AmerGen Energy Company, LLC
Oyster Creek
US Route 9 South
P.O. Box 388
Forked River, NJ 08731-0388

AmerGen
An Exelon/British Energy Company

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

March 3, 2003
2130-03-20063

United States Nuclear Regulatory Commission
Document Control Desk
Washington DC 20555

Subject: Oyster Creek Generating Station
Docket 50-219
Annual Radioactive Effluent Release Report

Enclosed with this cover letter is the approved Oyster Creek Generating Station Annual Radioactive Effluent Release Report for the period January 1 - December 31, 2002. This report has been reviewed as required by the Oyster Creek Technical Specifications.

If you should require any further information, please contact Mr. John Rogers, of my staff, at 609.971.4893

Very truly yours,

Ernest J. Harkness P.E., Vice President
Oyster Creek Generating Station

EJH/JJR
Enclosure

cc: Administrator, Region I
NRC Senior Project Manager
NRC Senior Resident Inspector

IE48

Rec'd 8/26/03

2002

Annual Radioactive Effluent Release Report

Oyster Creek Generating Station

AmerGen Energy Company

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 2002 THROUGH DECEMBER 31, 2002

YEAR 2002 EVENT REPORT

LIQUID EFFLUENT RELEASES

There were no liquid radioactive releases from the facility in 2002.

CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL

There were no revisions made to the Oyster Creek Generating Station Offsite Dose Calculation Manual during 2002.

EFFLUENT MONITORS OUT OF SERVICE GREATER THAN 30 DAYS

The effluent monitor on the 1-5 sump was out of service from January 28, 2002 to April 26, 2002 due to the failure of the preamplifier. Although it is possible to valve this sump in for overboard release, this is never done. Administrative procedures require all water from this sump to be pumped to the Radwaste Facility for processing.

CHANGES TO THE PROCESS CONTROL PLAN

There were no changes to the Process Control Plan (PCP) during 2002.

TABLE OF CONTENTS

TABLE OF CONTENTS	i
LIST OF TABLES	ii
EXECUTIVE SUMMARY	1
YEAR 2002 EVENT REPORT	3
SUPPLEMENTAL INFORMATION	4

LIST OF TABLES

TABLE		
1	ANNUAL OFFSITE DOSES DUE TO RADIONUCLIDES IN EFFLUENTS	2
1A	GASEOUS EFFLUENTS - SUMMATION OF ALL RELEASES	6
1B	GASEOUS EFFLUENTS - ELEVATED RELEASES	7
1C	GASEOUS EFFLUENTS - GROUND-LEVEL RELEASES	8
2A	LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES	9
2B	LIQUID EFFLUENTS	10
3A	SOLID WASTE AND IRRADIATED FUEL SHIPMENTS - SUMMARY	11
3B	SOLID WASTE AND IRRADIATED FUEL SHIPMENTS	12
4A	HOURS AT EACH WIND SPEED AND DIRECTION	22
4B	CLASSIFICATION OF ATMOSPHERIC STABILITY	38

EXECUTIVE SUMMARY

AMERGEN ENERGY COMPANY
OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 2002 THROUGH DECEMBER 31, 2002

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, 2002 through December 31, 2002.

Radioactive gaseous releases from the plant are monitored by radiation monitors and filtering systems installed in the plant stacks. Regarding liquid releases, representative samples are collected and analyzed prior to discharge. These methods accurately determine the types and quantities of radioactive materials being released to the environment.

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. There was no dose attributable to liquid effluents because there were no liquid radioactive releases from the facility in 2002.

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 2002 consisted of 137 curies of noble gases, 9.87E-2 (0.0987) curies of radioiodines, and 29.4 curies of tritium. The total quantity of particulate radioactivity released form the facility has yet to be determined because the strontium 89 and 90 analyses results for the fourth quarter have yet to be completed due to the involved analysis process. Once these data become available, a completed addendum to this report, which will be the final report, will be issued.

Eighteen (18) solid, low level radioactive waste shipments, totaling approximately 1504 cubic meters, were shipped 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 18 shipments.

Because the fourth quarter strontium 89 and 90 results have yet to be obtained, no annual doses using these data can be calculated. As previously stated, these doses will be provided when the strontium data become available.

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 1

ANNUAL OFFSITE DOSES DUE TO RADIONUCLIDES IN EFFLUENTS

January 1, 2002 through December 31, 2002

Reference	ODCM 4.6.1.1.4.A	ODCM 4.6.1.1.4.A	ODCM 4.6.1.1.5.A	ODCM 4.6.1.1.5.A	ODCM 4.6.1.1.5.B	ODCM 4.6.1.1.6.A	ODCM 4.6.1.1.6.A	ODCM 4.6.1.1.7.A
	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
2002 Dose	N/A mrem	N/A mrem	1.76E-03 mrem	2.61E-03 mrem	* mrem	4.94E-03 mrem	1.88E-03 mrem	* mrem
Percent of Limit	N/A Percent	N/A Percent	3.52E-04 Percent	8.70E-05 Percent	* Percent	4.94E-02 Percent	9.40E-03 Percent	* Percent

Reference	ODCM 4.6.1.1.8.A	ODCM 4.6.1.1.8.A
	All Effluents Total Body mrem	All Effluents Thyroid mrem
ODCM Limit	25 mrem/year	75 mrem/year
2002 Dose	* mrem	* mrem
Percent of Limit	* Percent	* Percent

* Sr-89 & 90 data not yet received - An addendum will be issued once the data are received

OYSTER CREEK GENERATING STATION
ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT
JANUARY 1, 2002 THROUGH DECEMBER 31, 2002

YEAR 2002 EVENT REPORT

LIQUID EFFLUENT RELEASES

There were no liquid radioactive releases from the facility in 2002.

CHANGES TO THE OFFSITE DOSE CALCULATION MANUAL

There were no revisions made to the Oyster Creek Generating Station Offsite Dose Calculation Manual during 2002.

EFFLUENT MONITORS OUT OF SERVICE GREATER THAN 30 DAYS

The effluent monitor on the 1-5 sump was out of service from January 28, 2002 to April 26, 2002 due to the failure of the preamplifier. Although it is possible to valve this sump in for overboard release, this is never done. Administrative procedures require all water from this sump to be pumped to the Radwaste Facility for processing.

CHANGES TO THE PROCESS CONTROL PLAN

There were no changes to the Process Control Plan (PCP) during 2002.

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

SUPPLEMENTAL INFORMATION

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 4.6.1.1.5.A
      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 4.6.1.1.6.A
      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 4.6.1.1.8.A
      The annual dose to a MEMBER OF THE PUBLIC due to radioactive material in effluent 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 4.6.1.1.5.B.
      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 4.6.1.1.7.A.
      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 4.6.1.1.5.B.
      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 4.6.1.1.7.A.
      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 4.6.1.1.3.A.
      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 4.6.1.1.3.B.
      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 4.6.1.1.4.A.
      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 4.6.1.1.8.A
      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:	1.57E-03	Mev (gamma - elevated release)
Second Quarter:	2.67E-03	Mev (gamma - elevated release)
Third Quarter:	1.47E-03	Mev (gamma - elevated release)
Fourth Quarter:	4.83E-05	Mev (gamma - elevated release)
Annual:	3.10E-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 monthly 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 monthly 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 a low background beta counter and 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.

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 - 2002

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	3.58E+01	5.71E+01	4.38E+01	1.16E+00	1.37E+02	+/- 25
2. Average release rate for period	µ Ci/sec	4.52E+00	7.27E+00	5.48E+00	1.45E-01	4.35E+00	
3. Percent of Technical Specification							
a. 0.21/Energy (average) - gamma (elevated release only)	%	1.57E-03	2.67E-03	1.47E-03	4.83E-06	1.44E-03	
b. Dose rate due to gaseous effluent -							
Total Body - 500 mrem/year	%					3.52E-04	
Skin - 3000 mrem/year	%					8.70E-05	
c. Air dose due to noble gas in gaseous effluent -							
5 mRad/calendar quarter due to gamma radiation	%	3.30E-02	6.19E-02	3.64E-02	4.92E-03		
10 mRad/calendar quarter due to beta radiation	%	3.60E-03	9.72E-03	1.21E-02	1.05E-03		
10 mRad/calendar year due to gamma radiation	%					4.84E-02	
20 mRad/calendar year due to beta radiation	%					9.40E-03	
B. Iodines							
1. Total iodine-131	Ci	3.98E-03	4.63E-03	3.39E-03	1.71E-03	1.37E-02	+/- 25
2. Average release rate for period	µ Ci/sec	5.06E-04	5.88E-04	4.27E-04	2.15E-04	4.34E-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)	%					*	
b. Dose due to radioiodine and particulates in gaseous effluent -							
Any body organ per calendar quarter - 7.5 mrem	%	6.16E-02	4.32E-01	2.35E-01	*		
Any body organ per calendar year - 15 mrem	%					*	
C. Particulates							
1. Particulates with half-lives > 8 days	Ci	1.36E-02	5.88E-03	2.50E-03	*	*	+/- 25
2. Average release rate for period	µ Ci/sec	1.72E-03	7.19E-04	3.15E-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)	%					*	
b. Dose due to radioiodine and particulates in gaseous effluent -							
Any body organ per calendar quarter - 7.5 mrem	%	6.16E-02	4.32E-01	2.35E-01	*		
Any body organ per calendar year - 15 mrem	%					*	
4. Gross alpha radioactivity	Ci	7.90E-07	1.05E-06	< LLD	< LLD	1.84E-06	
* Sr-89 & 90 data not yet received - An addendum will be issued once the data are received							
C. Tritium							
1. Total Release	Ci	7.80E+00	7.84E+00	9.58E+00	4.40E+00	2.84E+01	+/- 25
2. Average release rate for period	µ Ci/sec	9.86E-01	9.97E-01	1.21E+00	5.53E-01	9.30E-01	
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)	%					*	

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

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	2.59E+00	2.34E+00	4.14E-01	6.15E-02	5.41E+00
krypton-87	Ci	9.19E+00	9.39E+00	7.67E+00	2.94E-01	2.65E+01
krypton-88	Ci	6.88E+00	1.38E+01	5.60E+00	2.14E-01	2.65E+01
xenon-133	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
xenon-135	Ci	1.69E+01	2.37E+01	2.96E+01	5.86E-01	7.08E+01
xenon-135m	Ci	<LLD	7.89E+00	<LLD	<LLD	7.89E+00
xenon-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Others						
None						
Total for period.	Ci	3.56E+01	5.71E+01	4.33E+01	1.16E+00	1.37E+02
2. Iodines						
iodine-131	Ci	3.98E-03	4.63E-03	3.39E-03	1.71E-03	1.37E-02
iodine-132	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
iodine-133	Ci	2.13E-02	3.34E-02	2.80E-02	2.24E-03	8.49E-02
iodine-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	2.53E-02	3.80E-02	3.14E-02	3.95E-03	9.87E-02
C. Particulates						
strontium-89	Ci	5.30E-03	2.03E-03	<LLD	*	*
strontium-90	Ci	3.80E-05	1.40E-05	<LLD	*	*
cesium-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
cesium-137	Ci	6.95E-05	4.81E-05	<LLD	1.79E-04	2.97E-04
barium-140	Ci	8.11E-03	3.56E-03	2.50E-03	9.09E-04	1.51E-02
lanthanum-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Others						
chromium-51	Ci	<LLD	<LLD	<LLD	4.84E-05	4.84E-05
manganese-54	Ci	<LLD	<LLD	<LLD	1.01E-05	1.01E-05
cobalt-58	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
cobalt-60	Ci	<LLD	<LLD	<LLD	5.29E-05	5.29E-05
technetium-99m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	1.35E-02	5.65E-03	2.50E-03	*	*

* Data not yet received - An addendum will be issued once the data are received

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

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	<LLD	<LLD	<LLD
krypton-87	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
krypton-88	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
xenon-133	Ci	<LLD	<LLD	3.01E-01	<LLD	3.01E-01
xenon-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
xenon-135m	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
xenon-138	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Others						
None						
Total for period	Ci	<LLD	<LLD	3.01E-01	<LLD	3.01E-01
2. Iodines						
iodine-131	Ci	1.31E-06	1.58E-06	1.08E-06	3.04E-06	7.01E-06
iodine-133	Ci	7.85E-06	9.63E-06	4.76E-06	6.81E-06	2.91E-05
iodine-135	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	9.16E-06	1.12E-05	5.84E-06	9.85E-06	3.61E-05
C. Particulates						
strontium-89	Ci	4.42E-06	<LLD	<LLD	*	*
strontium-90	Ci	<LLD	<LLD	<LLD	*	*
cesium-134	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
cesium-137	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
barium-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
lanthanum-140	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Others						
manganese-54	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
cobalt-60	Ci	<LLD	<LLD	<LLD	<LLD	<LLD
Total for period	Ci	4.42E-06	<LLD	<LLD	*	*

* Data not yet received - An addendum will be issued once the data are received

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

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	+/- 25
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	+/- 25
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	+/- 25
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	+/- 25
E. Volume of waste released (prior to dilution)	liters	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	+/- 10
F. Volume of dilution water used during period	liters	4.31E+11	4.78E+11	4.80E+11	4.30E+11	1.82E+12	+/- 10

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

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 - 2002

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	
	Ci	Shipped	
b. Dry compressible waste, contaminated equipment, etc.	m^3	1.48E+03	+/- 25
	Ci	1.07E-01	
c. Irradiated components, control rods, etc.	m^3	None	
	Ci	Shipped	
d. Other waste	m^3	2.39E+01	+/- 25
	Ci	5.22E+00	

Note: No solidification agent was used during the reporting period

2. Estimate of major nuclear composition (by type of waste)	Percentage (%)	Activity (Ci)
a. None Shipped	N/A	N/A
None Shipped	N/A	N/A
None Shipped	N/A	N/A
b. cobalt-60	3.76E+01	4.04E-02
iron-55	3.45E+01	3.71E-02
cesium-137	2.08E+01	2.24E-02
c. None Shipped	N/A	N/A
None Shipped	N/A	N/A
None Shipped	N/A	N/A
d. iron-55	3.35E+01	1.75E+00
cobalt-60	3.28E+01	1.71E+00
chromium-51	2.09E+01	1.09E+00

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

3. Solid Waste Disposition

Number of Shipments	Mode of Transportation	Destination
5	Motor Vehicle	American Ecology Recycle Center, Inc.
4	Motor Vehicle	Duratek Radwaste Processing, Inc.
3	Motor Vehicle	Duratek
2	Motor Vehicle	Duratek Memphis Group, L.L.C.
2	Motor Vehicle	RACE, L.L.C.
1	Motor Vehicle	East Tennessee Materials & Energy Corp.
1	Motor Vehicle	Perma-Fix of Florida

B. IRRADIATED FUEL SHIPMENTS (Disposition)

Number of Shipments	Mode of Transportation	Destination
None Shipped		

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Summary Of All Wastes

Period of Performance: January 1, 2002 through December 31, 2002

Waste Class	Volume Shipped		Activity Shipped	Percent Error
	(Ft^3)	(M^3)	(Curies)	(Percent)
A	52943.0	1499.3	5.33E+00	+/- 25 %
B	0.0	0.0	0.00E+00	
C	0.0	0.0	0.00E+00	
All	52943.0	1499.3	5.33E+00	+/- 25 %

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Summary of All Shipments

Period of Performance: January 1, 2002 through December 31, 2002

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	1.79E+00	3.35E+01
Co-60	1.75E+00	3.29E+01
Cr-51	1.09E+00	2.05E+01
Cs-137	2.29E-01	4.31E+00
Co-58	1.91E-01	3.59E+00
Mn-54	1.57E-01	2.94E+00
Ni-63	7.46E-02	1.40E+00
Fe-59	2.78E-02	5.22E-01
Cs-134	7.20E-03	1.35E-01
Zn-65	6.99E-03	1.31E-01
Ag-110m	1.51E-03	2.83E-02
H-3	1.18E-03	2.22E-02
Sr-90	7.74E-04	1.45E-02
Other	2.63E-03	4.93E-02
Total	5.33E+00	1.00E+02

Waste Class: B

Nuclide	Activity (Curies)	Percent Abundance (Percent)
NONE SHIPPED		
Total	N/A	N/A

Waste Class: C

Nuclide	Activity (Curies)	Percent Abundance (Percent)
NONE SHIPPED		
Total	N/A	N/A

Waste Class: All

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	1.79E+00	3.35E+01
Co-60	1.75E+00	3.29E+01
Cr-51	1.09E+00	2.05E+01
Cs-137	2.29E-01	4.31E+00
Co-58	1.91E-01	3.59E+00
Mn-54	1.57E-01	2.94E+00
Ni-63	7.46E-02	1.40E+00
Fe-59	2.78E-02	5.22E-01
Cs-134	7.20E-03	1.35E-01
Zn-65	6.99E-03	1.31E-01
Ag-110m	1.51E-03	2.83E-02
H-3	1.18E-03	2.22E-02
Sr-90	7.74E-04	1.45E-02
Other	2.63E-03	4.93E-02
Total	5.33E+00	1.00E+02

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Spent Resins, Filters, and Filter Sludge

Period of Performance: January 1, 2002 through December 31, 2002

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 - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Spent Resins, Filters, and Filter Sludge

Period of Performance: January 1, 2002 through December 31, 2002

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 - 2002

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, 2002 through December 31, 2002

Waste Class	Volume Shipped		Activity Shipped
	(Ft^3)	(M^3)	(Curies)
A	52100	1475.5	1.07E-01
B	0.0	0.0	0.00E+00
C	0.0	0.0	0.00E+00
All	52100	1475.5	1.07E-01

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

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

Period of Performance: January 1, 2002 through December 31, 2002

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Co-60	4.04E-02	3.76E+01
Fe-55	3.71E-02	3.45E+01
Cs-137	2.24E-02	2.08E+01
Mn-54	4.53E-03	4.21E+00
Cr-51	8.46E-04	7.87E-01
Ni-63	5.36E-04	4.98E-01
Cs-134	4.93E-04	4.58E-01
Zn-65	4.13E-04	3.84E-01
Ag-110m	2.27E-04	2.11E-01
Co-58	1.90E-04	1.77E-01
H-3	1.02E-04	9.48E-02
Other	3.01E-04	2.80E-01
Total	1.08E-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)
Co-60	4.04E-02	3.76E+01
Fe-55	3.71E-02	3.45E+01
Cs-137	2.24E-02	2.08E+01
Mn-54	4.53E-03	4.21E+00
Cr-51	8.46E-04	7.87E-01
Ni-63	5.36E-04	4.98E-01
Cs-134	4.93E-04	4.58E-01
Zn-65	4.13E-04	3.84E-01
Ag-110m	2.27E-04	2.11E-01
Co-58	1.90E-04	1.77E-01
H-3	1.02E-04	9.48E-02
Other	3.01E-04	2.80E-01
Total	1.08E-01	1.00E+02

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B (CONT.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Irradiated Components

Period of Performance: January 1, 2002 through December 31, 2002

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 - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Irradiated Components

Period of Performance: January 1, 2002 through December 31, 2002

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 - 2002

TABLE 3B (CONT.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Waste Stream - Other Waste

Period of Performance: January 1, 2002 through December 31, 2002

Waste Class	Volume Shipped		Activity Shipped	Percent Error
	(Ft^3)	(M^3)	(Curies)	(Percent)
A	843.0	23.9	5.22E+00	+/- 25 %
B	0.0	0.0	0.00E+00	
C	0.0	0.0	0.00E+00	
All	843.0	23.9	5.22E+00	+/- 25 %

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 3B (cont.)

SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Estimate of Major Nuclide Composition - Other Waste

Period of Performance: January 1, 2002 through December 31, 2002

Waste Class: A

Nuclide	Activity (Curies)	Percent Abundance (Percent)
Fe-55	1.75E+00	3.35E+01
Co-60	1.71E+00	3.28E+01
Cr-51	1.09E+00	2.09E+01
Cs-137	2.07E-01	3.97E+00
Co-58	1.91E-01	3.66E+00
Mn-54	1.52E-01	2.91E+00
Ni-63	7.41E-02	1.42E+00
Fe-59	2.78E-02	5.33E-01
Cs-134	6.71E-03	1.29E-01
Zn-65	6.58E-03	1.26E-01
Ag-110m	1.28E-03	2.45E-02
H-3	1.08E-03	2.07E-02
Sr-90	7.74E-04	1.48E-02
Other	2.33E-03	4.46E-02
Total	5.22E+00	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	1.75E+00	3.35E+01
Co-60	1.71E+00	3.28E+01
Cr-51	1.09E+00	2.09E+01
Cs-137	2.07E-01	3.97E+00
Co-58	1.91E-01	3.66E+00
Mn-54	1.52E-01	2.91E+00
Ni-63	7.41E-02	1.42E+00
Fe-59	2.78E-02	5.33E-01
Cs-134	6.71E-03	1.29E-01
Zn-65	6.58E-03	1.26E-01
Ag-110m	1.28E-03	2.45E-02
H-3	1.08E-03	2.07E-02
Sr-90	7.74E-04	1.48E-02
Other	2.33E-03	4.46E-06
Total	5.22E+00	1.00E+02

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	All Pasquill Categories
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	53	86	33	3	0	0	175
NNE	48	72	16	1	0	0	137
NE	44	103	76	8	0	0	231
ENE	41	118	158	15	0	0	332
E	30	107	110	13	0	0	260
ESE	23	91	61	2	0	0	177
SE	25	118	88	11	0	0	242
SSE	46	88	114	17	1	0	266
S	70	153	184	67	3	0	477
SSW	97	211	224	107	3	0	642
SW	106	338	152	10	0	0	606
WSW	241	466	125	18	0	0	850
W	308	324	190	29	1	0	852
WNW	211	300	213	74	3	0	801
NW	174	298	188	54	1	0	715
NNW	149	245	99	15	0	0	508
VARIABLE	0	0	0	0	0	0	0
TOTAL	1666	3118	2031	444	12	0	7271

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category A
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	16	36	17	2	0	0	71
NNE	16	25	3	0	0	0	44
NE	13	37	35	1	0	0	86
ENE	20	57	88	11	0	0	176
E	9	57	59	2	0	0	127
ESE	9	55	37	1	0	0	102
SE	7	83	79	1	0	0	170
SSE	18	54	91	14	0	0	177
S	28	71	113	42	0	0	254
SSW	32	80	111	50	0	0	273
SW	26	99	66	2	0	0	193
WSW	44	116	78	15	0	0	253
W	46	95	108	22	1	0	272
WNW	37	64	97	40	0	0	238
NW	43	56	59	25	0	0	183
NNW	51	64	41	6	0	0	162
VARIABLE	0	0	0	0	0	0	0
TOTAL	415	1049	1082	234	1	0	2781

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category B
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	3	0	0	0	0	0	3
NNE	2	2	1	1	0	0	6
NE	0	10	2	0	0	0	12
ENE	0	11	0	0	0	0	11
E	1	5	3	0	0	0	9
ESE	0	3	2	0	0	0	5
SE	0	1	5	0	0	0	6
SSE	1	2	2	1	0	0	6
S	2	4	6	4	0	0	16
SSW	0	4	5	7	0	0	16
SW	1	13	11	3	0	0	28
WSW	3	9	8	0	0	0	20
W	7	7	11	2	0	0	27
WNW	5	11	14	7	0	0	37
NW	3	9	16	8	0	0	36
NNW	4	9	8	0	0	0	21
VARIABLE	0	0	0	0	0	0	0
TOTAL	32	100	94	33	0	0	259

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category C
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	1	5	0	0	0	0	6
NNE	0	1	0	0	0	0	1
NE	1	3	1	0	0	0	5
ENE	0	2	1	0	0	0	3
E	0	2	2	0	0	0	4
ESE	0	1	2	0	0	0	3
SE	0	0	0	1	0	0	1
SSE	0	1	1	0	0	0	2
S	0	6	6	3	0	0	15
SSW	2	3	6	3	0	0	14
SW	0	2	2	1	0	0	5
WSW	1	6	1	1	0	0	9
W	1	7	3	0	0	0	11
WNW	1	6	14	2	2	0	25
NW	1	3	4	2	1	0	11
NNW	1	1	3	2	0	0	7
VARIABLE	0	0	0	0	0	0	0
TOTAL	9	49	46	15	3	0	122

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category D
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	2	8	8	1	0	0	19
NNE	7	18	4	0	0	0	29
NE	8	18	8	0	0	0	34
ENE	8	25	27	1	0	0	61
E	6	26	18	0	0	0	50
ESE	2	22	7	0	0	0	31
SE	2	12	1	0	0	0	15
SSE	6	13	12	0	0	0	31
S	4	22	30	7	0	0	63
SSW	8	26	47	17	2	0	100
SW	8	38	19	2	0	0	67
WSW	17	45	18	1	0	0	81
W	8	27	22	3	0	0	60
WNW	8	28	31	9	1	0	77
NW	9	34	45	12	0	0	100
NNW	10	34	14	4	0	0	62
VARIABLE	0	0	0	0	0	0	0
TOTAL	113	396	311	57	3	0	880

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category E
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	14	26	6	0	0	0	46
NNE	11	24	8	0	0	0	43
NE	14	33	21	2	0	0	70
ENE	10	19	36	3	0	0	68
E	4	11	27	9	0	0	51
ESE	2	8	11	1	0	0	22
SE	8	12	2	6	0	0	28
SSE	12	12	8	1	0	0	33
S	16	45	28	11	3	0	103
SSW	20	77	52	30	1	0	180
SW	28	118	53	2	0	0	201
WSW	35	129	19	1	0	0	184
W	47	89	41	2	0	0	179
WNW	32	108	50	12	0	0	202
NW	34	94	57	5	0	0	190
NNW	17	65	30	3	0	0	115
VARIABLE	0	0	0	0	0	0	0
TOTAL	304	870	449	88	4	0	1715

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category F
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	3	6	1	0	0	0	10
NNE	3	1	0	0	0	0	4
NE	2	1	1	5	0	0	9
ENE	0	1	4	0	0	0	5
E	2	4	1	2	0	0	9
ESE	1	0	0	0	0	0	1
SE	3	1	1	1	0	0	6
SSE	2	1	0	1	0	0	4
S	8	5	0	0	0	0	13
SSW	18	14	0	0	0	0	32
SW	20	43	1	0	0	0	64
WSW	39	86	1	0	0	0	126
W	39	47	5	0	0	0	91
WNW	33	41	6	1	0	0	81
NW	24	59	5	1	0	0	89
NNW	21	30	3	0	0	0	54
VARIABLE	0	0	0	0	0	0	0
TOTAL	218	340	29	11	0	0	598

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category G
ELEVATION:	33 foot

Wind Direction	Wind Speed (mph) at 33 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	14	5	1	0	0	0	20
NNE	9	1	0	0	0	0	10
NE	6	1	8	0	0	0	15
ENE	3	3	2	0	0	0	8
E	8	2	0	0	0	0	10
ESE	9	2	2	0	0	0	13
SE	5	9	0	2	0	0	16
SSE	7	5	0	0	1	0	13
S	12	0	1	0	0	0	13
SSW	17	7	3	0	0	0	27
SW	23	25	0	0	0	0	48
WSW	102	75	0	0	0	0	177
W	160	52	0	0	0	0	212
WNW	95	42	1	3	0	0	141
NW	60	43	2	1	0	0	106
NNW	45	42	0	0	0	0	87
VARIABLE	0	0	0	0	0	0	0
TOTAL	575	314	20	6	1	0	916

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	1489	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	All Pasquill Categories
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	29	57	139	188	66	10	489
NNE	19	55	92	81	13	7	267
NE	28	43	105	115	83	50	424
ENE	24	40	97	107	67	46	381
E	9	42	99	79	41	19	289
ESE	10	64	104	67	12	5	262
SE	8	70	137	52	10	8	285
SSE	9	48	141	107	21	4	330
S	7	52	156	218	54	26	513
SSW	26	32	153	318	237	77	843
SW	17	30	135	275	242	86	785
WSW	37	29	126	226	230	77	725
W	31	38	134	270	221	86	780
WNW	63	39	123	228	258	151	862
NW	29	34	147	276	245	133	864
NNW	18	30	132	242	168	39	629
VARIABLE	0	0	0	0	0	0	0
TOTAL	364	703	2020	2849	1968	824	8728

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category A
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	5	8	20	17	0	1	51
NNE	3	11	13	9	1	0	37
NE	3	6	19	21	10	1	60
ENE	3	10	18	40	23	15	109
E	0	12	28	19	9	0	68
ESE	1	17	52	13	0	2	85
SE	0	17	63	24	2	0	106
SSE	0	7	49	61	12	0	129
S	2	9	43	88	25	5	172
SSW	3	6	34	65	68	12	188
SW	0	6	24	42	25	1	98
WSW	1	8	31	39	30	8	117
W	1	9	39	70	33	12	164
WNW	11	7	27	35	33	36	149
NW	3	6	23	44	17	28	121
NNW	3	8	25	37	19	0	92
VARIABLE	0	0	0	0	0	0	0
TOTAL	39	147	508	624	307	121	1746

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category B
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	0	6	3	2	5	0	16
NNE	0	6	4	7	0	0	17
NE	0	1	7	2	0	0	10
ENE	1	0	18	12	2	0	33
E	1	2	8	2	0	0	13
ESE	0	5	3	6	0	0	14
SE	0	4	12	3	0	0	19
SSE	0	1	12	11	0	0	24
S	1	4	13	25	6	1	50
SSW	1	3	8	23	18	1	54
SW	1	1	5	5	9	1	22
WSW	0	1	8	18	1	1	29
W	2	1	10	21	4	2	40
WNW	10	4	6	25	13	12	70
NW	3	2	10	25	13	13	66
NNW	0	4	14	10	12	1	41
VARIABLE	0	0	0	0	0	0	0
TOTAL	20	45	141	197	83	32	518

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category C
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	1	10	10	6	0	0	27
NNE	0	5	2	2	1	0	10
NE	1	2	5	5	3	0	16
ENE	2	2	15	8	0	1	28
E	0	3	9	8	0	0	20
ESE	0	9	6	6	0	0	21
SE	0	9	11	3	0	0	23
SSE	0	3	12	12	0	0	27
S	1	0	14	17	4	1	37
SSW	2	0	6	21	12	2	43
SW	2	0	5	14	6	1	28
WSW	4	2	10	6	6	0	28
W	4	4	15	18	3	0	44
WNW	3	2	11	13	12	15	56
NW	3	3	16	23	12	12	69
NNW	1	2	12	8	3	1	27
VARIABLE	0	0	0	0	0	0	0
TOTAL	24	56	159	170	62	33	504

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category D
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	7	16	42	33	15	0	113
NNE	5	12	36	30	5	5	93
NE	9	13	31	43	34	27	157
ENE	15	17	18	32	27	17	126
E	4	10	36	30	23	13	116
ESE	1	10	24	25	6	0	66
SE	1	10	22	11	4	1	49
SSE	5	18	36	13	7	3	82
S	2	16	34	47	6	11	116
SSW	12	6	37	79	70	45	249
SW	2	10	36	73	45	9	175
WSW	4	5	31	45	35	5	125
W	9	9	25	62	31	15	151
WNW	26	8	26	48	74	58	240
NW	7	13	40	71	68	51	250
NNW	4	8	42	74	30	17	175
VARIABLE	0	0	0	0	0	0	0
TOTAL	113	181	516	716	480	277	2283

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category E
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	5	9	30	58	20	3	125
NNE	5	7	17	12	3	1	45
NE	5	10	12	23	22	17	89
ENE	2	5	11	6	11	11	46
E	2	12	9	6	8	5	42
ESE	2	10	11	13	3	3	42
SE	1	15	11	4	4	4	39
SSE	2	9	14	6	2	1	34
S	0	8	23	33	9	8	81
SSW	5	6	31	109	54	10	215
SW	10	7	25	95	110	44	291
WSW	8	5	16	70	94	24	217
W	5	5	26	55	79	20	190
WNW	6	6	23	57	67	15	174
NW	4	3	28	49	58	8	150
NNW	7	3	17	56	43	8	134
VARIABLE	0	0	0	0	0	0	0
TOTAL	69	120	304	652	587	182	1914

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category F
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	7	5	19	52	20	3	106
NNE	5	7	12	10	1	0	35
NE	8	3	13	8	11	1	44
ENE	1	3	5	4	0	1	14
E	1	3	5	4	1	0	14
ESE	2	7	4	4	0	0	17
SE	4	6	7	6	0	2	25
SSE	0	8	9	3	0	0	20
S	1	4	16	3	3	0	27
SSW	1	5	15	16	9	5	51
SW	2	2	14	29	40	20	107
WSW	13	3	15	22	45	24	122
W	7	4	6	30	52	28	127
WNW	4	6	9	33	41	6	99
NW	4	2	10	26	64	16	122
NNW	1	3	6	33	51	10	104
VARIABLE	0	0	0	0	0	0	0
TOTAL	61	71	165	283	338	116	1034

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

TABLE 4A (cont.)

HOURS AT EACH WIND SPEED AND DIRECTION[a]

PERIOD OF RECORD:	January 1, 2002 through December 31, 2002
STABILITY CLASS:	Pasquill Category G
ELEVATION:	380 foot

Wind Direction	Wind Speed (mph) at 380 foot level						
	1 - 3	4 - 7	8 - 12	13 - 18	19 - 24	> 24	Total
N	4	3	15	20	6	3	51
NNE	1	7	8	11	2	1	30
NE	2	8	18	13	3	4	48
ENE	0	3	12	5	4	1	25
E	1	0	4	10	0	1	16
ESE	4	6	4	0	3	0	17
SE	2	9	11	1	0	1	24
SSE	2	2	9	1	0	0	14
S	0	11	13	5	1	0	30
SSW	2	6	22	5	6	2	43
SW	0	4	26	17	7	10	64
WSW	7	5	15	26	19	15	87
W	3	6	13	14	19	9	64
WNW	3	6	21	17	18	9	74
NW	5	5	20	38	13	5	86
NNW	2	2	16	24	10	2	56
VARIABLE	0	0	0	0	0	0	0
TOTAL	38	83	227	207	111	63	729

Periods of Calm (hours):	0	Hours
Hours of missing data (Total):	32	Hours

[a] The total number of hours of each category of wind direction for the indicated period of record, stability class and elevation

OYSTER CREEK GENERATING STATION

ANNUAL RADIOACTIVE EFFLUENT RELEASE REPORT - 2002

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 period of 15 minutes to 1 hour. The values shown are averages for each stability classification.