.20E-14	4.67E-06	9.00E-09
XE-131M	0.00E+00	0.00E+00	0.00E+00	2.00E-06
XE-135	7.76E+04	3.92E-11	5.60E-04	7.00E-08
XE-133	5.22E+05	2.64E-10	5.27E-04	5.00E-07
F&AG	6.27E+05	3.17E-10	2.05E-03	
I-131	6.50E+00	3.29E-15	1.64E-05	2.00E-10
I-132	3.52E+02	1.78E-13	8.89E-06	2.00E-08
I-133	3.74E-02	1.89E-17	1.89E-08	1.00E-09
Iodine	3.59E+02	1.81E-13	2.53E-05	
C-14	4.30E+06	2.17E-09	7.25E-01	3.00E-09
Other	4.30E+06	2.17E-09	7.25E-01	
H-3	2.65E+08	1.34E-07	1.34E+00	1.00E-07
H-3	2.65E+08	1.34E-07	1.34E+00	
CS-138	0.00E+00	0.00E+00	0.00E+00	8.00E-08
P<8	0.00E+00	0.00E+00	0.00E+00	

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2

=== NUCLIDE DATA ===

Nuclide	uCi	Average uCi/cc	ECrcent Ratio	EC
NB-95M	6.37E+00	3.22E-15	1.07E-06	3.00E-09
CO-60	1.15E+02	5.83E-14	1.17E-03	5.00E-11
CE-141	5.01E+01	2.53E-14	3.16E-05	8.00E-10
P>=8	1.72E+02	8.68E-14	1.20E-03	
Total	2.69E+08	1.36E-07	2.06E+00	

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GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 610
Compass Point.....: 0.0

=== PERIOD DOSE BY AGEGROUP, PATHWAY, ORGAN (mrem) ==========

Age/Path	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
AGPD	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	0.00E+00	1.47E-03
AINHL	2.88E-03	7.53E-03	7.54E-03	7.53E-03	7.56E-03	7.54E-03	0.00E+00	7.53E-03
AVEG	1.42E-01	4.09E-02	4.10E-02	4.09E-02	4.09E-02	4.11E-02	0.00E+00	4.09E-02
AGMILK	4.26E-03	9.50E-03	1.01E-02	9.50E-03	9.50E-03	9.50E-03	0.00E+00	9.50E-03
ACMEAT	5.27E-02	1.24E-02	1.24E-02	1.23E-02	1.23E-02	1.24E-02	0.00E+00	1.24E-02
ACMILK	5.75E-02	1.57E-02	1.62E-02	1.57E-02	1.57E-02	1.58E-02	0.00E+00	1.57E-02
TGPD	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	0.00E+00	1.47E-03
TINHL	4.12E-03	7.83E-03	7.83E-03	7.83E-03	7.87E-03	7.83E-03	0.00E+00	7.83E-03
TVEG	2.30E-01	6.04E-02	6.05E-02	6.04E-02	6.04E-02	6.06E-02	0.00E+00	6.05E-02
TGMILK	7.70E-03	1.28E-02	1.37E-02	1.28E-02	1.28E-02	1.28E-02	0.00E+00	1.28E-02
TCMEAT	4.45E-02	9.98E-03	9.98E-03	9.97E-03	9.97E-03	1.00E-02	0.00E+00	9.98E-03
TCMILK	1.06E-01	2.67E-02	2.75E-02	2.67E-02	2.67E-02	2.68E-02	0.00E+00	2.67E-02
CGPD	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	0.00E+00	1.47E-03
CINHL	5.68E-03	7.30E-03	7.30E-03	7.30E-03	7.33E-03	7.30E-03	0.00E+00	7.30E-03
CVEG	5.54E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	1.33E-01	0.00E+00	1.33E-01
CGMILK	2.47E-01	6.99E-02	7.17E-02	6.99E-02	6.99E-02	6.99E-02	0.00E+00	6.99E-02
CCMEAT	8.38E-02	1.81E-02	1.81E-02	1.81E-02	1.81E-02	1.81E-02	0.00E+00	1.81E-02
CCMILK	2.61E-01	6.08E-02	6.23E-02	6.08E-02	6.08E-02	6.08E-02	0.00E+00	6.08E-02
IGPD	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03	0.00E+00	1.47E-03
IINHL	4.20E-03	4.43E-03	4.43E-03	4.43E-03	4.45E-03	4.43E-03	0.00E+00	4.43E-03
IGMILK	5.11E-01	1.36E-01	1.40E-01	1.36E-01	1.36E-01	1.36E-01	0.00E+00	1.36E-01
ICMILK	5.11E-01	1.22E-01	1.26E-01	1.22E-01	1.22E-01	1.22E-01	0.00E+00	1.22E-01

=== PERIOD DOSE BY AGEGROUP, ORGAN (mrem) ==========

Agegroup	Bone	Liver	Thyroid	Kidney	Lung	GI-Lli	Skin	TB
ADULT	2.61E-01	8.75E-02	8.87E-02	8.75E-02	8.75E-02	8.78E-02	0.00E+00	8.75E-02
TEEN	3.93E-01	1.19E-01	1.21E-01	1.19E-01	1.19E-01	1.19E-01	0.00E+00	1.19E-01
CHILD	1.15E+00	2.91E-01	2.94E-01	2.91E-01	2.91E-01	2.91E-01	0.00E+00	2.91E-01
INFANT	1.03E+00	2.64E-01	2.72E-01	2.64E-01	2.64E-01	2.64E-01	0.00E+00	2.64E-01

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Receptor.....: 5 Composite Crit. Receptor - IP
Distance (meters)....: 610
Compass Point.....: 0.0

=== MAXIMUM PERIOD DOSE TO LIMIT (Any Organ) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	BONE	1.15E+00	31-day	2.25E-01	5.13E+02	3.00E-01	3.84E+02
Qrtr->End	CHILD	BONE	1.15E+00	Quarter	5.63E+00	2.05E+01	7.50E+00	1.54E+01
Year->End	CHILD	BONE	1.15E+00	Annual	1.13E+01	1.03E+01	1.50E+01	7.69E+00

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	0.00E+00
C-14	9.97E+01
CO-60	1.27E-01
I-131	8.93E-04
I-132	2.22E-05
I-133	7.61E-08
CS-138	0.00E+00
CE-141	3.88E-05

=== MAXIMUM PERIOD DOSE TO LIMIT (Tot Body)) ==========

Dose Period	Age Group	Organ	Dose (mrem)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	CHILD	TBODY	2.91E-01	31-day	1.50E-01	1.94E+02	2.00E-01	1.45E+02
Qrtr->End	CHILD	TBODY	2.91E-01	Quarter	5.25E+00	5.54E+00	7.50E+00	3.88E+00
Year->End	CHILD	TBODY	2.91E-01	Annual	1.05E+01	2.77E+00	1.50E+01	1.94E+00

Critical Pathway.....: 2 Vegetation (VEG)
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
H-3	1.94E+01
C-14	8.01E+01
CO-60	5.36E-01
I-131	2.03E-03
I-132	8.70E-05
I-133	1.50E-07
CS-138	0.00E+00

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
CE-141	1.25E-04

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Receptor.....: 4 Composite Crit. Receptor - NG
Distance (meters)....: 610
Compass Point.....: 0.0

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Gamma) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Gamma	1.16E-05	31-day	1.50E-01	7.71E-03	2.00E-01	5.78E-03
Qrtr->End	Gamma	1.16E-05	Quarter	3.75E+00	3.08E-04	5.00E+00	2.31E-04
Year->End	Gamma	1.16E-05	Annual	7.50E+00	1.54E-04	1.00E+01	1.16E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	3.36E+01
KR-85M	7.08E-01
KR-85	0.00E+00
KR-87	0.00E+00
XE-133M	3.94E-01
KR-89	0.00E+00
KR-88	2.47E-01
XE-131M	0.00E+00
XE-135	2.91E+01
XE-133	3.59E+01

=== MAXIMUM PERIOD NG DOSE TO LIMIT (Beta)) ==========

Dose Period	Dose Type	Dose (mrad)	Limit Period	Admin Limit	Admin % of Limit	T.Spec Limit	T.Spec % of Limit
Strt->End	Beta	3.00E-05	31-day	3.00E-01	9.99E-03	4.00E-01	7.50E-03
Qrtr->End	Beta	3.00E-05	Quarter	7.50E+00	4.00E-04	1.00E+01	3.00E-04
Year->End	Beta	3.00E-05	Annual	1.50E+01	2.00E-04	2.00E+01	1.50E-04

Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
AR-41	7.47E+00
KR-85M	7.13E-01
KR-85	0.00E+00
KR-87	0.00E+00
XE-133M	1.12E+00
KR-89	0.00E+00
KR-88	2.99E-02
XE-131M	0.00E+00
XE-135	2.34E+01

GASEOUS RELEASE AND DOSE SUMMARY REPORT - BY UNIT
(Composite Critical Receptor - Limited Analysis)

Release ID.....: 1 All Gas Release Types
Period Start Date....: 01/01/2013 00:00
Period End Date.....: 01/01/2014 00:00
Period Duration (min): 5.256E+05
Coefficient Type.....: Historical
Unit.....: 2
Major Contributors.....: 0.0 % or greater to total

Nuclide	Percentage
XE-133	6.72E+01

ATTACHMENT 1

ERRATA CORRECTIONS FROM PREVIOUS REPORTS

There have been no errors identified requiring entries as errata in the 2013 Radioactive Effluent Release Report.

ATTACHMENT 2

Process Control Program for Radioactive Wastes

Braidwood Station's Process Control Program (PCP) is managed via procedure RW-AA-100, "Process Control Program for Radioactive Wastes." The purpose of the PCP is threefold;

1) Establish the process and boundary conditions for the preparation of specific procedures for processing, sampling, analysis, packaging, storage, and shipment of solid radwaste in accordance with local, state, and federal requirements.

2) Establish parameters which will provide reasonable assurance that all Low Level Radioactive Wastes (LLRW), processed by the in-plant waste process systems on-site OR by on-site vendor supplied waste processing systems, meet the acceptance criteria to a Licensed Burial Facility, as required by 10CFR Part 20, 10CFR Part 61, 10CFR Part 71, 49CFR Parts 171-172, "Technical Position on Waste Form (Revision 1)" [1/91], "Low-Level Waste Licensing Branch Technical Position on Radioactive Waste Classification" [5/83], and the Station Technical Specifications, as applicable.

3) Provide reasonable assurance that waste placed in "on-site storage" meets the requirements as addressed within the Safety Analysis Reports for the low level radwaste storage facilities for dry and/or processed wet waste.

There were no revisions to RW-AA-100 in 2013.

While not directly controlled by RW-AA-100, liquid radwaste processing is discussed on a minimal basis. UFSAR changes DRP 12-015 and DRP 13-064 discuss inclusion of an onsite 500,000 gallon tank, the 0WX27T, to store processed liquid radwaste and installation of a hose to connect the tank to the liquid radwaste process piping. When Radwaste Monitor Tank tritium concentrations exceed 1.00E+00 uCi/cc, the water is processed through a series of demineralizers and reverse osmosis membranes to attain Reactor Coolant System (RCS) purity; however, the water is stored in the 0WX27T versus transfer to the Primary Water Storage Tanks (PWST). The storage of water with concentrations above 1.00E+00 uCi/cc provides the station the flexibility to release the water, at their discretion, via normal liquid release tank pathways and help drive down the RCS tritium concentration by not recycling back to the PWSTs. The hose that was installed via EC 396325 and DRP 13-064 in 2013 has allowed the station to begin releasing the 0WX27T water per the established radwaste processing and release procedures. Releases from the 0WX27T are in progress and in accordance with 10CFR20 Appendix B, Table 2 effluent release criteria.

ATTACHMENT 3

OFFSITE DOSE CALCULATION MANUAL (ODCM)

See included CD