Annual Radioactive Effluent Release Report

2009

Oyster Creek Nuclear Generating Station

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

January 1, 2009 through December 31, 2009

EXELON GENERATION COMPANY, LLC

OYSTER CREEK NUCLEAR GENERATING STATION

DOCKET NO. 50-219 (Oyster Creek Nuclear 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 2009 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 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 Nuclear Generating Station (OCNGS) does not result in significant radiation exposure of people or the environment surrounding OCNGS and is well below the applicable levels set by the Nuclear Regulatory Commission (NRC) and the Environmental Protection Agency (EPA).

There were no planned liquid radioactive effluent releases above ODCM Lower Limit of Detection (LLD) during 2009.

There were three abnormal liquid releases during 2009 resulting in an estimated total exposure of < 0.001 mRem to the most limiting member of the public.

On February 9, 2009 less than 1 gallon of condensation from the B Isocondenser vent leaked onto the ground. The tritium in the condensed water was 2.19E+04 pCi/l. The contaminated soil was placed in drums for disposal. No doses were calculated since the spill was contained and soil disposed.

On April 15, 2009, in preparation for work inside the Emergency Service Water (ESW) vault, water was found inside the vault. As part of standard practices for water removal, the water was pumped into drums and sampled for gamma emitters, tritium, and pH. Samples indicated elevated levels of tritium and a leak was subsequently confirmed by a monitoring well in the area. The release of tritiated water was caused by small leaks in 8-inch and 10-inch carbon steel Condensate System lines.

On August 24, 2009 a leak was discovered inside the turbine building coming from the turbine building west wall penetration housing a six-inch Condensate Transfer line. The leakage was found coming from the six-inch pipe within the wall penetration. After excavation of the pipe penetration from outside the turbine building, water was observed leaking from the pipe penetration into the excavation pit. The puddled water was pumped into drums for subsequent disposal.

The maximum hypothetical calculated organ dose (GI-LLI) from iodines, tritium and particulates to any individual due to gaseous effluents was 6.56E-3 mrem, which was approximately 4.37E-02 percent of the annual limit. The maximum calculated gamma air dose in the UNRESTRICTED AREA due to noble gas effluents was 1.61E-04 mrem, which was 1.61E-03 percent of the annual limit.

For comparison, the background radiation dose averages approximately 300 mRem per year in the Central New Jersey area, which includes approximately 200 mrem from naturally occurring radon gas and100 mrem from background radiation.

The Independent Spent Fuel Storage Installation (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 2009. Because it is a sealed unit, no radioactive material was released.

Additionally, comparison of environmental sampling results to iodine and particulate gaseous effluents released, showed no radioactivity attributable to the operation of OCNGS. Both elevated and ground-level release paths were considered in this review, with total iodines released of 6.02E-04 Ci and total particulates with half-lives greater than 8 days released of 1.78E-04 Ci.

Joint Frequency Tables of meteorological data, per Pasquill 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 97.8 percent and 97.8 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. Introduction

In accordance with the reporting requirements of Technical Specification 3.6.E.1 applicable during the reporting period, this report summarizes the effluent release data for Oyster Creek Generating Station for the period January 1, 2009 through December 31, 2009. 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 2009 report is complete.

2. Supplemental Information

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,
	< 15	mrem	Skin (Beta)	Section II.B.2(b)
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, Evaluation, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants," 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 and NUREG-0133, "Preparation of Radiological Effluent Technical Specifications for Nuclear Power Plants, October 1978. Therefore, average energy ($\bar{E}$) as described in Regulstory 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 ODCM Table 4.11.2.1.2-1. Additional grab samples were taken from the stack 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. The data from the noble gas radiation monitor were analyzed to report net noble gas effluent activity. If activity was found in the grab isotopic analysis, the isotopic mixture for the Noble Gas Monitor was determined from that isotopic mixture. If no activity is detected in the grab samples, Xe-135 is assumed to be the nuclide detected by the noble gas radiation monitor. Cross-check samples for the gas Marinelli were not performed in 2009. There were numerous non-gas cross-check samples that were performed in 2009. These cross-check samples gave assurance that the efficiency of the detectors had not changed.

2. Particulates and Iodines

The method used for Gamma Isotopic Analysis is the Canberra Gamma Spectroscopy System with a particulate filter (47 mm) and charcoal cartridge, respectively. Particulate and iodine activity was continuously sampled and analyzed in accordance with ODCM Table 4.11.2.1.2-1. Charcoal and 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.

3. Liquid Effluents

During 2009, there were no planned radiological liquid releases. Since there were no liquid discharges in 2009, there was no dose attributable to liquid effluents.

4. Tritium in Gaseous Effluents:

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

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

Particulate air samples were composited monthly and analyzed for gross alpha, Sr-89 and Sr-90. These composites are submitted to an offsite vendor laboratory for analysis. The ODCM required lower limit of detection for liquid and airborne releases are as follows:

Liquid:	**LLD**
Principal Gamma Emitters (Mn-54, Fe-59, Co-58, Co-60, Zn-65, I-131, Ce-141, Cs-134, Cs-137)	5E-07 µCi/ml
Principal Gamma Emitters (Mo-99, Ce-144)	1E-05 µCi/ml
Dissolved and Entrained Gases	1E-05 µCi/ml
H-3	1E-05 µCi/ml
Gross Alpha	1E-07 µCi/ml
Sr-89, Sr-90	5E-08 µCi/ml
Fe-55	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, Mo-99, Cs-134, Cs-137, Ce-141, Ce-144)	1E-11 µCi/ml
Gross Alpha	1E-11 µCi/ml
Sr-89, Sr-90	1E-11 µCi/ml

6. 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.

E. Batch Releases:

There were no batch releases of liquid or gaseous effluents during 2009.

F. Average Stream Flow:

There were no planned releases of liquid effluent in 2009. See the abnormal releases section for discharge canal flows used for calculations.

G. Abnormal Releases:

There were three abnormal liquid releases during 2009.

1. On February 9, 2009 less than 1 gallon of condensation from the B Isocondenser vent leaked onto the ground. The tritium in the condensed water was 2.19E+04 pCi/l (8.29E-08 Ci). The contaminated soil was placed in drums for disposal. No doses were calculated since the spill was contained and soil disposed.

2. On April 15, 2009, in preparation for work inside the Emergency Service Water (ESW) vault, water was found inside the vault. As part of standard practices for water removal, the water was pumped into drums and sampled for gamma emitters, tritium, and pH. Sample analysis identified tritium levels at 102,000 pCi/l. Investigation determined that the release of tritiated water was caused by leaks in the 8-inch and 10-inch carbon steel Condensate System lines. The root cause investigation determined that the piping leaks developed due to a corrosion mechanism known as anodic dissolution. Poor application of pipe coating left the buried pipes susceptible to this corrosion.

   A bounding calculation of the doses was done. A total of 66 Ci of tritium was assumed to be released to the discharge canal over a 4 month period with a dilution flow of 500,000 gpm. The total body and organ doses were both 6.06E-04 mrem. Dose from this release is not included in the Liquid Effluents – Summary of all Releases.

3. On August 24, 2009 an eight to ten gallon per minute leak was discovered in the condenser bay. The leak was coming from the turbine building west wall penetration housing the Condensate Transfer CH-5 line, the six-inch Condensate Transfer Main Header. Two leaks were found in the pipe within the wall penetration. A tritium concentration of 1.08E+07 pCi/l was detected. The root cause investigation determined the cause to be galvanic corrosion.

   A bounding calculation of the doses was done. A total of 2.06 Ci of tritium was assumed to be released to the discharge canal over a 7 day period with a dilution flow of 1E+06 gpm. The total body and organ doses were both 9.36E-06mrem. Dose from this release is no included in the Liquid Effluents – Summary of all Releases.

H. Revisions to the ODCM:

Revision 3 of CY-OC-170-301, Offsite Dose Calculation Manual was approved during April, 2009. A complete copy, along with detailed information justifying the changes, a determination that the changes did not reduce the accuracy or reliability of dose calculations or setpoint determination, and documentation of review and approval is in Appendix E.

The following is a summary of the changes made in Revision 3.

- Changes to REMP sample locations.
- Change the reporting level of I-131 to 2 pCi/L
- Update X/Q and D/Q factors to average values from the last five years of met data.
- Use of the updated X/Q and D/Q factors in example dose calculations.
- Add a reference for a report from a vendor's hydrogeologic investigation report.
- A complete re-write of Table E-1 describing REMP sample stations.
- Updated maps of the 1-mile, 1 to 5-mile and greater than 5-mile rings showing REMP sample stations.

Revision 4 of CY-OC-170-301, Offsite Dose Calculation Manual, was approved during September 2009. A complete copy, along with detailed information justifying the changes, a determination that the changes did not reduce the accuracy or reliability of dose calculations or setpoint determination, and documentation of review and approval is in Appendix E.

The following is a summary of the changes made in Revision 4.

- Administrative changes
- Added projected dose requirements for liquid and gas effluents
- Provided justification for liquid composite sampling methods
- Provided justification for gaseous tritium sampling quarterly
- Added limits for operation of the liquid and gas treatment systems

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

Per ODCM Control 3.11, "Radioactive Liquid Effluent Monitoring Instrumentation" and Table 3.3.3.11-1 Radioactive Gaseous Effluent Monitoring Instrumentation", instrumentation requires:

With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3.3.11-1. Restore the inoperable instrumentation to OPERABLE status within the time specified in the ACTION or explain in the next Annual Radioactive Effluent Release Report why this inoperability was not corrected within the time specified.

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

The Service Water radiation monitor was out of service from 09/25/2008 to 11/06/2009 due to inoperable instrumentation. An investigation revealed that the monitor could not be repaired and that new components had to be manufactured.

J. Revisions to the Process Control Plan:

There were no changes to the Process Control Plan in 2009.

K. Releases from the Independent Spent Fuel Storage Facility:

The Independent Spent Fuel Storage Installation (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 2009. Because it is a sealed unit, no radioactive material was released

L. Errata:

Revisions 6 and 7 of the Process Control Plan (PCP) (RW-AA-100) were approved June 2008 and December 2008 respectively. As required by Technical Specifications, complete copies of the procedures, along with a summary of changes are included in Appendix F.

The 2008 Annual Radioactive Effluent Release Report (ARERR) had errors. A revised 2008 ARERR is included in Appendix F.

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Appendix A
Effluent and Waste Disposal Summary

LIST OF TABLES

TABLE A -1 GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES PERIOD 2009

A. FISSION AND ACTIVATION GASES

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total Release	Ci	1.29E-07	6.48E-01	7.85E+00	6.86E+00	25
2. Average Release Rate for Period	µCi/sec	1.66E-08	8.24E-02	9.88E-01	8.63E-01	
3. Dose - Gamma Air Dose	mrad	1.17E-09	1.95E-05	9.58E-05	1.24E-04	
- Beta Air Dose	mrad	1.50E-09	1.26E-05	6.76E-05	4.79E-05	
4. Percent of ODCM Limit - Gamma Air Dose	%	2.34E-08	3.90E-04	1.92E-03	2.48E-03	
- Beta Air Dose	%	1.50E-08	1.26E-04	6.76E-04	4.79E-04	

B. IODINES

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total – I-131	Ci	2.73E-05	1.07E-04	2.23E-05	4.78E-06	25
2. Average Release Rate for Period	µCi/sec	3.51E-06	1.36E-05	2.80E-06	6.01E-07	
3. Percent of ODCM limit	%	*	*	*	*	

C. PARTICULATES

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Particulates with T 1/2 > 8 days	Ci	1.71E-05	1.22E-05	1.36E-04	1.27E-05	25
2. Average Release Rate for Period	µCi/sec	2.20E-06	1.55E-06	1.71E-05	1.60E-06	
3. Percent of ODCM limit	%	*	*	*	*	
4. Gross Alpha Radioactivity	Ci	<LLD	<LLD	<LLD	<LLD	

D. TRITIUM

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total Release	Ci	1.45E+00	2.97E+00	5.70E-01	4.87E-01	25
2. Average Release Rate for Period	µCi/sec	1.87E-01	3.79E-01	7.17E-02	6.13E-02	
3. Percent of ODCM limit	%	*	*	*	*	

E. Iodine 131 & 133, Tritium & Particulate

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
1. Organ Dose	mrem	3.70E-04	8.63E-04	5.76E-03	4.54E-04
2. Percent of ODCM Limit	%	4.93E-03	1.15E-02	7.68E-02	6.05E-03

* ODCM Limit is for combined Iodine, tritium and particulate only, which is shown in Item E.

TABLE A - 2 GASEOUS EFFLUENTS FOR RELEASE POINT – ELEVATED PERIOD 2009

1. FISSION AND ACTIVATION GASES

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
KR-85	Ci	<LLD	<LLD	<LLD	<LLD
KR-85M	Ci	<LLD	<LLD	<LLD	<LLD
KR-87	Ci	<LLD	<LLD	<LLD	<LLD
KR-88	Ci	<LLD	<LLD	<LLD	<LLD
XE-131M	Ci	<LLD	<LLD	<LLD	<LLD
XE-133	Ci	<LLD	<LLD	<LLD	<LLD
XE-133M	Ci	<LLD	<LLD	<LLD	<LLD
XE-135	Ci	<LLD	6.48E-01	7.85E+00	6.86E+00
XE-135M	Ci	<LLD	<LLD	<LLD	<LLD
XE-138	Ci	<LLD	<LLD	<LLD	<LLD
KR-85	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	6.48E-01	7.85E+00	6.86E+00

2. IODINES

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
I-131	Ci	2.73E-05	1.07E-04	2.23E-05	4.72E-06
I-133	Ci	2.96E-05	4.12E-04	<LLD	<LLD
Total for Period	Ci	5.69E-05	5.19E-04	2.23E-05	4.72E-06

3. PARTICULATES (T 1/2 > 8 DAYS)

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
MN-54	Ci	6.83E-06	1.22E-05	<LLD	<LLD
FE-59	Ci	<LLD	<LLD	<LLD	<LLD
CO-58	Ci	<LLD	<LLD	<LLD	<LLD
CO-60	Ci	<LLD	<LLD	<LLD	<LLD
ZN-65	Ci	<LLD	<LLD	<LLD	<LLD
SR-89	Ci	1.03E-05	<LLD	<LLD	<LLD
SR-90	Ci	<LLD	<LLD	<LLD	<LLD
ZR-95	Ci	<LLD	<LLD	<LLD	<LLD
NB-95	Ci	<LLD	<LLD	<LLD	<LLD
MO-99	Ci	<LLD	<LLD	<LLD	<LLD
CS-134	Ci	<LLD	<LLD	<LLD	<LLD
CS-137	Ci	<LLD	<LLD	<LLD	<LLD
CE-141	Ci	<LLD	<LLD	<LLD	<LLD
CE-144	Ci	<LLD	<LLD	<LLD	<LLD
BA-140	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	1.71E-05	1.22E-05	<LLD	<LLD

TABLE A - 3 GASEOUS EFFLUENTS FOR RELEASE POINT – GROUND LEVEL PERIOD 2009

1. FISSION AND ACTIVATION GASES

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
AR-41	Ci	<LLD	<LLD	<LLD	<LLD
KR-85M	Ci	<LLD	<LLD	<LLD	<LLD
KR-87	Ci	<LLD	<LLD	<LLD	<LLD
KR-88	Ci	<LLD	<LLD	<LLD	<LLD
XE-133	Ci	<LLD	<LLD	<LLD	<LLD
XE-133M	Ci	<LLD	<LLD	<LLD	<LLD
XE-135	Ci	1.29E-07	<LLD	<LLD	<LLD
XE-135M	Ci	<LLD	<LLD	<LLD	<LLD
XE-138	Ci	<LLD	<LLD	<LLD	<LLD
KR-85	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	1.29E-07	<LLD	<LLD	<LLD

2. IODINES

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
I-131	Ci	<LLD	<LLD	<LLD	5.78E-08
I-133	Ci	1.12E-07	<LLD	<LLD	9.63E-08
Total for Period	Ci	1.12E-07	<LLD	<LLD	1.54E-07

3. PARTICULATES (T 1/2 > 8 DAYS)

Nuclide Released	Continuous Mode				
	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4
MN-54	Ci	<LLD	<LLD	1.31E-05	8.71E-06
FE-59	Ci	<LLD	<LLD	<LLD	<LLD
CO-58	Ci	<LLD	<LLD	<LLD	<LLD
CO-60	Ci	<LLD	<LLD	1.23E-04	4.00E-06
ZN-65	Ci	<LLD	<LLD	<LLD	<LLD
SR-89	Ci	<LLD	<LLD	<LLD	<LLD
SR-90	Ci	<LLD	<LLD	<LLD	<LLD
ZR-95	Ci	<LLD	<LLD	<LLD	<LLD
NB-95	Ci	<LLD	<LLD	<LLD	<LLD
MO-99	Ci	<LLD	<LLD	<LLD	<LLD
CS-134	Ci	<LLD	<LLD	<LLD	<LLD
CS-137	Ci	<LLD	<LLD	<LLD	<LLD
CE-141	Ci	<LLD	<LLD	<LLD	<LLD
CE-144	Ci	<LLD	<LLD	<LLD	<LLD
Total for Period	Ci	<LLD	<LLD	1.36E-04	1.27E-05

TABLE A - 4 LIQUID EFFLUENTS – SUMMATION OF ALL RELEASES PERIOD 2009

A. FISSION AND ACTIVATION PRODUCTS

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total release (not including tritium, gasses & alpha)	Ci	<LLD	<LLD	<LLD	<LLD	N/A
2. Average diluted concentration during batch discharge for the period	uCi/ml	<LLD	<LLD	<LLD	<LLD	
3. Dose - Whole Body	mrem	N/A	N/A	N/A	N/A	
- Organ	mrem	N/A	N/A	N/A	N/A	
4. % of ODCM Limit - Whole Body Dose*	%	N/A	N/A	N/A	N/A	
- Organ Dose*	%	N/A	N/A	N/A	N/A	

B. TRITIUM

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total Release (Abnormal Releases)	Ci	8.29E-08	6.60E+01	2.06	N/A	N/A
2. Average diluted concentration during batch discharge for the period	uCi/ml	N/A	3.84E-07	4.72E-08	N/A	
3. % of ODCM Limit - ECL	%	N/A	3.84E-02	4.72E-03	N/A	

C. DISSOLVED AND ENTRAINED GASSES

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total release	Ci	<LLD	<LLD	<LLD	<LLD	N/A
2. Average diluted concentration during batch discharge for the period	uCi/ml	N/A	N/A	N/A	N/A	
3. %of ODCM Limit – ECL	%	N/A	N/A	N/A	N/A	

D. GROSS ALPHA RADIOACTIVITY

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
1. Total release	Ci	<LLD	<LLD	<LLD	<LLD	N/A
2. Average diluted concentration during batch discharge for the period	uCi/ml	N/A	N/A	N/A	N/A	

	Units	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Est. Total Error %
E. Volume of waste released (prior to dilution)	Liters	N/A	N/A	N/A	N/A	N/A

F. Volume of dilution water used during period	Liters	N/A	N/A	N/A	N/A	N/A

* Percent of limit does not include abnormal releases

Appendix B
Solid Waste and Irradiated Fuel Shipments
Solid waste shipped offsite for burial or disposal (not irradiated fuel) 1/1/09 – 12/31/09

LIST OF TABLES

1. Type of waste

Type of waste	Unit	12 Month Period	Estimated Error %
a. Spent resin, filters sludges, evaporator bottoms, etc	m^3	5.13E+01	25%
	Ci	5.21E+01	
b. Dry compressible waste, contaminated equipment, etc.	m^3	3.28E+02	25%
	Ci	6.01E02	
c. Irradiated components, control rods, etc.	m^3	0.00E+00	25%
	Ci	0.00E+00	
d. Other - Scrap Metal	m^3	1.42E+02	25%
	Ci	2.80E-01	

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

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

Isotope	Waste Class A Curies*	Percent Abundance	Waste Class B Curies*	Percent Abundance
H-3	3.45E-02	0.143%	2.72E-02	0.097%
C-14	2.88E-01	1.195%	5.81E-01	2.081%
Mn-54	1.40E+00	5.820%	5.51E-01	1.975%
Fe-55	7.30E+00	30.237%	5.62E+00	20.128%
Fe-59	4.47E-08	0.000%		
Co-57	6.61E-03	0.027%		
Co-58	5.00E-04	0.002%	1.08E-05	0.000%
Co-60	9.76E+00	40.445%	9.57E+00	34.273%
Ni-63	1.34E-01	0.556%	2.44E-01	0.875%
Zn-65	5.17E-01	2.142%	2.18E-01	0.781%
Sr-89	3.34E-06	0.000%		
Sr-90	1.23E-02	0.051%	3.38E-02	0.121%
Zr-95	1.06E-06	0.000%		
Nb-95	4.54E-09	0.000%		
Tc-99	7.49E-03	0.031%		
Ag-110m	3.17E-02	0.131%	4.63E-03	0.017%
Sb-125	1.89E-03	0.008%		
Cs-134	3.10E-02	0.129%	7.91E-02	0.283%
Cs-137	4.57E+00	18.927%	1.10E+01	39.267%
Ce-144	2.70E-02	0.112%	6.34E-03	0.023%
Pu-238	2.58E-04	0.001%	3.15E-04	0.001%
Pu-239	1.01E-04	0.000%	1.33E-04	0.000%
Pu-241	9.89E-03	0.041%	1.97E-02	0.071%
Am-241	2.80E-04	0.001%	1.04E-03	0.004%
Cm-242	6.97E-06	0.000%		
Cm-243	1.47E-04	0.001%	5.01E-04	0.002%
Totals	2.41E+01	100.00%	2.80E+01	100.00%

* Activity is estimated

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

Isotope	Waste Class A Curies*	Percent Abundance	Waste Class B Curies*	Percent Abundance
H-3	7.83E-02	1.823%	2.04E-02	0.003%
C-14	1.78E-01	4.135%	1.05E-01	0.018%
Mn-54	2.89E-01	6.736%	7.41E+00	1.242%
Fe-55	1.68E+00	39.224%	5.05E+02	84.675%
Co-57	1.17E-05	0.000%	1.84E-03	0.000%
Co-58	4.71E-04	0.011%	6.00E-04	0.000%
Co-60	1.55E+00	36.066%	4.93E+01	8.262%
Ni-63	3.30E-02	0.768%	2.39E+00	0.400%
Zn-65	9.86E-02	2.296%	1.52E+00	0.255%
Sr-89	2.45E-05	0.001%	5.97E-07	0.000%
Sr-90	2.49E-03	0.058%	1.77E-01	0.030%
Tc-99	2.23E-05	0.001%	4.34E-02	0.007%
Ag-110m	5.81E-03	0.135%	5.78E-02	0.010%
Sb-125	2.53E-03	0.059%		
Cs-134	1.25E-04	0.003%	1.60E-01	0.027%
Cs-137	3.64E-01	8.468%	2.98E+01	4.988%
Ce-144	7.48E-03	0.174%	2.33E-01	0.039%
Pu-238	1.36E-05	0.000%	3.59E-03	0.001%
Pu-239	9.85E-06	0.000%	1.07E-03	0.000%
Pu-240	9.66E-06	0.000%	6.63E-04	0.000%
Pu-241	1.64E-03	0.038%	2.37E-01	0.040%
Am-241	6.85E-05	0.002%	8.06E-03	0.001%
Cm-242	1.19E-06	0.000%	4.66E-05	0.000%
Cm-243	2.69E-05	0.001%	7.33E-03	0.001%
Cm-244	2.62E-05	0.001%	6.10E-03	0.001%
Totals	4.29E+00	100.00%	5.96E+02	100.00%

* Activity is estimated

Category C – Irradiated components, control rods, etc.

No Irradiated components, control rods, etc. shipped

Category D - Other - Scrap Metal

Isotope	Waste Class A Curies*	Percent Abundance
H-3	2.70E-01	96.430%
C-14	8.07E-06	0.003%
Mn-54	1.34E-03	0.477%
Fe-55	4.66E-03	1.664%
Co-57	8.92E-07	0.000%
Co-58	3.56E-05	0.013%
Co-60	2.16E-03	0.770%
Ni-63	2.18E-04	0.078%
Zn-65	5.98E-04	0.214%
Sr-89	1.85E-06	0.001%
Sr-90	1.89E-06	0.001%
Tc-99	1.70E-06	0.001%
Ag-110m	3.33E-05	0.012%
Cs-134	9.52E-06	0.003%
Cs-137	9.30E-04	0.332%
Ce-144	6.30E-06	0.002%
Pu-238	4.15E-08	0.000%
Pu-239	1.41E-08	0.000%
Pu-241	1.64E-06	0.001%
Am-241	4.44E-08	0.000%
Cm-242	2.53E-08	0.000%
Cm-243	2.81E-08	0.000%
Total	2.80E-01	100.00%

* Activity is estimated

3. Solid Waste (Disposition)

Number of Shipments	Mode of Transportation	Destination
18	Hittman Transport Co.	Barnwell Disposal Facility
10	Hittman Transport Co.	Duratek
2	Hittman Transport Co.	Duratek Radwaste Processing, Inc.

B. Irradiated Fuel Shipments (disposition).

There were no irradiated fuel shipments

Appendix C
Radiological Impact to Man

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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 resident was SE sector at 925 meters
- Actual meteorology and actual gaseous effluent releases were used
- All significant pathways were assumed to be present
- Occupancy factor was considered 100%.

Liquid

There was no dose due to planned liquid releases.

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	1.61E-04	All	540	SSE	1.61E-03	10	mrad
Noble Gas	Beta – Air Dose	9.65E-05	All	500	E	4.83E-04	20	mrad
Noble Gas	Total Body (Gamma)	6.72E-05	All	5635	SSW	1.34E-03	5	mrem
Noble Gas	Skin (Beta)	1.03E-04	All	5635	SSW	6.87E-04	15	mrem
Iodine, Particulate & Tritium	GI-LLI	6.56E-03	Teen	1169	ESE	4.37E-02	15	mrem
Liquid	Total body	<LLD	<LLD	925	SE	<LLD	3	mrem
Liquid	Organ	<LLD	<LLD	925	SE	<LLD	10	mrem
Direct Radiation	Total Body	<1	All	925	SE	<4	25	mrem

Doses calculated were well below all ODCM and 40 CFR Part 190 limits of 75 mrem to the thyroid and 25 mrem to the total body and any other organ. The 40 CFR Part 190 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 population doses to be calculated.

There are no radiological environmental sample parameters or locations where it is not possible or practical to obtain samples.

New Jersey State Police were not present full time at the plant entrance.

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Appendix D
Meteorological Data

LIST OF METEOROLOGICAL DATA TABLES **PAGE**

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class A - 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	8	3	0	0	0	11
NNE	0	5	4	0	0	0	9
NE	1	7	5	0	0	0	13
ENE	0	10	14	0	0	0	24
E	0	11	6	0	0	0	17
ESE	0	14	5	0	0	0	19
SE	0	3	9	0	0	0	12
SSE	0	1	7	0	0	0	8
S	0	3	12	5	2	0	22
SSW	0	2	7	0	1	0	10
SW	0	4	4	0	0	0	8
WSW	0	3	12	1	0	0	16
W	0	10	12	6	0	0	28
WNW	0	13	51	20	0	0	84
NW	1	15	49	24	2	0	91
NNW	0	4	39	1	0	0	44
Variable	0	0	0	0	0	0	0
Total	2	113	239	57	5	0	416

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class B - 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	3	0	0	0	0	3
NE	1	5	1	0	0	0	7
ENE	0	3	1	0	0	0	4
E	0	3	0	0	0	0	3
ESE	0	0	1	0	0	0	1
SE	3	4	1	0	0	0	8
SSE	0	2	0	0	0	0	2
S	0	1	4	3	0	0	8
SSW	1	1	2	0	0	0	4
SW	0	0	2	0	0	0	2
WSW	0	1	2	2	0	0	5
W	1	5	0	1	0	0	7
WNW	0	1	9	2	0	0	12
NW	1	8	10	6	1	0	26
NNW	1	3	4	2	0	0	10
Variable	0	0	0	0	0	0	0
Total	8	42	38	16	1	0	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: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class C - 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	0	0	0	0	2
NNE	0	2	2	0	0	0	4
NE	0	2	2	0	0	0	4
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	0	0	2	1	0	0	3
SSW	0	0	3	0	0	0	3
SW	1	0	2	0	0	0	3
WSW	0	2	0	0	0	0	2
W	0	2	0	1	0	0	3
WNW	0	1	1	1	0	0	3
NW	2	1	5	1	0	0	9
NNW	0	3	3	1	0	0	7
Variable	0	0	0	0	0	0	0
Total	5	17	20	5	0	0	47

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class D - 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	17	18	1	0	0	38
NNE	13	27	8	1	0	0	49
NE	4	39	15	0	0	0	58
ENE	2	12	5	0	0	0	19
E	5	5	4	0	0	0	14
ESE	2	5	2	1	0	0	10
SE	1	9	4	0	0	0	14
SSE	5	13	4	1	0	0	23
S	3	19	10	5	0	0	37
SSW	2	8	8	2	0	0	20
SW	3	6	4	1	0	0	14
WSW	2	5	5	4	0	0	16
W	10	14	7	6	0	0	37
WNW	7	15	24	1	0	0	47
NW	7	24	36	12	2	0	81
NNW	7	23	12	1	0	0	43
Variable	0	0	0	0	0	0	0
Total	75	241	166	36	2	0	520

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class E - 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	0	6	1	0	0	0	7
NNE	6	7	0	0	0	0	13
NE	8	4	6	0	0	0	18
ENE	4	2	3	0	0	0	9
E	3	4	2	0	0	0	9
ESE	2	1	1	0	0	0	4
SE	0	2	0	0	0	0	2
SSE	7	13	2	0	0	0	22
S	7	17	13	3	0	0	40
SSW	4	13	18	0	0	0	35
SW	5	16	10	0	0	0	31
WSW	6	28	14	4	0	0	52
W	17	38	35	3	0	0	93
WNW	10	64	43	7	0	0	124
NW	12	53	39	8	1	0	113
NNW	11	31	12	0	0	0	54
Variable	0	0	0	0	0	0	0
Total	102	299	199	25	1	0	626

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: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class F - 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	1	0	0	0	0	7
NNE	1	0	0	0	0	0	1
NE	4	0	0	0	0	0	4
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	0	1	0	0	0	0	1
SE	0	1	0	0	0	0	1
SSE	5	3	0	0	0	0	8
S	2	8	0	0	0	0	10
SSW	7	2	0	0	0	0	9
SW	4	10	0	0	0	0	14
WSW	3	16	0	0	0	0	19
W	18	25	0	0	0	0	43
WNW	15	16	0	0	0	0	31
NW	18	23	1	0	0	0	42
NNW	10	7	0	0	0	0	17
Variable	0	0	0	0	0	0	0
Total	93	113	1	0	0	0	207

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: 14

Table D – 1 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class G - 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	5	0	0	0	0	0	5
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
ENE	1	0	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	0	0	0	0	0	0	0
S	5	1	0	0	0	0	6
SSW	4	0	0	0	0	0	4
SW	11	2	0	0	0	0	13
WSW	26	18	0	0	0	0	44
W	28	13	0	0	0	0	41
WNW	46	12	0	0	0	0	58
NW	17	16	0	0	0	0	33
NNW	6	3	0	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	154	65	0	0	0	0	219

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: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class A - 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	2	1	0	3
NNE	0	0	0	0	0	0	0
NE	0	0	2	1	0	0	3
ENE	0	0	1	2	0	0	3
E	0	0	5	0	0	0	5
ESE	0	0	2	0	0	0	2
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	1	0	0	1
WSW	0	0	0	0	0	0	0
W	0	0	0	4	0	0	4
WNW	0	0	0	1	0	9	10
NW	0	0	0	0	9	1	10
NNW	0	0	1	7	2	0	10
Variable	0	0	0	0	0	0	0
Total	0	0	11	18	12	10	51

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: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class B - 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	1	0	0	0	1
NNE	0	0	1	0	0	0	1
NE	0	0	2	1	0	0	3
ENE	0	0	4	1	0	0	5
E	0	0	3	0	0	0	3
ESE	0	3	2	0	0	0	5
SE	0	0	3	0	0	0	3
SSE	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0
SSW	0	0	0	5	2	0	7
SW	0	0	0	1	0	0	1
WSW	0	0	0	1	0	0	1
W	0	0	0	3	2	2	7
WNW	0	0	2	7	1	3	13
NW	0	0	5	3	11	2	21
NNW	0	0	0	4	4	0	8
Variable	0	0	0	0	0	0	0
Total	0	3	23	26	20	7	79

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: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class C - 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	6	2	0	0	8
NNE	0	2	2	0	0	0	4
NE	0	0	3	2	0	0	5
ENE	0	1	3	2	0	0	6
E	0	2	4	0	0	0	6
ESE	0	1	3	0	0	0	4
SE	0	0	5	1	0	0	6
SSE	0	0	3	0	0	0	3
S	0	0	3	1	0	0	4
SSW	0	0	1	1	1	4	7
SW	0	1	3	1	0	0	5
WSW	0	1	1	3	0	0	5
W	0	0	2	1	0	1	4
WNW	0	0	8	11	9	7	35
NW	0	0	5	8	11	7	31
NNW	0	0	0	2	3	0	5
Variable	0	0	0	0	0	0	0
Total	0	8	52	35	24	19	138

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class D - 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	3	7	20	6	0	37
NNE	2	8	15	16	4	0	45
NE	1	8	33	26	10	0	78
ENE	0	5	8	11	3	0	27
E	2	8	5	3	3	0	21
ESE	3	4	2	1	0	0	10
SE	3	4	9	5	0	0	21
SSE	1	1	11	5	0	0	18
S	1	5	18	15	2	0	41
SSW	2	4	19	12	8	10	55
SW	1	0	2	11	2	0	16
WSW	0	1	3	11	8	3	26
W	0	12	20	8	9	11	60
WNW	1	5	13	22	40	22	103
NW	2	5	36	36	45	52	176
NNW	0	7	12	38	24	3	84
Variable	0	0	0	0	0	0	0
Total	20	80	213	240	164	101	818

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class E - 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	8	8	2	2	0	21
NNE	0	3	4	3	2	0	12
NE	1	0	1	1	9	0	12
ENE	0	3	3	6	6	2	20
E	0	2	5	3	3	0	13
ESE	3	4	1	1	2	3	14
SE	1	3	0	0	0	0	4
SSE	0	3	1	1	1	0	6
S	0	0	8	17	9	0	34
SSW	0	0	6	17	30	5	58
SW	0	2	13	11	16	2	44
WSW	1	1	2	8	9	7	28
W	3	2	13	16	35	11	80
WNW	1	2	8	28	68	10	117
NW	1	2	14	37	59	10	123
NNW	1	4	6	20	43	3	77
Variable	0	0	0	0	0	0	0
Total	13	39	93	171	294	53	663

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: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class F - 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	8	2	0	0	0	11
NNE	0	1	0	0	0	0	1
NE	1	0	1	0	0	0	2
ENE	0	0	2	0	0	0	2
E	0	1	0	1	0	0	2
ESE	1	1	0	0	1	0	3
SE	0	0	1	0	0	0	1
SSE	0	1	1	0	0	0	2
S	0	0	2	1	4	1	8
SSW	1	0	3	10	7	2	23
SW	1	0	2	3	12	2	20
WSW	1	1	1	3	10	5	21
W	1	1	4	2	14	6	28
WNW	0	3	4	24	19	6	56
NW	0	1	3	21	11	1	37
NNW	0	0	3	6	28	3	40
Variable	0	0	0	0	0	0	0
Total	7	18	29	71	106	26	257

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: 14

Table D – 2 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, January – March, 2009

Oyster Creek Alpha

Period of Record: January - March, 2009
Stability Class G - 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	0	2	1	0	0	3
NNE	0	0	1	2	5	0	8
NE	0	2	5	2	0	0	9
ENE	0	0	2	0	0	0	2
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	1	1	1	0	0	3
S	0	0	5	4	0	0	9
SSW	0	1	4	3	0	0	8
SW	0	1	0	4	1	0	6
WSW	1	0	2	5	3	1	12
W	0	0	6	9	5	0	20
WNW	0	2	11	13	3	1	30
NW	0	1	1	6	5	0	13
NNW	0	0	4	2	6	0	12
Variable	0	0	0	0	0	0	0
Total	1	8	44	52	28	2	135

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: 14

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class A - 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	8	0	0	0	0	8
NNE	0	7	3	0	0	0	10
NE	0	12	9	0	0	0	21
ENE	0	20	32	2	0	0	54
E	0	15	23	0	0	0	38
ESE	0	21	28	0	0	0	49
SE	0	5	19	0	0	0	24
SSE	0	8	19	3	0	0	30
S	0	5	26	21	3	0	55
SSW	0	4	5	0	0	0	9
SW	0	12	13	3	0	0	28
WSW	0	16	27	2	0	0	45
W	1	4	34	8	6	0	53
WNW	0	5	14	17	0	0	36
NW	1	13	10	6	0	0	30
NNW	0	7	2	0	0	0	9
Variable	0	0	0	0	0	0	0
Total	2	162	264	62	9	0	499

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class B - 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	0	2	0	0	0	2
NNE	1	5	0	0	0	0	6
NE	0	4	0	0	0	0	4
ENE	0	3	3	1	0	0	7
E	0	4	5	0	0	0	9
ESE	1	7	1	0	0	0	9
SE	0	2	0	0	0	0	2
SSE	1	1	3	0	0	0	5
S	0	4	7	1	1	0	13
SSW	1	1	2	0	0	0	4
SW	0	3	3	0	0	0	6
WSW	0	3	1	0	0	0	4
W	2	0	1	1	0	0	4
WNW	0	3	0	0	0	0	3
NW	0	4	3	0	0	0	7
NNW	1	4	1	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	7	48	32	3	1	0	91

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class C - 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	1	0	0	0	2
NNE	0	2	0	0	0	0	2
NE	0	5	1	0	0	0	6
ENE	0	1	6	2	0	0	9
E	0	0	0	0	0	0	0
ESE	0	4	1	0	0	0	5
SE	0	1	0	0	0	0	1
SSE	0	2	0	0	0	0	2
S	0	1	3	1	0	0	5
SSW	1	0	0	0	0	0	1
SW	0	2	2	0	0	0	4
WSW	0	2	0	0	0	0	2
W	0	1	1	0	0	0	2
WNW	0	2	0	1	0	0	3
NW	0	1	1	0	0	0	2
NNW	0	3	1	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	1	28	17	4	0	0	50

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class D - 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	7	9	6	0	0	0	22
NNE	6	24	17	3	0	0	50
NE	13	47	45	5	0	0	110
ENE	2	36	28	6	0	0	72
E	2	26	18	1	0	0	47
ESE	0	17	7	0	0	0	24
SE	8	14	6	0	0	0	28
SSE	9	18	18	2	0	0	47
S	7	20	20	10	0	0	57
SSW	4	14	6	1	0	0	25
SW	2	12	7	0	0	0	21
WSW	3	13	1	1	0	0	18
W	3	6	5	0	0	0	14
WNW	1	8	0	2	0	0	11
NW	5	10	5	0	0	0	20
NNW	7	18	6	0	0	0	31
Variable	0	0	0	0	0	0	0
Total	79	292	195	31	0	0	597

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 12
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class E - 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	6	9	0	0	0	0	15
NNE	13	8	1	0	0	0	22
NE	14	24	3	0	0	0	41
ENE	9	11	0	0	0	0	20
E	9	9	1	1	0	0	20
ESE	5	17	2	0	0	0	24
SE	7	7	5	0	0	0	19
SSE	13	13	7	0	0	0	33
S	6	25	9	0	0	0	40
SSW	5	55	9	0	0	0	69
SW	17	48	7	0	0	0	72
WSW	7	40	11	2	0	0	60
W	7	19	11	6	0	0	43
WNW	6	16	7	3	0	0	32
NW	9	20	3	0	0	0	32
NNW	8	18	6	0	0	0	32
Variable	0	0	0	0	0	0	0
Total	141	339	82	12	0	0	574

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 12
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class F - 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	1	1	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	1	1	0	0	0	0	2
ENE	1	0	0	0	0	0	1
E	1	1	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	2	0	0	0	0	0	2
S	2	1	0	0	0	0	3
SSW	5	5	0	0	0	0	10
SW	8	30	0	0	0	0	38
WSW	6	18	0	0	0	0	24
W	10	8	0	0	0	0	18
WNW	4	11	0	0	0	0	15
NW	6	9	0	0	0	0	15
NNW	1	5	0	0	0	0	6
Variable	0	0	0	0	0	0	0
Total	49	90	0	0	0	0	139

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 33

Table D – 3 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class G - 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	3	1	0	0	0	0	4
NNE	1	0	0	0	0	0	1
NE	3	0	0	0	0	0	3
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	3	1	0	0	0	0	4
SSW	5	0	0	0	0	0	5
SW	15	6	0	0	0	0	21
WSW	33	19	0	0	0	0	52
W	31	4	0	0	0	0	35
WNW	19	4	0	0	0	0	23
NW	11	3	0	0	0	0	14
NNW	6	2	0	0	0	0	8
Variable	1	0	0	0	0	0	1
Total	131	40	0	0	0	0	171

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: 33

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class A - 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	2	5	0	0	7
ENE	0	0	4	10	2	0	16
E	0	0	6	2	0	0	8
ESE	0	0	5	1	0	0	6
SE	0	0	2	1	0	0	3
SSE	0	0	0	3	0	0	3
S	0	0	0	8	0	0	8
SSW	0	0	0	0	1	0	1
SW	0	0	3	0	0	0	3
WSW	0	0	3	4	5	0	12
W	0	0	4	4	2	1	11
WNW	0	0	0	8	9	10	27
NW	0	0	1	3	2	8	14
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	0	0	30	49	21	19	119

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class B - 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	1	0	0	0	1
NNE	0	1	1	0	0	0	2
NE	0	2	1	1	1	0	5
ENE	0	0	8	5	0	0	13
E	0	1	6	2	0	0	9
ESE	0	0	14	4	0	0	18
SE	0	1	7	0	0	0	8
SSE	0	0	4	3	0	0	7
S	0	0	1	11	5	1	18
SSW	0	1	1	4	2	1	9
SW	0	1	4	0	0	0	5
WSW	0	2	6	2	4	0	14
W	0	0	3	7	4	0	14
WNW	0	0	3	8	3	4	18
NW	0	0	4	1	1	2	8
NNW	0	0	1	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	0	9	65	48	20	8	150

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class C - 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	3	5	0	0	0	8
NNE	0	1	2	0	0	0	3
NE	0	1	9	2	0	0	12
ENE	0	0	5	1	1	0	7
E	0	0	5	4	0	0	9
ESE	0	2	5	4	0	0	11
SE	0	3	2	1	0	0	6
SSE	0	0	8	0	0	0	8
S	0	1	3	4	2	2	12
SSW	0	0	1	9	3	0	13
SW	0	3	3	0	2	0	8
WSW	0	3	0	3	4	0	10
W	0	4	1	3	1	2	11
WNW	0	0	5	5	1	2	13
NW	0	2	3	6	1	1	13
NNW	0	0	3	3	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	23	60	45	15	7	150

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class D - 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	0	6	17	14	4	0	41
NNE	1	13	9	7	2	0	32
NE	1	38	37	30	17	29	152
ENE	1	11	20	36	28	11	107
E	1	14	31	13	7	7	73
ESE	1	17	23	13	1	0	55
SE	1	12	23	8	1	0	45
SSE	1	8	13	6	10	0	38
S	1	17	20	13	13	1	65
SSW	1	9	19	29	15	10	83
SW	0	5	9	20	9	0	43
WSW	0	5	3	14	6	0	28
W	0	6	8	13	9	9	45
WNW	0	6	2	2	8	11	29
NW	2	5	7	5	3	3	25
NNW	0	6	14	16	3	2	41
Variable	0	0	0	0	0	0	0
Total	11	178	255	239	136	83	902

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 16
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class E - 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	2	4	14	2	0	23
NNE	0	6	6	0	0	0	12
NE	1	6	3	4	3	1	18
ENE	1	4	2	2	0	0	9
E	0	3	4	2	0	2	11
ESE	0	4	4	2	2	7	19
SE	0	6	3	6	2	0	17
SSE	3	3	2	4	2	2	16
S	0	5	18	10	0	0	33
SSW	1	7	9	26	12	1	56
SW	1	2	10	33	27	6	79
WSW	0	3	8	27	15	9	62
W	1	4	4	16	16	4	45
WNW	0	5	3	11	14	1	34
NW	0	3	3	3	6	3	18
NNW	1	2	2	14	15	3	37
Variable	0	0	0	0	0	0	0
Total	10	65	85	174	116	39	489

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 9
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class F - 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	3	1	0	6
NNE	0	2	1	3	0	0	6
NE	2	3	2	1	0	0	8
ENE	1	3	2	0	0	0	6
E	0	2	1	0	0	0	3
ESE	0	3	1	0	0	0	4
SE	0	1	1	0	0	0	2
SSE	0	2	5	1	0	0	8
S	0	0	2	3	0	0	5
SSW	0	0	1	5	0	0	6
SW	0	2	3	5	17	8	35
WSW	1	1	1	9	19	4	35
W	0	2	3	6	9	8	28
WNW	0	1	2	3	4	1	11
NW	0	5	3	6	12	1	27
NNW	0	0	0	10	2	0	12
Variable	0	0	0	0	0	0	0
Total	4	27	30	55	64	22	202

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 37

Table D – 4 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, April – June, 2009

Oyster Creek Alpha

Period of Record: April - June 2009
Stability Class G - 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	0	0	0	0	0	0
NNE	1	2	3	0	4	0	10
NE	1	1	1	0	0	0	3
ENE	0	3	6	0	0	0	9
E	0	1	1	0	0	0	2
ESE	0	1	2	0	0	0	3
SE	0	1	2	0	0	0	3
SSE	0	0	2	0	0	0	2
S	0	0	1	1	0	0	2
SSW	0	1	1	1	0	0	3
SW	0	1	1	3	6	4	15
WSW	0	0	1	2	8	1	12
W	0	0	5	4	4	1	14
WNW	1	2	4	3	2	0	12
NW	0	0	6	3	5	0	14
NNW	0	1	0	0	0	0	1
Variable	0	0	0	0	0	0	0
Total	3	14	36	17	29	6	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: 37

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class A - 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	1	8	0	0	0	0	9
NNE	1	5	4	0	0	0	10
NE	1	10	22	1	0	0	34
ENE	0	18	17	0	0	0	35
E	0	24	12	0	0	0	36
ESE	0	18	16	0	0	0	34
SE	0	19	37	0	0	0	56
SSE	1	6	26	2	0	0	35
S	0	4	22	9	0	0	35
SSW	0	4	5	1	0	0	10
SW	0	10	4	0	0	0	14
WSW	0	8	13	2	0	0	23
W	1	18	18	0	0	0	37
WNW	0	17	14	0	0	0	31
NW	0	28	5	0	0	0	33
NNW	2	12	1	0	0	0	15
Variable	0	0	0	0	0	0	0
Total	7	209	216	15	0	0	447

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: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class B - Moderately Unstable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	0	1	0	0	0	3
NNE	0	1	2	0	0	0	3
NE	1	6	5	1	0	0	13
ENE	0	3	2	0	0	0	5
E	1	5	1	0	0	0	7
ESE	0	3	0	0	0	0	3
SE	1	6	8	0	0	0	15
SSE	1	4	4	0	0	0	9
S	0	2	4	3	0	0	9
SSW	0	2	0	1	0	0	3
SW	1	3	1	0	0	0	5
WSW	2	2	5	0	0	0	9
W	0	2	2	0	0	0	4
WNW	2	9	2	0	0	0	13
NW	1	7	1	0	0	0	9
NNW	2	3	0	0	0	0	5
Variable	0	0	0	0	0	0	0
Total	14	58	38	5	0	0	115

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class C - 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	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	0	3	2	0	0	0	5
ENE	1	1	1	0	0	0	3
E	1	2	1	0	0	0	4
ESE	0	2	0	0	0	0	2
SE	0	2	2	0	0	0	4
SSE	0	3	3	0	0	0	6
S	0	2	2	1	0	0	5
SSW	0	3	0	1	0	0	4
SW	0	4	0	0	0	0	4
WSW	0	2	0	0	0	0	2
W	0	1	3	0	0	0	4
WNW	0	4	0	0	0	0	4
NW	0	2	0	0	0	0	2
NNW	0	2	0	0	0	0	2
Variable	0	0	0	0	0	0	0
Total	2	35	14	2	0	0	53

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: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class D - 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	4	4	0	0	0	0	8
NNE	2	19	0	0	0	0	21
NE	2	13	18	5	0	0	38
ENE	4	9	13	0	0	0	26
E	3	7	3	0	0	0	13
ESE	1	8	6	0	0	0	15
SE	0	19	5	0	0	0	24
SSE	3	17	2	0	0	0	22
S	3	18	23	3	0	0	47
SSW	1	8	3	1	0	0	13
SW	3	8	2	0	0	0	13
WSW	0	10	3	0	0	0	13
W	2	9	0	0	0	0	11
WNW	3	13	3	0	0	0	19
NW	3	11	0	0	0	0	14
NNW	1	8	2	0	0	0	11
Variable	0	0	0	0	0	0	0
Total	35	181	83	9	0	0	308

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class E - 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	3	0	0	0	0	13
NNE	5	15	2	4	0	0	26
NE	10	30	30	10	0	0	80
ENE	4	18	16	3	0	0	41
E	2	12	10	0	0	0	24
ESE	4	20	6	0	0	0	30
SE	7	17	2	0	0	0	26
SSE	6	17	0	0	0	0	23
S	10	33	15	0	0	0	58
SSW	10	38	5	0	0	0	53
SW	13	43	3	0	0	0	59
WSW	17	40	1	0	0	0	58
W	24	22	2	0	0	0	48
WNW	9	7	0	0	0	0	16
NW	19	21	0	0	0	0	40
NNW	4	15	0	0	0	0	19
Variable	0	0	0	0	0	0	0
Total	154	351	92	17	0	0	614

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class F - Moderately Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	0	1	0	0	0	0	1
NNE	1	1	0	0	0	0	2
NE	2	0	0	0	0	0	2
ENE	0	0	0	0	0	0	0
E	2	0	0	0	0	0	2
ESE	2	0	0	0	0	0	2
SE	2	0	0	0	0	0	2
SSE	9	0	0	0	0	0	9
S	10	2	0	0	0	0	12
SSW	12	3	0	0	0	0	15
SW	14	20	0	0	0	0	34
WSW	21	12	0	0	0	0	33
W	16	5	0	0	0	0	21
WNW	14	6	0	0	0	0	20
NW	16	9	0	0	0	0	25
NNW	7	9	0	0	0	0	16
Variable	0	0	0	0	0	0	0
Total	128	68	0	0	0	0	196

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: 132

Table D – 5 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class G - Extremely Stable - 150Ft-33Ft Delta-T (F)
Winds Measured at 33 Feet

Wind Direction	Wind Speed (in mph) 1-3	4-7	8-12	13-18	19-24	> 24	Total
N	2	0	0	0	0	0	2
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0
ESE	2	0	0	0	0	0	2
SE	1	0	0	0	0	0	1
SSE	2	0	0	0	0	0	2
S	5	0	0	0	0	0	5
SSW	6	0	0	0	0	0	6
SW	18	2	0	0	0	0	20
WSW	98	17	0	0	0	0	115
W	80	3	0	0	0	0	83
WNW	38	4	0	0	0	0	42
NW	39	8	0	0	0	0	47
NNW	8	5	0	0	0	0	13
Variable	0	0	0	0	0	0	0
Total	300	39	0	0	0	0	339

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: 132

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class A - 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	1	0	0	1
NE	0	0	2	5	0	0	7
ENE	0	0	4	4	0	0	8
E	0	0	4	1	0	0	5
ESE	0	1	1	1	0	0	3
SE	0	0	3	0	0	0	3
SSE	0	0	0	1	0	0	1
S	0	0	0	4	0	0	4
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	1	0	1
WSW	0	0	0	2	0	0	2
W	0	0	0	2	2	0	4
WNW	0	0	0	3	1	0	4
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	1	14	25	4	0	44

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: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class B - 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	3	1	0	0	0	4
NNE	0	0	0	0	0	0	0
NE	0	0	5	6	0	0	11
ENE	0	3	7	3	0	0	13
E	0	2	10	1	0	0	13
ESE	0	2	11	3	0	0	16
SE	0	3	13	0	0	0	16
SSE	0	0	11	4	0	0	15
S	0	0	1	15	2	0	18
SSW	0	0	4	1	3	0	8
SW	0	1	3	2	2	0	8
WSW	0	0	1	1	0	0	2
W	0	1	3	7	1	0	12
WNW	0	2	9	4	0	0	15
NW	0	0	10	5	0	0	15
NNW	0	2	3	1	0	0	6
Variable	0	0	0	0	0	0	0
Total	0	19	92	53	8	0	172

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: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class C - 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	3	1	0	0	0	4
NNE	0	1	1	0	0	0	2
NE	0	1	5	9	0	1	16
ENE	0	2	3	6	0	1	12
E	0	3	6	2	0	0	11
ESE	0	7	4	1	0	0	12
SE	0	1	8	4	0	0	13
SSE	0	3	16	2	0	0	21
S	0	1	6	7	1	0	15
SSW	0	3	3	6	1	1	14
SW	0	4	2	0	2	0	8
WSW	0	2	3	3	1	1	10
W	1	4	4	6	2	1	18
WNW	0	3	7	7	1	0	18
NW	1	1	13	8	0	0	23
NNW	0	7	7	0	0	0	14
Variable	0	0	0	0	0	0	0
Total	2	46	89	61	8	5	211

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class D - 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	2	2	3	1	1	0	9
NNE	1	5	9	5	0	0	20
NE	1	8	19	30	8	20	86
ENE	1	3	6	36	15	40	101
E	3	13	7	17	8	0	48
ESE	0	12	12	10	2	0	36
SE	0	9	23	17	2	0	51
SSE	1	5	28	12	2	0	48
S	1	7	32	26	4	0	70
SSW	1	6	14	30	17	0	68
SW	0	8	10	12	1	0	31
WSW	2	2	7	13	1	0	25
W	2	1	7	11	3	0	24
WNW	0	2	11	11	2	0	26
NW	0	3	20	7	1	0	31
NNW	2	10	7	11	0	0	30
Variable	0	0	0	0	0	0	0
Total	17	96	215	249	67	60	704

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class E - 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	7	14	12	4	0	37
NNE	2	6	6	10	0	0	24
NE	4	4	7	5	0	0	20
ENE	3	1	12	15	2	0	33
E	1	0	4	4	1	0	10
ESE	1	2	2	0	0	0	5
SE	0	4	10	3	0	0	17
SSE	0	2	14	6	0	0	22
S	0	4	14	10	1	0	29
SSW	2	4	8	40	2	0	56
SW	0	3	9	40	7	0	59
WSW	0	2	11	24	13	0	50
W	0	0	7	20	16	0	43
WNW	0	9	5	16	4	0	34
NW	0	3	8	7	0	0	18
NNW	0	2	7	11	6	0	26
Variable	0	0	0	0	0	0	0
Total	13	53	138	223	56	0	483

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: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class F - 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	0	12	8	3	0	24
NNE	1	6	6	2	1	0	16
NE	0	2	2	2	0	0	6
ENE	1	1	4	0	0	0	6
E	0	0	0	0	0	0	0
ESE	1	2	0	0	0	0	3
SE	0	0	0	0	0	0	0
SSE	0	1	3	0	0	0	4
S	0	1	8	0	0	0	9
SSW	0	3	5	4	0	0	12
SW	2	3	7	9	6	0	27
WSW	0	2	7	8	16	2	35
W	2	3	8	11	6	0	30
WNW	0	2	14	21	13	0	50
NW	1	2	4	18	5	0	30
NNW	0	2	6	10	10	1	29
Variable	0	0	0	0	0	0	0
Total	9	30	86	93	60	3	281

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: 134

Table D – 6 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, July – September, 2009

Oyster Creek Alpha

Period of Record: July - September 2009
Stability Class G - 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	1	2	1	3	0	7
NNE	0	2	5	5	3	0	15
NE	0	2	3	6	0	0	11
ENE	0	0	7	5	0	0	12
E	0	0	3	0	0	0	3
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	1	0	2	2	0	0	5
S	1	4	5	1	0	0	11
SSW	0	10	3	0	0	0	13
SW	0	4	4	0	0	0	8
WSW	0	5	5	3	1	0	14
W	0	4	14	6	4	0	28
WNW	1	10	5	10	2	0	28
NW	1	1	3	7	1	0	13
NNW	0	2	2	1	3	0	8
Variable	0	0	0	0	0	0	0
Total	4	45	63	47	17	0	176

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: 134

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class A - 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	7	1	0	0	0	8
NNE	0	5	7	0	0	0	12
NE	0	5	2	0	0	0	7
ENE	0	3	3	0	0	0	6
E	0	1	0	0	0	0	1
ESE	0	4	0	0	0	0	4
SE	0	6	3	0	0	0	9
SSE	1	5	1	0	0	0	7
S	0	0	1	1	0	0	2
SSW	0	2	2	3	0	0	7
SW	0	2	1	0	0	0	3
WSW	0	6	4	0	0	0	10
W	0	8	15	1	0	0	24
WNW	0	8	25	9	0	0	42
NW	0	12	24	10	0	0	46
NNW	0	9	3	0	0	0	12
Variable	0	0	0	0	0	0	0
Total	1	83	92	24	0	0	200

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: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class B - 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	3	0	0	0	0	3
NNE	0	2	2	0	0	0	4
NE	0	6	1	0	0	0	7
ENE	0	3	0	0	0	0	3
E	0	0	0	0	0	0	0
ESE	0	1	1	0	0	0	2
SE	0	1	2	0	0	0	3
SSE	0	1	0	0	0	0	1
S	0	0	3	0	0	0	3
SSW	2	0	1	1	0	0	4
SW	0	2	0	0	0	0	2
WSW	0	3	1	1	0	0	5
W	0	4	3	1	0	0	8
WNW	0	7	9	7	0	0	23
NW	1	3	7	6	0	0	17
NNW	0	8	5	0	0	0	13
Variable	0	0	0	0	0	0	0
Total	3	44	35	16	0	0	98

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: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class C - 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	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0
NE	0	4	1	0	0	0	5
ENE	0	1	0	0	0	0	1
E	0	2	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0
S	0	0	1	4	0	0	5
SSW	0	0	0	1	0	0	1
SW	0	0	0	0	0	0	0
WSW	0	1	0	0	0	0	1
W	0	0	1	1	0	0	2
WNW	1	3	8	0	0	0	12
NW	0	0	5	2	0	0	7
NNW	3	1	0	0	0	0	4
Variable	0	0	0	0	0	0	0
Total	4	12	16	8	0	0	40

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: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class D - 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	7	10	22	0	0	0	39
NNE	3	48	45	4	0	0	100
NE	0	32	25	7	0	0	64
ENE	4	3	9	6	0	0	22
E	2	1	3	0	0	0	6
ESE	0	4	1	0	0	0	5
SE	1	5	3	1	0	0	10
SSE	3	1	3	0	0	0	7
S	2	8	5	5	0	0	20
SSW	0	4	2	3	0	0	9
SW	0	2	3	0	0	0	5
WSW	2	4	2	1	0	0	9
W	3	10	8	0	0	0	21
WNW	6	15	17	6	0	0	44
NW	5	15	23	6	0	0	49
NNW	7	26	12	1	0	0	46
Variable	0	0	0	0	0	0	0
Total	45	188	183	40	0	0	456

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: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class E - 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	14	21	10	0	0	0	45
NNE	11	35	32	35	3	0	116
NE	2	19	31	5	0	0	57
ENE	2	16	28	12	0	0	58
E	0	14	5	4	0	0	23
ESE	2	5	11	5	0	0	23
SE	1	6	7	3	0	0	17
SSE	5	16	12	1	1	0	35
S	3	14	11	10	0	0	38
SSW	6	10	9	5	0	0	30
SW	4	16	12	1	0	0	33
WSW	4	20	2	2	0	0	28
W	11	46	19	3	0	0	79
WNW	5	47	31	5	0	0	88
NW	9	35	40	9	0	0	93
NNW	7	26	13	0	0	0	46
Variable	0	0	0	0	0	0	0
Total	86	346	273	100	4	0	809

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 2
Hours of missing stability measurements in all stability classes: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class F - 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	3	3	0	0	0	0	6
NNE	1	1	0	2	0	0	4
NE	1	2	0	0	0	0	3
ENE	1	5	0	0	0	0	6
E	1	1	0	0	0	0	2
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	0	0	1
SSE	2	1	0	0	0	0	3
S	0	5	2	0	0	0	7
SSW	1	5	0	0	0	0	6
SW	11	3	0	0	0	0	14
WSW	13	24	0	1	0	0	38
W	13	31	0	0	0	0	44
WNW	15	31	0	0	0	0	46
NW	14	27	0	0	0	0	41
NNW	6	7	0	0	0	0	13
Variable	0	0	0	0	0	0	0
Total	82	147	2	3	0	0	234

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: 14

Table D – 7 Wind Speed by Direction Measured at 33 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class G - 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	3	0	0	0	0	0	3
NNE	1	0	0	0	0	0	1
NE	2	0	0	0	0	0	2
ENE	1	0	0	0	0	0	1
E	1	0	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	0	0	0	0	0	0
SSE	4	1	0	0	0	0	5
S	3	0	0	0	0	0	3
SSW	5	0	0	0	0	0	5
SW	9	4	0	0	0	0	13
WSW	63	31	0	0	0	0	94
W	55	21	0	0	0	0	76
WNW	49	15	0	0	0	0	64
NW	37	14	0	0	0	0	51
NNW	13	19	0	0	0	0	32
Variable	0	0	0	0	0	0	0
Total	246	106	0	0	0	0	352

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: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class A - 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	0	0	0	0
SSW	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0
WSW	1	0	0	0	0	0	1
W	0	0	0	0	0	0	0
WNW	0	0	1	3	0	0	4
NW	0	0	0	1	1	0	2
NNW	0	0	0	0	0	0	0
Variable	0	0	0	0	0	0	0
Total	1	0	1	4	1	0	7

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: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class B - 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	2	2	0	0	4
NE	0	0	1	1	1	0	3
ENE	0	0	2	2	0	0	4
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	1	0	1	0	0	2
SSE	0	0	0	0	0	0	0
S	0	0	1	0	0	0	1
SSW	0	1	0	1	2	1	5
SW	0	0	1	0	0	0	1
WSW	0	0	1	0	0	0	1
W	0	0	6	4	1	0	11
WNW	0	1	2	9	1	0	13
NW	0	0	2	6	7	6	21
NNW	0	1	2	2	1	0	6
Variable	0	0	0	0	0	0	0
Total	0	4	20	28	13	7	72

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class C - 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	2	8	0	0	0	10
NNE	0	0	2	1	0	0	3
NE	0	1	1	3	2	0	7
ENE	0	0	2	0	0	0	2
E	0	0	1	0	0	0	1
ESE	0	2	0	0	0	0	2
SE	0	0	1	2	0	0	3
SSE	0	0	0	0	1	0	1
S	0	1	0	0	0	0	1
SSW	0	0	0	0	0	2	2
SW	0	0	3	0	0	0	3
WSW	0	2	3	0	0	1	6
W	0	2	5	3	0	1	11
WNW	0	2	3	10	4	5	24
NW	0	3	2	6	8	9	28
NNW	0	3	10	0	6	2	21
Variable	0	0	0	0	0	0	0
Total	0	18	41	25	21	20	125

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 0
Hours of missing stability measurements in all stability classes: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class D - 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	2	8	8	18	20	2	58
NNE	0	3	22	42	28	25	120
NE	0	4	40	54	32	28	158
ENE	1	7	13	3	21	7	52
E	0	5	4	6	7	13	35
ESE	0	2	3	3	2	0	10
SE	1	4	10	3	0	3	21
SSE	0	2	1	8	9	1	21
S	1	5	4	6	6	1	23
SSW	0	4	9	7	5	22	47
SW	0	7	6	1	3	2	19
WSW	0	2	2	4	5	0	13
W	0	1	3	11	3	3	21
WNW	0	5	16	22	24	17	84
NW	0	7	13	21	53	33	127
NNW	1	12	18	24	20	8	83
Variable	0	0	0	0	0	0	0
Total	6	78	172	233	238	165	892

Hours of calm in this stability class: 0
Hours of missing wind measurements in this stability class: 3
Hours of missing stability measurements in all stability classes: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class E - 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	6	11	15	2	1	36
NNE	1	7	12	15	2	26	63
NE	0	6	8	21	10	4	49
ENE	0	1	3	4	3	4	15
E	1	1	3	10	2	27	44
ESE	0	0	2	4	5	6	17
SE	0	2	2	2	3	7	16
SSE	0	0	2	4	2	2	10
S	0	1	0	10	11	1	23
SSW	0	0	2	9	5	2	18
SW	0	2	5	21	9	4	41
WSW	1	0	2	5	11	2	21
W	0	1	2	9	17	5	34
WNW	2	4	4	26	55	8	99
NW	2	1	2	19	36	5	65
NNW	0	1	5	15	26	0	47
Variable	0	0	0	0	0	0	0
Total	8	33	65	189	199	104	598

Hours of calm in this stability class: 1
Hours of missing wind measurements in this stability class: 1
Hours of missing stability measurements in all stability classes: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class F - 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	2	2	7	10	2	23
NNE	3	4	10	4	1	0	22
NE	1	5	5	3	0	0	14
ENE	1	2	0	0	0	0	3
E	0	0	5	0	0	0	5
ESE	0	0	1	0	0	0	1
SE	0	1	1	0	0	0	2
SSE	0	0	2	0	1	0	3
S	0	1	1	0	2	0	4
SSW	0	0	1	0	0	0	1
SW	0	0	0	5	2	0	7
WSW	0	2	2	7	9	0	20
W	0	1	0	12	10	1	24
WNW	0	2	3	9	21	6	41
NW	0	1	3	10	35	8	57
NNW	0	2	4	12	24	6	48
Variable	0	0	0	0	0	0	0
Total	5	23	40	69	115	23	275

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: 14

Table D – 8 Wind Speed by Direction Measured at 380 Feet for various Stability Classes for the Oyster Creek Nuclear Generating Station, October – December, 2009

Oyster Creek Alpha

Period of Record: October - December 2009
Stability Class G - 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	1	4	4	7	1	17
NNE	0	1	3	11	10	0	25
NE	0	2	0	2	1	0	5
ENE	0	0	1	0	0	0	1
E	0	0	1	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	1	0	0	1	0	2
SSE	0	2	0	2	1	0	5
S	2	1	0	1	0	0	4
SSW	0	1	2	1	3	0	7
SW	0	4	7	2	1	0	14
WSW	0	4	2	10	8	3	27
W	0	2	2	5	14	1	24
WNW	2	3	2	16	10	0	33
NW	0	3	2	17	7	1	30
NNW	0	1	4	2	9	8	24
Variable	0	0	0	0	0	0	0
Total	4	26	30	73	72	14	219

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: 14

Appendix E
ODCM Revisions

CY-OC-170-301 Revision 3

CY-OC-170-301 Revision 4

Appendix F
ERRATA