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

2130-06-20276

February 27, 2006
2130-06-20048

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

Oyster Creek Generating Station
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 2005

Enclosed with this cover letter is the Annual Radioactive Effluent Release Report for the period January 1 to December 31, 2005. This report includes the Oyster Creek Independent Spent Fuel Storage Facility.

If any further information or assistance is needed, please contact Robert J. Artz at 609-971-4006.

Sincerely,

C. N. Swenson
Vice President, Oyster Creek Generating Station

CNS/DIF
Enclosures: 2005 Annual Radioactive Effluent Release Report

cc: Administrator, USNRC Region I
USNRC Senior Project Manager, Oyster Creek
USNRC Senior Resident Inspector, Oyster Creek
File No. 06003

IE48
IE17

2005

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT

OYSTER CREEK GENERATING STATION

AMERGEN ENERGY COMPANY

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OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 2005 THROUGH DECEMBER 31, 2005

This report summarizes the radioactive liquid and gaseous effluents from the Oyster Creek Generating Station and the calculated maximum hypothetical radiation exposure to the public resulting from those effluents. This report covers the period of operation from January 1, 2005 through December 31, 2005.

There were no radiological liquid releases during 2005. If liquid releases had occurred from the Facility, representative samples would have been collected and analyzed prior to discharge. There was no dose attributable to liquid effluents because there were no liquid radioactive releases from the facility in 2005.

Radioactive gaseous releases from the plant are monitored by radiation monitors and filtering systems installed in the plant stack and vents. Utilizing gaseous effluent data, the maximum hypothetical dose to any individual in the vicinity of the plant was calculated using a mathematical model, which is based on the methods defined by the U.S. Nuclear Regulatory Commission. These methods accurately determine the types and quantities of radioactive materials being released to the environment.

The maximum hypothetical doses (Table 1) are conservative overestimates of the actual off-site doses, which are likely to occur. For example, wet deposition due to precipitation events decreases the off-site dose, but this phenomenon is not incorporated into the mathematical dose model.

Radioactive airborne discharges from the facility during 2005 consisted of 304 curies of noble gases, 2.37E-2 (0.0237) curies of radioiodines, 9.81E-3 (0.00981) curies of particulate activity, and 223 curies of tritium.

Thirteen (13) solid, low level radioactive waste shipments, totaling approximately 797 cubic meters, were shipped in Type IP-1 and IP-2 Containers and General Design Packages from the Oyster Creek Generating Station during the reporting period. This material went to either a licensed burial site or to a waste processor for volume reduction. No solidification agent was used in any of the 13 shipments.

The maximum hypothetical calculated organ dose (Thyroid) from iodines and particulates to any individual due to gaseous effluents (0.0618 mRem/year) was approximately 0.41 percent of the annual limit (Table 1). The maximum hypothetical calculated whole body dose to any individual due to gaseous effluents (4.47E-3 mRem/year) was 8.94E-4 percent of the annual limit.

The total maximum hypothetical organ dose (Thyroid) due to all radiological effluents of 6.60E-02 mRem/year received by any individual from gaseous effluents from the Oyster Creek Generating Station for the reporting period is over 4500 times lower than the dose the average individual in the Oyster Creek area received from natural background radiation, including that from radon (300 mRem) during the same time period. The natural background radiation dose averages approximately 300 mRem whole body per year in the Central New Jersey area, with contributions of approximately 100 mRem/year from natural background radiation and approximately 200 mRem/year from naturally occurring Radon gas.

Joint Frequency Tables of meteorological data, per Pasquill Category, as well as for all stability classes, are included. All data were collected from the on-site Meteorological Facility. Collection efficiencies for the 380-foot data and the 33-foot data were 97.3 percent and 96.9 percent, respectively. The UFSAR commits to Regulatory Guide (RG) 1.23 for Met Tower reliability. RG 1.23 requires 90% reliability over the year.

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 1

ANNUAL OFFSITE DOSES DUE TO RADIONUCLIDES IN EFFLUENTS

January 1, 2005 through December 31, 2005

Reference	ODCM 3.11.1.2	ODCM 3.11.1.2	ODCM 3.11.2.1	ODCM 3.11.2.1	ODCM 3.11.2.1	ODCM 3.11.2.2	ODCM 3.11.2.2	ODCM 3.11.2.3
	Liquid Total Body mrem	Liquid GI Tract mrem	Noble Gas Total Body mrem	Noble Gas Skin mrem	H-3, Iodines, & Particulates Thyroid mrem	Noble Gas Gamma Dose mRad	Noble Gas Beta Dose mRad	I-131, I-133, & Particulates Thyroid mrem
ODCM Limit	3.0 mrem/year	10.0 mrem/year	500 mrem/year	3000 mrem/year	1500 mrem/year	10 mRad/year	20 mRad/year	15 mrem/year
2005 Dose	N/A mrem	N/A mrem	4.47E-03 mrem	6.48E-03 mrem	6.18E-02 mrem	1.92E-02 mRad	8.91E-03 mRad	6.18E-02 mrem
Percent of Limit	N/A Percent	N/A Percent	8.94E-04 Percent	2.16E-04 Percent	4.12E-03 Percent	1.92E-01 Percent	4.46E-02 Percent	4.12E-01 Percent

Reference	ODCM 3.11.4	ODCM 3.11.4
	All Effluents Total Body mrem	All Effluents Thyroid mrem
ODCM Limit	25 mrem/year	75 mrem/year
2005 Dose	4.67E-02 mrem	6.60E-02 mrem
Percent of Limit	1.87E-01 Percent	8.80E-02 Percent

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 2005 THROUGH DECEMBER 31, 2005

YEAR 2005 EVENT REPORT

LIQUID EFFLUENT RELEASES

There were no liquid radioactive releases from the facility in 2005.

CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL

There were no changes to the ODCM during 2005.

EFFLUENT MONITORS OUT OF SERVICE GREATER THAN 30 DAYS

The radiation monitor for the 1-5 Sump was out of service for 96 days from September 26 until the end of the year due to the unavailability of parts. There were no Radwaste discharges via this pathway during all of 2005. No other effluent monitors were out of service for greater than 30 days.

CHANGES TO THE PROCESS CONTROL PLAN

Revision 3 to the Process Control Plan (PCP) (RW-AA-100) was implemented during 2005. Changes include: enhancement to the definitions "dewatering" and "incineration," changes to the method of controlling on-site vendors who process liquid LLRW, clarification of compliance with federal regulations for waste sent for burial, and clarifying of review of vendor procedures.

RELEASES FROM THE INDEPENDENT SPENT FUEL STORAGE FACILITY

The Independent Spent Fuel Storage Facility (ISFSI) is a closed system and the only exposure would be due to direct radiation. Because it is a sealed unit, no radioactive materials were released. This includes iodines, particulates and noble gases. Therefore there is no dose from effluents from the facility.

Facility: Oyster Creek Generating Station — Licensee: AmerGen Energy Company, L.L.C.

1. Regulatory Limits

a. Fission and activation gases:

Technical Specification 3.6.E.1:

The gross radioactivity in noble gases discharged from the main condenser air ejector shall not exceed 0.21/E Ci/sec after the holdup line where E is the average gamma energy (Mev per atomic transformation).

ODCM 3.11.2.1

The dose equivalent rate in the UNRESTRICTED AREA due to radioactive noble gas in gaseous effluent shall not exceed 500 mrem/year to the total body or 3000 mrem/year to the skin.

Note: The total body dose limit of 500 mrem/year has been superseded by 10 CFR 20.1301.a.1 which states:

The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 millisievert) in a year, exclusive of the dose contributions from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released in accordance with Sec. 35.75, from voluntary participation in medical research programs, and from the licensee's disposal of radioactive material into sanitary sewerage in accordance with Section 20.2003.

ODCM 3.11.2.2

The air dose in the UNRESTRICTED AREA due to noble gas released in gaseous effluent shall not exceed:

5 mRad/calendar quarter due to gamma radiation
10 mRad/calendar quarter due to beta radiation
10 mRad/calendar year due to gamma radiation, or
20 mRad/calendar year due to beta radiation.

ODCM 3.11.4

The annual dose commitment to a MEMBER OF THE PUBLIC due to radioactive material in effluent and direct radiation from the OCNGS in the Unrestricted Area shall not exceed 75 mrem to his/her thyroid or 25 mrem to his/her total body or to any other organ.

b. Iodines

ODCM 3.11.2.1.

The dose equivalent rate in the UNRESTRICTED AREA due to tritium (H-3), I-131, I-133, and to radioactive material in particulate form having half-lives of 8 days or more in gaseous effluents shall not exceed 1500 mrem/year to any body organ when the dose rate due to H-3, Sr-89, Sr-90, and alpha-emitting radionuclides is averaged over no more than 3 months and the dose rate due to other radionuclides is averaged over no more than 31 days.

ODCM 3.11.2.3.

The dose to a MEMBER OF THE PUBLIC from I-131, I-133, and from radionuclides in particulate form having half-lives of 8 days or more in gaseous effluent, in the UNRESTRICTED AREA shall not exceed 7.5 mrem to any body organ per calendar quarter or 15 mrem to any body organ per calendar year.

c. Particulates, half-lives > 8 Days:

ODCM 3.11.2.1.

The dose equivalent rate in the UNRESTRICTED AREA due to tritium (H-3), I-131, I-133, and to radioactive material in particulate form having half-lives of 8 days or more in gaseous effluents shall not exceed 1500 mrem/year to any body organ when the dose rate due to H-3, Sr-89, Sr-90, and alpha-emitting radionuclides is averaged over no more than 3 months and the dose rate due to other radionuclides is averaged over no more than 31 days.

ODCM 3.11.2.3.

The dose to a MEMBER OF THE PUBLIC from I-131, I-133, and from radionuclides in particulate form having half-lives of 8 days or more in gaseous effluent, in the UNRESTRICTED AREA shall not exceed 7.5 mrem to any body organ per calendar quarter or 15 mrem to any body organ per calendar year.

d. Liquid effluents:

ODCM 3.11.1.1.

The concentration of radioactive material, other than noble gases, in liquid effluents in the discharge canal at the U.S. Route 9 bridge shall not exceed 10 times the Liquid Effluent Concentrations specified in 10 CFR Part 20.1001-20.2401, Appendix B, Table II, Column 2.

ODCM 3.11.1.1.

The concentration of noble gases dissolved or entrained in liquid effluent in the discharge canal at the U.S. Route 9 bridge shall not exceed 2.0e-4 μCi/mL.

ODCM 3.11.1.2.

The dose to a MEMBER OF THE PUBLIC due to radioactive material in liquid effluent in the UNRESTRICTED AREA shall not exceed:

1.5 mrem to the Total Body during any calendar quarter,
5.0 mrem to any body organ during any calendar quarter,
3.0 mrem to the Total Body during any calendar year, or
10.0 mrem to any body organ during any calendar year.

ODCM 3.11.4

The annual dose to a MEMBER OF THE PUBLIC due to radioactive material in effluents from the OCNGS in the Unrestricted Area shall not exceed 75 mrem to his/her thyroid or 25 mrem to his/her total body or to any other organ.

2. Maximum Permissible Concentrations

MPCs used in determining allowable release rates or concentrations:

a. Fission and activation gases:

Per OCGS ODCM limits, no MPCs are used to calculate allowable fission and activation gas release rates or concentrations.

b. Iodines:

Per OCGS ODCM limits, no MPCs are used to calculate allowable iodine gaseous release rates or concentrations.

c. Particulates, half-lives > 8 Days:

Per OCGS ODCM limits, no MPCs are used to calculate allowable particulate gaseous release rates or concentrations.

d. Liquid effluents:

The MPC for Tritium (H-3) is 1 E-3 μCi/mL.

3. Average Energy

The average energy (E) of the radionuclide mixture in releases of fission and activation gases:

First Quarter:	3.51E-01	Mev (gamma - elevated release)
Second Quarter:	7.35E-01	Mev (gamma - elevated release)
Third Quarter:	3.58E-01	Mev (gamma - elevated release)
Fourth Quarter:	5.87E-01	Mev (gamma - elevated release)
Annual:	6.19E-01	Mev (gamma - elevated release)

4. Measurements and Approximations of Total Radioactivity

The methods used to measure or approximate the total radioactivity in effluents and the methods used to determine radionuclide composition:

a. Fission and activation gases:

1. Stack - A continuous recording of gross radioactivity and the incorporation of isotopic data obtained from a weekly grab sample analyzed using gamma spectroscopy.
2. Augmented Offgas (AOG) Vent - The continuous recording of gross activity and the incorporation of isotopic data obtained from a weekly grab sample analyzed using gamma spectroscopy.
3. Turbine Building Stack and Feedpump Room Vent - The continuous recording of gross activity and the incorporation of isotopic data obtained from a weekly grab sample analyzed using gamma spectroscopy

b. Iodines:

1. Stack - Filters are changed weekly and analyzed using gamma spectroscopy.
2. Augmented Offgas (AOG) Vent - Filters are changed weekly and analyzed using gamma spectroscopy.
3. Turbine Building Stack and Feedpump Room Vent - Filters are changed weekly and analyzed using gamma spectroscopy.

c. Particulates:

1. Stack - Filters are changed weekly and analyzed using gamma spectroscopy.
2. Augmented Offgas (AOG) Vent - Filters are changed weekly and analyzed using gamma spectroscopy.
3. Turbine Building Vent and Feedpump Room Vent - Filters are changed weekly and analyzed using gamma spectroscopy.

d. Liquid effluents:

Analysis per batch release using gamma spectrometry with a germanium detector, a low background beta counter, and a liquid scintillation counter.

5. Batch Releases

a. Liquid

1. Number of batch releases: No releases
2. Total time period for batch releases: N/A
3. Maximum time period for a batch release: N/A
4. Average time period for batch releases: N/A
5. Minimum time period for a batch release: N/A
6. Average stream flow during periods of release of effluent into a flowing stream: N/A

b. Gaseous

1. Number of batch releases: No releases
2. Total time period for batch release: N/A
3. Maximum time period for a batch release: N/A
4. Average time period for batch releases: N/A
5. Minimum time period for a batch release: N/A

6. Abnormal releases

a. Liquid

1. Number of releases: None
2. Total activity released: N/A

b. Gaseous

1. Number of releases: None
2. Total activity released: N/A

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 1A

GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES

	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly Total	Est. Total Error, %
A. Fission & activation gases							
1. Total release	Ci	4.22E+01	1.80E+02	3.13E+01	5.19E+01	3.04E+02	+/- 10
2. Average release rate for period	u Ci/sec	1.33E+00	5.70E+00	9.89E-01	1.64E+00	9.60E+00	
3. Percent of Technical Specification							
a. 0.21/Energy (average) - gamma (elevated release only)	%	8.76E-04	8.01E-03	6.70E-04	1.83E-03	2.85E-03	
b. Dose rate due to gaseous effluent -							
Total Body - 500 mrem/year	%					8.94E-04	
Skin - 3000 mrem/year	%					2.16E-04	
c. Air dose due to noble gas in gaseous effluent -							
5 mRad/calendar quarter due to gamma radiation	%	5.08E-02	2.06E-01	1.67E-01	3.22E-02		
10 mRad/calendar quarter due to beta radiation	%	2.15E-02	2.69E-02	5.80E-02	2.40E-03		
10 mRad/calendar year due to gamma radiation	%					1.92E-01	
20 mRad/calendar year due to beta radiation	%					4.46E-02	
B. Iodines							
1. Total iodine-131	Ci	7.26E-04	1.52E-03	2.59E-03	1.10E-03	5.94E-03	+/- 16
2. Average release rate for period	u Ci/sec	9.23E-05	1.94E-04	3.26E-04	1.38E-04	1.88E-04	
3. Percent of Technical Specification							
a. Dose rate due to gaseous effluent -							
Any body organ - 1500 mrem/year (H-3, I-131, I-133, & Part. T1/2 > 8 D)	%					4.12E-03	
b. Dose due to radioiodine and particulates in gaseous effluent -							
Any body organ per calendar quarter - 7.5 mrem	%	6.80E-02	4.48E-01	1.67E-01	1.44E-01		
Any body organ per calendar year - 15 mrem	%					4.12E-01	
C. Particulates							
1. Particulates with half-lives > 8 days	Ci	3.01E-03	1.62E-03	2.04E-03	3.14E-03	9.81E-03	+/- 10
2. Average release rate for period	u Ci/sec	3.83E-04	2.06E-04	2.57E-04	3.95E-04	3.10E-04	
3. Percent of Technical Specification							
a. Dose rate due to gaseous effluent -							
Any body organ - 1500 mrem/year (H-3, I-131, I-133, & Part. T1/2 > 8 D)	%					4.12E-03	
b. Dose due to radioiodine and particulates in gaseous effluent -							
Any body organ per calendar quarter - 7.5 mrem	%	6.80E-02	4.48E-01	1.67E-01	1.44E-01		
Any body organ per calendar year - 15 mrem	%					4.12E-01	
4. Gross alpha radioactivity	Ci	<LLD	<LLD	<LLD	<LLD	<LLD	
D. Tritium							
1. Total Release	Ci	3.65E+01	7.80E+01	5.94E+01	4.87E+01	2.23E+02	+/- 25
2. Average release rate for period	u Ci/sec	4.64E+00	9.93E+00	7.48E+00	6.13E+00	7.04E+00	
3. Percent of Technical Specification							
a. Dose rate due to gaseous effluent -							
Any body organ - 1500 mrem/year (H-3, I-131, I-133, & Part. T1/2 > 8 D)	%					4.12E-03	

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 1B

GASEOUS EFFLUENTS - ELEVATED RELEASES

Nuclides Released	Unit	Continuous Mode				
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly Total
1. Fission gases						
krypton-85	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
krypton-85m	Ci	2.71E+00	1.17E+01	7.83E-01	1.81E+00	1.70E+01
krypton-87	Ci	8.14E+00	4.60E+01	2.36E+00	7.76E+00	6.43E+01
krypton-88	Ci	<LLD	3.73E+01	1.30E+00	7.94E+00	4.65E+01
xenon-133	Ci	< LLD	1.17E+00	<LLD	7.68E-05	1.17E+00
xenon-135	Ci	2.99E+01	8.35E+01	2.68E+01	3.44E+01	1.75E+02
xenon-135m	Ci	< LLD	<LLD	<LLD	<LLD	<LLD
xenon-138	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Others						
None						
Total for period	Ci	4.08E+01	1.80E+02	3.12E+01	5.19E+01	3.04E+02
2. Iodines						
iodine-131	Ci	7.26E-04	1.52E-03	2.59E-03	1.10E-03	5.94E-03
iodine-132	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
iodine-133	Ci	1.14E-03	5.10E-03	8.06E-03	3.44E-03	1.77E-02
iodine-135	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Total for period	Ci	1.87E-03	6.62E-03	1.07E-02	4.54E-03	2.37E-02
3. Particulates						
strontium-89	Ci	1.31E-03	7.72E-04	1.00E-03	1.39E-03	4.47E-03
strontium-90	Ci	1.30E-05	6.00E-06	<LLD	<LLD	1.90E-05
cesium-134	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
cesium-137	Ci	1.01E-05	<LLD	4.97E-06	<LLD	1.51E-05
barium-140	Ci	1.67E-03	8.23E-04	1.04E-03	1.75E-03	5.28E-03
gross alpha	Ci	<LLD	<LLD	<LLD	< LLD	<LLD
nickel-63	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
chromium-51	Ci	< LLD	< LLD	< LLD	<LLD	<LLD
manganese-54	Ci	7.44E-06	1.63E-05	<LLD	<LLD	2.37E-05
cobalt-58	Ci	<LLD	< LLD	<LLD	<LLD	<LLD
cobalt-60	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
technetium-99m	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Total for period	Ci	3.01E-03	1.62E-03	2.04E-03	3.14E-03	9.81E-03

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 1C

GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES

Nuclides Released	Unit	Continuous Mode				
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly Total
1. Fission gases						
krypton-85	Ci	< LLD	< LLD	< LLD	< LLD	<LLD
krypton-85m	Ci	< LLD	< LLD	5.72E-03	4.94E-04	6.21E-03
krypton-87	Ci	< LLD	< LLD	1.07E-02	1.09E-03	1.18E-02
krypton-88	Ci	< LLD	< LLD	1.48E-02	2.07E-03	1.69E-02
xenon-133	Ci	< LLD	< LLD	<LLD	< LLD	<LLD
xenon-135	Ci	5.37E-01	3.03E-01	4.16E-02	7.69E-03	8.89E-01
xenon-135m	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
xenon-138	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Others						
None						
Total for period	Ci	5.37E-01	3.03E-01	7.28E-02	1.13E-02	9.24E-01
2. Iodines						
iodine-131	Ci	1.54E-06	4.57E-06	<LLD	<LLD	4.59E-06
iodine-133	Ci	< LLD	5.11E-05	<LLD	<LLD	5.11E-05
iodine-135	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Total for period	Ci	1.54E-06	5.57E-05	<LLD	<LLD	5.57E-05
3. Particulates						
strontium-89	Ci	1.80E-06	3.90E-07	< LLD	< LLD	2.19E-06
strontium-90	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
cobalt-58	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
cesium-137	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
barium-140	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
nickel-63	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
gross alpha	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
manganese-54	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
cobalt-60	Ci	< LLD	< LLD	< LLD	< LLD	< LLD
Total for period	Ci	1.80E-06	3.90E-07	< LLD	< LLD	2.19E-06

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 2A

LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

	Unit	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly Total	Est. Total Error, %
A. Fission & activation products							
1. Total release (not including tritium, gases, alpha)	Ci	No Releases	No Releases	No Releases	No Releases	No Releases	N/A
2. Average diluted concentration during period	u Ci/mL	-	-	-	-	-	
3. Percent of Technical Specification							
a. Radioactivity Concentration in Liquid Effluent							
The concentration of radioactive material, other than noble gases shall not exceed 10 times the liquid effluent concentrations specified in 10CFR Part 20.1001-20.2401, Appendix B, Table II, Column 2	%					-	
b. Limit on Dose Due to Liquid Effluent							
Total Body - 1.5 mrem/calendar quarter	%	-	-	-	-		
Any Body Organ - 5.0 mrem/calendar quarter	%	-	-	-	-		
Total Body - 3.0 mrem/calendar year	%					-	
Any Body Organ - 10.0 mrem/calendar year	%					-	
B. Tritium							
1. Total release	Ci	No Releases	No Releases	No Releases	No Releases	No Releases	N/A
2. Average diluted concentration during period	u Ci/mL	-	-	-	-	-	
3. Percent of Technical Specification							
a. Shall not exceed 10 times the liquid effluent concentrations specified in 10CFR Part 20.1001-20.2401, Appendix B, Table II, Column 2	%					-	
b. Limit on Dose Due to Liquid Effluent							
Total Body - 1.5 mrem/calendar quarter	%	-	-	-	-		
Any Body Organ - 5.0 mrem/calendar quarter	%	-	-	-	-		
Total Body - 3.0 mrem/calendar year	%					-	
Any Body Organ - 10.0 mrem/calendar year	%					-	
C. Dissolved and entrained gases							
1. Total release	Ci	No Releases	No Releases	No Releases	No Releases	No Releases	N/A
2. Average diluted concentration during period	u Ci/mL	-	-	-	-	-	
3. Percent of Technical Specification							
a. Shall not exceed 2.0 E-4 u Ci/mL	%					-	
b. Limit on Dose Due to Liquid Effluent							
Total Body - 1.5 mrem/calendar quarter	%	-	-	-	-		
Any Body Organ - 5.0 mrem/calendar quarter	%	-	-	-	-		
Total Body - 3.0 mrem/calendar year	%					-	
Any Body Organ - 10.0 mrem/calendar year	%					-	
D. Gross alpha radioactivity							
1. Total release	Ci	No Releases	No Releases	No Releases	No Releases	No Releases	N/A
E. Volume of waste released (prior to dilution)	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	N/A
F. Volume of dilution water used during period	liters	4.31E+11	4.76E+11	4.80E+11	4.30E+11	1.82E+12	N/A

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 2B

LIQUID EFFLUENTS

Nuclides Released	Unit	Batch Mode				
		Quarter 1	Quarter 2	Quarter 3	Quarter 4	Yearly Total
strontium-89	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
strontium-90	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
cesium-134	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
cesium-137	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
iodine-131	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
cobalt-58	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
cobalt-60	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
iron-59	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
zinc-65	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
manganese-54	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
chromium-51	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
zirconium-95	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
niobium-95	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
technetium-99m	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
barium-140	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
lanthanum-140	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
cerium-141	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
Other	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
unidentified	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
Total for period	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
xenon-133	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
xenon-135	Ci	No Releases	No Releases	No Releases	No Releases	No Releases
Total for period	Ci	No Releases	No Releases	No Releases	No Releases	No Releases

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3A

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS - SUMMARY

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	Yearly Total	Est. Total Error, %
a. Spent resins, filters, filter sludges, etc	m^3	None	
Waste shipped in Type A containers.	Ci	Shipped	
b. Dry compressible waste, contaminated equipment, etc.	m^3	7.84E+02	+/- 25
Waste shipped in LSA containers.	Ci	8.04E-01	
c. Irradiated components, control rods, etc.	m^3	None	
	Ci	Shipped	
d. Other waste	m^3	1.26E+01	+/- 25
Waste shipped in LSA containers.	Ci	1.92E-02	

Note: No solidification agent was used during the reporting period

2. Estimate of major nuclear composition (by type of waste)	Percentage (%)	Activity (Ci)
a. Iron-55	N/A	N/A
Cobalt-60	N/A	N/A
manganese-54	N/A	N/A
b. Iron-55	6.06E+01	4.88E-01
Cesium-137	1.68E+01	1.35E-01
Cobalt-60	1.42E+01	1.14E-01
c. None Shipped	N/A	N/A
None Shipped	N/A	N/A
None Shipped	N/A	N/A
d. Iron-55	8.31E+01	1.60E-02
Cobalt-60	7.95E+00	1.53E-03
Manganese-54	5.35E+00	1.03E-03

Note - See attached tables (Table 3B) for additional data

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
3	Motor Vehicle	ALARON CORP
6	Motor Vehicle	Duratek Radwaste Processing, Inc.
4	Motor Vehicle	Duratek Radwaste Processing, Inc.

B. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
None Shipped		

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Summary Of All Wastes

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class	Volume Shipped		Activity Shipped	Percent Error
	(Ft^3)	(M^3)	(Curies)	(Percent)
A	2.81E+04	7.96E+02	8.24E-01	+/- 25
B	0.0	0.0	0.00E+00	
C	0.0	0.0	0.00E+00	
All	2.81E+04	7.96E+02	8.24E-01	+/- 25

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Summary of All Shipments

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	5.04E-01	6.12E+01
Cs-137	1.35E-01	1.64E+01
Co-60	1.15E-01	1.40E+01
Mn-54	3.75E-02	4.55E+00
Zn-65	1.18E-02	1.43E+00
C-14	5.99E-03	7.27E-01
Cs-134	5.07E-03	6.16E-01
Ni-63	2.89E-03	3.51E-01
Pu-241	2.58E-03	3.13E-01
H-3	7.01E-04	8.51E-02
Fe-59	5.82E-04	7.07E-02
Ce-144	5.41E-04	6.57E-02
Co-58	5.30E-04	6.44E-02
Cr-51	4.06E-04	4.93E-02
Other	1.01E-03	1.22E-01
Total	8.24E-01	1.00E+02

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	5.04E-01	6.12E+01
Cs-137	1.35E-01	1.64E+01
Co-60	1.15E-01	1.40E+01
Mn-54	3.75E-02	4.55E+00
Zn-65	1.18E-02	1.43E+00
C-14	5.99E-03	7.27E-01
Cs-134	5.07E-03	6.16E-01
Ni-63	2.89E-03	3.51E-01
Pu-241	2.58E-03	3.13E-01
H-3	7.01E-04	8.51E-02
Fe-59	5.82E-04	7.07E-02
Ce-144	5.41E-04	6.57E-02
Co-58	5.30E-04	6.44E-02
Cr-51	4.06E-04	4.93E-02
Other	1.01E-03	1.22E-01
Total	8.24E-01	1.00E+02

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Spent Resins, Filters, and Filter Sludge
Period of Performance: January 1, 2005 through December 31, 2005

Waste Class	Volume Shipped		Activity Shipped (Curies)	Percent Error (Percent)
	(Ft^3)	(M^3)		
A	0.0	0.0	0.0	
B	0.0	0.0	0.0	
C	0.0	0.0	0.0	
All	0.0	0.0	0.0	

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Spent Resins and Filter Sludge

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
Total	N/A	N/A

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (CONT.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Dry Activated Waste Shipped To An Offsite Waste Processor

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class	Volume Shipped (Ft^3)	Volume Shipped (M^3)	Activity Shipped (Curies)	Percent Error (Percent)
A	2.77E+04	7.84E+02	8.04E-01	+/- 25
B	0.0	0.0	0.00E+00	
C	0.0	0.0	0.00E+00	
All	2.77E+04	7.84E+02	8.04E-01	+/- 25

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Dry Activated Waste Shipped to an Offsite Processor

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	4.88E-01	6.06E+01
Cs-137	1.35E-01	1.68E+01
Co-60	1.14E-01	1.42E+01
Mn-54	3.64E-02	4.52E+00
Zn-65	1.16E-02	1.44E+00
C-14	5.98E-03	7.43E-01
Cs-134	5.05E-03	6.27E-01
Ni-63	2.85E-03	3.54E-01
Pu-241	2.49E-03	3.09E-01
H-3	6.97E-04	8.66E-02
Fe-59	5.59E-04	6.94E-02
Ce-144	5.39E-04	6.70E-02
Co-58	5.11E-04	6.35E-02
Other	1.37E-03	1.71E-01
Total	8.05E-01	1.00E+02

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	4.88E-01	6.06E+01
Cs-137	1.35E-01	1.68E+01
Co-60	1.14E-01	1.42E+01
Mn-54	3.64E-02	4.52E+00
Zn-65	1.16E-02	1.44E+00
C-14	5.98E-03	7.43E-01
Cs-134	5.05E-03	6.27E-01
Ni-63	2.85E-03	3.54E-01
Pu-241	2.49E-03	3.09E-01
H-3	6.97E-04	8.66E-02
Fe-59	5.59E-04	6.94E-02
Ce-144	5.39E-04	6.70E-02
Co-58	5.11E-04	6.35E-02
Other	1.37E-03	1.71E-01
Total	8.05E-01	1.00E+02

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (CONT.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Irradiated Fuel

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class	Volume Shipped		Activity Shipped	Percent Error
	(Ft^3)	(M^3)	(Curies)	(Percent)
A	0.0	0.0	0.0	
B	0.0	0.0	0.0	
C	0.0	0.0	0.0	
All	0.0	0.0	0.0	

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Irradiated Fuel

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (CONT.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Other Waste

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class	Volume Shipped (Ft^3)	Volume Shipped (M^3)	Activity Shipped (Curies)	Percent Error (Percent)
A	4.44E+02	1.26E+01	1.92E-02	+/- 25
B	0.0	0.0	0.00E+00	
C	0.0	0.0	0.00E+00	
All	4.44E+02	1.26E+01	1.92E-02	+/- 25

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Other Waste

Period of Performance: January 1, 2005 through December 31, 2005

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	1.60E-02	8.31E+01
Co-60	1.53E-03	7.95E+00
Mn-54	1.03E-03	5.35E+00
Cs-137	2.39E-04	1.24E+00
Zn-65	2.22E-04	1.15E+00
Pu-241	8.44E-05	4.38E-01
Ni-63	4.18E-05	2.17E-01
Fe-59	2.27E-05	1.18E-01
Cr-51	1.88E-05	9.76E-02
Co-58	1.87E-05	9.71E-02
Cs-134	1.76E-05	9.14E-02
Cm-244	5.30E-06	2.75E-02
Sb-125	4.43E-06	2.30E-02
C-14	3.79E-06	1.97E-02
Other	2.18E-05	1.13E-01
Total	1.93E-02	1.00E+02

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
N		
O		
N		
E		
S		
H		
I		
P		
P		
E		
D		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	1.60E-02	8.31E+01
Co-60	1.53E-03	7.95E+00
Mn-54	1.03E-03	5.35E+00
Cs-137	2.39E-04	1.24E+00
Zn-65	2.22E-04	1.15E+00
Pu-241	8.44E-05	4.38E-01
Ni-63	4.18E-05	2.17E-01
Fe-59	2.27E-05	1.18E-01
Cr-51	1.88E-05	9.76E-02
Co-58	1.87E-05	9.71E-02
Cs-134	1.76E-05	9.14E-02
Cm-244	5.30E-06	2.75E-02
Sb-125	4.43E-06	2.30E-02
C-14	3.79E-06	1.97E-02
Other	2.18E-05	1.13E-01
Total	1.93E-02	1.00E+02

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: ALL Pasquill Categories
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	87	202	211	88	0	0	588
NNE	SSW	87	236	141	43	5	0	512
NE	SW	159	293	83	8	0	0	543
ENE	WSW	354	450	107	2	0	0	913
E	W	398	377	151	25	0	0	951
ESE	WNW	237	310	298	78	1	0	924
SE	NW	267	338	183	39	0	0	827
SSE	NNW	127	235	89	3	0	0	454
S	N	62	165	58	1	0	0	286
SSW	NNE	67	150	66	8	0	0	291
SW	NE	54	190	142	33	0	0	419
WSW	ENE	45	208	166	18	0	0	437
W	E	34	178	104	8	0	0	324
WNW	ESE	21	165	67	4	0	0	257
NW	SE	37	188	105	9	3	0	342
NNW	SSE	71	180	134	35	2	0	422
TOTAL		2107	3865	2105	402	11	0	8490

Hours of Missing/Invalid Data: 270

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class A
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED (mph) 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	13	95	33	0	0	141
NNE	SSW	2	14	21	8	0	0	45
NE	SW	0	31	29	4	0	0	64
ENE	WSW	0	32	36	0	0	0	68
E	W	0	29	54	13	0	0	96
ESE	WNW	0	35	114	36	0	0	185
SE	NW	1	28	86	17	0	0	132
SSE	NNW	0	24	36	0	0	0	60
S	N	0	25	13	0	0	0	38
SSW	NNE	0	32	11	0	0	0	43
SW	NE	1	35	47	8	0	0	91
WSW	ENE	1	60	99	7	0	0	167
W	E	0	40	53	0	0	0	93
WNW	ESE	1	66	25	0	0	0	92
NW	SE	0	35	62	0	0	0	97
NNW	SSE	1	8	41	3	0	0	53
TOTAL		7	507	822	129	0	0	1465

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class B
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	4	22	9	0	0	35
NNE	SSW	1	9	9	2	0	0	21
NE	SW	2	16	3	0	0	0	21
ENE	WSW	1	17	15	0	0	0	33
E	W	0	19	16	4	0	0	39
ESE	WNW	0	16	36	8	0	0	60
SE	NW	2	19	19	6	0	0	46
SSE	NNW	0	10	7	0	0	0	17
S	N	2	15	3	0	0	0	20
SSW	NNE	0	14	1	0	0	0	15
SW	NE	2	9	6	1	0	0	18
WSW	ENE	1	17	9	0	0	0	27
W	E	0	18	5	0	0	0	23
WNW	ESE	0	13	3	0	0	0	16
NW	SE	1	19	14	0	0	0	34
NNW	SSE	1	7	6	0	0	0	14
TOTAL		13	222	174	30	0	0	439

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class C
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	4	11	1	0	0	16
NNE	SSW	0	2	5	1	0	0	8
NE	SW	0	3	4	2	0	0	9
ENE	WSW	0	8	5	1	0	0	14
E	W	2	9	4	1	0	0	16
ESE	WNW	1	10	8	3	0	0	22
SE	NW	2	8	9	1	0	0	20
SSE	NNW	4	4	5	0	0	0	13
S	N	2	9	2	0	0	0	13
SSW	NNE	1	7	3	0	0	0	11
SW	NE	1	7	5	0	0	0	13
WSW	ENE	1	7	1	0	0	0	9
W	E	0	12	2	0	0	0	14
WNW	ESE	1	8	2	0	0	0	11
NW	SE	0	10	3	0	0	0	13
NNW	SSE	0	13	6	0	0	0	19
TOTAL		15	121	75	10	0	0	221

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class D
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	4	36	47	19	0	0	106
NNE	SSW	5	21	34	17	2	0	79
NE	SW	5	33	16	0	0	0	54
ENE	WSW	7	52	24	1	0	0	84
E	W	8	42	40	5	0	0	95
ESE	WNW	13	51	59	20	0	0	143
SE	NW	14	53	44	7	0	0	118
SSE	NNW	8	76	30	3	0	0	117
S	N	9	41	26	0	0	0	76
SSW	NNE	15	51	26	1	0	0	93
SW	NE	13	69	42	2	0	0	126
WSW	ENE	7	78	42	4	0	0	131
W	E	5	50	18	0	0	0	73
WNW	ESE	1	40	23	1	0	0	65
NW	SE	3	55	11	1	0	0	70
NNW	SSE	5	59	32	10	0	0	106
TOTAL		122	807	514	91	2	0	1536

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class E
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	34	124	35	26	0	0	219
NNE	SSW	26	169	72	15	3	0	285
NE	SW	41	152	31	2	0	0	226
ENE	WSW	48	135	27	0	0	0	210
E	W	28	126	37	2	0	0	193
ESE	WNW	25	139	80	11	1	0	256
SE	NW	33	143	25	8	0	0	209
SSE	NNW	27	84	11	0	0	0	122
S	N	23	63	14	1	0	0	101
SSW	NNE	35	38	25	7	0	0	105
SW	NE	27	66	42	22	0	0	157
WSW	ENE	24	41	15	6	0	0	86
W	E	16	50	26	8	0	0	100
WNW	ESE	15	36	14	3	0	0	68
NW	SE	28	69	15	8	3	0	123
NNW	SSE	40	89	49	22	2	0	202
TOTAL		470	1524	518	141	9	0	2662

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class F
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	29	19	1	0	0	0	49
NNE	SSW	37	19	0	0	0	0	56
NE	SW	48	46	0	0	0	0	94
ENE	WSW	57	107	0	0	0	0	164
E	W	68	81	0	0	0	0	149
ESE	WNW	40	51	1	0	0	0	92
SE	NW	52	45	0	0	0	0	97
SSE	NNW	27	22	0	0	0	0	49
S	N	8	6	0	0	0	0	14
SSW	NNE	8	5	0	0	0	0	13
SW	NE	6	2	0	0	0	0	8
WSW	ENE	7	4	0	1	0	0	12
W	E	10	7	0	0	0	0	17
WNW	ESE	3	2	0	0	0	0	5
NW	SE	3	0	0	0	0	0	3
NNW	SSE	12	4	0	0	0	0	16
TOTAL		415	420	2	1	0	0	838

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class G
ELEVATION: 33 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	20	2	0	0	0	0	22
NNE	SSW	16	2	0	0	0	0	18
NE	SW	63	12	0	0	0	0	75
ENE	WSW	241	99	0	0	0	0	340
E	W	292	71	0	0	0	0	363
ESE	WNW	158	8	0	0	0	0	166
SE	NW	163	42	0	0	0	0	205
SSE	NNW	61	15	0	0	0	0	76
S	N	18	6	0	0	0	0	24
SSW	NNE	8	3	0	0	0	0	11
SW	NE	4	2	0	0	0	0	6
WSW	ENE	4	1	0	0	0	0	5
W	E	3	1	0	0	0	0	4
WNW	ESE	0	0	0	0	0	0	0
NW	SE	2	0	0	0	0	0	2
NNW	SSE	12	0	0	0	0	0	12
TOTAL		1065	264	0	0	0	0	1329

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: All Pasquill Categories
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	7	37	148	162	55	50	459
NNE	SSW	4	36	136	289	138	76	679
NE	SW	5	53	108	220	158	41	585
ENE	WSW	9	53	145	145	166	36	554
E	W	4	39	133	217	195	50	638
ESE	WNW	3	40	145	320	335	224	1067
SE	NW	7	51	124	250	240	77	749
SSE	NNW	6	29	110	203	103	16	467
S	N	9	43	145	173	49	4	423
SSW	NNE	8	53	141	143	55	8	408
SW	NE	7	50	164	176	73	73	543
WSW	ENE	5	54	196	136	69	35	495
W	E	10	64	174	94	24	17	383
WNW	ESE	8	82	162	54	16	9	331
NW	SE	8	77	148	64	22	23	342
NNW	SSE	7	59	150	93	37	52	398
TOTAL		107	820	2329	2739	1735	791	8521

Hours of Missing/Invalid Data: 239

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class A
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	0	1	6	0	0	7
NNE	SSW	0	0	0	4	3	0	7
NE	SW	0	1	2	1	2	0	6
ENE	WSW	0	0	2	5	1	0	8
E	W	0	0	1	7	3	0	11
ESE	WNW	0	0	3	13	9	11	36
SE	NW	1	0	0	13	12	1	27
SSE	NNW	0	0	1	3	0	0	4
S	N	0	0	1	2	0	0	3
SSW	NNE	0	0	0	0	0	0	0
SW	NE	0	0	2	13	6	6	27
WSW	ENE	0	0	4	19	9	1	33
W	E	0	0	7	7	0	0	14
WNW	ESE	0	0	8	3	0	0	11
NW	SE	0	0	3	4	4	0	11
NNW	SSE	0	1	1	3	0	0	5
TOTAL		1	2	36	103	49	19	210

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class B
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	0	10	29	5	3	47
NNE	SSW	0	0	8	10	8	2	28
NE	SW	0	0	6	2	2	0	10
ENE	WSW	0	0	5	9	3	0	17
E	W	0	1	11	10	2	4	28
ESE	WNW	0	0	11	20	20	17	68
SE	NW	0	0	6	18	13	4	41
SSE	NNW	0	1	9	10	4	1	25
S	N	0	1	6	2	0	0	9
SSW	NNE	0	1	7	2	0	0	10
SW	NE	0	0	16	14	2	1	33
WSW	ENE	0	1	25	31	6	2	65
W	E	0	0	11	9	0	0	20
WNW	ESE	0	3	24	2	0	0	29
NW	SE	0	1	19	4	0	0	24
NNW	SSE	0	0	3	13	0	0	16
TOTAL		0	9	177	185	65	34	470

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class C
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	0	0	10	23	6	0	39
NNE	SSW	0	2	12	17	9	5	45
NE	SW	0	1	13	5	2	2	23
ENE	WSW	0	6	22	10	5	0	43
E	W	0	2	20	14	8	3	47
ESE	WNW	0	2	18	26	24	24	94
SE	NW	0	2	17	20	13	13	65
SSE	NNW	0	2	13	11	6	0	32
S	N	0	2	14	6	1	1	24
SSW	NNE	0	2	7	7	0	0	16
SW	NE	0	2	18	16	7	0	43
WSW	ENE	0	2	32	10	3	0	47
W	E	0	5	27	5	0	0	37
WNW	ESE	0	8	20	2	0	0	30
NW	SE	0	4	16	12	0	0	32
NNW	SSE	0	0	14	5	0	0	19
TOTAL		0	42	273	189	84	48	636

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class D
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	1	22	54	42	18	39	176
NNE	SSW	2	17	48	107	42	38	254
NE	SW	0	19	27	26	20	2	94
ENE	WSW	1	22	55	32	28	3	141
E	W	1	12	40	72	43	18	186
ESE	WNW	1	12	51	89	74	92	319
SE	NW	1	15	47	63	53	37	216
SSE	NNW	2	13	37	58	21	12	143
S	N	1	23	45	45	14	2	130
SSW	NNE	2	29	56	54	27	4	172
SW	NE	2	26	65	66	39	35	233
WSW	ENE	2	30	80	48	35	27	222
W	E	3	30	81	44	19	14	191
WNW	ESE	0	38	72	28	12	4	154
NW	SE	5	46	77	30	6	2	166
NNW	SSE	2	26	75	32	26	19	180
TOTAL		26	380	910	836	477	348	2977

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class E
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	2	8	51	54	23	8	146
NNE	SSW	1	8	40	117	56	28	250
NE	SW	2	10	30	111	87	14	254
ENE	WSW	3	9	28	39	68	5	152
E	W	2	9	22	56	68	12	169
ESE	WNW	0	7	26	68	113	28	242
SE	NW	1	9	19	63	84	7	183
SSE	NNW	0	3	16	66	42	0	127
S	N	3	9	35	53	5	0	105
SSW	NNE	4	10	25	36	15	4	94
SW	NE	2	13	23	31	4	30	103
WSW	ENE	1	13	27	17	11	5	74
W	E	3	16	32	29	5	3	88
WNW	ESE	6	19	28	13	4	5	75
NW	SE	1	13	20	13	10	21	78
NNW	SSE	3	14	43	35	10	33	138
TOTAL		34	170	465	801	605	203	2278

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class F
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	3	2	12	5	3	0	25
NNE	SSW	0	4	18	23	11	3	59
NE	SW	1	9	16	37	33	19	115
ENE	WSW	1	9	11	33	44	19	117
E	W	0	4	19	30	45	9	107
ESE	WNW	0	7	14	47	56	34	158
SE	NW	2	8	10	33	44	12	109
SSE	NNW	2	3	12	33	25	3	78
S	N	0	4	23	43	15	1	86
SSW	NNE	0	8	19	24	5	0	56
SW	NE	1	4	15	19	3	0	42
WSW	ENE	0	4	21	6	5	0	36
W	E	1	9	7	0	0	0	17
WNW	ESE	2	7	4	4	0	0	17
NW	SE	1	5	8	1	2	0	17
NNW	SSE	1	10	12	5	1	0	29
TOTAL		15	97	221	343	292	100	1068

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005
TABLE 4A
HOURS AT EACH WIND SPEED AND DIRECTION

PERIOD OF RECORD: January 01, 2005 through December 31, 2005
STABILITY CLASS: Pasquill Class G
ELEVATION: 380 feet

SECTOR WINDS TO	FROM	WIND SPEED 1-3	4-7	8-12	13-18	19-24	>24	TOTAL
N	S	1	5	10	3	0	0	19
NNE	SSW	1	5	10	11	9	0	36
NE	SW	2	13	14	38	12	4	83
ENE	WSW	4	7	22	17	17	9	76
E	W	1	11	20	28	26	4	90
ESE	WNW	2	12	22	57	39	18	150
SE	NW	2	17	25	40	21	3	108
SSE	NNW	2	7	22	22	5	0	58
S	N	5	4	21	22	14	0	66
SSW	NNE	2	3	27	20	8	0	60
SW	NE	2	5	25	17	12	1	62
WSW	ENE	2	4	7	5	0	0	18
W	E	3	4	9	0	0	0	16
WNW	ESE	0	7	6	2	0	0	15
NW	SE	1	8	5	0	0	0	14
NNW	SSE	1	8	2	0	0	0	11
TOTAL		31	120	247	282	163	39	882

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2005

TABLE 4B

CLASSIFICATION OF ATMOSPHERIC STABILITY

Stability Classification	Pasquill Categories	Sigma-Theta [a] (degrees)	Temperature change with height (degrees-C/100m)
Extremely unstable	A	25.0	< -1.9
Moderately unstable	B	20.0	-1.9 to - 1.7
Slightly unstable	C	15.0	-1.7 to - 1.5
Neutral	D	10.0	-1.5 to -0.5
Slightly stable	E	5.0	-0.5 to 1.5
Moderately stable	F	2.5	1.5 to 4.0
Extremely stable	G	1.7	> 4.0

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