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April 29, 2015

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Subject: Peach Bottom Atomic Power Station, Units 2 and 3

Independent Spent Fuel Storage Installation (ISFSI)
Facility Operating License DPR-12, DPR-44 and DPR-56
NRC Docket 50-171, 50-277 and 50-278 and ISFSI Docket 72-29

Annual Radioactive Effluent Release Report 57
January 1, 2014 through December 31, 2014

Enclosed is the Annual Radioactive Effluent Release Report 57, January 1, 2014 through December 31, 2014 for Peach Bottom Atomic Power Station, Units 2 and 3.

This report is being submitted in compliance with 10 CFR 50.36a(2) and the Technical Specifications of Operating Licenses DPR-44 and DPR-56 and to fulfill the requirements of Offsite Dose Calculation Manual Specification (ODCMS) 3.10.2. Additionally, this report is submitted to satisfy the annual effluent reporting requirements for the ISFSI required by the ODCM.

There were no revisions to the ODCM in the 2014 reporting period.

There are no commitments contained in this letter.

If you have any questions or require additional information, please do not hesitate to contact Eric Schwarz at 717-456-3056.

Sincerely,

Patrick Navin, Plant Manager
Peach Bottom Atomic Power Station

PDN/FML/GRS/EAS/eas

Enclosure (1)

cc: USNRC Region I, Regional Administrator (William Dean)
USNRC Senior Resident Inspector, PBAPS (Sam Hansell)
USNRC Region I Inspector, (Christopher Graves)

CCN 15-45

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Annual Radioactive Effluent Release Report 57
January 1, 2014 through December 31, 2014

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PEACH BOTTOM ATOMIC POWER STATION
Unit Numbers 2 and 3
Docket Numbers 50-277 and 50-278
Unit Number 1
Docket Number 50-171
PBAPS Independent Spent Fuel Storage Installation
Docket Number 72-29

RADIOACTIVE EFFLUENT RELEASE REPORT

NO. 57

JANUARY 1, 2014 THROUGH DECEMBER 31, 2014

Submitted to
The United States Nuclear Regulatory Commission
Pursuant to
Facility Operating Licenses DPR-44 and DPR-56

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Technical Concurrence (for accuracy of information):

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Chemistry, Environmental and Radioactive Waste Manager Date

Introduction

In accordance with the Reporting Requirements of Technical Specification 5.6.3 applicable during the reporting period, this report summarizes the Effluent Release Data for Peach Bottom Atomic Power Station (PBAPS) Units 2 and 3 for the period January 1, 2014 through December 31, 2014. The notations E+ and E- are used to denote positive and negative exponents to the base 10, respectively.

The release of radioactive materials during the reporting period was within the Offsite Dose Calculation Manual Specification (ODCMS) limits.

There were two (2) unplanned releases of liquid radioactive material. One release was from Residual Heat Removal (RHR) heat exchanger and the other is from groundwater tritium contamination ('tritium plume'). These releases were far below regulatory limits.

There was one (1) unplanned release of gaseous radioactive material during the Unit 2 20th Refueling Outage on October 24, 2014. This was due to thermal convective currents in the Reactor Building while hatches were open to support Unit 2 outage work activities. Details of this release are included in this report. This release was far below regulatory limits.

The maximum calculated organ dose (bone) from iodines (I-131, I-133 and I-135), tritium (H-3), carbon-14 (C-14) and particulates to any individual due to gaseous effluents was 5.49E-01 mrem, which was approximately 1.83E+00% of the annual limit. The maximum calculated air dose in the UNRESTRICTED Area due to noble gas effluents was 2.33E-01 mrad (gamma) and 1.60E-01 mrad (beta), which was 1.16E+00% and 3.99E-01%, respectively, of the annual limits.

There were no gaseous or liquid radioactive releases from the decommissioned Unit 1 in SAFSTOR[1] status. All radioactive water that collected in spaces inside was removed and was transferred from the Unit 1 Radioactive Material License to the Unit 2 and 3 Operating License to be processed through the normal radioactive waste processing systems.

There were no gaseous or liquid radioactive releases from the Independent Spent Fuel Storage Installation, NRC Docket No. 72-29 (ISFSI).

There were no changes made to RW-AA-100 "Process Control Program for Radioactive Waste" in 2014.

[1] SAFSTOR is "[a] method of decommissioning in which a nuclear facility is placed and maintained in a condition that allows the facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use", http://www.nrc.gov/reading-rm/basic-ref/glossary/safstor.html, accessed 7 APR 2014.

There were no changes made to the ODCM during the 2014 reporting period.

Exelon Nuclear common procedures, which provide consistent expectations and standards for Radioactive Effluents Controls Program (RECP), were used to generate this report. They are:

- CY-AA-170-000, Radioactive Effluent and Environmental Monitoring Program
- CY-AA-170-100, Radiological Environmental Monitoring Program
- CY-AA-170-200, Radioactive Effluent Controls Program
- CY-AA-170-300, Offsite Dose Calculation Manual Administration
- CY-AA-170-2000, Annual Radioactive Effluent Release Report
- CY-AA-170-2100, Estimated Errors of Effluent Measurement
- CY-AA-170-3100, Offsite Dose Calculation Manual Revisions

Attachment 1: Supplemental Information

Regulatory Limits

Table 1. Noble Gas Dose Rate and Dose Limits

Maximum Value	Units	Limit Classification	Specification
500	mrem/ y	annual total body dose rate	ODCM Specification 3.8.C.1.a
3000	mrem/ y	annual skin dose rate	ODCM Specification 3.8.C.1.a
10	mrad	gamma radiation air dose per quarter	ODCM Specification 3.8.C.2.a
20	mrad	beta radiation in air dose per quarter	ODCM Specification 3.8.C.2.b
20	mrad	gamma radiation in air dose per year	ODCM Specification 3.8.C.2.c
40	mrad	beta radiation in air dose per year	ODCM Specification 3.8.C.2.d

Table 2. Iodines, Tritium and Particulates (with half-lives > 8 days) Dose Rate and Dose Limits

Maximum Value	Units	Limit Classification	Specification
1500	mrem/ y	annual dose rate limit to any organ	ODCM Specification 3.8.C.1.b
15	mrem	annual dose limit to any organ per quarter	ODCM Specification 3.8.C.3.a
30	mrem	dose limit to any organ per year	ODCM Specification 3.8.C.3.b

Table 3. Liquid Effluent Activity Concentration and Dose Rate Limits

Maximum Value	Units	Limit Classification	Specification
≤ 10 times 10 CFR 20, Appendix B, Table 2, Column 2	µCi/ mL	Activity Concentration in all liquid releases	ODCM Specification 3.8.B.1.a
2E-04	µCi/ mL	total activity concentration for all dissolved and entrained noble gases	ODCM Specification 3.8.B.1.b
3.0	mrem	total body dose limit per quarter	ODCM Specification 3.8.B.2.a
10	mrem	total body dose limit per year	ODCM Specification 3.8.B.2.a
6.0	mrem	dose limit per quarter to any organ	ODCM Specification 3.8.B.2.b
20	mrem	dose limit per year to any organ	ODCM Specification 3.8.B.2.b

Maximum Permissible Concentrations

Gaseous dose rates, rather than effluent concentrations, are used to calculate permissible release rates for gaseous releases. The maximum permissible dose rates for gaseous releases are defined in ODCMS 3.8.C.1.a and 3.8.C.1.b.

The Effluent Concentrations Limits (ECL) specified in 10 CFR 20, Appendix B, Table 2, Column 2 and multiplied by 10, for identified nuclides, are used to calculate permissible release rates and concentrations for liquid release per ODCMS 3.8.B.1.

The total activity concentration for all dissolved or entrained noble gases is limited to ≤ 2E-04 µCi/ mL (ODCMS 3.8.B.1.b).

Average Energy

The PBAPS ODCM limits the dose-equivalent rates due to the release of noble gases to less than or equal to 500 mrem/ year to the total body and less than or equal to 3000 mrem/ year to the skin. Therefore, the average beta and gamma energies of the radionuclide mixture in releases of fission and activation gases as described in Regulatory Guide 1.21, Revision 1, "Measuring, Evaluation, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," are not applicable to PBAPS.

Measures and Approximations of Total Radioactivity

Fission and Activation Gases

The method used for gamma isotopic analysis is the Canberra Genie™ System with a gas Marinelli beaker. Grab samples are taken and analyzed weekly to determine the isotopic mixture of noble gas activity released for the week. Airborne effluent gaseous activity was continuously monitored and recorded in accordance with ODCMS Table 4.8.C.1. The data from the noble gas radiation monitor were analyzed to report noble gas effluent activities. When no activity was identified in the grab isotopic analysis, the entire release must be assumed to be the radionuclide most-limiting dose factors for the release pathway (i.e. krypton-88 (Kr-88) for all ground-level releases, Kr-88 for elevated gamma dose and Kr-87 for elevated beta dose; see ODCM IV.B and NUREG-0133[2]).

The activity released is listed as "unidentified" in the Attachment 2 Tables. If activity was found in the grab isotopic analysis, the isotopic mixture for the Noble Gas Monitor was determined from that isotopic mixture.

Iodines

The method used is the Canberra Genie™ System with a charcoal cartridge. Iodine activity was continuously sampled and analyzed in accordance with ODCMS Table 4.8.C.1.

Particulates

The method used is the Canberra Genie™ System with a particulate filter (47 mm diameter). Particulate activity was continuously sampled and analyzed in accordance with ODCM Table 4.8.C.1.

Composite particulate air samples were submitted to an offsite vendor laboratory for analyses of strontium-89 (Sr-89), strontium-90 (Sr-90) and gross alpha.

Carbon-14

The amount of C-14 released was estimated using the guidance from the Electric Power Research Institute (EPRI) Technical Report 1021106, "Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents". The C-14 was released primarily through the stack (9.7E+01%) with a small amount (3.00E+00%) through the plant vents. The C-14 in liquid effluents is not a significant dose pathway, as determined from studies. The resulting annual dose to the maximum conservative receptor is 5.49E-01 mrem, with the limiting receptor as the child bone.

Liquid Effluents

Gamma isotopic activity concentrations are determined on each batch of liquid effluent prior to release using the Canberra Genie™ System in accordance with ODCMS Table 4.8.B.1. The total

[2] http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr0133/sr0133.pdf, accessed 9 April 2014.

activity of a released batch is determined by multiplying each nuclide's concentration by the total volume discharged.

Composite liquid radwaste samples are analyzed for tritium on-site and submitted to an offsite vendor laboratory for analyses of iron-55 (Fe-55), phosphorus-32 (P-32), Sr-89, Sr-90 and gross alpha.

Decommissioned Unit 1 Liquid Radioactive Waste Processing
In 2014, no water from Unit 1 was processed for release.

Estimate of Total Error Present
CY-AA-170-2100, "Estimated Errors of Effluent Measurements", provides the methodology to obtain an overall estimate of the error associated with radioactive effluents.

Batch Releases

Table 4. Quarterly Liquid Batch Release Statistics

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Number of Batch Releases	9	3	5	13
Total Time for Batch Releases (minutes)	9.49E+02	4.55E+02	5.60E+02	2.78E+03
Maximum time period for batch release (minutes)	1.90E+02	2.55E+02	2.60E+02	2.70E+02
Average time period for batch release (minutes)	1.05E+02	1.52E+02	1.12E+02	2.14E+02
Minimum time period for batch release (minutes)	6.00E+01	7.50E+01	4.50E+01	1.08E+02
Average Stream Flow (ft^3/s),[3] [4]	5.12E+04	6.50E+04	1.43E+04	2.05E+04
Dilution volume (liters)	2.92E+09	2.07E+09	2.54E+09	7.33E+09

Table 5. Quarterly Gaseous Batch Release Statistics

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Number of batch releases:	0	0	0	1
Total Time for batch releases (minutes)	N/A	N/A	N/A	495
Maximum time period for batch release (minutes):	N/A	N/A	N/A	495
Average time period for batch release (minutes)	N/A	N/A	N/A	495
Minimum time period for batch release (minutes)	N/A	N/A	N/A	495

[3] Average Stream Flow is not used for dose calculation.
[4] USGS National Water Information System, Site Name: "Susquehanna River at Marietta, PA", Site Number: 01576000. Data accessed 2 March 2015.

Average Stream Flow

The river flow is not used for dose calculations. The actual flow rate of Circulation Water (the water that is circulated within the plant for cooling) is determined for each liquid effluent release because this Circulation Water provides dilution and therefore reduces the projected dose.

Abnormal or Unplanned Releases

'Abnormal' releases are those releases that are not defined as 'normal' releases in the Licensee's ODCM. While attempts are made to ensure radioactivity is not released offsite without processing, monitoring of systems with a potential for release is continuously performed. Source terms used for dose calculations utilize direct sampling and the maximum concentrations of nuclides to ensure that the most conservative and bounding estimates are used. Methodologies used calculate conservative dose uses conservative mathematical models to describe intake and exposure pathways. Therefore, reported doses for these abnormal releases are calculated conservatively.

Liquid Releases

Groundwater Tritium Plume

During 2014, during the sampling and analysis of the Radiological Ground Water Protection Program (RGPP), tritium was measured at several locations around the site. The ground water that has detectable tritium has been determined to flow into the Plant intake and eventually flow into the normal Discharge Canal. Details of this program can be found in the Peach Bottom AREOR as an appendix. No other nuclides were detected from monitoring wells.

Analysis of Release

It was assumed from the maximum flow rates measured[5] that ground water flowed to the discharge canal at a steady rate of 317 gpm, carrying with it some of the tritium underneath the plant. The conservative maximum dose for the entire year from this continuous release is calculated to be 3.91E-05 mrem (whole-body) and 3.91E-05 mrem (any organ, except bone[6] which is 0.00E+00 mrem)[7]. This dose contribution projection is well below the limit specified in the ODCM.

The tritium concentration decreased over the period demonstrating that the RGPP at Peach Bottom is effective at locating and correcting leaks. Surveillance of this program is ongoing.

[5] "Estimated Mass Flux Of Tritiated Groundwater To The Conowingo Reservoir And Rock Run Creek, Peach Bottom Atomic Power Station, Delta, Pennsylvania", November 2011, Conestoga-Rovers & Associates.
[6] Tritium dose factor for bone is 0.00E+00; therefore no hypothetical dose is calculated.
[7] These doses are identical because the dose factors are identical for the same nuclide and pathway.

Heat Exchanger Leakage

Throughout the 2014 calendar year, small leaks were discovered in three of the Unit 2 and Unit 3 Residual Heat Removal (RHR) Heat Exchangers, which are designed to circulate water to remove heat from their respective reactor units when necessary. The dose model assumes that contaminated water leaks from the heat exchanger, regardless of operating pressure to ensure conservatism in calculated dose. As an additional precaution, installed radiation monitoring instrumentation can indicate an inadvertent release of radioactive material should the heat exchanger develop a large leak with a large amount of radioactivity.

Analysis of Release

It was assumed that the water released to the discharge canal for all of 2014 contributed a conservative maximum 3.81E-04 mrem Total Body dose (receptor child), and a conservative maximum 7.00E-04 mrem for the conservative maximum organ, child liver, dose. This dose contribution was well below the limits specified in the ODCM.

Samples were analyzed for all the parameters of radioactive effluent releases. Composite liquid radwaste samples counted for tritium and submitted to an offsite vendor laboratory for analyses of Fe-55, P-32, Sr-89, Sr-90 and gross alpha. The dose contributions and isotope quantities from the releases were added to this Radioactive Effluent Release Report for the applicable reporting periods.

Gaseous Releases

Unit 2 Equipment Ground Hatch Opening

Maintenance hatches were opened to permit equipment to be moved in and out of the plant duing the twentieth refueling outage on Unit 2 (P2R20). Because the inside air of the plant can remain warmer than the colder outside air, an open hatch would exhibit a small convective current of air. An open ground hatch on October 24, 2014 was noticed by Radiation Protection personnel conducting periodic surveillance of open boundaries to have a slight current of air. This was immediately reported and particulate air samples were analyzed for radioactivity. The maximum concentration of Co-60 was found to be 1.69E-11 µCi/cc and positive air flow of 2.00E-01 m/s was estimated for a period of 4.95E+02 minutes. The conservative dose rate (1.40E-05 mrem/ year) and conservative dose (3.52E-07 mrem Ground-Plane) calculated for this release was well-below the limits in the ODCM. No other nuclides were identified.

Changes to the ODCM

There were no changes to the ODCM in 2014.

Minimum Detectable Concentrations

If a radionuclide was not detected, "<LLD" was reported as the activity. Samples were analyzed with techniques that achieved the required Lower Limits of Detection (LLD) as specified in ODCMS Table 4.8.B.1, "Radioactive Liquid Waste Sampling and Analysis" (for liquids) or ODCMS Table 4.8.C.1, "Radioactive Gaseous Waste Sampling and Analysis from Main Stack and Vent Stack" (for gases). In all cases, the LLD requirements were satisfied.

Sampling and Analysis Deviations

With the Unit 2 Service Water radiation monitor out of service on 1 November 2014, compensatory sampling by grab sample was required to be performed in accordance with the ODCMS 3.8.B.3, Compensatory Action D. However, a sample was not analyzed within the required completion time (approximately six minutes late). The Licensee entered this deviation into its Corrective Action Program.

Violations

There were no effluent release violations for the 2014 reporting period.

Dose Assessment

Introduction

A dose assessment for PBAPS was conducted from measured radioactive effluent source terms and environmental data to verify that PBAPS continues to demonstrate compliance with the limits as well as the requirement of maintaining the doses "as low as is reasonably achievable" as stated in 10 CFR 50, Appendix I.[8]

The radioactive source term used for both liquids and gases are the current radioactive source terms given in this report, Attachment 2, "Effluent Summary".

Liquid Dose Assessment

Hydrologic Conditions and Receptor Locations of Interest

PBAPS is located on the Conowingo Pond formed in the Susquehanna River by the Conowingo Dam. For 2014, the average river flow was measured[9] to be approximately 3.52E+04 ft^3/ s. Of these three separate flow regimes that were used in the original Appendix I submittal, the most-limiting of them (<1.50E+04 ft^3/ s) was used to calculate a dose assessment for this report because this would provide a bounding extreme for all PBAPS liquid effluents. Therefore, although the actual average stream flow for the year was more than double the limiting case, this report will provide an upper limit for the most-limiting dose.

[8] http://www.nrc.gov/reading-rm/doc-collections/cfr/part050/part050-appi.html, accessed 9 April 2014.
[9] USGS National Water Information Service; Monitoring Site 01576000,Susquehanna River at Marietta, PA; http://waterdata.usgs.gov/nwis. Accessed 6 Mar 2015.

The annual average dilution factor[10] at the Conowingo Intake is 5.40E+00 and the assumption for the reconcentration factor[11] is 1.16E+00. The PBAPS shorewidth factor[12] of 2.00E-01 was also used.

Table 6. Consumption and Useage Rate Assumptions

Pathway	Adult	Teenager	Child	Infant	Units
Eating Fish[13]	2.10E+01	1.60E+01	6.90E+00	0.00E+00	kg/ y
Drinking Water[14]	7.30E+02	5.10E+02	5.10E+02	5.10E+02	L/ y
Swimming[15]	2.80E+02	2.80E+02	0.00E+00	0.00E+00	h/ y
Boating[14]	1.20E+02	1.20E+02	6.70E+01	0.00E+00	h/ y
Shoreline Recreation[14]	3.25E+02	3.25E+02	1.40E+01	0.00E+00	h/ y
Fishing from Conowingo Dam[14]	3.25E+02	3.25E+02	0.00E+00	0.00E+00	h/ y

No invertebrate intake was examined because invertebrate ingestion pathways are not considered to be significant in this area close to PBAPS.

Liquid Effluent Dose Assessment Conclusion

The calculated limiting Total Body dose was 5.47E-06 mrem and the limiting organ dose was 8.71E-06 mrem for the limiting receptor of adult GI-LLI (gastro-intestinal tract, lower-large intestine).

Therefore, PBAPS liquid radioactive effluent controls continue to demonstrate compliance with 10 CFR 50, Appendix I objectives for the purposes of keeping doses to members of the public "as low as is reasonably achievable". These limiting or maximum calculated doses are a small fraction of the limits in Appendix I.

[10] From original ODCM.
[11] From original ODCM.
[12] RG 1.109, Table A-2.
[13] RG 1.109, Table A-2.
[14] All locations except Chester Water Authority from RG 1.109, Section A-2. Chester Water Authority uses 10% of the RG 1.109 value because it is assumed to have 10% sourced from Conowingo Pond.
[15] From PBAPS Environmental Report, Supplement No. 3, Page 19. Boating data derived from a ratio of Adult:Child rates as listed in RG 1.109, Table A-2.

Gaseous Dose Assessment

The gaseous dose assessment calculates the conservative dose at the limiting receptor locations from the land-use census data, the 2014 meteorology and the 2014 source term to demonstrate compliance with 10 CFR 50, Appendix I.

Table 7. Conservative Maximum Elevated Release Dose from 2014 Source Term and 2014 Meteorology

Distance (m)	Direction	2014 X/Q undepleted undecayed (s/m^3)	2014 D/Q ($1/m^2$)	Total Body Dose (mrem)	Skin Dose (mrem)	Beta Air Dose (mrad)	Gamma Air Dose (mrad)	Particulate and Iodines, H-3 and C-14 (mrem)	Limiting Receptor
4877	N	4.75E-08	3.13E-10	1.11E-03	1.55E-03	3.39E-04	1.64E-03	N/A	N/A
4877	N	4.75E-08	3.13E-10	N/A	N/A	N/A	N/A	2.33E-01	Child Bone

Table 8. Ground-Level Dose from 2014 Source Term and 2014 Meteorology

Distance (m)	Direction	2014 X/Q undepleted undecayed (s/m^3)	2014 D/Q ($1/m^2$)	Total Body Dose (mrem)	Skin Dose (mrem)	Beta Air Dose (mrad)	Gamma Air Dose (mrad)	Particulate and Iodines, H-3 and C-14 (mrem)	Limiting Receptor
893	NW	1.462E-06	8.65E-09	2.40E-01	3.31E-01	6.84E-02	3.55E-01	N/A	N/A
1194	SSE	1.24E-06	1.12E-08	N/A	N/A	N/A	N/A	2.21E-01	Child Bone

Gaseous Radioactive Effluent Dose Assessment Conclusion

Gaseous Effluent Dose

The conservative maximum dose was 2.33E-01 mrem with the maximum receptor as the child bone and this is due to the incorporation of carbon-14 in the calculation. The noble gas limiting air doses were 3.55E-01 mrad (gamma) and 6.84E-02 mrad (beta). Noble gas plume conservative dose was 2.40E-01 mrem for the year (Total Body) and 3.31E-01 mrem (Skin Dose) for the year.

All doses are projected to be much less than the limits, as expected. Again, these dose models incorporate several factors of conservatism including a source term that, by procedure, will use the most dose-limiting noble gas nuclide when no fission gas can be identified by grab sample but activity is detected from the effluent radiaition monitor.

Exelon Nuclear uses a more-detailed C-14 dose projection from the Electric Power Research Institute, Technical Report 1021106. Details for the assumptions used in this calculation may be found there.[16]

Therefore, PBAPS gaseous radioactive effluent controls continue to demonstrate compliance with 10 CFR 50, Appendix I objectives for the purposes of keeping doses to members of the public "as low as is reasonably achievable". These limiting or maximum calculated doses are a small fraction of the limits in Appendix I.

[16] For PBAPS uses specific Boiling Water Reactor assumptions because the fraction of C-14 that is in the CO_2 form will vary based on general plant design. This is important because the major dose pathway is through photosynthesis and, therefore, only the oxide form is relevant.

Attachment 2: Effluent Summary

Gaseous Effluents - Summation of All Releases

Period: January 1, 2014 through December 31, 2014 **Unit: Peach Bottom**

A. Fission & Activation Gases	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Est. Total Error %
1. Total Release	Ci	1.48E+02	1.69E+02	9.74E+01	2.05E+02	3.51E+01
2. Average release For the Period	uCi/ s	1.90E+01	2.15E+01	1.23E+01	2.58E+01	
3. Gamma Air Dose	mrad	5.94E-02	7.17E-02	3.67E-02	8.32E-02	
4. Beta Air Dose	mrad	7.76E-02	9.34E-02	4.79E-02	1.09E-01	
5. Percent of ODCM limit						
Gamma Air Dose	%	5.94E-01	7.17E-01	3.67E-01	8.32E-01	
Beta Air Dose	%	3.88E-01	4.67E-01	2.40E-01	5.43E-01	

B. Iodines						
1. Total I-131	Ci	6.69E-05	7.45E-05	6.69E-05	1.59E-04	1.76E+01
2. Average release For the Period	uCi/ s	8.60E-06	9.47E-06	8.41E-06	1.99E-05	
3. Percent of ODCM limit	%	*	*	*	*	

C. Particulate						
1. Particulates with T1/2 > 8 days	Ci	1.29E-04	7.54E-05	2.87E-04	2.07E-04	1.94E+01
2. Average release For the Period	uCi/ s	1.66E-05	9.59E-06	3.62E-05	2.61E-05	
3. Percent of ODCM limit	%	*	*	*	*	

D. Tritium						
1. Total Release	Ci	3.34E+00	1.52E+01	1.56E+01	6.06E+00	1.11E+01
2. Average release For the Period	uCi/ s	4.29E-01	1.93E+00	1.96E+00	7.63E-01	
3. Percent of ODCM limit	%	*	*	*	*	

E. Gross Alpha						
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	4.00E+02
2. Average release For the Period	uCi/ s	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM limit	%	*	*	*	*	

F. Carbon-14					
1. Total Release	Ci	8.87E+00	8.87E+00	8.87E+00	8.87E+00
2. Average release For the Period	uCi/ s	1.14E+00	1.13E+00	1.12E+00	1.12E+00

G. Iodine-131, 133 and 135, Tritium, Carbon-14 & Particulate					
1. Organ Dose	mrem	1.37E-01	1.37E-01	1.37E-01	1.37E-01
2. Percent ODCM limit	%	9.13E-01	9.13E-01	9.13E-01	9.13E-01

Gaseous Effluents Release Point: Elevated (Main Offgas Stack)

Period: January 1, 2014 through December 31, 2014 **Unit: Peach Bottom**

Nuclides Released		Continuous Mode				Batch Mode			
1. Fission Gases	**Unit**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	Ci	<LLD	<LLD	<LLD	8.98E-01	<LLD	<LLD	<LLD	<LLD
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	1.96E+00	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	3.14E+00	<LLD	<LLD	4.94E+00	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Unidentified	Ci	2.19E+01	1.88E+01	1.81E+01	2.29E+01	<LLD	<LLD	<LLD	<LLD
Total For Period	Ci	2.50E+01	1.88E+01	2.01E+01	2.87E+01	<LLD	<LLD	<LLD	<LLD
2. Iodines									
I-131	Ci	6.23E-05	5.66E-05	4.79E-05	5.80E-05	<LLD	<LLD	<LLD	<LLD
I-133	Ci	1.08E-04	1.04E-04	9.03E-05	1.04E-04	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total For Period	Ci	1.70E-04	1.61E-04	1.38E-04	1.62E-04	<LLD	<LLD	<LLD	<LLD
3. Particulates									
Sr-89	Ci	5.52E-05	4.50E-05	4.72E-05	4.10E-05	<LLD	<LLD	<LLD	<LLD
Sr-90	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	6.29E-05	8.24E-06	3.63E-05	1.77E-05	<LLD	<LLD	<LLD	<LLD
La-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	8.99E-07	2.40E-06	3.65E-06	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	5.57E-07	1.63E-06	4.35E-07	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	1.07E-05	2.07E-05	1.88E-04	2.81E-05	<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
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	1.21E-05	5.17E-06	<LLD	<LLD	<LLD	<LLD
Total For Period	Ci	1.29E-04	7.54E-05	2.87E-04	9.61E-05	<LLD	<LLD	<LLD	<LLD
4. Tritium									
H-3	Ci	9.12E-01	3.03E+00	5.92E+00	9.04E-01	<LLD	<LLD	<LLD	<LLD
5. Gross Alpha									
Gross Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
6. Carbon-14									
C-14	Ci	8.61E+00	8.61E+00	8.61E+00	8.61E+00	<LLD	<LLD	<LLD	<LLD

Gaseous Effluents Release Point: Ground-Level (Units 2 and 3 Reactor Building Exhaust Vents and Abnormal Releases)

Period: January 1, 2014 through December 31, 2014 **Unit: Peach Bottom**

Nuclides Released		Continuous Mode				Batch Mode			
1. Fission Gases	**Unit**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**
Kr-85	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-85m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Unidentified	Ci	1.23E+02	1.50E+02	7.73E+01	1.76E+02	<LLD	<LLD	<LLD	<LLD
Total For Period	Ci	1.23E+02	1.50E+02	7.73E+01	1.76E+02	<LLD	<LLD	<LLD	<LLD
2. Iodines									
I-131	Ci	4.59E-06	1.78E-05	1.89E-05	1.00E-04	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	4.96E-05	8.04E-05	2.61E-04	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total For Period	Ci	4.59E-06	6.74E-05	9.93E-05	3.61E-04	<LLD	<LLD	<LLD	<LLD
3. Particulates									
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	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
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	<LLD	<LLD	<LLD	1.11E-04	<LLD	<LLD	<LLD	3.03E-07
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ag-110m	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
Total For Period	Ci	<LLD	<LLD	<LLD	1.11E-04	<LLD	<LLD	<LLD	3.03E-07
4. Tritium									
H-3	Ci	2.42E+00	1.21E+01	9.68E+00	5.16E+00	<LLD	<LLD	<LLD	<LLD
5. Gross Alpha									
Gross Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
6. Carbon-14									
C-14	Ci	2.66E-01	2.66E-01	2.66E-01	2.66E-01	<LLD	<LLD	<LLD	<LLD

Liquid Effluents - Summation of All Releases

Period: January 1, 2014 to December 31, 2014 **Unit: Peach Bottom**

A. Fission & Activation Gases	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Est. Total Error %
1. Total Release (not including tritium, gases & alpha)	Ci	3.65E-03	3.67E-03	3.86E-03	4.69E-03	2.11E+01
2. Average diluted concentration for the Period	µCi/ mL	7.06E-12	5.42E-12	5.69E-12	7.03E-12	
3. Percent of applicable limit						
Total Body Dose	%	2.92E-03	2.81E-03	6.73E-03	4.56E-03	
Organ Dose	%	1.08E-03	1.59E-03	3.23E-03	2.48E-03	

B. Tritium						Est. Total Error %
1. Total Release	Ci	7.66E-01	1.16E+00	1.52E+00	4.95E+00	6.40E+00
2. Average diluted concentration for the Period	µCi/ mL	1.48E-09	1.72E-09	2.24E-09	7.42E-09	
3. Percent of applicable limit	%	1.48E-05	1.72E-05	2.24E-05	7.42E-05	

(10x 10CFR20 Limit of 1.00E-03 uCi/ mL; ODCMS 3.8.B.1.a)

C. Dissolved & Entrained Gases						Est. Total Error %
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	2.11E+01
2. Average diluted concentration for the Period	µCi/ mL	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM limit	%	0.00E+00	0.00E+00	0.00E+00	0.00E+00	

D. Gross Alpha Activity						Est. Total Error %
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	2.30E+01

E. Volume of Waste Released (prior to dilution)	Liters	8.59E+07	1.10E+08	1.59E+08	1.60E+08

F. Volume of Dilution Water Used During Period	Liters	5.17E+11	6.77E+11	6.79E+11	6.67E+11

Liquid Effluents Release Points – Liquid Radwaste, RHR Leaks and Groundwater

Period: January 1, 2014 through December 13, 2014 **Unit: Peach Bottom**

Nuclides Released		Continuous Mode				Batch Mode			
	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Sr-89	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sr-90	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cs-137	Ci	<LLD	2.22E-05	1.27E-04	<LLD	3.86E-07	1.55E-07	8.07E-07	<LLD
I-131	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	9.02E-05	8.13E-05	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	2.17E-03	2.22E-03	2.77E-03	3.44E-03	<LLD	<LLD	4.07E-07	1.41E-05
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	3.22E-04	2.91E-04	1.25E-04	3.43E-04	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	8.82E-04	8.84E-04	7.89E-04	7.61E-04	<LLD	<LLD	2.87E-07	<LLD
Cr-51	Ci	9.03E-05	8.14E-05	4.76E-05	1.30E-04	<LLD	<LLD	<LLD	<LLD
Zr-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Nb-95	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Tc-99m	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
Ag-110m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-55	Ci	1.00E-04	9.04E-05	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Sb-124	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	2.67E-06
H-3	Ci	7.65E-01	8.37E-01	1.21E+00	1.21E+00	5.52E-04	3.28E-01	3.09E-01	3.74E+00
Total for Period	Ci	7.69E-01	8.40E-01	1.22E+00	1.22E+00	5.52E-04	3.28E-01	3.09E-01	3.74E+00
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

Attachment 3: Solid Waste and Irradiated Fuel Shipments

Solid Waste Shipped

1. Type of Waste

	Units	Volume or Activity	Est. error %
a: Spent resin, Filters, Sludges, Evaporator Bottoms, etc.	m^3	5.02E+01	
	Ci	3.19E+02	2.5E+00
b: Dry compressible waste, Contaminated Equipment, etc.	m^3	2.18E+03	
	Ci	1.48E+01	2.5E+00
c: Irradiated components, Control rods, etc.	m^3	2.17E-01	
	Ci	1.57E+01	N/A
d: Other (Oil, Standy Liquid Control solution, Methyl Ethyl Ketone).	m^3	3.13E+01	
	Ci	2.57E-02	2.5E+00

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

a. Spent-Resin, Filters, Sludges, Evaporator Bottoms, etc.

Nuclide	% Abundance (no cutoff)	Activity (Ci)
H-3	1.03E-01	3.27E-01
C-14	1.30E-01	4.15E-01
Cr-51	5.67E-02	1.81E-01
Mn-54	1.36E+00	4.34E+00
Fe-55	3.66E+01	1.17E+02
Co-58	2.98E-02	9.51E-02
Co-60	5.52E+01	1.76E+02
Ni-59	9.83E-03	3.14E-02
Ni-63	1.16E+00	3.70E+00
Zn-65	1.44E+00	4.61E+00
Sr-89	3.57E-10	1.14E-09

Nuclide	% Abundance (no cutoff)	Activity (Ci)
Nb-94	3.60E-08	1.15E-07
Tc-99	1.72E-01	5.48E-01
Cs-134	2.11E-02	6.74E-02
Cs-137	3.53E+00	1.13E+01
Ce-141	6.51E-07	2.08E-06
Pu-238	5.60E-04	1.79E-03
Am-241	2.97E-04	9.47E-04
Cm-242	3.33E-06	1.06E-05
Cm-243	3.35E-07	1.07E-06
Cm-244	8.90E-04	2.84E-03

b. Dry, Compressible Waste, Contaminated Equipment, etc.

Nuclide	% Abundance (no cutoff)	Activity (Ci)
H-3	1.56E-01	2.33E-02
C-14	1.11E-01	1.65E-02
Cr-51	2.46E+00	3.68E-01
Mn-54	4.92E+00	7.35E-01
Fe-55	2.29E+01	3.42E+00
Fe-59	1.25E+00	1.87E-01
Co-58	5.97E-01	8.91E-02
Co-60	5.39E+01	8.05E+00
Ni-63	8.84E-01	1.32E-01
Zn-65	7.93E+00	1.18E+00
Sr-89	4.93E-03	7.36E-04
Sr-90	3.59E-02	5.36E-03
Tc-99	1.62E-01	2.43E-02

Nuclide	% Abundance (no cutoff)	Activity (Ci)
Ag-110m	4.57E-01	6.83E-02
I-129	1.51E-02	2.25E-03
Cs-134	1.16E-01	1.73E-02
Cs-137	3.43E+00	5.11E-01
Ce-141	1.17E-01	1.74E-02
Ce-144	5.05E-01	7.53E-02
Pu-238	1.12E-04	1.67E-05
Pu-239	8.78E-06	1.31E-06
Pu-241	1.78E-02	2.66E-03
Am-241	6.55E-05	9.77E-06
Cm-242	3.42E-05	5.10E-06
Cm-243	1.88E-04	2.80E-05

c. Irradiated Components, Control Rods, etc.

Nuclide	% Abundance (no cutoff)	Activity (Ci)
H-3	4.00E-02	6.21E-03
C-14	8.00E-03	1.24E-03
Cr-51	5.21E+00	8.17E-01
Mn-54	1.70E-01	2.66E-02
Fe-55	5.64E+01	8.84E+00
Fe-59	2.81E-01	4.41E-02
Co-58	1.51E-01	2.36E-02
Co-60	3.12E+01	4.89E+00
Ni-59	4.87E-02	7.63E-03
Ni-63	6.34E+00	9.93E-01
Zn-65	1.17E-01	1.83E-02
Nb-94	4.80E-05	7.52E-06
Tc-99	2.38E-06	3.73E-07
I-129	6.96E-04	1.09E-04
Cs-137	9.76E-03	1.53E-03

d. Other: Oil.

Nuclide	% Abundance (no cutoff)	Activity (Ci)
H-3	9.75E+01	2.50E-02
C-14	9.19E-02	2.36E-05
Fe-55	7.17E-07	1.84E-10
Co-60	3.15E-02	8.08E-06
Ni-63	1.27E+00	3.26E-04
Sr-90	1.86E-02	4.78E-06
Tc-99	2.77E-01	7.11E-05
I-129	1.41E-01	3.62E-05
Cs-137	7.96E-03	2.04E-06
Ce-144	7.12E-01	1.83E-04

3. Solid Waste Disposition

Number of shipments	Mode of Transportation	Destination
1	Bionomics, Inc	Perma-Fix of Florida
52	Hittman Transport Services	Energy Solutions (Oak Ridge, TN)
14	Hittman Transport Services	Energy Solutions (Kingston, TN)
9	Hittman Transport Services	Energy Solutions - Clive CWF
7	Hittman Transport Services	Energy Solutions - Clive BWF
1	R&R Trucking	Alaron Nuclear Services (Wampum, PA)
1	Visionary Solutions, LLC	Energy Solutions (Oak Ridge, TN)
1	Visionary Solutions, LLC	Waste Control Specialist - CWF

Irradiated Fuel Shipments

No shipment of irradiated fuel was made during the reporting period of 2014.

Changes to Process Control Program (PCP)

No changes to the Radioactive Waste Process Control Program were made during the reporting period of 2014.

Attachment 4: Radiological Impact on Man

Radiological Impact on Man

Effluent	Applicable Organ	Estimated Dose	Age Group	Location		% of Applicable Limit	Limit	Unit
				Distance (meters)	Direction (toward)			
Noble Gas	Gamma - Air Dose	2.53E-01	All	1.10E+03	SSE	1.27E+00	2.00E+01	mrad
Noble Gas	Beta - Air Dose	1.74E-01	All	1.10E+03	SSE	4.35E-01	4.00E+01	mrad
Noble Gas	Total Body (gamma)	2.45E-01	All	1.10E+03	SSE	2.45E+00	1.00E+01	mrem
Noble Gas	Skin (Beta)	3.20E-01	All	1.10E+03	SSE	1.07E+00	3.00E+01	mrem
Gaseous Iodine, Particulate, Carbon-14 & Tritium	Bone	5.49E-01	Child	1.10E+03	SSE	1.83E+00	3.00E+01	mrem
Gaseous Iodine, Particulate & Tritium	Thyroid	2.58E-03	Infant	1.10E+03	SSE	8.60E-03	3.00E+01	mrem
Liquid	Total Body (gamma)	1.68E-02	Child	Site Boundary		2.80E-01	6.00E+00	mrem
Liquid	Liver	8.32E-03	Child			4.16E-02	2.00E+01	mrem
Direct Radiation	Total Body	0.00E+00	All	1.15E+03	SSE	0.00E+00	2.20E+01	mrem

40 CFR 190 Doses

40 CFR Part 190 Compliance								
Total Dose	Total Body	2.62E-01	All	1.15E+03	SSE	1.05E+00	2.50E+01	mrem
Total Dose	Thyroid	2.58E-03	All	1.15E+03	SSE	3.45E-03	7.50E+01	mrem
Total Dose	Bone	5.50E-01	All	1.15E+03	SSE	2.20E+00	2.50E+01	mrem
Total Dose	Total Body	2.62E-01	All	1.15E+03	SSE	8.73E+00	3.00E+00	mrem
Total Dose	Bone	5.49E-01	All	1.15E+03	SSE	1.83E+01	3.00E+00	mrem
Total Dose	Thyroid	2.56E-01	All	1.15E+03	SSE	4.65E-01	5.50E+01	mrem

Attachment 5: Meteorological Data

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 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	6	0	0	0	0	6
NE	3	11	0	0	0	0	14
ENE	7	2	0	0	0	0	9
E	1	2	0	0	0	0	3
ESE	0	4	0	0	0	0	4
SE	0	1	0	0	0	0	1
SSE	0	0	1	1	0	0	2
S	0	0	3	1	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	2	0	0	2
WNW	0	0	2	0	0	0	2
NW	0	0	1	0	0	0	1
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	11	26	8	4	0	0	49

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

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	6	1	0	0	0	7
NNE	0	5	1	0	0	0	6
NE	4	6	0	0	0	0	10
ENE	4	1	0	0	0	0	5
E	5	4	0	0	0	0	9
ESE	0	3	0	0	0	0	3
SE	0	2	0	0	0	0	2
SSE	1	2	4	0	0	0	7
S	0	3	4	0	0	0	7
SSW	0	1	0	1	0	0	2
SW	0	0	1	0	0	0	1
WSW	0	1	2	1	0	0	4
W	0	1	6	10	0	0	17
WNW	0	0	6	9	0	0	15
NW	0	4	6	12	3	0	25
NNW	0	2	2	5	1	0	10
Variable	0	0	0	0	0	0	0
Total	14	41	33	38	4	0	130

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: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	2	0	0	0	3
NNE	0	4	0	0	0	0	4
NE	7	3	0	0	0	0	10
ENE	1	0	0	0	0	0	1
E	2	0	0	0	0	0	2
ESE	0	1	0	0	0	0	1
SE	0	0	1	0	0	0	1
SSE	0	3	2	0	0	0	5
S	0	2	3	0	0	0	5
SSW	0	2	0	1	0	0	3
SW	0	0	1	0	0	0	1
WSW	0	1	3	1	0	0	5
W	0	2	8	7	0	0	17
WNW	0	1	9	5	0	0	15
NW	0	0	16	5	0	0	21
NNW	0	1	15	3	1	0	20
Variable	0	0	0	0	0	0	0
Total	10	21	60	22	1	0	114

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

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	42	26	2	0	0	76
NNE	13	31	10	1	0	0	55
NE	27	21	2	0	0	0	50
ENE	40	8	0	0	0	0	48
E	19	6	0	0	0	0	25
ESE	8	6	0	0	0	0	14
SE	9	23	6	0	0	0	38
SSE	6	30	18	0	0	0	54
S	6	19	29	3	0	0	57
SSW	6	10	6	1	0	0	23
SW	2	18	8	0	0	0	28
WSW	2	16	8	1	0	0	27
W	4	26	26	6	1	0	63
WNW	2	30	64	23	0	0	119
NW	5	47	65	52	10	0	179
NNW	4	62	64	42	1	0	173
Variable	0	0	0	0	0	0	0
Total	159	395	332	131	12	0	1029

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 27
Hours of missing stability measurements in all stability classes: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	7	6	0	0	0	0	13
NNE	11	1	0	0	0	0	12
NE	17	3	1	0	0	0	21
ENE	26	5	0	0	0	0	31
E	36	5	0	0	0	0	41
ESE	43	8	0	0	0	0	51
SE	21	15	1	0	0	0	37
SSE	15	13	2	0	0	0	30
S	8	10	10	0	0	0	28
SSW	9	13	2	0	0	0	24
SW	10	19	2	0	0	0	31
WSW	11	36	1	0	0	0	48
W	17	46	6	1	0	0	70
WNW	21	35	13	0	0	0	69
NW	18	17	4	0	0	0	39
NNW	8	22	2	0	0	0	32
Variable	3	0	0	0	0	0	3
Total	281	254	44	1	0	0	580

Hours of calm in this stability class: 3
Hours of missing wind measurements in this stability class: 4
Hours of missing stability measurements in all stability classes: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	0	0	0	0	0	2
NNE	2	0	0	0	0	0	2
NE	7	0	0	0	0	0	7
ENE	8	0	0	0	0	0	8
E	8	1	0	0	0	0	9
ESE	13	2	0	0	0	0	15
SE	12	1	0	0	0	0	13
SSE	4	3	0	0	0	0	7
S	4	1	0	0	0	0	5
SSW	7	3	0	0	0	0	10
SW	7	1	0	0	0	0	8
WSW	9	7	0	0	0	0	16
W	12	3	0	0	0	0	15
WNW	4	1	0	0	0	0	5
NW	6	0	0	0	0	0	6
NNW	8	1	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	113	24	0	0	0	0	137

Hours of calm in this stability class: 4
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	0	0	0	0	0	9
NNE	1	0	0	0	0	0	1
NE	5	0	0	0	0	0	5
ENE	6	0	0	0	0	0	6
E	1	0	0	0	0	0	1
ESE	5	0	0	0	0	0	5
SE	4	0	0	0	0	0	4
SSE	2	0	0	0	0	0	2
S	2	1	0	0	0	0	3
SSW	1	1	0	0	0	0	2
SW	3	0	0	0	0	0	3
WSW	6	4	0	0	0	0	10
W	5	2	0	0	0	0	7
WNW	9	0	0	0	0	0	9
NW	4	0	0	0	0	0	4
NNW	2	0	0	0	0	0	2
Variable	1	0	0	0	0	0	1
Total	66	8	0	0	0	0	74

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

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Extremely Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	0	3	0	0	0	3
ENE	0	1	3	0	0	0	4
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	1	7	0	0	0	8

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: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Moderately Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	2	0	0	0	2
NE	0	0	4	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	2	0	0	2
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	6	2	0	0	8

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: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Slightly Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	2	0	0	0	0	2
NE	0	1	2	0	0	0	3
ENE	0	1	2	0	0	0	3
E	0	2	0	0	0	0	2
ESE	0	1	0	1	0	0	2
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	1	3	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	1	0	1
W	0	0	0	0	7	0	7
WNW	0	0	0	2	0	4	6
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	8	6	6	8	4	32

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: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Neutral - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	20	40	32	10	0	102
NNE	1	16	13	9	9	0	48
NE	6	20	30	8	4	2	70
ENE	3	26	17	0	0	0	46
E	7	21	13	3	0	0	44
ESE	3	11	5	1	0	0	20
SE	0	12	21	9	0	0	42
SSE	0	6	23	18	1	0	48
S	3	12	22	37	8	0	82
SSW	2	4	14	5	4	0	29
SW	0	6	12	12	3	0	33
WSW	1	7	17	15	5	0	45
W	1	9	16	39	27	20	112
WNW	2	11	36	79	45	23	196
NW	0	12	37	62	52	49	212
NNW	0	19	43	53	24	1	140
Variable	0	0	0	0	0	0	0
Total	29	212	359	382	192	95	1269

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 10
Hours of missing stability measurements in all stability classes: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Slightly Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	10	13	6	0	0	30
NNE	2	2	4	2	0	0	10
NE	2	5	2	2	0	0	11
ENE	2	9	4	0	0	0	15
E	1	13	13	6	0	0	33
ESE	2	13	14	3	0	0	32
SE	2	22	21	3	0	0	48
SSE	2	9	24	6	2	0	43
S	1	11	19	15	7	0	53
SSW	0	5	22	12	2	0	41
SW	3	12	16	15	2	0	48
WSW	6	9	18	16	0	0	49
W	2	8	14	19	7	1	51
WNW	3	8	24	38	5	1	79
NW	1	14	22	16	2	0	55
NNW	1	4	16	10	1	0	32
Variable	2	0	0	0	0	0	2
Total	33	154	246	169	28	2	632

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

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Moderately Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	1	1	0	0	0	2
ENE	0	0	0	0	0	0	0
E	1	1	1	0	0	0	3
ESE	1	2	4	1	0	0	8
SE	0	3	12	3	0	0	18
SSE	0	5	10	5	1	0	21
S	3	7	13	0	1	0	24
SSW	1	3	5	1	0	0	10
SW	2	4	2	1	0	0	9
WSW	6	3	4	0	0	0	13
W	0	2	6	4	0	0	12
WNW	1	2	1	3	0	0	7
NW	3	2	1	2	0	0	8
NNW	0	1	3	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	18	36	64	20	2	0	140

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: 1

Peach Bottom Atomic Power Station

Period of Record: January - March 2014
Stability Class - Extremely Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	2	0	0	0	2
SE	0	4	1	0	0	0	5
SSE	1	0	5	0	0	0	6
S	0	4	2	0	0	0	6
SSW	3	4	3	3	0	0	13
SW	0	0	4	2	1	0	7
WSW	0	0	1	5	1	0	7
W	2	0	1	4	0	0	7
WNW	0	1	1	0	0	0	2
NW	0	0	0	0	0	0	0
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	8	13	20	14	2	0	57

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: 1

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	8	7	0	0	0	17
NNE	5	7	3	0	0	0	15
NE	7	4	0	0	0	0	11
ENE	14	11	0	0	0	0	25
E	10	21	0	0	0	0	31
ESE	3	16	5	0	0	0	24
SE	1	9	4	0	0	0	14
SSE	0	2	3	0	0	0	5
S	0	0	5	3	0	0	8
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	1
NW	0	3	2	0	0	0	5
NNW	1	5	15	0	0	0	21
Variable	0	0	0	0	0	0	0
Total	43	87	44	4	0	0	178

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	6	4	0	0	0	11
NNE	2	3	0	0	0	0	5
NE	4	3	0	0	0	0	7
ENE	10	3	0	0	0	0	13
E	8	4	0	0	0	0	12
ESE	1	5	0	0	0	0	6
SE	0	5	1	0	0	0	6
SSE	0	4	8	0	0	0	12
S	1	3	13	8	1	0	26
SSW	0	0	3	0	0	0	3
SW	0	0	1	0	0	0	1
WSW	0	1	2	0	0	0	3
W	0	1	2	0	0	0	3
WNW	0	3	2	3	0	0	8
NW	0	9	6	6	0	0	21
NNW	1	12	44	4	0	0	61
Variable	0	0	0	0	0	0	0
Total	28	62	86	21	1	0	198

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	5	0	0	0	0	7
NNE	6	0	0	0	0	0	6
NE	3	1	0	0	0	0	4
ENE	6	5	0	0	0	0	11
E	5	5	0	0	0	0	10
ESE	1	5	0	0	0	0	6
SE	0	1	2	0	0	0	3
SSE	1	3	10	0	0	0	14
S	0	1	6	1	0	0	8
SSW	0	0	1	0	0	0	1
SW	0	0	1	0	0	0	1
WSW	0	0	4	0	0	0	4
W	0	4	3	1	0	0	8
WNW	0	4	0	3	0	0	7
NW	1	5	6	7	0	0	19
NNW	0	10	16	2	0	0	28
Variable	0	0	0	0	0	0	0
Total	25	49	49	14	0	0	137

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	13	5	0	0	0	27
NNE	18	11	0	0	0	0	29
NE	23	3	0	0	0	0	26
ENE	34	28	0	0	0	0	62
E	17	28	3	0	0	0	48
ESE	7	20	2	0	0	0	29
SE	9	16	15	6	0	0	46
SSE	8	38	33	5	0	0	84
S	4	23	22	7	0	0	56
SSW	2	8	5	2	0	0	17
SW	1	9	4	0	0	0	14
WSW	3	7	4	0	0	0	14
W	9	7	12	4	0	0	32
WNW	3	14	15	5	0	0	37
NW	5	39	39	14	0	0	97
NNW	9	41	34	14	0	0	98
Variable	0	0	0	0	0	0	0
Total	161	305	193	57	0	0	716

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	16	6	5	0	0	0	27
NNE	19	7	1	0	0	0	27
NE	19	6	0	0	0	0	25
ENE	29	3	0	0	0	0	32
E	27	11	0	0	0	0	38
ESE	15	14	0	0	0	0	29
SE	28	20	0	0	0	0	48
SSE	27	40	10	0	0	0	77
S	22	30	8	0	0	0	60
SSW	18	8	0	0	0	0	26
SW	14	8	1	0	0	0	23
WSW	13	17	0	0	0	0	30
W	23	40	3	0	0	0	66
WNW	18	67	11	0	0	0	96
NW	9	35	6	0	0	0	50
NNW	11	18	3	0	0	0	32
Variable	2	0	0	0	0	0	2
Total	310	330	48	0	0	0	688

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	0	0	0	0	0	4
NNE	3	0	0	0	0	0	3
NE	11	0	0	0	0	0	11
ENE	3	0	0	0	0	0	3
E	9	0	0	0	0	0	9
ESE	5	0	0	0	0	0	5
SE	3	1	0	0	0	0	4
SSE	2	0	0	0	0	0	2
S	3	1	1	0	0	0	5
SSW	4	1	0	0	0	0	5
SW	8	0	0	0	0	0	8
WSW	20	15	0	0	0	0	35
W	17	9	0	0	0	0	26
WNW	20	6	0	0	0	0	26
NW	12	2	0	0	0	0	14
NNW	6	0	0	0	0	0	6
Variable	1	0	0	0	0	0	1
Total	131	35	1	0	0	0	167

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 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	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	2	0	0	0	0	0	2
ESE	2	0	0	0	0	0	2
SE	3	0	0	0	0	0	3
SSE	2	0	0	0	0	0	2
S	2	0	0	0	0	0	2
SSW	1	0	0	0	0	0	1
SW	7	6	0	0	0	0	13
WSW	23	13	0	0	0	0	36
W	10	2	0	0	0	0	12
WNW	1	0	0	0	0	0	1
NW	1	0	0	0	0	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	56	21	0	0	0	0	77

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Extremely Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	1	1	0	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	2	1	0	0	0	3
E	0	8	5	2	0	0	15
ESE	0	0	15	1	0	0	16
SE	0	0	0	1	2	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	11	22	4	2	0	39

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Moderately Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

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

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Slightly Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	1	1	0	0	4
NNE	0	1	0	1	0	0	2
NE	0	2	0	1	0	0	3
ENE	1	6	1	0	0	0	8
E	1	8	0	1	0	0	10
ESE	0	1	1	1	1	0	4
SE	0	0	6	1	0	0	7
SSE	0	0	2	0	0	0	2
S	0	0	3	7	3	0	13
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	1	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	1	0	3	4	8
NW	0	0	8	7	2	0	17
NNW	0	1	7	1	0	0	9
Variable	0	0	0	0	0	0	0
Total	2	21	30	22	9	4	88

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Neutral - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	9	14	17	1	0	42
NNE	4	7	11	2	0	0	24
NE	8	15	6	0	0	0	29
ENE	4	26	2	0	0	0	32
E	5	25	27	45	16	2	120
ESE	2	19	28	37	11	0	97
SE	4	20	47	14	8	2	95
SSE	2	15	39	18	4	1	79
S	1	13	44	39	23	3	123
SSW	4	6	11	7	2	0	30
SW	1	3	8	6	0	0	18
WSW	0	9	8	16	0	0	33
W	1	6	11	13	4	3	38
WNW	1	9	19	22	20	6	77
NW	2	22	65	70	27	5	191
NNW	0	19	54	28	10	1	112
Variable	0	0	0	0	0	0	0
Total	40	223	394	334	126	23	1140

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Slightly Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	6	11	2	3	0	24
NNE	1	7	12	2	1	0	23
NE	1	7	19	3	0	0	30
ENE	0	8	6	0	0	0	14
E	2	18	7	1	0	0	28
ESE	2	8	17	10	0	0	37
SE	0	16	18	9	0	0	43
SSE	2	14	22	13	1	0	52
S	3	24	44	25	4	0	100
SSW	2	9	14	4	0	0	29
SW	0	9	9	2	0	0	20
WSW	1	8	13	4	0	0	26
W	1	9	16	14	1	0	41
WNW	1	10	17	33	8	0	69
NW	1	9	25	64	5	0	104
NNW	2	9	14	11	1	0	37
Variable	1	0	0	0	0	0	1
Total	22	171	264	197	24	0	678

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Moderately Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	0	0	0	0	4
NNE	2	2	0	0	0	0	4
NE	0	3	2	0	0	0	5
ENE	0	3	0	0	0	0	3
E	0	3	0	0	0	0	3
ESE	0	3	4	0	0	0	7
SE	0	5	0	0	0	0	5
SSE	0	0	2	0	0	0	2
S	3	0	1	0	0	0	4
SSW	2	5	6	1	0	0	14
SW	1	9	11	2	0	0	23
WSW	2	8	8	4	0	0	22
W	2	6	9	1	0	0	18
WNW	2	3	2	2	0	0	9
NW	0	4	11	5	0	0	20
NNW	1	1	5	0	0	0	7
Variable	0	0	0	0	0	0	0
Total	15	59	61	15	0	0	150

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: 15

Peach Bottom Atomic Power Station

Period of Record: April - June 2014
Stability Class - Extremely Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	0	1	0	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	2	0	0	0	2
S	0	1	1	0	0	0	2
SSW	0	1	3	0	0	0	4
SW	0	0	3	1	0	0	4
WSW	1	1	6	1	0	0	9
W	0	1	2	1	0	0	4
WNW	0	3	1	0	0	0	4
NW	1	5	3	1	0	0	10
NNW	1	0	4	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	5	15	25	4	0	0	49

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 15

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	9	2	0	0	0	17
NNE	13	4	0	0	0	0	17
NE	18	0	0	0	0	0	18
ENE	10	1	0	0	0	0	11
E	8	3	0	0	0	0	11
ESE	2	5	0	0	0	0	7
SE	1	12	1	0	0	0	14
SSE	1	17	2	0	0	0	20
S	0	1	3	0	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	1	0	0	0	0	1
NW	1	0	1	0	0	0	2
NNW	3	4	2	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	63	57	11	0	0	0	131

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	18	1	0	0	0	21
NNE	10	5	0	0	0	0	15
NE	14	0	0	0	0	0	14
ENE	11	0	0	0	0	0	11
E	6	0	0	0	0	0	6
ESE	0	0	0	0	0	0	0
SE	1	2	0	0	0	0	3
SSE	0	17	7	0	0	0	24
S	0	6	7	0	0	0	13
SSW	0	4	3	0	0	0	7
SW	0	2	2	0	0	0	4
WSW	0	1	0	0	0	0	1
W	0	1	0	0	0	0	1
WNW	0	2	0	0	0	0	2
NW	1	1	4	0	0	0	6
NNW	1	9	12	0	0	0	22
Variable	0	0	0	0	0	0	0
Total	46	68	36	0	0	0	150

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	13	0	0	0	0	18
NNE	8	2	0	0	0	0	10
NE	7	0	0	0	0	0	7
ENE	3	0	0	0	0	0	3
E	2	0	0	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	2	1	0	0	0	0	3
SSE	1	9	8	0	0	0	18
S	0	10	5	0	0	0	15
SSW	0	2	4	0	0	0	6
SW	0	4	0	0	0	0	4
WSW	0	0	0	0	0	0	0
W	0	8	2	0	0	0	10
WNW	1	2	0	0	0	0	3
NW	0	5	0	0	0	0	5
NNW	3	4	9	1	0	0	17
Variable	0	0	0	0	0	0	0
Total	33	60	28	1	0	0	122

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	32	23	1	0	0	0	56
NNE	33	9	0	0	0	0	42
NE	18	0	0	0	0	0	18
ENE	11	1	0	0	0	0	12
E	14	1	0	0	0	0	15
ESE	8	4	0	0	0	0	12
SE	13	14	7	1	0	0	35
SSE	15	57	23	0	0	0	95
S	10	34	14	0	0	0	58
SSW	5	20	6	1	0	0	32
SW	7	13	8	0	0	0	28
WSW	9	25	0	0	0	0	34
W	8	12	11	0	0	0	31
WNW	13	8	8	0	0	0	29
NW	10	23	3	1	0	0	37
NNW	19	44	31	7	0	0	101
Variable	0	0	0	0	0	0	0
Total	225	288	112	10	0	0	635

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	23	12	3	0	0	0	38
NNE	17	8	0	0	0	0	25
NE	8	0	0	0	0	0	8
ENE	10	1	0	0	0	0	11
E	11	2	0	0	0	0	13
ESE	10	2	0	0	0	0	12
SE	24	19	2	0	0	0	45
SSE	24	57	8	0	0	0	89
S	45	37	9	0	0	0	91
SSW	27	29	2	0	0	0	58
SW	32	21	3	0	0	0	56
WSW	35	16	2	0	0	0	53
W	27	28	7	0	0	0	62
WNW	30	42	2	0	0	0	74
NW	21	48	2	0	0	0	71
NNW	26	36	4	0	0	0	66
Variable	5	0	0	0	0	0	5
Total	375	358	44	0	0	0	777

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	0	0	0	0	0	4
NNE	1	0	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	2	0	0	0	0	0	2
SSE	5	1	0	0	0	0	6
S	9	3	0	0	0	0	12
SSW	12	4	0	0	0	0	16
SW	25	5	0	0	0	0	30
WSW	29	13	0	0	0	0	42
W	27	25	0	0	0	0	52
WNW	10	14	0	0	0	0	24
NW	11	10	0	0	0	0	21
NNW	2	2	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	138	77	0	0	0	0	215

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 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	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	1	0	0	0	0	0	1
SW	14	7	0	0	0	0	21
WSW	43	62	0	0	0	0	105
W	17	10	0	0	0	0	27
WNW	7	2	0	0	0	0	9
NW	2	0	0	0	0	0	2
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	85	81	0	0	0	0	166

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Extremely Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	0	0	0	0	0	0
ENE	0	7	3	0	0	0	10
E	0	5	3	0	0	0	8
ESE	0	3	4	0	0	0	7
SE	0	0	1	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	15	11	0	0	0	26

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Moderately Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

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

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Slightly Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	3	0	0	0	3
NNE	0	1	2	1	0	0	4
NE	3	7	2	0	0	0	12
ENE	1	7	1	0	0	0	9
E	1	2	0	0	0	0	3
ESE	0	5	0	0	0	0	5
SE	0	4	4	1	0	0	9
SSE	0	1	3	0	0	0	4
S	0	1	2	0	0	0	3
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	1	0	0	0	1
NW	0	0	0	2	2	0	4
NNW	0	0	1	1	0	0	2
Variable	0	0	0	0	0	0	0
Total	5	28	19	5	2	0	59

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Neutral - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	15	17	13	0	0	50
NNE	4	22	12	8	0	0	46
NE	14	19	12	1	0	0	46
ENE	9	37	21	2	0	0	69
E	7	28	31	8	1	0	75
ESE	9	16	11	10	0	0	46
SE	4	16	27	16	4	0	67
SSE	3	27	26	8	0	0	64
S	5	28	54	29	0	0	116
SSW	3	19	33	7	1	0	63
SW	2	16	21	8	1	0	48
WSW	3	11	19	1	0	1	35
W	1	4	13	7	5	0	30
WNW	2	6	11	7	4	0	30
NW	0	13	34	19	2	3	71
NNW	2	28	35	28	6	0	99
Variable	1	0	0	0	0	0	1
Total	74	305	377	172	24	4	956

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Slightly Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	12	42	9	0	0	64
NNE	0	16	6	4	0	0	26
NE	2	11	2	5	0	0	20
ENE	5	10	8	1	0	0	24
E	1	9	7	3	0	0	20
ESE	3	12	8	6	3	0	32
SE	4	24	40	9	1	0	78
SSE	6	24	49	14	0	0	93
S	6	21	52	33	0	0	112
SSW	2	19	34	6	1	0	62
SW	5	29	15	12	1	0	62
WSW	7	14	13	6	0	0	40
W	1	8	8	3	6	0	26
WNW	0	5	11	9	6	0	31
NW	1	9	23	34	4	0	71
NNW	0	8	36	22	0	0	66
Variable	2	0	0	0	0	0	2
Total	46	231	354	176	22	0	829

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Moderately Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	9	12	0	0	0	23
NNE	1	7	3	0	0	0	11
NE	1	0	0	1	0	0	2
ENE	2	0	0	0	0	0	2
E	2	1	0	0	0	0	3
ESE	2	2	0	0	0	0	4
SE	2	7	0	0	0	0	9
SSE	2	7	2	1	0	0	12
S	5	3	1	4	0	0	13
SSW	1	2	2	0	0	0	5
SW	4	6	9	3	0	0	22
WSW	2	6	10	7	0	0	25
W	4	5	3	1	0	0	13
WNW	7	5	3	4	2	0	21
NW	1	3	9	7	0	0	20
NNW	4	4	14	4	0	0	26
Variable	0	0	0	0	0	0	0
Total	42	67	68	32	2	0	211

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: 10

Peach Bottom Atomic Power Station

Period of Record: July - September 2014
Stability Class - Extremely Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	5	4	0	0	0	11
NNE	1	0	1	0	0	0	2
NE	1	2	1	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	1	1	0	0	0	0	2
SW	2	1	0	0	0	0	3
WSW	0	3	1	1	0	0	5
W	1	9	7	2	0	0	19
WNW	2	4	7	1	0	0	14
NW	1	12	5	0	0	0	18
NNW	0	6	5	1	0	0	12
Variable	0	0	0	0	0	0	0
Total	12	43	31	5	0	0	91

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 10

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

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

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	0	0	0	0	2
NNE	3	1	0	0	0	0	4
NE	0	0	0	0	0	0	0
ENE	4	0	0	0	0	0	4
E	2	1	0	0	0	0	3
ESE	0	1	0	0	0	0	1
SE	0	1	1	0	0	0	2
SSE	0	1	2	0	0	0	3
S	0	4	2	2	0	0	8
SSW	0	0	4	0	0	0	4
SW	0	1	7	0	0	0	8
WSW	0	0	6	0	0	0	6
W	0	0	8	4	0	0	12
WNW	0	3	7	3	0	0	13
NW	0	3	5	1	0	0	9
NNW	1	2	5	3	3	0	14
Variable	0	0	0	0	0	0	0
Total	10	20	47	13	3	0	93

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	3	0	0	0	0	5
NNE	2	5	0	0	0	0	7
NE	3	1	0	0	0	0	4
ENE	2	0	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	1	0	0	0	2
SSE	0	1	0	1	0	0	2
S	0	1	4	2	0	0	7
SSW	0	1	1	0	0	0	2
SW	0	1	0	0	0	0	1
WSW	0	0	5	0	0	0	5
W	0	1	3	1	0	0	5
WNW	0	0	10	2	0	0	12
NW	0	4	14	4	0	0	22
NNW	0	3	9	1	1	0	14
Variable	0	0	0	0	0	0	0
Total	9	22	47	11	1	0	90

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

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	15	32	35	2	0	0	84
NNE	5	22	7	0	0	0	34
NE	22	7	0	0	0	0	29
ENE	23	1	0	0	0	0	24
E	13	1	0	0	0	0	14
ESE	7	11	0	0	0	0	18
SE	9	44	26	1	0	0	80
SSE	3	50	12	0	0	0	65
S	6	31	13	5	1	0	56
SSW	5	3	3	0	0	0	11
SW	3	4	2	0	0	0	9
WSW	3	18	10	1	0	0	32
W	4	26	40	5	0	0	75
WNW	2	56	75	13	0	0	146
NW	0	58	84	37	0	0	179
NNW	2	49	65	51	2	0	169
Variable	1	0	0	0	0	0	1
Total	123	413	372	115	3	0	1026

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	16	4	0	0	0	0	20
NNE	19	0	0	0	0	0	19
NE	9	1	0	0	0	0	10
ENE	12	0	0	0	0	0	12
E	23	5	0	0	0	0	28
ESE	31	11	0	0	0	0	42
SE	34	20	2	1	0	0	57
SSE	21	38	3	0	0	0	62
S	20	21	12	0	0	0	53
SSW	12	11	3	0	0	0	26
SW	12	22	2	0	0	0	36
WSW	15	36	2	0	0	0	53
W	21	77	9	0	0	0	107
WNW	25	43	15	0	0	0	83
NW	15	24	7	0	0	0	46
NNW	21	22	4	0	0	0	47
Variable	0	0	0	0	0	0	0
Total	306	335	59	1	0	0	701

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 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	3	0	0	0	0	0	3
NE	3	0	0	0	0	0	3
ENE	5	0	0	0	0	0	5
E	7	0	0	0	0	0	7
ESE	6	1	0	0	0	0	7
SE	7	0	0	0	0	0	7
SSE	5	1	0	0	0	0	6
S	3	0	0	0	0	0	3
SSW	8	0	0	0	0	0	8
SW	9	2	0	0	0	0	11
WSW	14	32	1	0	0	0	47
W	16	22	0	0	0	0	38
WNW	9	5	0	0	0	0	14
NW	7	2	0	0	0	0	9
NNW	5	0	0	0	0	0	5
Variable	2	0	0	0	0	0	2
Total	109	65	1	0	0	0	175

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	0	0	0	0	0	2
NNE	1	0	0	0	0	0	1
NE	2	0	0	0	0	0	2
ENE	1	0	0	0	0	0	1
E	6	0	0	0	0	0	6
ESE	5	0	0	0	0	0	5
SE	0	0	0	0	0	0	0
SSE	1	0	0	0	0	0	1
S	1	0	0	0	0	0	1
SSW	1	0	0	0	0	0	1
SW	5	4	0	0	0	0	9
WSW	10	8	0	0	0	0	18
W	6	3	0	0	0	0	9
WNW	1	0	0	0	0	0	1
NW	1	0	0	0	0	0	1
NNW	1	0	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	44	15	0	0	0	0	59

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

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Extremely Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	1	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	1	0	0	0	1

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Moderately Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	1	0	0	0	2
ENE	0	2	0	0	0	0	2
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	4	1	1	0	0	6

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Slightly Unstable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	1	2	0	0	0	3
NE	1	1	0	0	0	0	2
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	1	0	0	0	1
SE	0	0	3	2	0	0	5
SSE	0	0	0	0	1	0	1
S	0	0	2	1	1	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0
W	0	0	1	0	1	1	3
WNW	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	4	9	3	3	1	21

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

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Neutral - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	12	23	35	14	0	84
NNE	2	15	21	15	5	0	58
NE	4	18	16	3	0	0	41
ENE	3	16	4	0	0	0	23
E	5	14	3	1	0	0	23
ESE	1	16	4	0	0	0	21
SE	2	10	27	27	10	0	76
SSE	1	10	29	11	4	0	55
S	1	8	40	19	11	2	81
SSW	0	5	15	9	2	0	31
SW	1	2	7	10	0	0	20
WSW	0	4	12	23	6	0	45
W	0	4	17	48	26	4	99
WNW	1	3	24	91	45	8	172
NW	0	13	48	85	56	28	230
NNW	1	10	42	27	36	12	128
Variable	0	0	0	0	0	0	0
Total	22	160	332	404	215	54	1187

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Slightly Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	6	15	4	3	0	32
NNE	1	11	10	0	0	0	22
NE	1	19	11	0	0	0	31
ENE	2	14	3	0	0	0	19
E	0	10	10	2	0	0	22
ESE	2	8	21	0	0	0	31
SE	5	14	40	7	1	1	68
SSE	2	10	29	10	4	0	55
S	1	9	56	19	9	0	94
SSW	2	7	24	14	5	0	52
SW	3	8	12	20	5	1	49
WSW	1	8	11	6	0	0	26
W	1	4	21	43	2	0	71
WNW	0	13	29	63	23	1	129
NW	0	7	26	24	6	0	63
NNW	1	6	10	5	1	0	23
Variable	0	0	0	0	0	0	0
Total	26	154	328	217	59	3	787

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Moderately Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	1	1	0	0	0	4
NNE	0	0	1	0	0	0	1
NE	1	2	0	0	0	0	3
ENE	0	3	1	0	0	0	4
E	1	1	0	0	0	0	2
ESE	1	0	2	0	0	0	3
SE	1	8	7	0	0	0	16
SSE	0	4	1	0	0	0	5
S	0	1	7	2	0	0	10
SSW	1	1	5	0	0	0	7
SW	3	5	8	1	0	0	17
WSW	0	4	7	5	1	0	17
W	0	5	4	19	1	0	29
WNW	2	4	6	7	2	0	21
NW	2	3	7	6	0	0	18
NNW	0	3	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	14	45	58	40	4	0	161

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: 6

Peach Bottom Atomic Power Station

Period of Record: October - December 2014
Stability Class - Extremely Stable - 316Ft-33Ft Delta-T (F)
Winds Measured at 320 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	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	1	0	0	0	1
S	1	2	0	0	0	0	3
SSW	1	3	0	0	0	0	4
SW	1	4	3	0	0	0	8
WSW	0	1	2	1	0	0	4
W	0	2	7	3	1	0	13
WNW	0	1	1	0	0	0	2
NW	0	3	1	0	0	0	4
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	3	16	15	4	1	0	39

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: 6

Appendix A: Errata Data Section

Corrected 2013 Maximum Radioactive Groundwater Protection Program (RGPP) values.

In the 2013 ARERR, it was reported:

With the concentration ranging from 4.16E-06 µCi/ mL to 9.64E-06 µCi/ mL, the ground water released to the discharge canal was responsible for a hypothetical maximum 1.79E-05 mrem total body dose and critical organ dose (child liver) for the year. This dose contribution projection is well below the limit specified in the ODCM.

This range was not correct. This range maximum should have been 1.07E-05 µCi/ mL H-3. The conservative dose contribution from the groundwater for the year is 2.81E-05 mrem.

Offsite Laboratory Error Not Reported in 2013 Report

An error with the off-site Contract laboratory affecting some Radiological Environmental Monitoring Program (REMP) analysis samples in 2012 and 2013 and their clients were contacted. The vendor was contacted again in 2014 to affirm that no effluent samples (or composite effluent samples) were affected by this earlier analysis issue. Initially, the contract laboratory reported that only REMP samples were affected but the subsequent review indicated that this was not the case and that a revised report for one effluent analysis should have been issued to Peach Bottom but had not been issued in May of 2013 (with the rest of the REMP samples).

No MDCs were affected and all ODCM-required LLDs were met. No nuclides were now 'detected' as a result of the reprocessing of samples. Therefore, this one sample was not materially affected and the accounting of these nuclides was not affected in 2013. No errata to nuclide data or conservative doses are required for the 2013 ARERR.

Clarification to Errata in 2013 ARERR regarding corrected noble gas conservative dose calculations.

In 2012, a change to the ODCM was reported which affected the meteorological dispersion factor for ground-releases.

In 2013, errata were issued as an addendum to the 2012 errata concerning the same changes and 2008 data were added because of an extent of condition review that was conducted as part of the identified "particulate and iodine" errors (as described in the 2013 Errata).

These revised calculations were reviewed and are correct. The 2013 errata data should have added a remark indicating that these were addenda to the 2012 errata rather than standalone information.