Exelon Generation®

Oyster Creek
Route 9 South
P.O. Box 388
Forked River, NJ 08731

10 CFR 50.36a(a)(2)
10 CFR 72.44 (d)(3)
Technical Specification 6.9.1.d

RA-17-031

April 28, 2016

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555 - 0001

Oyster Creek Nuclear Generating Station
Renewed Facility Operating License No. DPR-16
NRC Docket No. 50-219

Independent Spent Fuel Storage Facility
NRC Docket No. 72-15

Subject: Annual Radioactive Effluent Release Report for 2016

Enclosed with this cover letter is the Annual Radioactive Effluent Release Report for the period January 1 to December 31, 2016. This report includes the Oyster Creek Nuclear Generating Station Independent Spent Fuel Storage Facility.

If any further information or assistance is needed, please contact John Clark, Chemistry Manager, at 609-971-2312.

Sincerely,

Timothy A. Moore
Site Vice President
Oyster Creek Nuclear Generating Station

Enclosure: 2016 Annual Radioactive Effluent Release Report

cc: Administrator, USNRC Region I
USNRC Senior Project Manager, Oyster Creek
USNRC Senior Resident Inspector, Oyster Creek
Craig Stewart, American Nuclear Insurers

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Annual Radioactive Effluent Release Report

2016

Oyster Creek Generating Station

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

January 1, 2016 through December 31, 2016

EXELON GENERATION COMPANY, LLC

OYSTER CREEK GENERATING STATION

DOCKET NO. 50-219 (Oyster Creek Generating Station)

DOCKET NO. 72-15 (Independent Spent Fuel Storage Facility)

Submitted to
The United States Nuclear Regulatory Commission
Pursuant to
Renewed Facility Operating License DPR-16

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Oyster Creek 2016 Annual Radioactive Effluent Release Report

EXECUTIVE SUMMARY

Effluents are strictly monitored to ensure that radioactivity released to the environment is as low as reasonably achievable and does not exceed regulatory limits. Effluent control includes the operation of monitoring systems, in-plant and environmental sampling and analyses programs, quality assurance programs for the effluent and environmental programs, and procedures covering all aspects of effluent and environmental monitoring.

Both radiological environmental and effluent monitoring indicate that the operation of Oyster Creek Generating Station (OCGS) does not result in significant radiation exposure to the people or the environment surrounding OCGS and is well below the applicable levels set by the Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA).

There were liquid radioactive effluent releases during 2016 of concentrations of tritium too low to detect at an LLD of 200 picocuries per liter (pCi/L) at the New Jersey Pollution Discharge Elimination System (NJPDES) permitted main condenser outfall. The releases were part of nearly continuous pumping of groundwater at approximately 60 gpm containing low levels of tritium and no detectable gamma. Exelon and the State of New Jersey Department of Environmental Protection (NJDEP) agreed to this remediation action instead of natural attenuation to address concentrations of tritium in groundwater. Well 73 and supporting equipment and piping were installed to pump groundwater to the intake structure at the inlet of the main circulating water pumps. Provisions were established for both batch and continuous releases of groundwater. Continuous releases occurred approximately 296 days in 2016. The nearly continuous releases occurred from January 1, 2016 through April 12, 2016 and June 8, 2016 through December 31, 2016 with a total of 2.68E+07 gallons of groundwater pumped resulting in 2.01E-01 Ci of tritium released to the discharge canal. The dose to the most limiting member of the public due to the release of groundwater was 9.78E-07 mrem.

There were no liquid abnormal releases during 2016.

There were no gaseous abnormal releases during 2016.

The maximum calculated organ dose (Bone) from iodines, tritium, carbon-14 (C-14), and particulates to any individual due to gaseous effluents was 4.50E-01 mrem, which was approximately 3.00E+00 percent of the annual limit of 15 mrem. The majority of organ dose from gaseous effluents was due to C-14. The maximum calculated gamma air dose in the UNRESTRICTED AREA due to noble gas effluents was 1.34E-03 mrad, which was 1.34E-02 percent of the annual 10 CFR 50 Appendix I, As Low As Reasonably Achievable (ALARA) limit of 10 mrad.

For comparison, the background radiation dose averages approximately 620 mrem per year to the average person in the United States.

The Independent Spent Fuel Storage Installation (ISFSI) is a closed system and the only exposure is due to direct radiation. Based on offsite TLD readings, dose due to direct radiation from the ISFSI was less than 1 mrem for 2016. Because it is a sealed unit, no radioactive material was released.

Comparison of environmental sampling results to iodine and particulate gaseous effluents released, showed no radioactivity attributable to the operation of OCGS. Both elevated and ground-level release paths were considered in this review, with total iodines released of 2.00E-02 Ci and total particulates with half-lives greater than 8 days less C-14 released of 2.57E-02 Ci.

Joint Frequency Tables of meteorological data, per Stability Classification Category, as well as for all stability classes, are included. All data was collected from the on-site Meteorological Facility. Data recoveries for the 380-foot data and the 33-foot data were 98.1 percent and 99.5 percent, respectively. The UFSAR commits to Regulatory Guide (RG) 1.23 for Meteorological Facility data recovery. RG 1.23 requires data recovery of at least 90% on an annual basis.

1 Sources of Radiation Dose to the U.S. Population

Note: The information in this section is from the following NRC report: Radioactive Effluents from Nuclear Power Plants: Annual Report 2007

For comparison with Nuclear Power Plant (NPP) effluents, this section provides a perspective on the doses that Americans typically receive on average from natural and background radiation.

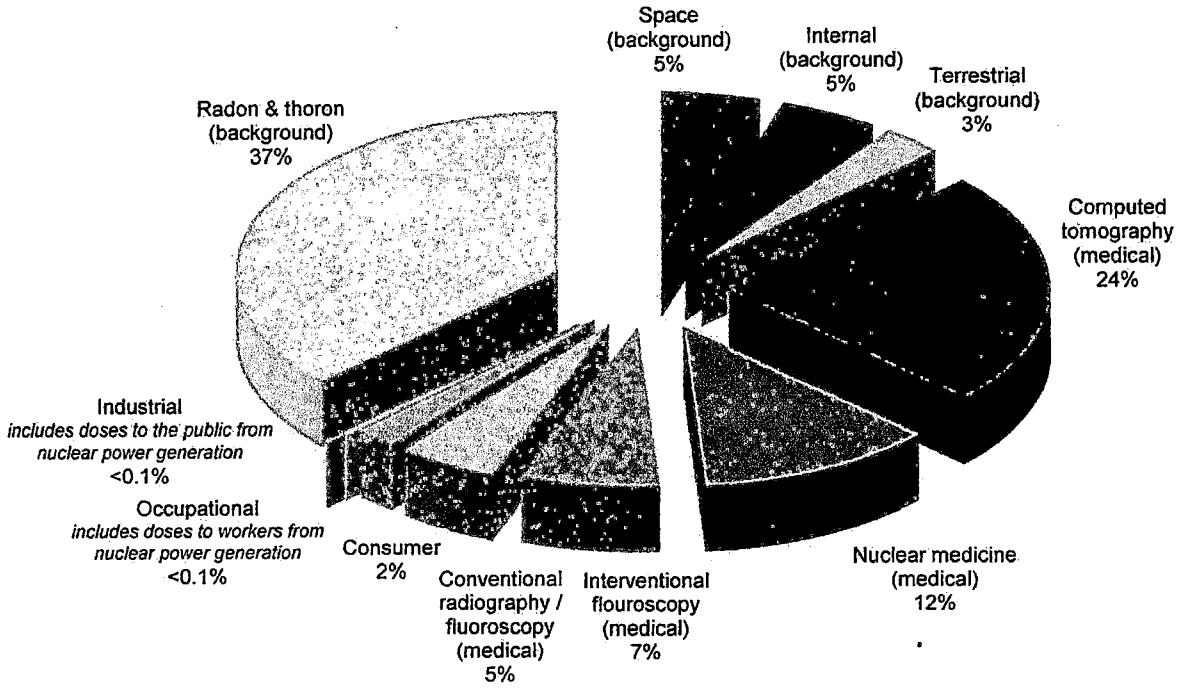
In March 2009, the National Council on Radiation Protection and Measurements (NCRP) published Report No. 160 as an update to the 1987 NCRP Report No. 93, Ionizing Radiation Exposure of the Population of the United States (Refs. 28, 29). Report No. 160 describes the doses to the U.S. population from all sources of ionizing radiation for 2006, the most recent data available at the time the report was written. The report also includes information on the variability of those doses from one individual to another. The NCRP estimated that the average person in the United States receives the equivalent of about 620 mrem of radiation dose each year. NCRP Report No. 160 describes each of the sources of radiation that contribute to this dose, including:

1. naturally-occurring sources (natural background) such as cosmic radiation from space, terrestrial radiation from radioactive materials in the earth, and naturally occurring radioactive materials in food people eat and air people breathe;
2. medical sources from diagnosis and treatment of health disorders using radioactive pharmaceuticals and radiation-producing equipment;
3. consumer products;
4. industrial processes, security devices, educational tools, and research activities;
5. exposures of workers that result from their occupations.

Figure 1.1 is a pie chart showing the relative contributions of these sources to radiation dose to the U.S. population. Larger relative contributors to dose are represented by proportionally larger slices of the pie. Doses to the public from nuclear power generation are included in the industrial category; doses to workers from nuclear power generation are included in the category of occupational dose.

Doses to the public due to effluents from NPPs are less than 0.1% of what the average person receives each year from all sources of radiation. Doses to workers from occupational exposures, including those received from work at NPPs, also are less than 0.1% of the average dose to a member of the public from all sources.

FIGURE 1.1
Sources of Radiation Exposure to the U.S. Population



Percent contribution of various sources of exposure to the total collective effective dose and the total effective dose per individual in the U.S. population for 2006. Percent values have been rounded to the nearest 1%, except for those <1 % [less than 1%]. Credit: Modification to image courtesy of National Council on Radiation Protection and Measurements.

2 Exposure Pathways

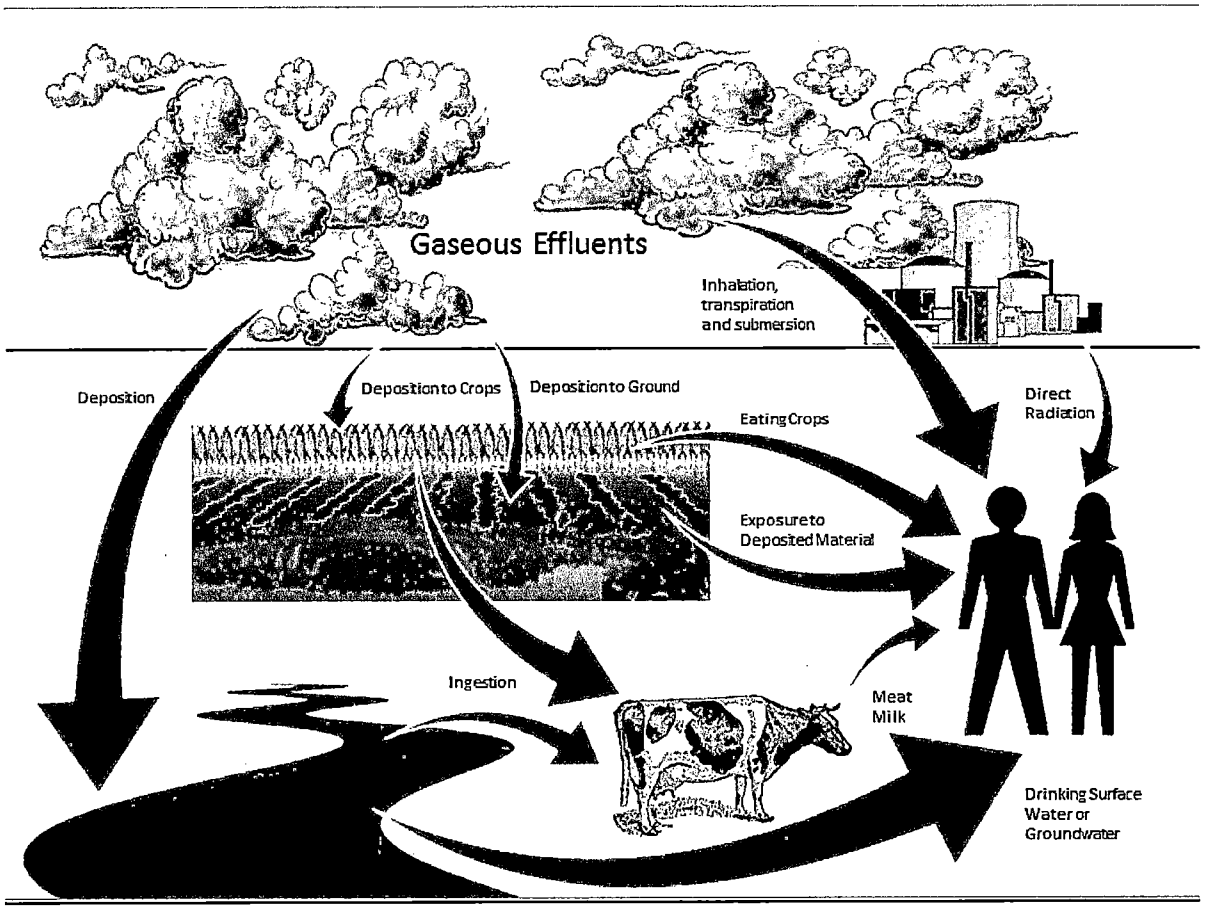
Radiological exposure pathways define the methods by which people may become exposed to radioactive material. The major pathways of concern are those which could cause the highest calculated radiation dose. These projected pathways are determined from the type and amount of radioactive material released the environmental transport mechanism, and the use of the environment. The environmental transport mechanism includes consideration of physical factors, such as the hydrological (water) and meteorological (weather) characteristics of the area. An annual average of the water flow, wind speed, and wind direction are used to evaluate how the radionuclides will be distributed in an area for gaseous or liquid releases. An important factor in evaluating the exposure pathways is the use of the environment. Many factors are considered such as dietary intake of residents, recreational use of the area, and the locations of homes and farms in the area.

The external and internal exposure pathways considered are shown in Figure 2.1. The release of radioactive gaseous effluents involves pathways such as external whole body exposure, deposition of radioactive material on plants, deposition on soil, inhalation by animals destined for human consumption, and inhalation by humans. The release of radioactive material in liquid effluents involves pathways such as drinking water, fish, and direct exposure from the water at the shoreline while swimming.

Although radionuclides can reach humans by many different pathways, some result in more dose than others. The critical pathway is the exposure route that will provide, for a specific radionuclide, the greatest dose to a population, or to a specific group of the population called the critical group. The critical group may vary depending on the radionuclides involved, the age and diet of the group, or other cultural factors. The dose may be delivered to the whole body or to a specific organ. The organ receiving the greatest fraction of the dose is called the critical organ.

FIGURE 2.1

Exposure Pathways



This simple diagram demonstrates some potential exposure pathways from Oyster Creek Generating Station.

3 Introduction

In accordance with the reporting requirements of Technical Specification 6.9.1.d applicable during the reporting period, this report summarizes the effluent release data for OCGS for the period January 1, 2016 through December 31, 2016. This submittal complies with the format described in Regulatory Guide 1.21, "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", Revision 1, June 1974.

Meteorological data was reported in the format specified in Regulatory Guide 1.23, Revision 1, "Meteorological Monitoring Programs for Nuclear Power Plants".

All vendor results were received and included in the report calculations. Therefore the 2016 report is complete.

4 Supplemental Information

Oyster Creek Generating Station Exelon Generation Company, LLC

A. Regulatory Limits:

	Limit	Units	Receptor	ODCM and 10 CFR 50, Appendix I Design Objective Limits
1. Noble Gases:				
a.	≤ 500	mrem/yr	Total Body	ODCM Control 3.11.2.1
	≤ 3000	mrem/yr	Skin	
b.	≤ 5	mrad	Air Gamma	Quarterly air dose limits
	≤ 10	mrad	Air Beta	ODCM Control 3.11.2.2
c.	≤ 10	mrad	Air Gamma	Yearly air dose limits
	≤ 20	mrad	Air Beta	ODCM Control 3.11.2.2
d.	< 5	mrem	Total Body (Gamma)	10 CFR 50, Appendix I, Section II.B.2(b)
	< 15	mrem	Skin (Beta)	
2. Iodines, Tritium, Particulates with Half Life > 8 days:				
a.	≤ 1500	mrem/yr	Any Organ	ODCM Control 3.11.2.1
b.	≤ 7.5	mrem	Any Organ	Quarterly dose limits ODCM Control 3.11.2.3
c.	≤ 15	mrem	Any Organ	Yearly dose limits ODCM Control 3.11.2.3
3. Liquid Effluents:				
a.	Concentration 10 CFR 20, Appendix B, Table 2 Column 2			ODCM Control 3.11.1.1
b.	≤ 1.5	mrem	Total Body	Quarterly dose limits
	≤ 5	mrem	Any Organ	ODCM Control 3.11.1.2
c.	≤ 3	mrem	Total Body	Yearly dose limits
	≤ 10	mrem	Any Organ	ODCM Control 3.11.1.2

B. Effluent Concentration Limits:

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 ODCM Controls 3.11.2.1.

The Effluent Concentration Limit (ECL) specified in 10 CFR 20, Appendix B, Table 2, Column 2 for identified nuclides, were used to calculate permissible release rates and concentrations for liquid release per ODCM Controls 3.11.1.1. The total activity concentration at the Route 9 bridge for all dissolved or entrained gases was limited to < 2E-04 μCi/ml.

C. Average Energy ($\bar{E}$):

The Oyster Creek ODCM limits the instantaneous 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. The average beta and gamma energies ($\bar{E}$) of the radionuclide mixture in releases of fission and activation gases as described in Regulatory Guide 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plant", may be used to calculate doses in lieu of more sophisticated software. The Oyster Creek radioactive effluent program employs the methodologies presented in U.S. NRC Regulatory Guide 1.109 "Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I," Revision 1, October 1977. Therefore, average energy ($\bar{E}$) as described in Regulatory Guide 1.21 is not applicable to Oyster Creek.

D. Measurements and Approximations of Total Radioactivity:

1. Fission and Activation Gases

The method used for Gamma Isotopic Analysis is the Canberra Gamma Spectroscopy System with a gas Marinelli beaker. Airborne effluent gaseous activity was continuously monitored and recorded in accordance with the Off Site Dose Calculation Manual (ODCM) Table 4.11.2.1.2-1. Additional grab samples were taken from the stack Radioactive and Gaseous Effluent Monitoring System (RAGEMS) sample point and ground-level release sample points and analyzed at least monthly to determine the isotopic mixture of noble gas activity released for the month. If activity was found in the grab isotopic analysis, the results are entered into Simplified Environmental Effluent Dosimetry System (SEEDS) to calculate dose and dose rates. If no activity is detected in the stack grab samples, post treatment or Off Gas Isotopic Analysis data may be used.

2. Iodines

The method used for Gamma Isotopic Analysis is the Canberra Gamma Spectroscopy System with a charcoal cartridge. Iodine activity was continuously sampled and analyzed in accordance with ODCM Table 4.11.2.1.2-1. Charcoal samples are taken from the stack RAGEMS sample point and

ground-level release sample points and analyzed at least weekly to determine the total activity released from the plant based on the average vent flow rates recorded for the sampling period.

3. Particulates (half-lives > 8 days)

   The method used for Gamma Isotopic Analysis is the Canberra Gamma Spectroscopy System with a particulate filter (47 mm). Particulate activity was continuously sampled and analyzed in accordance with ODCM Table 4.11.2.1.2-1. Particulate samples are taken from the stack RAGEMS sample point and ground-level release sample points and analyzed at least weekly to determine the total activity released from the plant based on the average vent flow rates recorded for the sampling period.

4. Tritium

   A. Gaseous Effluents

      Air from stack and vent effluents was passed through a desiccant column and distilled to remove the moisture collected. An aliquot of the water from the distillate was analyzed for tritium using a liquid scintillation counter.

   B. Liquid Effluents

      Water from liquid effluents was analyzed for tritium using a liquid scintillation counter.

5. Gross Alpha

   Gross alpha was measured by an off-site vendor for both the gas and liquid effluent composite samples.

6. Hard-To-Detects

   Hard-To-Detects was measured by an off-site vendor for one set of gas monthly composites. The analysis included Fe-55, I-129, Ni-59, Ni-63, Tc-99, Am-241, Cm-242, Cm-243/244, Pu-238, Pu-239/240 and Pu-241. Fe-55 and Ni-63 have been added to the routine monthly composite analysis schedule based on previous sample results for Hard-To-Detects. Only nuclides that have been detected are included in Table A-2 and/or Table A-3.

7. Carbon-14 (C-14)

The amount of C-14 (Ci) released was estimated using the guidance from EPRI Technical Report 1021106, Estimation of Carbon-14 in Nuclear Power Plant Gaseous Effluents. The C-14 was released primarily through the stack (97%) with a small amount (3%) released through plant vents. The activity in liquid effluents was determined to not be significant.

The offsite dose from C-14 was calculated using SEEDS, which uses approved ODCM methodologies. The resulting annual dose to a child from gaseous releases of C-14 is about 4.30E-01 mrem to the bone.

8. Liquid Effluents

Groundwater containing tritium was released during 2016. For continuous releases, tritium and principal gamma emitters were determined for a composite sample daily. The concentration of tritium is limited to ensure concentrations were less than 200 pCi/l in the discharge canal. The gamma emitters were limited to less than detectable concentrations. Gross alpha and Hard-to-detect analyses (Fe-55, Ni-63, Sr-89 and Sr-90) were determined for monthly composite samples for each type of release (batch or continuous).

The leaks into the groundwater were reported in the 2009 Annual Radioactive Effluent Release Report as abnormal releases. Estimates of the curies of the tritium releases were reported. Doses due to the release of the groundwater to the discharge canal were included in the report. To ensure that the amount of activity discharge is accurate and limiting, the activity and doses as a result of discharges during 2016 from the groundwater remediation project are included in this report.

9. Estimated Total Error Present

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

10. Composite Samples and Lower Limit of Detection (LLD)

Particulate air samples were composited monthly and analyzed for gross alpha, Sr-89, Sr-90, Fe-55 and Ni-63. Groundwater batch and continuous releases were composited at least monthly and analyzed for gross alpha, Sr-89, Sr-90, Fe-55 and Ni-63. These composites are submitted to an offsite vendor laboratory for analysis. The ODCM required LLD for liquid and airborne releases are as follows:

Liquid:	**LLD**
Principal Gamma Emitters (Mn-54, Fe-59, Co-58, Co-60, Zn-65, Mo-99, I-131, Ce-141, Cs-134, Cs-137)	5E-07 µCi/ml
Principal Gamma Emitters (Ce-144)	5E-06 µCi/ml
Dissolved and Entrained Gases	1E-05 µCi/ml
H-3	1E-05 µCi/ml
Gross Alpha	1E-07 µCi/ml
Sr-89 and Sr-90	5E-08 µCi/ml
Fe-55 and Ni-63	1E-06 µCi/ml
Airborne	**LLD**
Principal Gamma Emitters (Kr-87, Kr-88, Xe-133, Xe-133m, Xe-135, Xe-138)	1E-04 µCi/ml
H-3	1E-06 µCi/ml
I-131	1E-12 µCi/ml
I-133	1E-10 µCi/ml
Principal Gamma Emitters (Mn-54, Fe-59, Co-58, Co-60, Zn-65, Cs-134, Cs-137, Ce-141)	1E-11 µCi/ml
Principal Gamma Emitters (Mo-99, Ce-144)	1E-10 µCi/ml
Gross Alpha	1E-11 µCi/ml
Sr-89, Sr-90	1E-11 µCi/ml

E. Batch Releases:

1. Liquid

There were no batch releases of liquid effluents during 2016.

2. Gaseous

There were no batch releases of gaseous effluents during 2016.

F. Abnormal Releases:

There were no abnormal liquid releases during 2016.

There were no abnormal gaseous releases during 2016.

G. Revisions to the ODCM:

There were no revisions to the ODCM in 2016

H. Radiation Effluent Monitors Out of Service More Than 30 Days

Per ODCM Control 3.3.3.10, "Radioactive Liquid Effluent Monitoring Instrumentation" and 3.3.3.11, Radioactive Gaseous Effluent Monitoring Instrumentation requires:

With less than the minimum number of radioactive liquid/gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.3.10-1/3.3.3.11-1. Make every reasonable effort to return the instrument to OPERABLE status within 30 days and, if unsuccessful, explain in the next Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

The following is a discussion of instrumentation out of service for greater than 30 days:

1. The entire Turbine Building Ventilation Monitoring System, which includes the Radioactive Noble Gas Monitor (Low Range), the Iodine Sampler, the Particulate Sampler, the Effluent Flow Measuring Device and the Sample Flow Measuring Device, was declared inoperable from December 12, 2015 through January 22, 2016 (44 days). The system was originally declared inoperable to perform the Turbine Building RAGEMS Sample and Effluent Flow – Calibration surveillance and compensatory sampling was initiated per the ODCM. During the surveillance the Effluent Flow Measuring Device failed the calibration which impacted the sample flow. The issue was entered into our Corrective Action Program and the entire monitoring system remained inoperable until the surveillance could be completed satisfactorily. The failure was determined to be due to a faulty flow transmitter output card. The flow transmitter is an obsolete model which is no longer supported by the vendor. This required the station to locate a third party vendor to obtain a flow transmitter output card. The use of

a third party vendor increased the time to locate, order and receive the new output card which resulted in the monitoring system being inoperable for more than 30 days.

2. The Turbine Building Ventilation Monitoring System Effluent Flow Measuring Device was declared inoperable from February 10, 2016 through May 17, 2016 (97 days). During the performance of the Turbine Building RAGEMS Sample and Effluent Flow – Functional Test surveillance, the alarm for loss of flow from the feed pump room was not received as required by the acceptance criteria of the surveillance. The issue was entered into our Corrective Action Program and the Effluent Flow Measuring Device was declared inoperable. Compensatory sampling was initiated per the ODCM. After review of the surveillance performance and plant response during the surveillance, it was determined that the flow indication did not reach the alarm set point due to static pressure on the high side of the delta pressure transmitter. The surveillance was revised to address the static pressure issue and it was determined by the station to re-perform the surveillance at the next scheduled quarterly performance of the surveillance which resulted in the Effluent Flow Measuring Device being inoperable for more than 30 days.
3. The Reactor Building Service Water Radiation Monitor was declared inoperable from August 11, 2016 through September 22, 2016 (41 days). During the weekly performance of the source check of the Reactor Building Service Water Radiation Monitor, the LCD monitor for the monitor turned off and abnormal conditions were observed. The issue was entered into our Corrective Action Program and the Reactor Building Service Water Radiation Monitor was declared inoperable. Compensatory sampling was initiated per the ODCM. Troubleshooting identified that the DC power supply was degraded due to a failed beacon bulb. The components were not available on site and the components were ordered through the vendor. Due to the vendor having limited availability of the components, it took 31 days for the vendor to ship the components. The power supply and the beacon bulb were replaced as soon as they arrived. The time required for the components to arrive from the vendor resulted in the monitor being inoperable for more than 30 days.

I. Releases from the Independent Spent Fuel Storage Facility:

The ISFSI is a closed system and the only exposure would be due to direct radiation. This includes iodines, particulates, and noble gases. Based on offsite TLD readings, dose due to direct radiation from the ISFSI was less than 1 mrem for 2016. Because it is a sealed unit, no radioactive material was released.

J. Program Deviations:

1. There was one program deviation in 2016.

   A stack RAGEMS compensatory noble gas sample was not obtained within the ODCM required 8 hour time frame. The stack RAGEMS low range monitor was declared inoperable at 12:14 on October 17, 2016 by Operations so the Instrument Maintenance Department could perform a calibration of the stack RAGEMS low range monitor. An activity on the work order for the calibration is for the Chemistry Department to line up flow to the by-pass sample line which stops flow from going through the low range monitor. Chemistry

commenced the ODCM required compensatory sampling for the low range monitor being declared inoperable which is a noble gas sample every 8 hours. The calibration was suspended due to a parts issue and the monitor was inoperable longer than is typical to perform a calibration. When the Instrument Maintenance Department completed the calibration they informed Operations that the calibration was completed satisfactorily. The Operations crew that was on shift at the time the calibration was completed was a different crew than when the calibration began and did not realize that the monitor flow was in by-pass mode and declared the low range monitor operable at 16:05 on October 27,2016. The Operations Department notified the on shift chemistry technician that they had declared the low range monitor operable. The on shift chemistry technician was not involved in lining the low range monitor to the by-pass mode and stopped performing the ODCM required compensatory sampling based on Operations declaring the monitor operable. When Operations performed their daily source check early the next morning they noticed that the indication didn't change from when flow was supposed to be going through the monitor and when they placed the monitor in purge to perform the source check. Operations discovered that the flow was in by-pass mode and requested Chemistry to perform the compensatory sampling. Chemistry immediately obtained a sample but it was 9 hours and 55 minutes from the previous sample so it did not meet the ODCM requirement of performing a compensatory sample every 8 hours. The low range monitor flow was returned to normal through the monitor and the low range monitor was returned to service. This event was entered into our Corrective Action Program and the cause was determined to be that the Operations Unit Supervisor failed to use procedure
OP-AA-108-106 (Equipment Return to Service Checklist) due to the belief that the surveillance test returned the system to its normal lineup and that no maintenance was performed during the surveillance test. The OP-AA-108-106 would have directed a work order search be performed which would have identified there were activities that still needed to be completed including returning flow to the monitor. A contributing cause of this event was that the surveillance procedure Stack RAGEMS Noble Gas Monitor Calibration (621.3.025) does not contain instructions as to the mode or condition in which the equipment is to be placed after completion of the maintenance activity or test.

LIST OF TABLES

Table A-1: Gaseous Effluents - Summary Of All Releases

Period: January 1, 2016 through December 31, 2016 **Unit: Oyster Creek**

A. Fission & Activation Gases	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Est. Total Error %
1. Total Release	Ci	2.77E+01	2.85E+01	3.47E+01	1.27E+01	25.00%
2. Average Release Rate for Period	µCi/sec	3.56E+00	3.62E+00	4.37E+00	1.60E+00	
3. Gamma Air Dose	mrad	3.12E-04	4.57E-03	1.52E-04	1.14E-04	
4. Beta Air Dose	mrad	1.09E-04	4.26E-03	5.09E-05	1.95E-05	
5. Percent of ODCM Limit						
- Gamma Air Dose	%	6.24E-03	9.14E-02	3.04E-03	2.28E-03	
- Beta Air Dose	%	1.09E-03	4.26E-02	5.09E-04	1.95E-04	
B. Iodines						
1. Total – I-131	Ci	5.05E-04	9.27E-04	2.19E-03	4.80E-04	25.00%
2. Average Release Rate for Period	µCi/sec	6.49E-05	1.18E-04	2.75E-04	6.04E-05	
3. Percent of ODCM limit	%	*	*	*	*	
C. Particulate						
1. Particulates with T 1/2 > 8 days	Ci	7.54E-03	7.20E-03	8.68E-03	2.32E-03	25.00%
2. Average Release Rate for Period	µCi/sec	9.70E-04	9.15E-04	1.09E-03	2.92E-04	
3. Percent of ODCM limit	%	*	*	*	*	
D. Tritium						
1. Total Release	Ci	7.83E+00	7.09E+00	7.77E+00	2.81E+00	25.00%
2. Average Release Rate for Period	µCi/sec	1.01E+00	9.02E-01	9.77E-01	3.54E-01	
3. Percent of ODCM limit	%	*	*	*	*	
E. Gross Alpha						
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	25.00%
2. Average Release Rate for Period	µCi/sec	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM limit	%	*	*	*	*	
F. Carbon-14						
1. Total Release	Ci	2.41E+00	1.95E+00	2.07E+00	1.77E+00	
2. Average Release Rate for Period	µCi/sec	3.10E-01	2.48E-01	2.61E-01	2.23E-01	
3. Percent of ODCM limit	%	*	*	*	*	
G. Iodine 131 & 133, Tritium & Particulate						
1. Organ Dose	mrem	3.74E-02	8.63E-02	2.33E-01	1.80E-01	
2. Percent of ODCM Limit	%	4.99E-01	1.15E+00	3.11E+00	2.40E+00	

* ODCM Limit is for combined Iodine, tritium, Carbon-14 and particulate only, which is shown in Item G.

Table A-2: Gaseous Effluents Release Point: Elevated Release

Period: January 1, 2016 through December 31, 2016 **Unit: Oyster Creek**

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	3.02E-01	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Kr-87	Ci	<LLD	<LLD	<LLD	3.22E+00	<LLD	<LLD	<LLD	<LLD
Kr-88	Ci	3.00E-01	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-133	Ci	2.84E-01	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	2.68E+01	2.85E+01	3.47E+01	8.72E+00	<LLD	<LLD	<LLD	<LLD
Xe-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-138	Ci	<LLD	<LLD	<LLD	7.55E-01	<LLD	<LLD	<LLD	<LLD
Ar-41	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	2.77E+01	2.85E+01	3.47E+01	1.27E+01	<LLD	<LLD	<LLD	<LLD
2. Iodines									
I-131	Ci	5.05E-04	9.27E-04	1.98E-03	4.79E-04	<LLD	<LLD	<LLD	<LLD
I-132	Ci	<LLD	3.29E-04	6.58E-04	<LLD	<LLD	<LLD	<LLD	<LLD
I-133	Ci	1.51E-03	2.98E-03	7.34E-03	7.83E-04	<LLD	<LLD	<LLD	<LLD
I-135	Ci	5.12E-04	<LLD	1.82E-03	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	2.53E-03	4.24E-03	1.18E-02	1.26E-03	<LLD	<LLD	<LLD	<LLD
3. Particulates									
Sr-89	Ci	1.92E-03	7.18E-04	1.82E-03	5.09E-04	<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	6.76E-06	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ba-140	Ci	2.10E-03	1.15E-03	2.01E-03	4.25E-04	<LLD	<LLD	<LLD	<LLD
La-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cr-51	Ci	2.32E-05	4.38E-04	1.90E-05	2.33E-04	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	2.98E-04	6.73E-04	5.67E-04	1.13E-04	<LLD	<LLD	<LLD	<LLD
Co-58	Ci	1.14E-03	1.03E-03	1.01E-03	8.75E-05	<LLD	<LLD	<LLD	<LLD
Co-60	Ci	1.63E-03	2.20E-03	2.44E-03	5.16E-04	<LLD	<LLD	<LLD	<LLD
Ni-63	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mo-99	Ci	1.45E-05	7.78E-06	1.18E-05	<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
Fe-55	Ci	<LLD	4.32E-04	3.36E-04	4.37E-04	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	4.05E-04	5.48E-04	4.64E-04	<LLD	<LLD	<LLD	<LLD	<LLD
Am-241	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	7.54E-03	7.20E-03	8.68E-03	2.32E-03	<LLD	<LLD	<LLD	<LLD
4. Tritium									
H-3	Ci	7.53E+00	6.88E+00	7.47E+00	2.34E+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	2.34E+00	1.89E+00	2.01E+00	1.72E+00	<LLD	<LLD	<LLD	<LLD

Table A-3: Gaseous Effluent Release Point: Ground Level Releases

Period: January 1, 2016 through December 31, 2016 **Unit: Oyster Creek**

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-133m	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
Total for Period	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
2. Iodines									
I-131	Ci	<LLD	7.48E-08	2.07E-04	7.13E-07	<LLD	<LLD	<LLD	<LLD
I-133	Ci	<LLD	<LLD	1.91E-05	<LLD	<LLD	<LLD	<LLD	<LLD
I-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	7.48E-08	2.26E-04	7.13E-07	<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	3.71E-06	6.66E-08	6.44E-06	2.57E-06	<LLD	<LLD	<LLD	<LLD
Ni-63	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
Ce-141	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-55	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Am-241	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	3.71E-06	6.66E-08	6.44E-06	2.57E-06	<LLD	<LLD	<LLD	<LLD
4. Tritium									
H-3	Ci	3.00E-01	2.14E-01	2.98E-01	4.70E-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	7.25E-02	5.84E-02	6.23E-02	5.32E-02	<LLD	<LLD	<LLD	<LLD

Table A-4: Liquid Effluents - Summary Of All Releases

Period: January 1, 2016 through December 31, 2016 **Unit: Oyster Creek**

A. Fission & Activation Products	Units	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Est. Total Error %
1. Total Release not including tritium, gases, alpha	Ci	<LLD	<LLD	<LLD	<LLD	25.00%
2. Average Diluted concentration during period	µCi/ml	<LLD	<LLD	<LLD	<LLD	
3. Total Body Dose	mrem	2.71E-07	1.11E-07	3.04E-07	2.92E-07	
4. Organ Dose	mrem	2.71E-07	1.11E-07	3.04E-07	2.92E-07	
3. Percent of ODCM Limit						
-Total Body Dose	%	1.81E-05	7.42E-06	2.03E-05	1.95E-05	
-Organ Dose	%	5.42E-06	2.23E-06	6.09E-06	5.84E-06	
B. Tritium						
	Units	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	Est. Total Error %
1. Total Release	Ci	5.77E-02	2.38E-02	6.29E-02	5.71E-02	25.00%
2. Average diluted concentration during period	µCi/ml	1.24E-10	1.24E-10	1.33E-10	1.37E-10	
3. Percent of 10CFR20 limit	%	1.24E-05	1.24E-05	1.33E-05	1.37E-05	
C. Dissolved and Entrained Gases						
	Units	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	Est. Total Error %
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	25.00%
2. Average diluted concentration	µCi/ml	<LLD	<LLD	<LLD	<LLD	
3. Percent of ODCM limit	%	<LLD	<LLD	<LLD	<LLD	
D. Gross Alpha Activity						
	Units	**Quarter 1**	**Quarter 2**	**Quarter 3**	**Quarter 4**	Est. Total Error %
1. Total Release	Ci	<LLD	<LLD	<LLD	<LLD	25.00%
E. Volume of Waste Released prior to dilution	Liters	2.91E+07	1.20E+07	3.17E+07	2.88E+07	
F. Volume of Dilution Water Used During Period	Liters	4.63E+11	1.92E+11	4.73E+11	4.18E+11	

Table A-5: Liquid Release Point: Groundwater Remediation

Period: January 1, 2016 through December 31, 2016 **Unit: Oyster Creek**

Nuclides Released		Continuous Mode				Batch Mode			
Fission & Activation Products	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	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
I-131	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	<LLD	<LLD	<LLD	<LLD	<LLD
Ni-63	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Fe-59	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Zn-65	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Mn-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Cr-51	Ci	<LLD	<LLD	<LLD	<LLD	<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	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Ce-144	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Total for Period		<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Dissolved Entrained Gases									
Xe-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Xe-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD
Tritium									
H-3	Ci	5.77E-02	2.38E-02	6.29E-02	5.71E-02	<LLD	<LLD	<LLD	<LLD
Gross Alpha									
Gross Alpha	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD	<LLD

Appendix B
Solid Waste and Irradiated Fuel Shipments

A. Solid waste shipped offsite for burial or disposal (not irradiated fuel)

1. Type of waste

Types of Waste	Total Quantity (m^3)	Total Activity (Ci)	Period	Est. Total Error%
a. Spent resins,filter sludges, evaporator bottom, etc	2.72E+01	9.41E+01	2016	2.50E+01
b. Dry compressible waste, contaminated equip, etc	6.14E+02	1.44E+00	2016	2.50E+01
c. Irradiated components, control rods,etc	0.00E+00	0.00E+00	2016	2.50E+01
d. Other	5.61E+01	4.18E-02	2016	2.50E+01

1. Estimate of Major Nuclide Composition (By Waste Type)

Category A – Spent Resin, Filters, Sludges, Evaporator Bottoms, etc.

Isotope	Waste Class A		Waste Class B		Waste Class C	
	Curies	Percent	Curies	Percent	Curies	Percent
H-3	2.31E-02	8.80E-02	8.04E-03	1.18E-02		
C-14	6.48E-02	2.47E-01	2.99E-02	4.40E-02		
Cr-51						
P-32						
Mn-54	1.34E+00	5.11E+00	8.47E-02	1.25E-01		
Fe-55	1.37E+01	5.22E+01	3.96E+01	5.83E+01		
Fe-59						
Co-57						
Co-58						
Co-60	1.06E+01	4.04E+01	1.69E+01	2.49E+01		
Ni-59						
Ni-63	1.08E-01	4.12E-01	1.54E+00	2.27E+00		
Zn-65	1.65E-01	6.29E-01	1.47E-02	2.16E-02		
Sr-89						
Sr-90	6.73E-04	2.56E-03	7.54E-02	1.11E-01		
Nb-95						
Tc-99	5.53E-03	2.11E-02	1.53E-03	2.25E-03		
Ag-110m						
Sb-125	5.22E-03	1.99E-02				
I-129	8.27E-04	3.15E-03	1.87E-04	2.75E-04		
Cs-134						
Cs-137	1.84E-01	7.01E-01	9.60E+00	1.41E+01		
Ce-144	3.74E-02	1.43E-01	7.07E-04	1.04E-03		
Pu-238	1.01E-04	3.85E-04	2.04E-03	3.00E-03		
Pu-239	5.46E-06	2.08E-05	5.94E-04	8.75E-04		
Pu-240	5.46E-06	2.08E-05				
Pu-241	5.57E-03	2.12E-02	3.73E-02	5.49E-02		
Am-241	1.60E-04	6.10E-04	2.65E-03	3.90E-03		
Cm-242	2.03E-05	7.74E-05	1.32E-09	1.94E-09		
Cm-243	5.30E-05	2.02E-04	1.72E-03	2.53E-03		
Cm-244	5.24E-05	2.00E-04	1.57E-03	2.31E-03		
Totals	2.62E+01	1.00E+02	6.79E+01	1.00E+02	0.00E+00	0.00E+00

Note: Grey fields are where results were not reported in the NRC Regulatory Guide 1.21 Report

Category B – Dry Compressible Waste, Contaminated Equipment, etc.

Isotope	Waste Class A	
	Curies	Percent
H-3	9.91E-06	6.87E-04
C-14	3.39E-06	2.35E-04
P-32		
Mn-54	4.57E-02	3.17E+00
Fe-55	8.88E-01	6.16E+01
Co-57		
Co-58		
Co-60	3.65E-01	2.53E+01
Ni-59	1.06E-04	7.35E-03
Ni-63	1.14E-02	7.90E-01
Zn-65	2.46E-02	1.71E+00
Sb-125		
Sr-89		
Sr-90	3.39E-04	2.35E-02
Tc-99	4.44E-05	3.08E-03
I-129	7.79E-07	5.40E-05
Cs-137	1.05E-01	7.28E+00
Ce-144	2.24E-03	1.55E-01
Pu-238	1.04E-05	7.21E-04
Pu-239	3.01E-06	2.09E-04
Pu-240	3.01E-06	2.09E-04
Pu-241	1.14E-04	7.90E-03
Am-241	1.38E-05	9.57E-04
Cm-242	4.08E-07	2.83E-05
Cm-243	8.45E-06	5.86E-04
Cm-244	8.44E-06	5.85E-04
Totals	1.44E+00	1.00E+02

Note: Grey fields are where results were not reported in the NRC Regulatory Guide 1.21 Report

Category C – Irradiated components, control rods, etc.

Isotope	Waste Class C	
	Curies	Percent Abundance %
H-3		
C-14		
Cr-51		
Mn-54		
Fe-55		
Fe-59		
Co-58		
Co-60		
Ni-59		
Ni-63		
Zn-65		
Sr-90		
Zr-95		
Nb-94		
Mo-93		
Tc-99		
Sb-125		
I-129		
Cs-137		
Ce-144		
Hf-181		
Ta-182		
U-235		
Np-237		
Pu-238		
Totals	0.00E+00	0.00E+00

Note: Grey fields are where results were not reported in the NRC Regulatory Guide 1.21 Report

Category D - Other - Scrap Metal

Isotope	Waste Class A	
	Curies	Percent
H-3	2.86E-07	6.82E-04
C-14	9.79E-08	2.34E-04
P-32		
Mn-54	1.34E-03	3.20E+00
Fe-55	2.58E-02	6.16E+01
Co-57		
Co-58		
Co-60	1.06E-02	2.53E+01
Ni-59	3.07E-06	7.32E-03
Ni-63	3.30E-04	7.87E-01
Zn-65	7.21E-04	1.72E+00
Sr-85		
Sr-89		
Sr-90	9.78E-06	2.33E-02
Y-88		
Tc-99	1.28E-06	3.05E-03
Cd-109		
Sn-113		
I-129	2.25E-08	5.37E-05
Cs-137	3.04E-03	7.25E+00
Ba-133		
Ce-139		
Ce-144	6.56E-05	1.57E-01
Hg-203		
Pu-238	2.99E-07	7.13E-04
Pu-239	8.70E-08	2.08E-04
Pu-240	8.70E-08	2.08E-04
Pu-241	3.30E-06	7.87E-03
Am-241	4.00E-07	9.54E-04
Cm-242	1.20E-08	2.86E-05
Cm-243	2.44E-07	5.82E-04
Cm-244	2.44E-07	5.82E-04
Totals	4.19E-02	1.00E+02

Note: Grey fields are where results were not reported in the NRC Regulatory Guide 1.21 Report

2. Solid Waste (Disposition)

Number of Shipments	Mode of Transportation	Destination
5	HITTMAN TRANSPORT CO.	Barnwell Disposal Facility Operated by Energy Solutions, LLC
12	HITTMAN TRANSPORT CO.	Energy Solutions Services Bear Creek Facility
4	HITTMAN TRANSPORT CO.	Energy Solutions Services, Inc. Gallaher Road Facility

B. Irradiated Fuel Shipments (disposition).

There were no irradiated fuel shipments.

C. Changes to the Process Control Program

- There were no changes to the Process Control Program in 2016

Appendix C
Radiological Impact to Man

Per ODCM Administrative Control 6.2, an assessment of radiation doses to the likely most exposed MEMBER OF THE PUBLIC from reactor releases and other nearby uranium fuel cycle sources (including doses from primary effluent pathways and direct radiation) for the previous calendar year must be made to show conformance with 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operation. For purposes of this calculation the following assumptions were made:

Gaseous

- Nearest member of the public was W sector at 483 meters.
- Actual 2016 meteorology and measured gaseous effluent releases were used.
- All significant pathways were assumed to be present.
- Occupancy factor was considered 22.8% (40 hours/week for 50 weeks).

Liquid

- Doses calculated in the discharge canal at the Route 9 Bridge.
- Fish, shellfish and shoreline pathways doses calculated.

40 CFR Part 190 Compliance

- Dosimetry measurements (minus average of control stations) measured direct radiation for the nearest member of the public. The nearest member of the public for direct radiation is considered an individual that works in the warehouse west of the site. As a worker, the individual is assumed to work 2,000 hours per year at this location. Note that for the warehouse worker total dose calculations the full year (8760 hours) values for Noble Gas, Iodine, Particulate, Carbon-14, Tritium and Liquid are used.
- Nearest resident was at SE sector at 937 meters.
- The highest calculated dose for gamma air dose and liquid total body were summed for total body dose.
- The highest calculated dose for gamma air dose, child bone and liquid organ were summed for organ dose.
- The limits for Kr-85, I-129, Pu-239 and other alpha-emitting transuranic radionuclides with half-lives greater than one year were not exceeded.

The ODCM does not require total body doses to the population and average doses to individuals in the population from gaseous effluents to a distance of 50 miles from the site to be calculated.

A summary of gaseous and liquid radiation doses to most likely exposed MEMBER OF THE PUBLIC was as follows:

Effluent	Applicable Organ	Estimated Dose	Age Group	Location		% of Applicable Limit	Limit	Unit
				Distance (meters)	Direction (toward)			
Noble Gas	Gamma - Air Dose	1.34E-03	All	500	ENE	1.34E-02	10	mrad
Noble Gas	Beta – Air Dose	8.53E-04	All	500	ENE	4.27E-03	20	mrad
Noble Gas	Total Body (Gamma)	4.86E-04	All	988	NNE	9.72E-03	5	mrem
Noble Gas	Skin (Beta)	6.61E-04	All	988	NNE	4.41E-03	15	mrem
Iodine, Particulate, Carbon-14 & Tritium	Bone	4.50E-01	Child	972	ESE	3.00E+00	15	mrem
Liquid	Total body	9.78E-07	All	South Route 9 Bridge		3.26E-05	3	mrem
Liquid	Organ	9.78E-07	All			9.78E-06	10	mrem
Direct Radiation	Total Body	9.09E+00	All	483	W	3.64E+01	25	mrem
Direct Radiation	Total Body	<LLD	All	937	SE	<LLD	25	mrem
40 CFR Part 190 Compliance								
Warehouse Worker								
Total Dose	Total Body	9.09E+00	All	483	W	3.64E+01	25	mrem
Total Dose	Bone	9.54E+00	All	483	W	3.82E+01	25	mrem
Total Dose	Thyroid	9.09E+00	All	483	W	1.21E+01	75	mrem
Nearest Resident								
Total Dose	Total Body	1.34E-03	All	937	SE	5.36E-03	25	mrem
Total Dose	Bone	4.51E-01	All	937	SE	1.81E+00	25	mrem
Total Dose	Thyroid	1.34E-03	All	937	SE	1.79E-03	75	mrem

Appendix D
Meteorological Data

LIST OF METEOROLOGICAL DATA TABLES

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
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	1	0	0	0	1
NNE	0	0	0	0	0	0	0
NE	0	3	0	0	0	0	3
ENE	0	0	7	0	0	0	7
E	0	0	10	0	0	0	10
ESE	0	7	2	0	0	0	9
SE	0	1	8	0	0	0	9
SSE	0	1	0	0	0	0	1
S	0	0	5	2	0	0	7
SSW	0	0	3	3	3	0	9
SW	0	3	8	1	0	0	12
WSW	0	3	11	0	0	0	14
W	0	1	13	3	0	0	17
WNW	0	0	5	16	0	0	21
NW	0	0	22	13	0	0	35
NNW	0	0	5	2	0	0	7
Variable	0	0	0	0	0	0	0
Total	0	19	100	40	3	0	162

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: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
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	1	0	0	0	3
NNE	0	5	4	0	0	0	9
NE	0	6	0	0	0	0	6
ENE	0	2	0	0	0	0	2
E	0	2	4	0	0	0	6
ESE	0	2	1	0	0	0	3
SE	0	4	2	0	0	0	6
SSE	0	0	3	0	0	0	3
S	0	0	5	2	0	0	7
SSW	0	1	5	3	0	0	9
SW	0	5	1	0	0	0	6
WSW	0	1	10	1	0	0	12
W	0	4	6	7	0	0	17
WNW	0	2	5	10	0	0	17
NW	0	1	5	6	0	0	12
NNW	0	2	8	0	0	0	10
Variable	0	0	0	0	0	0	0
Total	0	39	60	29	0	0	128

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: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
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	0	0	0	0	1
NNE	0	4	1	0	0	0	5
NE	0	2	0	0	0	0	2
ENE	0	0	0	0	0	0	0
E	0	4	2	0	0	0	6
ESE	0	2	0	0	0	0	2
SE	0	3	0	0	0	0	3
SSE	0	1	1	0	0	0	2
S	0	1	1	0	0	0	2
SSW	0	3	2	0	1	0	6
SW	0	3	0	0	0	0	3
WSW	0	3	2	0	0	0	5
W	0	1	4	1	0	0	6
WNW	0	2	7	6	0	0	15
NW	0	1	2	1	0	0	4
NNW	0	2	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	0	33	22	8	1	0	64

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: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	5	29	5	1	0	0	40
NNE	8	23	23	2	0	0	56
NE	3	32	44	2	0	0	81
ENE	2	25	13	3	0	0	43
E	2	16	8	4	0	0	30
ESE	2	10	1	2	0	0	15
SE	0	8	0	1	0	0	9
SSE	0	6	0	12	4	0	22
S	1	14	10	11	1	0	37
SSW	1	6	11	16	3	0	37
SW	1	7	9	1	0	0	18
WSW	1	12	17	3	0	0	33
W	1	25	20	6	0	0	52
WNW	3	20	48	18	0	0	89
NW	2	12	19	5	0	0	38
NNW	3	22	22	2	0	0	49
Variable	0	0	0	0	0	0	0
Total	35	267	250	89	8	0	649

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: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	6	1	0	0	0	13
NNE	3	6	0	2	0	0	11
NE	8	16	3	10	0	1	38
ENE	5	17	5	0	0	0	27
E	3	10	3	0	0	0	16
ESE	1	6	0	0	0	0	7
SE	0	1	3	1	0	0	5
SSE	2	5	5	9	0	0	21
S	1	19	11	9	0	0	40
SSW	5	21	44	12	0	0	82
SW	7	48	17	0	0	0	72
WSW	10	33	9	0	0	0	52
W	14	30	25	6	0	0	75
WNW	10	49	43	4	0	0	106
NW	13	33	7	0	0	0	53
NNW	7	21	5	0	0	0	33
Variable	0	0	0	0	0	0	0
Total	95	321	181	53	0	1	651

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 5
Hours of missing stability measurements in all stability classes: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	4	2	0	0	0	0	6
NNE	0	1	0	0	0	0	1
NE	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	1	0	0	0	0	0	1
S	9	4	0	0	0	0	13
SSW	2	9	0	0	0	0	11
SW	5	12	1	0	0	0	18
WSW	13	18	0	0	0	0	31
W	14	15	0	0	0	0	29
WNW	8	12	0	0	0	0	20
NW	11	20	0	0	0	0	31
NNW	7	8	0	0	0	0	15
Variable	0	0	0	0	0	0	0
Total	75	102	1	0	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: 31

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 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	2	1	0	0	0	0	3
NE	1	0	0	0	0	0	1
ENE	1	0	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	1	1	0	0	0	0	2
SE	2	0	0	0	0	0	2
SSE	3	0	0	0	0	0	3
S	3	2	0	0	0	0	5
SSW	8	0	0	0	0	0	8
SW	22	3	0	0	0	0	25
WSW	61	24	0	0	0	0	85
W	67	14	0	0	0	0	81
WNW	26	4	0	0	0	0	30
NW	31	12	0	0	0	0	43
NNW	8	5	0	0	0	0	13
Variable	0	0	0	0	0	0	0
Total	239	66	0	0	0	0	305

Hours of calm in this stability class: 9
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Extremely Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	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	2	2
NW	0	0	0	2	0	2	4
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	0	2	0	4	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: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Moderately Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	0	4	0	0	4
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	1	0	0	1
S	0	0	0	1	0	0	1
SSW	0	0	0	0	0	1	1
SW	0	0	0	0	1	0	1
WSW	0	0	1	3	2	0	6
W	0	0	0	5	0	0	5
WNW	0	0	0	0	4	3	7
NW	0	0	0	6	4	4	14
NNW	0	0	0	0	1	0	1
Variable	0	0	0	0	0	0	0
Total	0	0	1	20	12	8	41

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Slightly Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	1	1	0	0	2
NNE	0	0	3	1	0	0	4
NE	0	0	1	0	0	0	1
ENE	0	0	0	1	0	0	1
E	0	0	1	4	0	0	5
ESE	0	1	2	1	0	0	4
SE	0	0	4	2	0	0	6
SSE	0	0	0	0	0	0	0
S	0	0	0	1	0	0	1
SSW	0	0	0	2	0	5	7
SW	0	0	0	1	3	0	4
WSW	0	0	6	3	1	0	10
W	0	0	0	8	9	0	17
WNW	0	0	0	1	5	12	18
NW	0	0	0	9	2	7	18
NNW	0	0	0	1	6	0	7
Variable	0	0	0	0	0	0	0
Total	0	1	18	36	26	24	105

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: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Neutral - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	6	25	13	5	3	53
NNE	2	13	23	19	10	5	72
NE	1	9	19	24	29	20	102
ENE	3	5	12	26	7	3	56
E	1	9	4	8	1	5	28
ESE	0	7	7	4	0	0	18
SE	0	1	14	1	0	0	16
SSE	1	0	13	1	0	1	16
S	0	0	16	6	7	9	38
SSW	1	1	11	13	24	24	74
SW	0	7	13	7	4	2	33
WSW	0	4	9	19	14	4	50
W	0	5	11	25	21	19	81
WNW	0	2	17	31	57	41	148
NW	2	4	12	16	21	12	67
NNW	0	3	5	12	23	6	49
Variable	0	0	0	0	0	0	0
Total	12	76	211	225	223	154	901

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: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Slightly Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	6	16	2	0	29
NNE	0	3	7	4	3	0	17
NE	0	8	7	8	5	12	40
ENE	1	2	3	11	7	1	25
E	0	1	3	11	4	3	22
ESE	0	1	5	4	0	2	12
SE	1	4	3	2	5	4	19
SSE	0	0	0	0	1	20	21
S	0	1	3	5	7	9	25
SSW	0	1	7	13	45	19	85
SW	0	0	4	16	36	4	60
WSW	0	2	5	19	24	2	52
W	0	0	6	22	25	4	57
WNW	0	0	8	33	38	12	91
NW	0	2	8	35	24	1	70
NNW	0	0	6	11	14	1	32
Variable	0	0	0	0	0	0	0
Total	2	30	81	210	240	94	657

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: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Moderately Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	7	15	7	0	30
NNE	0	0	0	4	2	0	6
NE	0	2	1	0	0	0	3
ENE	4	1	1	2	0	0	8
E	2	2	0	0	0	0	4
ESE	1	0	0	0	0	0	1
SE	0	0	2	2	1	0	5
SSE	0	1	1	0	0	0	2
S	0	0	1	3	0	0	4
SSW	0	0	1	3	9	3	16
SW	0	0	3	3	13	9	28
WSW	0	0	2	4	8	3	17
W	0	4	3	4	9	1	21
WNW	0	0	0	18	26	0	44
NW	1	1	3	9	11	0	25
NNW	0	2	4	11	20	8	45
Variable	0	0	0	0	0	0	0
Total	9	13	29	78	106	24	259

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: 31

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – March, 2016

Oyster Creek Alpha

Period of Record: January - March 2016
Stability Class - Extremely Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	0	3	6	1	0	11
NNE	0	0	3	4	0	0	7
NE	1	2	5	0	0	0	8
ENE	2	0	0	1	0	0	3
E	0	0	2	0	0	0	2
ESE	1	1	1	0	0	0	3
SE	0	1	5	3	1	0	10
SSE	0	2	0	1	0	0	3
S	0	0	3	3	1	0	7
SSW	0	1	2	2	8	1	14
SW	0	2	0	3	2	4	11
WSW	0	4	4	9	5	0	22
W	0	2	9	2	4	4	21
WNW	0	3	7	7	3	1	21
NW	0	3	10	2	2	0	17
NNW	0	7	7	9	1	0	24
Variable	0	0	0	0	0	0	0
Total	5	28	61	52	28	10	184

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: 31

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	4	1	0	0	5
NNE	0	3	2	0	0	0	5
NE	0	6	4	0	0	0	10
ENE	0	22	30	0	0	0	52
E	0	13	30	0	0	0	43
ESE	0	18	19	0	0	0	37
SE	0	5	29	1	0	0	35
SSE	0	4	27	4	0	0	35
S	0	1	23	20	0	0	44
SSW	0	1	10	11	0	0	22
SW	0	2	4	2	0	0	8
WSW	0	6	10	3	0	0	19
W	0	3	12	3	0	0	18
WNW	0	5	13	19	0	0	37
NW	0	4	19	10	1	0	34
NNW	0	2	9	1	0	0	12
Variable	0	0	0	0	0	0	0
Total	0	95	245	75	1	0	416

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: 4

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	2	0	0	0	4
NNE	0	4	1	0	0	0	5
NE	0	5	7	0	0	0	12
ENE	0	10	9	1	0	0	20
E	0	7	3	0	0	0	10
ESE	0	10	0	0	0	0	10
SE	0	6	2	0	0	0	8
SSE	0	3	3	0	0	0	6
S	0	1	7	2	0	0	10
SSW	0	3	5	4	0	0	12
SW	0	4	2	1	0	0	7
WSW	1	2	3	2	0	0	8
W	0	7	2	2	0	0	11
WNW	0	4	8	2	0	0	14
NW	0	3	6	1	0	0	10
NNW	0	1	1	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	1	72	61	15	0	0	149

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: 4

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	0	1	3	0	0	0	4
NE	0	5	14	0	0	0	19
ENE	0	7	7	1	0	0	15
E	0	8	0	0	0	0	8
ESE	0	6	1	0	0	0	7
SE	0	2	1	0	0	0	3
SSE	0	3	1	0	0	0	4
S	0	0	3	1	0	0	4
SSW	0	0	6	1	0	0	7
SW	0	2	2	0	0	0	4
WSW	0	1	8	1	0	0	10
W	0	2	3	0	0	0	5
WNW	0	3	4	0	0	0	7
NW	0	2	2	2	1	0	7
NNW	0	1	2	0	0	0	3
Variable	0	0	0	0	0	0	0
Total	0	44	57	6	1	0	108

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

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	1	10	10	0	0	0	21
NNE	2	12	4	0	0	0	18
NE	7	75	13	0	0	0	95
ENE	3	57	20	0	0	0	80
E	4	29	5	0	0	0	38
ESE	5	19	0	0	0	0	24
SE	5	19	1	0	0	0	25
SSE	4	17	1	0	0	0	22
S	4	31	16	5	0	0	56
SSW	7	33	33	21	0	0	94
SW	8	10	5	0	0	0	23
WSW	8	19	12	0	0	0	39
W	5	8	6	0	0	0	19
WNW	2	7	9	3	1	0	22
NW	4	13	5	1	0	0	23
NNW	3	12	8	0	0	0	23
Variable	0	0	0	0	0	0	0
Total	72	371	148	30	1	0	622

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: 4

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	3	2	0	0	0	0	5
NNE	7	2	0	0	0	0	9
NE	9	11	2	0	0	0	22
ENE	5	11	0	0	0	0	16
E	2	9	0	0	0	0	11
ESE	7	1	0	0	0	0	8
SE	4	2	2	0	0	0	8
SSE	8	6	1	0	0	0	15
S	16	25	4	0	0	0	45
SSW	10	32	11	8	2	0	63
SW	6	52	9	0	0	0	67
WSW	15	45	4	0	0	0	64
W	12	27	2	2	0	0	43
WNW	9	15	7	0	2	0	33
NW	6	13	6	0	0	0	25
NNW	4	18	9	0	0	0	31
Variable	0	0	0	0	0	0	0
Total	123	271	57	10	4	0	465

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: 4

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	6	3	0	0	0	0	9
NNE	3	0	0	0	0	0	3
NE	0	0	0	0	0	0	0
ENE	2	0	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	2	0	0	0	0	0	2
SE	2	0	0	0	0	0	2
SSE	2	0	0	0	0	0	2
S	11	0	0	0	0	0	11
SSW	14	2	0	0	0	0	16
SW	9	1	0	0	0	0	10
WSW	7	25	0	0	0	0	32
W	16	16	0	0	0	0	32
WNW	9	5	0	0	0	0	14
NW	4	3	0	0	0	0	7
NNW	7	4	0	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	94	59	0	0	0	0	153

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: 4

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
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	1	0	0	0	0	10
NNE	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0
ENE	1	1	0	0	0	0	2
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	2	1	0	0	0	0	3
SSE	3	0	0	0	0	0	3
S	5	0	0	0	0	0	5
SSW	3	0	0	0	0	0	3
SW	10	1	0	0	0	0	11
WSW	30	14	0	0	0	0	44
W	73	8	0	0	0	0	81
WNW	39	5	0	0	0	0	44
NW	35	2	0	0	0	0	37
NNW	11	8	0	0	0	0	19
Variable	0	0	0	0	0	0	0
Total	221	41	0	0	0	0	262

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Extremely Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

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

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Moderately Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	2	1	0	3
NNE	0	0	0	0	0	0	0
NE	0	0	2	2	0	0	4
ENE	0	0	9	13	0	0	22
E	0	1	4	2	0	0	7
ESE	0	0	1	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	0	0	1	5	1	0	7
S	0	0	0	9	8	0	17
SSW	0	0	0	5	4	0	9
SW	0	0	0	3	1	0	4
WSW	0	0	1	3	2	0	6
W	0	0	2	2	1	1	6
WNW	0	0	1	0	3	9	13
NW	0	0	0	6	2	1	9
NNW	0	0	0	2	1	0	3
Variable	0	0	0	0	0	0	0
Total	0	1	21	54	24	11	111

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Slightly Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	0	0	1	0	1
NNE	0	0	5	1	0	0	6
NE	0	1	11	4	0	0	16
ENE	0	1	19	8	0	0	28
E	0	2	9	0	0	0	11
ESE	0	3	12	0	0	0	15
SE	0	1	13	2	0	0	16
SSE	0	0	14	7	0	0	21
S	0	0	3	17	3	0	23
SSW	0	0	2	4	5	0	11
SW	0	0	2	0	3	0	5
WSW	0	1	4	2	4	0	11
W	0	1	2	6	5	0	14
WNW	0	0	2	2	4	4	12
NW	0	0	4	4	1	5	14
NNW	0	1	2	1	1	0	5
Variable	0	0	0	0	0	0	0
Total	0	11	104	58	27	9	209

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Neutral - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	9	8	7	1	25
NNE	0	3	20	14	0	0	37
NE	1	11	54	78	17	5	166
ENE	0	20	43	35	7	2	107
E	3	13	16	15	2	0	49
ESE	1	20	23	2	1	0	47
SE	1	14	25	4	2	0	46
SSE	2	9	22	5	2	1	41
S	1	8	26	21	6	6	68
SSW	3	16	24	47	25	22	137
SW	1	7	12	18	5	1	44
WSW	0	4	14	19	13	0	50
W	2	7	10	13	9	0	41
WNW	0	5	9	6	18	6	44
NW	1	4	6	14	7	6	38
NNW	0	7	8	9	8	1	33
Variable	0	0	0	0	0	0	0
Total	16	148	321	308	129	51	973

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Slightly Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	3	7	5	1	0	17
NNE	1	3	7	2	0	0	13
NE	0	7	11	3	2	0	23
ENE	0	4	8	3	0	0	15
E	0	1	2	5	0	0	8
ESE	0	4	2	0	0	0	6
SE	0	1	11	0	0	0	12
SSE	2	3	4	1	0	0	10
S	0	4	7	19	1	0	31
SSW	0	7	13	39	13	0	72
SW	1	11	8	39	33	4	96
WSW	0	2	4	19	28	0	53
W	0	2	4	9	11	3	29
WNW	0	3	4	8	25	2	42
NW	0	1	2	5	12	2	22
NNW	2	1	2	7	9	0	21
Variable	0	0	0	0	0	0	0
Total	7	57	96	164	135	11	470

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Moderately Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	5	1	4	6	0	16
NNE	0	0	1	2	1	0	4
NE	0	3	4	2	0	0	9
ENE	0	2	5	0	0	0	7
E	0	0	1	1	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	5	4	1	0	0	10
SSE	1	0	0	1	0	0	2
S	0	0	2	5	1	0	8
SSW	1	1	3	10	3	0	18
SW	0	0	1	6	8	0	15
WSW	0	0	4	5	19	8	36
W	0	0	8	8	9	1	26
WNW	0	0	5	6	5	1	17
NW	1	0	5	4	4	1	15
NNW	0	1	4	7	9	0	21
Variable	0	0	0	0	0	0	0
Total	3	17	48	62	65	11	206

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: 4

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, April – June, 2016

Oyster Creek Alpha

Period of Record: April - June 2016
Stability Class - Extremely Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	1	7	10	0	20
NNE	1	6	3	2	1	0	13
NE	0	5	2	0	0	0	7
ENE	0	1	2	0	0	0	3
E	0	2	1	0	0	0	3
ESE	1	2	0	0	0	0	3
SE	0	2	2	0	0	0	4
SSE	0	6	0	0	0	0	6
S	0	4	0	0	2	0	6
SSW	2	0	4	6	0	0	12
SW	0	1	0	5	4	0	10
WSW	1	2	5	8	4	4	24
W	0	1	2	5	3	2	13
WNW	2	3	6	10	1	0	22
NW	1	6	4	4	8	1	24
NNW	1	0	3	5	2	0	11
Variable	0	0	0	0	0	0	0
Total	10	42	35	52	35	7	181

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: 4

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
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	1	0	0	0	0	1
NNE	0	3	1	0	0	0	4
NE	0	6	17	1	0	0	24
ENE	0	12	30	1	0	0	43
E	0	9	12	0	0	0	21
ESE	0	25	13	0	0	0	38
SE	0	15	28	0	0	0	43
SSE	0	7	30	1	0	0	38
S	0	6	43	6	0	0	55
SSW	0	2	12	1	0	0	15
SW	0	10	7	0	0	0	17
WSW	1	10	18	0	0	0	29
W	0	8	11	0	0	0	19
WNW	0	6	8	0	0	0	14
NW	0	5	25	0	0	0	30
NNW	0	4	4	0	0	0	8
Variable	0	0	0	0	0	0	0
Total	1	129	259	10	0	0	399

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

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	4	2	0	0	0	8
NNE	0	7	1	0	0	0	8
NE	0	4	14	0	0	0	18
ENE	1	7	14	11	0	0	33
E	1	12	3	0	0	0	16
ESE	0	7	1	0	0	0	8
SE	0	4	5	0	0	0	9
SSE	0	5	4	0	0	0	9
S	1	8	18	0	0	0	27
SSW	1	5	4	3	0	0	13
SW	2	4	3	0	0	0	9
WSW	0	4	3	0	0	0	7
W	2	4	3	0	0	0	9
WNW	0	8	4	0	0	0	12
NW	0	7	6	0	0	0	13
NNW	0	9	6	0	0	0	15
Variable	0	0	0	0	0	0	0
Total	10	99	91	14	0	0	214

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

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
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	2	2	0	0	0	4
NNE	3	5	0	0	0	0	8
NE	1	2	0	0	0	0	3
ENE	0	7	4	8	0	0	19
E	0	3	1	0	0	0	4
ESE	0	5	0	0	0	0	5
SE	0	2	3	0	0	0	5
SSE	1	2	0	0	0	0	3
S	0	6	7	0	0	0	13
SSW	0	6	4	0	0	0	10
SW	1	0	4	0	0	0	5
WSW	1	6	2	0	0	0	9
W	1	2	1	0	0	0	4
WNW	0	2	0	0	0	0	2
NW	0	3	2	0	0	0	5
NNW	0	4	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	8	57	30	8	0	0	103

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

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	6	18	9	0	0	0	33
NNE	7	14	3	0	0	0	24
NE	2	18	15	0	0	0	35
ENE	3	18	10	11	0	0	42
E	4	19	7	0	0	0	30
ESE	0	9	0	0	0	0	9
SE	1	25	5	0	0	0	31
SSE	3	15	3	0	0	0	21
S	1	34	15	0	0	0	50
SSW	3	14	33	0	0	0	50
SW	3	11	4	0	0	0	18
WSW	3	14	5	0	0	0	22
W	2	10	2	0	0	0	14
WNW	3	13	3	0	0	0	19
NW	3	14	4	0	0	0	21
NNW	6	17	13	0	0	0	36
Variable	0	0	0	0	0	0	0
Total	50	263	131	11	0	0	455

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

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
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	10	5	0	0	0	0	15
NNE	6	5	0	0	0	0	11
NE	7	5	1	0	0	0	13
ENE	9	12	2	0	0	0	23
E	4	18	2	0	0	0	24
ESE	2	5	0	0	0	0	7
SE	1	2	0	0	0	0	3
SSE	7	6	0	0	0	0	13
S	15	42	0	0	0	0	57
SSW	9	51	5	0	0	0	65
SW	11	74	7	0	0	0	92
WSW	10	36	0	0	0	0	46
W	13	13	1	0	0	0	27
WNW	10	3	0	0	0	0	13
NW	9	15	1	0	0	0	25
NNW	12	12	7	0	0	0	31
Variable	0	0	0	0	0	0	0
Total	135	304	26	0	0	0	465

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: 0

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	9	3	1	0	0	0	13
NNE	5	2	0	0	0	0	7
NE	2	0	0	0	0	0	2
ENE	3	0	0	0	0	0	3
E	2	0	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	2	0	0	0	0	0	2
SSE	5	0	0	0	0	0	5
S	9	1	0	0	0	0	10
SSW	8	1	0	0	0	0	9
SW	7	8	0	0	0	0	15
WSW	19	13	0	0	0	0	32
W	20	7	0	0	0	0	27
WNW	17	2	0	0	0	0	19
NW	13	13	0	0	0	0	26
NNW	9	6	0	0	0	0	15
Variable	0	0	0	0	0	0	0
Total	130	56	1	0	0	0	187

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: 0

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
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	1	0	0	0	0	3
NNE	3	0	0	0	0	0	3
NE	1	0	0	0	0	0	1
ENE	2	1	0	0	0	0	3
E	2	0	0	0	0	0	2
ESE	1	0	0	0	0	0	1
SE	2	0	0	0	0	0	2
SSE	1	0	0	0	0	0	1
S	5	0	0	0	0	0	5
SSW	6	0	0	0	0	0	6
SW	9	0	0	0	0	0	9
WSW	50	2	0	0	0	0	52
W	128	2	1	0	0	0	131
WNW	62	1	0	0	0	0	63
NW	49	2	0	0	0	0	51
NNW	30	14	0	0	0	0	44
Variable	0	0	0	0	0	0	0
Total	353	23	1	0	0	0	377

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: 0

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Extremely Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	2	0	0	2
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	1	0	0	0	0	1
WNW	0	0	0	0	0	0	0
NW	0	0	0	1	0	0	1
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	2	0	3	0	0	5

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Moderately Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	4	0	0	4
ENE	0	0	1	3	0	0	4
E	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	1
SE	0	1	0	1	0	0	2
SSE	0	0	0	2	0	0	2
S	0	0	0	4	3	0	7
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	0	6	0	0	6
WNW	0	0	0	2	0	0	2
NW	0	0	0	2	0	0	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	2	1	30	4	0	37

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Slightly Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	2	7	0	0	9
ENE	0	0	11	11	0	0	22
E	0	0	12	4	0	0	16
ESE	0	3	13	0	0	0	16
SE	0	2	15	5	0	0	22
SSE	0	0	1	16	2	0	19
S	0	0	2	21	1	0	24
SSW	0	0	2	5	1	0	8
SW	0	1	1	5	0	0	7
WSW	0	0	5	8	1	0	14
W	0	1	1	4	0	0	6
WNW	0	0	4	4	0	0	8
NW	0	0	3	15	1	0	19
NNW	0	0	0	1	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	7	72	106	6	0	191

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Neutral - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	9	9	9	9	0	37
NNE	0	8	20	14	0	0	42
NE	1	5	40	23	11	23	103
ENE	1	10	24	19	9	39	102
E	1	12	19	16	2	0	50
ESE	0	15	26	6	0	0	47
SE	0	8	35	8	0	0	51
SSE	0	5	39	15	0	0	59
S	0	9	30	53	2	0	94
SSW	0	7	24	36	21	0	88
SW	0	9	8	25	4	0	46
WSW	1	7	19	18	2	0	47
W	1	10	11	10	1	0	33
WNW	1	4	18	16	0	0	39
NW	2	2	19	21	2	0	46
NNW	0	8	14	10	11	0	43
Variable	0	0	0	0	0	0	0
Total	9	128	355	299	74	62	927

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Slightly Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	1	13	4	0	22
NNE	1	5	10	6	0	0	22
NE	1	3	6	5	0	0	15
ENE	2	6	13	6	1	2	30
E	0	4	8	15	0	0	27
ESE	0	3	4	0	0	0	7
SE	0	1	5	3	0	0	9
SSE	0	6	7	1	0	0	14
S	0	5	16	36	0	0	57
SSW	0	2	15	60	7	0	84
SW	0	2	8	59	28	0	97
WSW	0	1	6	16	14	0	37
W	0	0	4	13	3	0	20
WNW	0	2	9	9	1	0	21
NW	0	3	4	14	7	0	28
NNW	1	2	5	9	14	1	32
Variable	0	0	0	0	0	0	0
Total	5	49	121	265	79	3	522

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Moderately Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	2	12	7	0	21
NNE	4	3	4	9	0	0	20
NE	1	7	9	8	0	0	25
ENE	0	2	3	2	2	0	9
E	0	4	2	1	0	0	7
ESE	2	3	5	0	0	0	10
SE	0	3	2	0	0	0	5
SSE	0	3	6	0	0	0	9
S	2	4	9	5	0	0	20
SSW	0	2	3	8	0	0	13
SW	0	4	6	16	9	0	35
WSW	0	1	6	11	14	2	34
W	0	4	6	12	4	0	26
WNW	0	0	5	9	2	0	16
NW	0	3	4	9	7	0	23
NNW	0	2	4	4	11	1	22
Variable	0	0	0	0	0	0	0
Total	9	45	76	106	56	3	295

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

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, July – September, 2016

Oyster Creek Alpha

Period of Record: July - September 2016
Stability Class - Extremely Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	5	7	8	0	22
NNE	0	0	7	2	0	0	9
NE	0	2	14	8	0	0	24
ENE	0	4	9	3	0	0	16
E	2	2	3	1	0	0	8
ESE	3	6	7	1	0	0	17
SE	2	4	2	0	0	0	8
SSE	0	1	8	0	0	0	9
S	1	15	13	0	0	0	29
SSW	0	6	4	3	0	0	13
SW	0	4	6	5	2	0	17
WSW	0	3	4	3	3	0	13
W	0	2	4	9	1	0	16
WNW	0	0	1	15	2	0	18
NW	0	0	2	2	0	0	4
NNW	0	1	5	0	2	0	8
Variable	0	0	0	0	0	0	0
Total	8	52	94	59	18	0	231

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

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	4	7	2	0	0	13
NNE	0	1	1	0	0	0	2
NE	0	4	1	0	0	0	5
ENE	0	6	2	0	0	0	8
E	0	3	1	0	0	0	4
ESE	0	3	1	0	0	0	4
SE	0	2	2	0	0	0	4
SSE	0	1	2	0	0	0	3
S	0	0	1	0	0	0	1
SSW	0	1	1	0	0	0	2
SW	0	3	2	0	0	0	5
WSW	0	11	2	0	0	0	13
W	0	1	2	0	0	0	3
WNW	0	3	15	3	0	0	21
NW	0	8	17	6	0	0	31
NNW	0	8	17	1	0	0	26
Variable	0	0	0	0	0	0	0
Total	0	59	74	12	0	0	145

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	3	8	1	0	0	12
NNE	0	2	1	0	0	0	3
NE	0	11	3	0	0	0	14
ENE	0	3	1	0	0	0	4
E	0	4	0	0	0	0	4
ESE	0	7	0	0	0	0	7
SE	0	2	3	0	0	0	5
SSE	0	2	1	0	0	0	3
S	0	0	0	1	0	0	1
SSW	0	1	2	2	0	0	5
SW	0	2	2	0	0	0	4
WSW	0	8	2	0	0	0	10
W	0	8	4	0	0	0	12
WNW	0	8	15	2	0	0	25
NW	0	9	12	8	0	0	29
NNW	0	8	12	1	0	0	21
Variable	0	0	0	0	0	0	0
Total	0	78	66	15	0	0	159

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
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	2	1	0	0	0	3
NNE	0	0	0	0	0	0	0
NE	2	9	0	0	0	0	11
ENE	0	2	1	0	0	0	3
E	0	2	2	0	0	0	4
ESE	1	2	0	0	0	0	3
SE	0	4	1	0	0	0	5
SSE	0	1	1	0	0	0	2
S	0	0	1	1	0	0	2
SSW	0	0	1	2	0	0	3
SW	0	0	0	0	0	0	0
WSW	1	5	0	0	0	0	6
W	0	6	2	0	0	0	8
WNW	0	2	8	4	0	0	14
NW	0	6	7	4	0	0	17
NNW	0	6	5	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	4	47	30	11	0	0	92

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
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	2	12	4	1	0	0	19
NNE	2	9	0	0	0	0	11
NE	6	24	7	0	0	0	37
ENE	4	16	11	0	0	0	31
E	3	8	6	0	0	0	17
ESE	1	5	3	0	0	0	9
SE	0	12	2	0	0	0	14
SSE	1	12	7	0	0	0	20
S	1	7	5	0	0	0	13
SSW	2	5	8	7	0	0	22
SW	2	5	10	7	0	0	24
WSW	3	12	11	2	0	0	28
W	5	14	18	4	0	0	41
WNW	3	17	34	25	0	0	79
NW	8	22	22	8	0	0	60
NNW	6	16	24	1	0	0	47
Variable	0	0	0	0	0	0	0
Total	49	196	172	55	0	0	472

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
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	3	5	2	0	0	0	10
NNE	3	5	0	0	0	0	8
NE	5	13	0	0	0	0	18
ENE	3	12	6	0	0	0	21
E	4	1	2	0	0	0	7
ESE	1	2	0	0	0	0	3
SE	1	7	0	0	0	0	8
SSE	5	13	1	0	0	0	19
S	4	11	7	0	0	0	22
SSW	6	16	7	6	0	0	35
SW	12	28	13	1	0	0	54
WSW	11	41	17	0	0	0	69
W	14	70	26	0	0	0	110
WNW	10	60	26	2	0	0	98
NW	13	47	10	1	0	0	71
NNW	10	38	12	0	0	0	60
Variable	0	0	0	0	0	0	0
Total	105	369	129	10	0	0	613

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
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	6	0	0	0	0	0	6
NNE	4	1	0	0	0	0	5
NE	5	2	0	0	0	0	7
ENE	2	0	0	0	0	0	2
E	4	0	0	0	0	0	4
ESE	2	0	0	0	0	0	2
SE	5	1	0	0	0	0	6
SSE	1	2	0	0	0	0	3
S	7	0	0	0	0	0	7
SSW	3	1	0	0	0	0	4
SW	6	6	0	0	0	0	12
WSW	17	15	0	0	0	0	32
W	19	36	0	0	0	0	55
WNW	14	20	0	0	0	0	34
NW	8	15	0	0	0	0	23
NNW	9	28	0	0	0	0	37
Variable	0	0	0	0	0	0	0
Total	112	127	0	0	0	0	239

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: 5

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
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	6	0	0	0	0	0	6
NNE	2	0	0	0	0	0	2
NE	2	0	0	0	0	0	2
ENE	1	0	0	0	0	0	1
E	3	0	0	0	0	0	3
ESE	1	0	0	0	0	0	1
SE	1	0	0	0	0	0	1
SSE	5	0	0	0	0	0	5
S	3	0	0	0	0	0	3
SSW	7	1	0	0	0	0	8
SW	10	1	0	0	0	0	11
WSW	52	18	0	0	0	0	70
W	153	31	0	0	0	0	184
WNW	69	14	0	0	0	0	83
NW	56	11	0	0	0	0	67
NNW	17	12	0	0	0	0	29
Variable	0	0	0	0	0	0	0
Total	388	88	0	0	0	0	476

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: 5

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Extremely Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	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	0	0	0	0	0

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Moderately Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 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	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	0	0	0	0	0

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Slightly Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	0	2	1	0	0	3
NNE	0	0	1	1	0	0	2
NE	0	0	0	0	0	0	0
ENE	0	0	3	0	0	0	3
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	1	1
SW	0	0	0	1	0	0	1
WSW	0	0	0	1	0	0	1
W	0	0	0	1	1	0	2
WNW	0	0	3	4	4	3	14
NW	0	0	3	3	2	2	10
NNW	0	0	0	7	0	1	8
Variable	0	0	0	0	0	0	0
Total	0	0	12	19	7	7	45

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Neutral - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Speed (in mph)

Wind Direction	1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	4	12	9	3	1	30
NNE	1	2	8	2	0	0	13
NE	0	8	17	44	7	2	78
ENE	2	4	16	7	8	4	41
E	0	6	7	3	5	2	23
ESE	0	6	8	5	0	0	19
SE	0	5	9	3	0	0	17
SSE	0	2	9	3	2	0	16
S	0	2	4	1	0	0	7
SSW	0	3	6	5	3	15	32
SW	0	1	13	9	8	11	42
WSW	2	3	29	6	9	1	50
W	0	2	12	19	20	9	62
WNW	1	6	19	25	38	25	114
NW	0	5	23	20	21	18	87
NNW	0	3	15	24	11	1	54
Variable	0	0	0	0	0	0	0
Total	7	62	207	185	135	89	685

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Slightly Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	2	3	14	10	4	33
NNE	0	2	0	7	0	0	9
NE	1	1	6	10	5	0	23
ENE	0	2	6	7	7	1	23
E	0	1	4	2	1	0	8
ESE	0	1	1	1	0	0	3
SE	0	4	6	3	1	0	14
SSE	0	0	5	13	15	2	35
S	0	2	8	10	6	3	29
SSW	0	3	9	22	9	4	47
SW	0	0	11	13	24	6	54
WSW	0	3	10	17	27	9	66
W	0	1	7	24	56	14	102
WNW	0	1	8	33	53	24	119
NW	0	6	13	29	26	3	77
NNW	0	2	3	20	42	1	68
Variable	0	0	0	0	0	0	0
Total	1	31	100	225	282	71	710

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Moderately Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	1	1	2	6	6	0	16
NNE	0	0	5	6	0	0	11
NE	0	1	7	2	1	0	11
ENE	3	2	1	1	0	0	7
E	1	3	2	1	0	0	7
ESE	0	5	4	0	0	0	9
SE	1	1	2	0	0	0	4
SSE	0	0	3	0	0	0	3
S	0	0	2	7	1	0	10
SSW	0	1	4	3	1	0	9
SW	1	0	4	5	8	2	20
WSW	0	0	2	3	24	4	33
W	0	3	5	9	14	15	46
WNW	0	2	0	10	27	5	44
NW	1	3	0	19	23	1	47
NNW	0	2	4	14	20	8	48
Variable	0	0	0	0	0	0	0
Total	8	24	47	86	125	35	325

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: 128

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, October – December, 2016

Oyster Creek Alpha

Period of Record: October - December 2016
Stability Class - Extremely Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	2	1	12	12	3	32
NNE	1	5	3	7	2	0	18
NE	2	4	5	5	0	0	16
ENE	2	1	12	1	0	0	16
E	1	10	14	4	0	0	29
ESE	1	3	4	1	0	0	9
SE	1	3	1	0	0	0	5
SSE	0	1	0	3	1	0	5
S	1	0	2	1	3	0	7
SSW	0	1	3	3	1	0	8
SW	0	3	5	5	0	0	13
WSW	1	0	5	0	0	0	6
W	1	1	6	8	7	13	36
WNW	1	1	5	15	13	2	37
NW	0	1	6	10	13	0	30
NNW	1	6	4	8	24	4	47
Variable	0	0	0	0	0	0	0
Total	15	42	76	83	76	22	314

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: 128

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class - All Stabilities - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	1	34	42	41	69	35	26	18	2	0	0	268
NNE	0	20	36	44	67	37	12	7	2	0	0	225
NE	0	22	37	46	165	121	46	30	11	0	1	479
ENE	1	14	27	52	152	142	55	36	24	0	0	503
E	0	8	29	38	114	92	32	7	1	0	0	321
ESE	2	7	17	29	95	66	4	1	2	0	0	223
SE	1	13	15	26	74	95	27	4	2	0	0	257
SSE	1	18	30	31	60	55	46	23	15	6	0	285
S	1	42	49	63	111	100	79	76	29	2	0	552
SSW	2	43	47	56	119	115	103	67	62	12	0	626
SW	5	55	63	75	208	84	42	17	10	0	0	559
WSW	3	104	192	179	199	102	68	22	4	0	0	873
W	6	233	302	155	199	104	70	45	16	0	0	1130
WNW	3	157	118	124	158	122	114	94	71	4	0	965
NW	4	106	140	116	149	127	83	59	42	2	0	828
NNW	3	49	83	129	149	102	70	28	1	0	0	614
Tot	33	925	1227	1204	2088	1499	877	534	294	26	1	8708

Hours of Calm	29
Hours of Variable Direction	0
Hours of Valid Data	8737
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class - Extremely Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	0	0	4	5	4	5	2	0	0	20
NNE	0	0	0	0	6	4	0	1	0	0	0	11
NE	0	0	0	2	9	17	6	8	0	0	0	42
ENE	0	0	0	0	24	50	28	8	0	0	0	110
E	0	0	0	0	15	38	23	2	0	0	0	78
ESE	0	0	0	0	34	50	3	1	0	0	0	88
SE	0	0	0	1	10	53	23	4	0	0	0	91
SSE	0	0	0	0	7	21	34	14	1	0	0	77
S	0	0	0	0	4	13	31	47	12	0	0	107
SSW	0	0	0	0	1	10	13	11	8	5	0	48
SW	0	0	0	0	16	7	11	7	1	0	0	42
WSW	0	0	1	0	19	28	23	4	0	0	0	75
W	0	0	0	1	9	24	13	8	2	0	0	57
WNW	0	0	0	0	10	23	10	23	27	0	0	93
NW	0	0	0	0	11	34	40	21	23	1	0	130
NNW	0	0	0	0	9	18	13	13	0	0	0	53
Tot	0	0	1	4	188	395	275	177	76	6	0	1122

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	1122
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	1	3	6	9	4	4	0	0	0	27
NNE	0	0	0	3	13	5	4	0	0	0	0	25
NE	0	0	0	1	19	17	7	6	0	0	0	50
ENE	0	0	1	3	14	17	7	11	6	0	0	59
E	0	0	1	7	15	12	1	0	0	0	0	36
ESE	0	0	0	4	17	7	0	0	0	0	0	28
SE	0	0	0	0	10	17	1	0	0	0	0	28
SSE	0	0	0	0	5	12	4	0	0	0	0	21
S	0	0	1	2	6	10	15	9	2	0	0	45
SSW	0	0	1	4	5	5	7	12	5	0	0	39
SW	0	0	1	2	14	1	6	1	1	0	0	26
WSW	0	0	1	3	7	11	11	4	0	0	0	37
W	0	0	1	5	16	10	5	8	4	0	0	49
WNW	0	0	0	5	14	12	12	17	8	0	0	68
NW	0	0	0	0	16	19	8	12	9	0	0	64
NNW	0	0	0	1	16	12	15	4	0	0	0	48
Tot	0	0	8	43	193	176	107	88	35	0	0	650

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	650
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class - Slightly Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	0	0	5	2	2	0	0	0	0	9
NNE	0	1	1	5	2	6	2	0	0	0	0	17
NE	0	0	3	1	9	16	5	1	0	0	0	35
ENE	0	0	0	4	10	6	5	4	8	0	0	37
E	0	0	0	3	13	5	0	1	0	0	0	22
ESE	0	0	1	3	11	2	0	0	0	0	0	17
SE	0	0	0	1	8	6	1	0	0	0	0	16
SSE	0	1	0	1	3	4	1	1	0	0	0	11
S	0	0	0	0	3	9	5	3	1	0	0	21
SSW	0	0	0	3	5	4	7	3	3	1	0	26
SW	0	0	1	0	4	4	3	0	0	0	0	12
WSW	0	0	2	2	7	9	7	3	0	0	0	30
W	0	0	1	2	7	8	2	3	0	0	0	23
WNW	0	0	0	2	5	6	9	10	6	0	0	38
NW	0	0	0	1	6	10	3	9	3	1	0	33
NNW	0	0	0	1	9	7	3	0	0	0	0	20
Tot	0	2	9	29	107	104	55	38	21	2	0	367

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	367
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Neutral - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	3	10	19	42	15	15	9	0	0	0	113
NNE	0	4	13	23	35	22	6	6	0	0	0	109
NE	0	5	12	26	101	62	26	15	1	0	0	248
ENE	0	1	9	21	74	57	11	13	10	0	0	196
E	0	0	13	22	41	28	6	4	1	0	0	115
ESE	0	2	5	13	27	7	1	0	2	0	0	57
SE	0	1	5	14	42	15	1	0	1	0	0	79
SSE	0	0	6	11	33	13	6	0	10	6	0	85
S	0	2	4	19	45	44	20	11	10	1	0	156
SSW	0	2	9	11	30	52	44	23	28	4	0	203
SW	0	2	11	12	15	20	14	2	7	0	0	83
WSW	0	3	10	17	37	20	22	9	4	0	0	122
W	0	3	10	13	36	20	22	17	5	0	0	126
WNW	0	2	8	18	35	33	51	32	28	2	0	209
NW	0	6	10	17	30	33	24	15	7	0	0	142
NNW	1	3	12	22	43	36	28	9	1	0	0	155
Tot	1	39	147	278	666	477	297	165	115	13	0	2198

Hours of Calm	1
Hours of Variable Direction	0
Hours of Valid Data	2199
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Slightly Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	9	10	9	11	4	0	0	0	0	0	43
NNE	0	6	12	8	11	0	0	0	2	0	0	39
NE	0	9	19	16	25	9	2	0	10	0	1	91
ENE	0	6	13	23	29	12	4	0	0	0	0	87
E	0	1	11	5	30	9	2	0	0	0	0	58
ESE	0	3	8	8	6	0	0	0	0	0	0	25
SE	0	2	4	8	4	4	1	0	1	0	0	24
SSE	1	5	15	18	11	5	1	8	4	0	0	68
S	1	13	21	39	47	24	8	6	4	1	0	164
SSW	0	10	19	30	72	44	32	18	18	2	0	245
SW	0	13	20	40	145	51	8	7	1	0	0	285
WSW	0	10	31	61	89	33	5	2	0	0	0	231
W	0	10	37	38	87	41	28	9	5	0	0	255
WNW	0	11	27	29	87	48	32	12	2	2	0	250
NW	1	11	25	38	58	31	8	2	0	0	0	174
NNW	1	11	18	30	53	29	11	2	0	0	0	155
Tot	4	130	290	400	765	344	142	66	47	5	1	2194

Hours of Calm	5
Hours of Variable Direction	0
Hours of Valid Data	2199
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	1	14	10	7	1	0	1	0	0	0	0	34
NNE	0	8	4	4	0	0	0	0	0	0	0	16
NE	0	4	3	0	2	0	0	0	0	0	0	9
ENE	0	5	2	0	0	0	0	0	0	0	0	7
E	0	3	3	1	0	0	0	0	0	0	0	7
ESE	0	1	3	0	0	0	0	0	0	0	0	4
SE	0	7	3	1	0	0	0	0	0	0	0	11
SSE	0	4	5	1	1	0	0	0	0	0	0	11
S	0	16	18	3	4	0	0	0	0	0	0	41
SSW	1	13	13	7	6	0	0	0	0	0	0	40
SW	1	10	16	14	13	1	0	0	0	0	0	55
WSW	0	17	35	42	33	0	0	0	0	0	0	127
W	0	21	45	43	34	0	0	0	0	0	0	143
WNW	0	18	25	37	7	0	0	0	0	0	0	87
NW	0	11	23	29	24	0	0	0	0	0	0	87
NNW	0	10	16	38	14	0	0	0	0	0	0	78
Tot	3	162	224	227	139	1	1	0	0	0	0	757

Hours of Calm	2
Hours of Variable Direction	0
Hours of Valid Data	759
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 9 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	8	11	3	0	0	0	0	0	0	0	22
NNE	0	1	6	1	0	0	0	0	0	0	0	8
NE	0	4	0	0	0	0	0	0	0	0	0	4
ENE	1	2	2	1	1	0	0	0	0	0	0	7
E	0	4	1	0	0	0	0	0	0	0	0	5
ESE	2	1	0	1	0	0	0	0	0	0	0	4
SE	1	3	3	1	0	0	0	0	0	0	0	8
SSE	0	8	4	0	0	0	0	0	0	0	0	12
S	0	11	5	0	2	0	0	0	0	0	0	18
SSW	1	18	5	1	0	0	0	0	0	0	0	25
SW	4	30	14	7	1	0	0	0	0	0	0	56
WSW	3	74	112	54	7	1	0	0	0	0	0	251
W	6	199	208	53	10	1	0	0	0	0	0	477
WNW	3	126	58	33	0	0	0	0	0	0	0	220
NW	3	78	82	31	4	0	0	0	0	0	0	198
NNW	1	25	37	37	5	0	0	0	0	0	0	105
Tot	25	592	548	223	30	2	0	0	0	0	0	1420

Hours of Calm	21
Hours of Variable Direction	0
Hours of Valid Data	1441
Hours of Missing Data . . .	47
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – All Stabilities - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	1	1	8	8	22	38	39	62	117	99	30	425
NNE	0	1	9	14	27	47	65	50	84	22	6	325
NE	0	2	5	16	43	68	110	111	182	71	82	690
ENE	0	8	11	10	38	57	99	104	121	37	70	555
E	0	2	6	15	46	54	48	45	72	15	13	316
ESE	0	3	7	9	47	65	69	31	13	1	3	248
SE	0	1	3	9	37	70	78	42	26	8	8	282
SSE	0	1	5	3	25	45	67	52	53	20	30	301
S	1	1	3	11	32	42	74	93	170	56	34	517
SSW	0	1	6	11	28	39	57	94	229	150	144	759
SW	0	1	1	6	37	40	50	57	182	169	100	643
WSW	0	0	3	9	24	39	66	72	159	171	103	646
W	0	1	3	7	27	38	58	62	176	147	169	688
WNW	0	0	5	4	19	37	55	84	207	266	248	925
NW	1	1	7	4	23	58	62	69	196	190	104	715
NNW	0	0	4	5	28	43	48	45	134	187	91	585
Tot	3	24	86	141	503	780	1045	1073	2121	1609	1235	8620

Hours of Calm	1
Hours of Variable Direction	0
Hours of Valid Data	8621
Hours of Missing Data	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Extremely Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	0	0	0	0	0	0	0	2	0	2
NNE	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	1	2	0	0	3
ENE	0	0	0	0	0	0	0	0	3	0	0	3
E	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	1	0	0	0	0	1
SSE	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	3	1	0	4
SSW	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	1	0	0	0	0	0	0	1
W	0	0	0	0	1	0	0	0	0	0	1	2
WNW	0	0	0	0	0	0	0	0	0	2	12	14
NW	0	0	0	0	0	0	0	1	3	3	2	9
NNW	0	0	0	0	0	0	0	0	0	2	0	2
Tot	0	0	0	0	2	0	1	2	11	10	15	41

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	41
Hours of Missing Data . . .	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Moderately Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	0	0	0	0	0	0	2	1	0	3
NNE	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	2	2	3	1	0	8
ENE	0	0	0	0	0	0	4	9	16	1	0	30
E	0	0	0	0	0	1	3	3	0	0	0	7
ESE	0	0	0	0	0	1	0	1	0	0	0	2
SE	0	0	0	0	0	1	0	0	1	0	0	2
SSE	0	0	0	0	0	0	0	2	7	1	0	10
S	0	0	0	0	0	0	0	0	13	12	0	25
SSW	0	0	0	0	0	0	0	0	5	3	2	10
SW	0	0	0	0	0	0	0	0	3	2	0	5
WSW	0	0	0	0	0	0	1	1	12	3	2	19
W	0	0	0	0	0	0	0	4	11	0	2	17
WNW	0	0	0	0	0	0	1	1	1	3	16	22
NW	0	0	0	0	0	0	0	0	13	5	7	25
NNW	0	0	0	0	0	0	0	0	2	1	1	4
Tot	0	0	0	0	0	3	11	23	89	33	30	189

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	189
Hours of Missing Data . . .	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Slightly Unstable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	0	0	0	1	1	2	0	2	0	6
NNE	0	0	0	0	0	0	8	2	2	0	0	12
NE	0	0	0	0	1	2	7	6	10	0	0	26
ENE	0	0	0	1	0	4	16	20	13	0	0	54
E	0	0	0	0	0	9	11	8	4	0	0	32
ESE	0	0	0	0	3	10	19	2	1	0	0	35
SE	0	0	0	0	1	5	14	18	6	0	0	44
SSE	0	0	0	0	0	1	8	10	18	3	0	40
S	0	0	0	0	0	0	2	11	30	5	0	48
SSW	0	0	0	0	0	1	1	4	9	3	9	27
SW	0	0	0	0	0	3	0	2	5	5	2	17
WSW	0	0	0	0	0	4	4	9	13	5	1	36
W	0	0	0	0	1	2	0	4	17	10	5	39
WNW	0	0	0	0	0	0	3	9	7	9	24	52
NW	0	0	0	0	0	2	7	8	24	6	14	61
NNW	0	0	0	0	0	1	2	3	7	5	3	21
Tot	0	0	0	1	6	45	103	118	166	53	58	550

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	550
Hours of Missing Data . . .	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Neutral - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	3	4	12	19	22	27	26	23	9	145
NNE	0	0	3	6	13	24	39	21	40	12	6	164
NE	0	1	2	8	12	44	61	64	132	56	69	449
ENE	0	1	4	4	23	32	51	46	63	23	59	306
E	0	0	4	5	29	24	15	19	35	11	8	150
ESE	0	1	0	5	28	37	32	18	8	1	1	131
SE	0	0	0	5	16	36	47	14	10	1	1	130
SSE	0	1	2	1	11	24	43	27	17	3	3	132
S	0	0	1	5	8	15	41	45	59	15	18	207
SSW	0	1	3	3	16	18	29	43	73	65	80	331
SW	0	1	0	3	15	23	21	15	47	18	22	165
WSW	0	0	3	3	13	19	38	28	43	37	13	197
W	0	0	3	2	14	16	22	27	47	40	46	217
WNW	0	0	2	2	10	21	28	30	62	81	109	345
NW	0	1	4	1	6	29	26	29	50	43	49	238
NNW	0	0	0	1	15	18	19	20	43	42	21	179
Tot	0	7	34	58	241	399	534	473	755	471	514	3486

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	3486
Hours of Missing Data . . .	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Slightly Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	0	1	3	7	5	10	13	37	16	9	101
NNE	0	0	2	4	6	10	11	10	15	3	0	61
NE	0	1	0	2	13	12	18	9	22	11	13	101
ENE	0	1	2	1	7	17	13	10	21	10	11	93
E	0	0	0	0	5	8	9	7	27	4	5	65
ESE	0	0	0	1	6	4	5	6	4	0	2	28
SE	0	0	1	0	7	16	9	6	4	4	7	54
SSE	0	0	2	1	5	7	8	11	7	12	27	80
S	0	0	0	1	10	8	16	31	47	13	16	142
SSW	0	0	0	4	6	11	18	35	108	63	43	288
SW	0	0	0	2	10	8	17	19	96	112	43	307
WSW	0	0	0	1	4	6	10	21	56	71	39	208
W	0	0	0	1	1	5	13	9	57	64	58	208
WNW	0	0	0	1	2	9	11	23	64	103	60	273
NW	0	0	0	1	6	14	14	14	61	70	17	197
NNW	0	0	2	2	2	7	7	9	36	66	22	153
Tot	0	2	10	25	97	147	189	233	662	622	372	2359

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	2359
Hours of Missing Data	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Moderately Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	1	0	1	1	2	8	2	9	27	29	3	83
NNE	0	0	3	1	3	3	3	11	13	4	0	41
NE	0	0	1	1	10	4	10	15	6	1	0	48
ENE	0	3	4	2	4	3	3	7	2	3	0	31
E	0	1	2	3	5	4	1	2	2	0	0	20
ESE	0	0	3	1	5	5	5	1	0	0	0	20
SE	0	1	0	2	5	8	2	2	2	2	0	24
SSE	0	0	1	0	1	8	4	2	0	0	0	16
S	0	0	2	1	3	5	8	4	15	4	0	42
SSW	0	0	1	1	2	3	6	4	23	9	7	56
SW	0	0	1	0	3	4	7	10	21	29	23	98
WSW	0	0	0	0	1	5	5	5	19	44	41	120
W	0	0	0	3	7	9	12	8	27	19	34	119
WNW	0	0	0	1	1	2	6	5	35	53	18	121
NW	0	0	3	2	5	1	6	9	31	44	9	110
NNW	0	0	0	0	4	6	9	10	28	44	35	136
Tot	1	5	22	19	61	78	89	104	251	285	170	1085

Hours of Calm	0
Hours of Variable Direction	0
Hours of Valid Data	1085
Hours of Missing Data . . .	163
Hours in Period	8784

Table D – 10 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Generating Station, January – December, 2016

Oyster Creek Alpha

Period of Record: January - December 2016
Stability Class – Extremely Stable - 380Ft-33Ft Delta-T (F)
Winds Measured at 380 Feet

Wind Direction Sector	Wind Speed (in m/s) <0.50	0.5-1	1.1-1.5	1.6-2	2.1-3	3.1-4	4.1-5	5.1-6	6.1-8	8.1-10	>10.00	Total
N	0	1	3	0	1	5	4	11	25	26	9	85
NNE	0	1	1	3	5	10	4	6	14	3	0	47
NE	0	0	2	5	7	6	12	14	7	2	0	55
ENE	0	3	1	2	4	1	12	12	3	0	0	38
E	0	1	0	7	7	8	9	6	4	0	0	42
ESE	0	2	4	2	5	8	8	3	0	0	0	32
SE	0	0	2	2	8	4	5	2	3	1	0	27
SSE	0	0	0	1	8	5	4	0	4	1	0	23
S	1	1	0	4	11	14	7	2	3	6	0	49
SSW	0	0	2	3	4	6	3	8	11	7	3	47
SW	0	0	0	1	9	2	5	11	10	3	10	51
WSW	0	0	0	5	5	5	8	8	16	11	7	65
W	0	1	0	1	3	6	11	10	17	14	23	86
WNW	0	0	3	0	6	5	6	16	38	15	9	98
NW	1	0	0	0	6	12	9	8	14	19	6	75
NNW	0	0	2	2	7	11	11	3	18	27	9	90
Tot	2	10	20	38	96	108	118	120	187	135	76	910

Hours of Calm	1
Hours of Variable Direction	0
Hours of Valid Data	911
Hours of Missing Data . . .	163
Hours in Period	8784

Appendix E
ODCM Revisions

There were no ODCM revisions in 2016

Appendix F
ERRATA

None