

Nuclear

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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

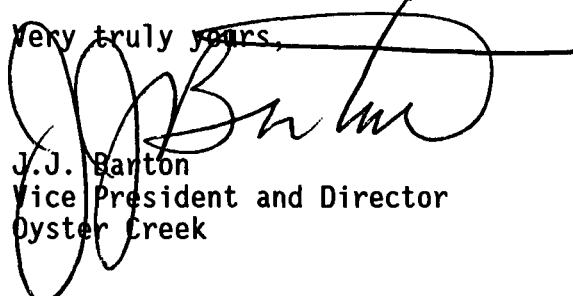
Dear Sir:

Subject: Oyster Creek Nuclear Generating Station
Docket No. 50-219
Semiannual Radiological Effluent Release Report

Attached is a copy of the Oyster Creek Effluent Release Report for the period covering July 1991 through December, 1991. This submittal is made in accordance with 10 CFR 50.36a(a)(2) and our Operating License and Technical Specifications.

If you have any questions, please do not hesitate to contact Brenda DeMerchant, Oyster Creek Licensing Engineer at 609-971-4642.

Very truly yours,


J.J. Barton
Vice President and Director
Oyster Creek

JJB/BDEM/jc
Attachment

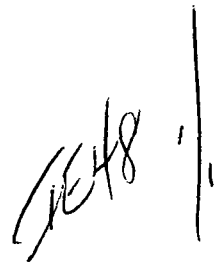
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OYSTER CREEK NUCLEAR GENERATING STATION



prepared by
Radiological Engineering Dept
Oyster Creek

*1991-2
SemiAnnual Effluent
Release Report*

Executive Summary

The Semiannual Effluent Release Report is submitted to the United States Nuclear Regulatory Commission (NRC) every six months in accordance with the Oyster Creek Nuclear Generating Station (OCNGS) Technical Specifications (Tech Specs). It summarizes the radioactive gaseous and liquid effluents released and solid radioactive wastes shipped from the OCNGS. In addition, meteorological data are presented in joint frequency tables per atmospheric stability class.

For clarity, the report is organized into four sections. Section I itemizes gaseous releases of 390.2 curies of fission and activation gases, 0.14 curies of non-particulate halogens, 5.35 curies of tritium, and 0.005 curies of particulate* radioactivity. In addition, .008 curies of fission and activation products, .016 curies of noble gases, and .603 curies of tritium were released in 1 continuous and 1 unplanned batch release. Tables 1, 2, 3, 4, 5, and 6 show that quantities of radioactive material released were well within the limits allowed by the OCNGS Tech Specs. Further limits for the release of radioactive effluents at OCNGS are based upon offsite exposure to members of the general public. These limits, outlined on pages 1-2, were compared to dose projections calculated using the methodology in the Offsite Dose Calculation Manual (ODCM). The results for the 1991-2 reporting period are shown in Figure 1. Section I also itemizes 744 curies of radioactivity, contained in 287.7 cubic meters of waste, which was shipped offsite in 65 shipments. These shipments are similar to those of nuclear plants of comparable type, age and size. The report summarizes the fact that all effluents released were within federal regulatory requirements of the OCNGS Technical Specifications.

Section II provides a summary of Oyster Creek's meteorological data for the reporting period in tabular form. Section III provides a detailed listing of all changes made to the Offsite Dose Calculation Manual (ODCM) and the Process Control Plan (PCP) during the reporting period. One change was made to the PCP. There were several changes made to the ODCM. Section IV reports any effluent monitoring instrumentation that was inoperative as per Technical Specification 3.15 for the reporting period.

**Note: Sr-89,90 stack filter results for the fourth quarter were not available at report time due to late shipment of samples to the laboratory. They will be available in the 1992-1 SemiAnnual Effluent Release Report.*

Figure 1

Maximum Offsite Exposure Due to Radionuclides in Radioactive Effluents							
Tech Spec Ref.	3.6.J.1	3.6.J.1	3.6.L.1	3.6.L.1	3.6.K.1	3.6.M.2	3.6.K.1
	Liquid Dose		Air Dose (Noble Gas)		Whole	(Thyroid)	
	WB	Organ	Beta	Gamma	Body	Organ	Skin
	mrem	mrem	mrad	mrad	mrem	mrem	mrem
Jan-June Total	0.00E+00	0.00E+00	7.90E-03	2.81E-03	5.45E-04	1.61E-02	9.46E-04
July-Dec Total	2.19E-05	4.21E-04	3.34E-03	1.20E-02	5.64E-03	6.01E-02	6.69E-03
1991 Total	2.19E-05	4.21E-04	1.12E-02	1.48E-02	6.19E-03	7.62E-02	7.64E-03
Tech Spec Limit	3.00E+00	1.00E+01	2.00E+01	1.00E+01	5.00E+02	1.50E+01	3.00E+03
Fraction of Annual Limit	7.30E-06	4.21E-05	5.62E-04	1.48E-03	1.24E-05	5.08E-03	2.55E-06

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Effluent and Waste Disposal Supplemental Information

FACILITY: Oyster Creek Nuclear Generating Station
LICENSEE: Owner - Jersey Central Power and Light Company
Operator - GPU Nuclear Corporation

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 a $0.21/E$ Ci/sec after the holdup line ,where E is the average gamma energy (Mev per atomic transformation).

Technical Specification 3.6.K.1

The dose equivalent rate outside of the EXCLUSION 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.

Technical Specification 3.6.L.1

The air dose outside of the EXCLUSION 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*

Technical Specification 3.6.N.1

The annual dose to a MEMBER OF THE PUBLIC due to radiation and radioactive material in effluents from the OCNGS outside of the EXCLUSION AREA shall not exceed 75 mrem to his thyroid or 25 mrem to his total body or to any other organ.

b. Iodines and Particulates

Technical Specification 3.6.K.2

The dose equivalent rate outside of the EXCLUSION AREA due to H-3, I-131, I-133, and to radioactive material in particulates 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.

Technical Specification 3.6.M.1

The dose to a MEMBER OF THE PUBLIC from iodine-131, iodine-133, and from radionuclides in particulate form having half-lives of 8 days or more in gaseous effluents, outside of the EXCLUSION 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. Liquid Effluents

Technical Specification 3.6.I.1

The concentration of radioactive material, other than noble gases, in liquid effluent in the discharge canal at the Route 9 bridge shall not exceed the concentrations specified in 10 CFR Part 20, Appendix B, Table II, Column 2.

Technical Specification 3.6.I.2

The concentration of noble gases dissolved or entrained in liquid effluent in the discharge canal at the Route 9 bridge shall not exceed 2×10^{-4} microcuries/milliliter.

Technical Specification 3.6.J.2

The dose to a MEMBER OF THE PUBLIC due to radioactive material in liquid effluents beyond the outside of the EXCLUSION AREA shall not exceed:

*1.5 mrem to the total body during any calendar quarter,
5 mrem to any body organ during any calendar quarter,
3 mrem to the total body during any calendar year, or
10 mrem to any body organ during any calendar year.*

2.) Maximum Permissible Concentrations (MPC)

- a. Fission and Activation Gases:
Appendix B, Table II, Column 2 of 10 CFR 20
- b. Iodines and Particulates:
Appendix B, Table II, Column 2 of 10 CFR 20
- c. Liquid Effluents:
Appendix B, Table II, Column 2 of 10 CFR 20, except for dissolved or entrained noble gases where the limit is 2×10^{-4} uCi/ml

3.) Measurements and Approximation of Total Radioactivity

- a. Fission and Activation Gases:
 - 1. Stack
The continuous recording of gross activity 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 monthly grab sample analyzed using gamma spectroscopy.
- b. Iodines
 - 1. Stack
Filters are changed twice weekly and analyzed using gamma spectroscopy.
 - 2. AOG Vent
Filters are changed twice weekly and analyzed using gamma spectroscopy.

3. Turbine Building Stack and Feedpump Room Vent

Filters are changed twice weekly and analyzed using gamma spectroscopy.

c. Particulates

1. Stack

Filters are changed twice weekly and analyzed using a low background beta counter and gamma spectroscopy.

2. AOG Vent

Filters are changed twice weekly and analyzed using gamma spectroscopy.

3. Turbine Building Stack and Feedpump Room Vent

Filters are changed twice 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.

Section I: Effluent Summaries: Gases, Liquids, and Solid Waste

Effluent Summaries: Gaseous Effluents

Table 1- Third Quarter Summary - Elevated

Gaseous Effluents	Nuclide	Elevated Release Curies Released
<i>Fission and Activation Gases</i>		
	Kr-85m	1.38E+01
	Kr-87	4.05E+01
	Kr-88	4.16E+01
	Xe-135	5.54E+01
	Total Released	1.51E+02
	Average Release Rate	1.90E+01 uCi/sec
	E-bar	0.9028 MeV
	Percent Tech Spec Limit	0.01%
<i>Iodines</i>		
	I-131	1.04E-02
	I-133	4.10E-02
	I-135	4.67E-02
	Total Released	9.81E-02
	Average Release Rate	1.23E-02 uCi/sec
<i>Particulates</i>		
	Cr-51	2.35E-05
	Mn-54	1.19E-04
	Co-60	2.04E-05
	Sr-89	3.22E-03
	Sr-90	9.97E-06
	Cs-137	3.60E-05
	Ba-140	6.33E-04
	Gross Alpha	4.87E-06
	Total Released	4.07E-03
	Average Release Rate	5.11E-04 uCi/sec
<i>Tritium</i>		
	H-3	3.35E-01
	Total Released	3.35E-01
	Average Release Rate	4.22E-02 uCi/sec

Table 2- Fourth Quarter Summary - Elevated

Gaseous Effluents	Nuclide	Elevated Release Curies Released
<i>Fission and Activation Gases</i>		
	Kr-85m	2.33E+01
	Kr-87	5.14E+01
	Kr-88	4.57E+01
	Xe-131m	2.72E+01
	Xe-135	9.11E+01
	Total Released	2.39E+02
	Average Release Rate	3.00E+01 uCi/sec
	E-bar	0.9028 MeV
	Percent Tech Spec Limit	0.01%
<i>Iodines</i>		
	I-131	7.77E-03
	I-133	1.85E-02
	I-135	1.53E-02
	Total Released	4.16E-02
	Average Release Rate	5.23E-03 uCi/sec
<i>Particulates*</i>		
	Cr-51	4.84E-05
	Mn-54	1.13E-05
	Co-60	1.60E-05
	Cs-137	5.96E-06
	Ba-140	4.63E-04
	Gross Alpha	4.10E-06
	Total Released	5.49E-04
	Average Release Rate	6.91E-05 uCi/sec
<i>Tritium</i>		
	H-3	5.01E+00
	Total Released	5.01E+00
	Average Release Rate	6.30E-01 uCi/sec

**Sr-89,90 activity not included (see Executive Summary)*

Table 3- Third Quarter Summary - Ground Level

Gaseous Effluents	Nuclide	Ground Level Release Curies Released
<i>Fission and Activation Gases</i>		
	Xe-133	1.64E+00
	Total Released	1.64E+00
	Average Release Rate	2.06E-01 uCi/sec
<i>Iodines</i>		
	I-131	2.08E-05
	I-133	1.40E-04
	Total Released	1.61E-04
	Average Release Rate	2.02E-05 uCi/sec
<i>Particulates</i>		
	Sr-89	1.23E-05
	Cs-137	1.35E-06
	Ba-140	3.16E-07
	Ce-144	2.81E-07
	Total Released	1.42E-05
	Average Release Rate	1.79E-06 uCi/sec
<i>Tritium</i>		
	H-3	< LLD
	Total Released	< LLD
	Average Release Rate	< LLD uCi/sec

Table 4- Fourth Quarter Summary - Ground Level

Gaseous Effluents	Nuclide	Ground Level Release Curies Released
<i>Fission and Activation Gases</i>		
	Xe-135	1.42E-02
	Total Released	1.42E-02
	Average Release Rate	1.79E-03 uCi/sec
<i>Iodines</i>		
	I-131	9.92E-06
	I-133	1.68E-04
	Total Released	1.78E-04
	Average Release Rate	2.23E-05 uCi/sec
<i>Particulates*</i>		
	Cs-137	1.09E-06
	Ba-140	1.72E-06
	Ce-141	4.24E-07
	Ce-144	1.27E-06
	Total Released	4.50E-06
	Average Release Rate	5.68E-07 uCi/sec
<i>Tritium</i>		
	H-3	< LLD
	Total Released	< LLD
	Average Release Rate	< LLD uCi/sec

*Sr-89,90 activity not included (see Executive Summary)

Table 5 - Third Quarter Batch Liquid Releases

	Nuclide	Curies Released	% Tech Spec Limit
<i>Fission and Activation Products</i>			
	Co-60	1.34E-04	1.05E-05
	Cs-137	2.68E-05	3.06E-06
	Total Released	1.61E-04	
<i>Noble Gases</i>			
	Xe-133	2.09E-03	2.47E-05
	Xe-135	1.42E-02	1.67E-04
	Total Released	1.63E-02	
<i>Tritium</i>			
	H-3	6.03E-01	4.74E-04
	Total Released	6.03E-01	
<i>Gross Alpha</i>			
	Total Released	< LLD	

Volume of Waste Released (Prior to Dilution)	2.21E+05 gallons
Volume of Dilution Water Used	1.12E+10 gallons

Table 6 - Third Quarter Continuous Liquid Releases

	Nuclide	Curies Released	% Tech Spec Limit
<i>Fission and Activation Products</i>			
	Cr-51	7.60E-03	1.34E-04
	Total Released	7.60E-03	
<i>Noble Gases</i>			
	< LLD	< LLD	
	Total Released	< LLD	
<i>Tritium</i>			
	H-3	< LLD	
	Total Released	< LLD	
<i>Gross Alpha</i>			
	Total Released	< LLD	

Volume of Waste Released (Prior to Dilution)	1.22E+07 gallons
Volume of Dilution Water Used	7.49E+08 gallons

Solid Waste Summaries

Table 7- Solid Waste Shipped Offsite For Disposal

Waste Stream: Resins, Filters, Evaporator Bottoms*					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	*Filter Media and Evaporator Bottoms solidified in Portland cement
A	4829.1	136.8	1.83E+02	25%	
B	1572.2	44.5	5.97E+01	25%	
C	240.6	6.8	4.90E+02	25%	
ALL	6641.9	188.1	7.33E+02	25%	

Waste Stream: Dry Activated Waste					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	
A	180.1	5.1	4.21E+00	25%	
B	0.0	0.0	0.00E+00	25%	
C	0.0	0.0	0.00E+00	25%	
ALL	180.1	5.1	4.21E+00	25%	

Waste Stream: Irradiated Components					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	
A	0.0	0.0	0.00E+00	25%	
B	0.0	0.0	0.00E+00	25%	
C	0.0	0.0	0.00E+00	25%	
ALL	0.0	0.0	0.00E+00	25%	

Waste Stream: Other Waste (Metals)					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	
A	550.8	15.6	7.49E-02	25%	
B	0.0	0.0	0.00E+00	25%	
C	0.0	0.0	0.00E+00	25%	
ALL	550.8	15.6	7.49E-02	25%	

Waste Stream: SEG (Dry Activated Waste)					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	
A	2786.0	78.9	7.03E+00	25%	

Waste Stream: Sum of All Categories					
Waste Class	Cubic Feet	Cubic Meters	Curies Shipped	% Error (Curies)	
A	8346.1	236.4	1.94E+02	25%	
B	1572.2	44.5	5.97E+01	25%	
C	240.6	6.8	4.90E+02	25%	
ALL	10158.9	287.7	7.44E+02	25%	

Estimates of Major Nuclides by Waste Class and Stream
Table 8 - Waste Stream: Resins, Filters, Evaporator Bottoms

Waste Class	Nuclide Name	PerCent Abundance	Curies
A	Co-60	42.300%	7.74E+01
	Fe-55	25.428%	4.65E+01
	Cs-137	18.123%	3.32E+01
	Mn-54	6.670%	1.22E+01
	Cs-134	2.706%	4.95E+00
	Ni-63	1.148%	2.10E+00
	Co-58	1.106%	2.02E+00
	Cr-51	1.005%	1.84E+00
	C-14	0.172%	3.15E-01
	Pu-241	0.075%	1.37E-01
	Sr-90	0.055%	9.97E-02
	H-3	0.013%	2.29E-02
	Ni-59	0.010%	1.90E-02
	Cm-242	0.000%	3.75E-04
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
B	Cs-137	68.180%	4.07E+01
	Co-60	15.154%	9.05E+00
	Cs-134	8.832%	5.27E+00
	Fe-55	3.802%	2.27E+00
	Ni-63	2.670%	1.59E+00
	Pu-241	0.218%	1.30E-01
	Sr-90	0.167%	9.97E-02
	H-3	0.050%	2.99E-02
	C-14	0.047%	2.81E-02
	Cm-242	0.000%	6.51E-05
	Mn-54	0.000%	0.00E+00
	Co-58	0.000%	0.00E+00
	Cr-51	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
	Ni-59	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
C	Co-60	49.953%	2.45E+02
	Fe-55	48.303%	2.37E+02
	Cs-137	1.315%	6.44E+00
	Ni-63	0.166%	8.13E-01
	Sr-90	0.116%	5.68E-01
	Pu-241	0.001%	5.40E-03
	C-14	0.001%	2.88E-03
	H-3	0.001%	2.88E-03
	Ni-59	0.000%	1.72E-03
	Cm-242	0.000%	2.33E-05
	Co-58	0.000%	0.00E+00
	Cr-51	0.000%	0.00E+00
	Cs-134	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Mn-54	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
ALL	Co-60	45.207%	3.31E+02
	Fe-55	38.968%	2.86E+02
	Cs-137	10.959%	8.03E+01
	Mn-54	1.748%	1.28E+01
	Cs-134	1.428%	1.05E+01
	Ni-63	0.615%	4.51E+00
	Sr-90	0.105%	7.69E-01
	C-14	0.047%	3.44E-01
	Pu-241	0.037%	2.71E-01
	H-3	0.008%	5.57E-02
	Ni-59	0.003%	2.09E-02
	Cm-242	0.000%	4.76E-04
	Co-58	0.000%	0.00E+00
	Cr-51	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Table 9 - Waste Stream: Dry Activated Waste

Waste Class	Nuclide Name	PerCent Abundance	Curies	Waste Class	Nuclide Name	PerCent Abundance	Curies
A	Fe-55	50.062%	2.11E+00	All	Fe-55	50.062%	2.11E+00
	Co-60	34.166%	1.44E+00		Co-60	34.166%	1.44E+00
	Cs-137	9.016%	3.80E-01		Cs-137	9.016%	3.80E-01
	Mn-54	2.468%	1.04E-01		Mn-54	2.468%	1.04E-01
	Cs-134	1.829%	7.70E-02		Cs-134	1.829%	7.70E-02
	Cr-51	1.305%	5.49E-02		Cr-51	1.305%	5.49E-02
	Ni-63	0.354%	1.49E-02		Ni-63	0.354%	1.49E-02
	Pu-241	0.091%	3.83E-03		Pu-241	0.091%	3.83E-03
	Sr-90	0.062%	2.60E-03		Sr-90	0.062%	2.60E-03
	Ni-59	0.030%	1.28E-03		Ni-59	0.030%	1.28E-03
	H-3	0.004%	1.64E-04		H-3	0.004%	1.64E-04
	C-14	0.002%	8.50E-05		C-14	0.002%	8.50E-05
	Cm-242	0.000%	1.77E-05		Cm-242	0.000%	1.77E-05
	Nb-94	0.000%	0.00E+00		Nb-94	0.000%	0.00E+00
	Tc-99	0.000%	0.00E+00		Tc-99	0.000%	0.00E+00
	I-129	0.000%	0.00E+00		I-129	0.000%	0.00E+00

Waste Stream: Dry Activated Waste (SEG)

Waste Class	Nuclide Name	PerCent Abundance	Curies	Waste Class	Nuclide Name	PerCent Abundance	Curies
A	Fe-55	50.062%	3.52E+00	All	Fe-55	50.062%	3.52E+00
	Co-60	34.166%	2.40E+00		Co-60	34.166%	2.40E+00
	Cs-137	9.016%	6.34E-01		Cs-137	9.016%	6.34E-01
	Mn-54	2.468%	1.74E-01		Mn-54	2.468%	1.74E-01
	Cs-134	1.829%	1.29E-01		Cs-134	1.829%	1.29E-01
	Cr-51	1.305%	9.17E-02		Cr-51	1.305%	9.17E-02
	Ni-63	0.354%	2.49E-02		Ni-63	0.354%	2.49E-02
	Pu-241	0.091%	6.40E-03		Pu-241	0.091%	6.40E-03
	Sr-90	0.062%	4.34E-03		Sr-90	0.062%	4.34E-03
	Ni-59	0.030%	2.14E-03		Ni-59	0.030%	2.14E-03
	H-3	0.004%	2.74E-04		H-3	0.004%	2.74E-04
	C-14	0.002%	1.42E-04		C-14	0.002%	1.42E-04
	Cm-242	0.000%	2.95E-05		Cm-242	0.000%	2.95E-05
	I-129	0.000%	0.00E+00		I-129	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00		Nb-94	0.000%	0.00E+00
	Tc-99	0.000%	0.00E+00		Tc-99	0.000%	0.00E+00

Table 10 - Waste Stream: Other (Metals)

Nuclide Name	PerCent Abundance	Curies	Waste Class	Nuclide Name	PerCent Abundance	Curies
Fe-55	50.062%	3.75E-02	ALL	Fe-55	50.062%	3.75E-02
Co-60	34.166%	2.56E-02		Co-60	34.166%	2.56E-02
Cs-137	9.016%	6.75E-03		Cs-137	9.016%	6.75E-03
Mn-54	2.468%	1.85E-03		Mn-54	2.468%	1.85E-03
Cs-134	1.829%	1.37E-03		Cs-134	1.829%	1.37E-03
Cr-51	1.305%	9.77E-04		Cr-51	1.305%	9.77E-04
Ni-63	0.354%	2.65E-04		Ni-63	0.354%	2.65E-04
Pu-241	0.091%	6.82E-05		Pu-241	0.091%	6.82E-05
Sr-90	0.062%	4.63E-05		Sr-90	0.062%	4.63E-05
Ni-59	0.030%	2.28E-05		Ni-59	0.030%	2.28E-05
H-3	0.004%	2.92E-06		H-3	0.004%	2.92E-06
C-14	0.002%	1.51E-06		C-14	0.002%	1.51E-06
Cm-242	0.000%	3.15E-07		Cm-242	0.000%	3.15E-07
I-129	0.000%	0.00E+00		I-129	0.000%	0.00E+00
Nb-94	0.000%	0.00E+00		Nb-94	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00		Tc-99	0.000%	0.00E+00

Table 11 - Waste Stream: Sum of All Categories

Waste Class	Nuclide Name	PerCent Abundance	Curies
A	Co-60	42.315%	8.13E+01
	Fe-55	27.177%	5.22E+01
	Cs-137	17.798%	3.42E+01
	Mn-54	6.500%	1.25E+01
	Cs-134	2.686%	5.16E+00
	Ni-63	1.115%	2.14E+00
	Co-58	1.054%	2.02E+00
	Cr-51	1.034%	1.99E+00
	C-14	0.164%	3.15E-01
	Pu-241	0.077%	1.48E-01
	Sr-90	0.056%	1.07E-01
	H-3	0.012%	2.33E-02
	Ni-59	0.012%	2.25E-02
	Cm-242	0.000%	4.23E-04
	Nb-94	0.000%	0.00E+00
	Tc-99	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
I-131	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
B	Cs-137	68.785%	4.07E+01
	Co-60	15.289%	9.05E+00
	Cs-134	8.910%	5.27E+00
	Fe-55	3.836%	2.27E+00
	Ni-63	2.694%	1.59E+00
	Pu-241	0.220%	1.30E-01
	Sr-90	0.168%	9.97E-02
	H-3	0.050%	2.99E-02
	C-14	0.047%	2.81E-02
	Cm-242	0.000%	6.51E-05
	Mn-54	0.000%	0.00E+00
	Co-58	0.000%	0.00E+00
	Cr-51	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
	Ni-59	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
C	Co-60	50.025%	2.45E+02
	Fe-55	48.373%	2.37E+02
	Cs-137	1.317%	6.44E+00
	Ni-63	0.166%	8.13E-01
	Sr-90	0.116%	5.68E-01
	Pu-241	0.001%	5.40E-03
	H-3	0.001%	2.88E-03
	C-14	0.001%	2.88E-03
	Ni-59	0.000%	1.72E-03
	Cm-242	0.000%	2.33E-05
	Cs-134	0.000%	0.00E+00
	Mn-54	0.000%	0.00E+00
	Co-58	0.000%	0.00E+00
	Cr-51	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
	I-131	0.000%	0.00E+00
	Nb-94	0.000%	0.00E+00
Tc-99	0.000%	0.00E+00	

Waste Class	Nuclide Name	PerCent Abundance	Curies
ALL	Co-60	45.250%	3.35E+02
	Fe-55	39.316%	2.91E+02
	Cs-137	10.983%	8.13E+01
	Mn-54	1.686%	1.25E+01
	Cs-134	1.409%	1.04E+01
	Ni-63	0.614%	4.55E+00
	Co-58	0.273%	2.02E+00
	Cr-51	0.268%	1.99E+00
	Sr-90	0.105%	7.75E-01
	C-14	0.047%	3.46E-01
	Pu-241	0.038%	2.83E-01
	H-3	0.008%	5.60E-02
	Ni-59	0.003%	2.42E-02
	Cm-242	0.000%	5.11E-04
	Nb-94	0.000%	0.00E+00
	Tc-99	0.000%	0.00E+00
	I-129	0.000%	0.00E+00
I-131	0.000%	0.00E+00	

Table 12 - Solid Waste Disposition Summary

Number of Shipments	Mode of Transportation	Destination
44	Truck	Barnwell, SC
21	Truck	Oak Ridge, TN (SEG)

SEG= Scientific Ecology Group, Inc.

Section II: Meteorological Data

Oyster Creek Nuclear Station:
1991-2 SemiAnnual Effluent Release Report

Third Quarter, 1991

33-Foot Level

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: A DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	17	9	0	0	0	27
NNE	0	8	2	0	0	0	10
NE	0	12	8	0	0	0	20
ENE	0	29	20	0	0	0	49
E	0	25	13	1	0	0	39
ESE	1	25	12	0	0	0	38
SE	2	14	29	0	0	0	45
SSE	1	8	19	1	0	0	29
S	1	10	43	8	0	0	62
SSW	3	11	11	1	0	0	26
SW	0	18	31	1	0	0	50
WSW	2	24	17	0	0	0	43
W	4	27	17	0	0	0	48
WNW	1	14	8	0	0	0	23
NW	0	28	9	1	0	0	38
NNW	1	19	8	0	0	0	28
TOTAL	17	289	256	13	0	0	575

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: C DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:D

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	0	0	0	0	0	1
NNE	1	0	0	0	0	0	1
NE	0	2	0	0	0	0	2
ENE	0	2	1	0	0	0	3
E	0	1	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	3	4	0	0	0	7
SSE	0	0	1	0	0	0	1
S	1	3	3	0	0	2	9
SSW	0	1	2	0	0	0	3
SW	1	0	1	0	0	0	2
WSW	2	4	2	0	0	0	8
W	0	3	1	0	0	0	4
WNW	0	1	0	0	0	0	1
NW	0	0	0	0	0	0	0
NNW	0	3	0	0	0	0	3
TOTAL	6	24	15	0	0	2	47

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: B DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	0	0	0	0	2
NNE	0	3	0	0	0	0	3
NE	0	6	2	0	0	0	8
ENE	0	4	2	0	0	0	6
E	0	2	1	0	0	0	3
ESE	0	6	0	0	0	0	6
SE	0	7	1	0	0	0	8
SSE	0	6	3	0	0	0	9
S	0	3	13	2	0	0	18
SSW	1	1	7	0	0	0	9
SW	0	3	3	0	0	0	6
WSW	2	5	2	0	0	0	9
W	1	4	2	1	0	0	8
WNW	0	8	1	0	0	0	9
NW	1	8	1	0	0	0	10
NNW	0	2	0	0	0	0	2
TOTAL	6	69	38	3	0	0	116

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: D DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:D

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	8	1	0	0	0	14
NNE	2	8	1	1	0	0	12
NE	3	23	4	0	0	0	30
ENE	3	15	6	0	0	0	24
E	2	18	11	0	0	0	31
ESE	1	8	2	0	0	0	11
SE	0	13	4	0	0	0	17
SSE	1	14	3	1	0	0	19
S	2	23	16	7	0	1	49
SSW	0	10	15	2	0	0	27
SW	4	12	3	0	0	0	19
WSW	8	14	3	0	0	0	25
W	2	8	4	0	0	0	14
WNW	4	12	3	0	0	0	19
NW	8	9	2	0	0	0	19
NNW	1	17	3	1	0	0	22
TOTAL	46	212	81	12	0	1	352

Hours of Missing Data: 17

Third Quarter, 1991

33-Foot Level

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: E DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	12	15	2	1	0	0	30
NNE	3	5	0	1	0	0	9
NE	1	11	0	0	0	0	12
ENE	1	13	2	0	0	0	16
E	4	10	4	0	0	0	18
ESE	3	2	0	0	0	0	5
SE	2	9	1	0	0	0	12
SSE	5	10	5	1	0	0	21
S	8	18	7	3	0	2	38
SSW	12	62	22	1	0	0	97
SW	14	88	14	0	0	0	116
WSW	14	61	2	0	0	0	77
W	14	16	0	0	0	0	30
WNW	14	2	0	0	0	0	16
NW	6	7	0	1	0	0	14
NNW	13	9	1	2	0	0	25
TOTAL	126	338	60	10	0	2	536

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: F DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	3	3	0	0	0	0	6
NNE	1	0	0	0	0	0	1
NE	4	0	0	0	0	0	4
ENE	1	3	0	0	0	0	4
E	1	3	0	0	0	0	4
ESE	1	0	1	0	0	0	2
SE	3	1	0	0	0	0	4
SSE	6	0	0	0	0	0	6
S	8	4	0	0	0	0	12
SSW	12	10	0	0	0	0	22
SW	18	18	0	0	0	0	36
WSW	22	27	0	0	0	0	49
W	6	1	1	0	0	0	8
WNW	9	2	0	0	0	0	11
NW	15	1	0	0	0	0	16
NNW	7	10	0	0	0	0	17
TOTAL	117	83	2	0	0	0	202

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: G DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:D

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	5	1	0	0	0	0	6
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	1	0	0	0	0	0	1
SSE	1	0	0	0	0	0	1
S	8	0	0	0	0	0	8
SSW	11	0	0	0	0	0	11
SW	23	4	0	0	0	0	27
WSW	56	26	0	0	0	0	82
W	84	12	0	0	0	0	96
WNW	42	4	0	0	0	0	46
NW	47	7	0	0	0	0	54
NNW	21	8	0	0	0	0	29
TOTAL	300	63	0	0	0	0	363

Hours of Missing Data: 17

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: ALL DT/DZ
Elevation: Speed:SPD33A Direction:DIR33A Lapse:D

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	28	45	12	1	0	0	86
NNE	7	24	3	2	0	0	36
NE	9	54	14	0	0	0	77
ENE	5	67	31	0	0	0	103
E	7	59	29	1	0	0	96
ESE	6	42	15	0	0	0	63
SE	8	47	39	0	0	0	94
SSE	14	38	31	3	0	0	86
S	28	61	82	20	0	5	196
SSW	39	95	57	4	0	0	195
SW	60	143	52	1	0	0	256
WSW	106	161	26	0	0	0	293
W	111	71	25	1	0	0	208
WNW	70	43	12	0	0	0	125
NW	77	60	12	2	0	0	151
NNW	43	68	12	3	0	0	126
TOTAL	618	1078	452	38	0	5	2191

Hours of Missing Data: 17

Oyster Creek Nuclear Station
1991-2 SemiAnnual Effluent Release Report

Fourth Quarter, 1991

33-Foot Level

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: A DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	8	16	3	0	0	27
NNE	1	8	8	0	0	0	17
NE	1	2	0	0	0	0	3
ENE	2	9	0	0	0	0	11
E	0	6	1	0	0	0	7
ESE	1	19	0	0	0	0	20
SE	3	5	5	0	0	0	13
SSE	1	2	5	2	0	0	10
S	2	0	9	7	0	0	18
SSW	0	6	12	1	0	0	19
SW	0	6	9	3	1	0	19
WSW	0	17	9	1	0	0	27
W	0	15	14	5	0	0	34
WNW	1	18	28	3	0	0	50
NW	1	8	23	1	0	0	33
NNW	1	11	16	0	0	0	28
TOTAL	14	140	155	26	1	0	336

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: B DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	8	0	0	0	10
NNE	0	2	3	0	0	0	5
NE	0	3	0	0	0	0	3
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	1	0	0	0	0	1
SE	0	3	1	1	0	0	5
SSE	1	0	4	1	0	0	6
S	0	0	2	1	0	0	3
SSW	0	1	4	0	0	0	5
SW	1	2	5	3	0	0	11
WSW	1	7	4	0	0	0	12
W	1	9	5	0	0	0	15
WNW	0	4	10	2	0	0	16
NW	0	12	7	0	0	0	19
NNW	3	6	4	0	0	0	13
TOTAL	8	53	57	8	0	0	126

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: C DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT1

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	3	0	0	0	5
NNE	1	1	1	1	0	0	4
NE	0	0	1	0	0	0	1
ENE	0	1	0	0	0	0	1
E	0	1	0	0	0	0	1
ESE	0	0	0	0	0	0	0
SE	0	2	2	0	0	0	4
SSE	0	0	3	0	0	0	3
S	0	0	2	0	0	0	2
SSW	0	0	2	0	0	0	2
SW	0	0	1	2	0	0	3
WSW	0	1	0	0	0	0	1
W	0	0	5	2	0	0	7
WNW	1	0	3	0	0	0	4
NW	0	0	2	0	0	0	2
NNW	0	1	0	0	0	0	1
TOTAL	3	8	25	5	0	0	41

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: D DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT1

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	2	28	25	0	0	0	55
NNE	1	9	27	0	0	0	37
NE	3	1	12	0	0	0	16
ENE	1	0	1	1	0	0	3
E	1	1	1	1	0	0	4
ESE	4	5	1	0	0	0	10
SE	5	17	1	2	0	0	25
SSE	4	5	10	0	0	0	19
S	5	9	17	2	0	0	33
SSW	3	14	12	6	0	0	35
SW	2	5	10	0	0	0	17
WSW	3	10	4	0	0	0	17
W	3	15	3	2	1	0	24
WNW	7	29	14	3	0	0	53
NW	7	34	15	0	0	0	56
NNW	7	21	19	0	0	0	47
TOTAL	58	203	172	17	1	0	451

Hours of Missing Data: 6

Oyster Creek Nuclear Station
1991-2 SemiAnnual Effluent Release Report

Fourth Quarter, 1991

33-Foot Level

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: E DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	6	15	5	0	0	0	26
NNE	0	8	8	1	0	0	17
NE	3	1	7	0	0	0	11
ENE	1	5	2	1	0	0	9
E	1	0	3	2	0	0	6
ESE	1	1	1	0	0	0	3
SE	4	5	3	0	0	0	12
SSE	5	8	6	1	0	0	20
S	6	20	7	2	0	0	35
SSW	12	36	29	0	0	0	77
SW	8	42	33	1	0	0	84
WSW	12	45	9	0	0	0	66
W	15	52	11	0	0	0	78
WNW	7	41	12	2	0	0	62
NW	9	21	6	0	0	0	36
NNW	6	26	5	1	0	0	38
TOTAL	96	326	147	11	0	0	580

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: F DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT150

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	4	8	0	0	0	0	12
NNE	3	0	1	0	0	0	4
NE	0	0	1	0	0	0	1
ENE	1	2	1	0	0	0	4
E	0	0	0	0	0	0	0
ESE	1	0	0	0	0	0	1
SE	1	1	0	0	0	0	2
SSE	10	0	0	0	0	0	10
S	2	7	0	0	0	0	9
SSW	6	12	0	0	0	0	18
SW	8	26	0	0	0	0	34
WSW	14	44	0	0	0	0	58
W	15	14	1	0	0	0	30
WNW	11	15	0	0	0	0	26
NW	18	12	0	0	0	0	30
NNW	10	17	0	0	0	0	27
TOTAL	104	158	4	0	0	0	266

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: G DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT1

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	10	2	0	0	0	0	12
NNE	0	0	0	0	0	0	0
NE	1	0	0	0	0	0	1
ENE	0	0	0	0	0	0	0
E	1	0	0	0	0	0	1
ESE	1	0	0	0	0	0	1
SE	3	0	0	0	0	0	3
SSE	4	1	0	0	0	0	5
S	8	3	0	0	0	0	11
SSW	19	3	0	0	0	0	22
SW	24	5	0	0	0	0	29
WSW	55	31	0	0	0	0	86
W	65	27	0	0	0	0	92
WNW	50	8	0	0	0	0	58
NW	37	15	0	0	0	0	52
NNW	15	14	0	0	0	0	29
TOTAL	293	109	0	0	0	0	402

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: ALL DT/DZ

Elevation: Speed:SPD33A Direction:DIR33A Lapse:DT1

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	24	63	57	3	0	0	147
NNE	6	28	48	2	0	0	84
NE	8	7	21	0	0	0	36
ENE	5	18	4	2	0	0	29
E	3	9	5	3	0	0	20
ESE	8	26	2	0	0	0	36
SE	16	33	12	3	0	0	64
SSE	25	16	28	4	0	0	73
S	23	39	37	12	0	0	111
SSW	40	72	59	7	0	0	178
SW	43	86	58	9	1	0	197
WSW	85	155	26	1	0	0	267
W	99	132	39	9	1	0	280
WNW	77	115	67	10	0	0	269
NW	72	102	53	1	0	0	228
NNW	42	96	44	1	0	0	183
TOTAL	576	997	560	67	2	0	2202

Hours of Missing Data: 6

Third Quarter, 1991

380-foot Level

Hours at Each Wind Speed and Direction

Period of Record = 91070100-91093023

Stability Class: A DT/DZ

Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	1	0	0	1
NNE	0	0	0	1	0	0	1
NE	0	0	0	3	0	0	3
ENE	0	0	4	2	1	0	7
E	0	0	3	1	0	0	4
ESE	0	1	1	0	0	0	2
SE	0	1	2	1	0	0	4
SSE	0	1	3	2	0	0	6
S	0	3	3	3	0	0	9
SSW	0	1	1	0	0	0	2
SW	0	0	2	2	1	0	5
WSW	0	0	5	3	0	0	8
W	0	1	4	3	0	1	9
WNW	0	0	2	4	0	0	6
NW	0	0	8	3	1	0	12
NNW	0	0	3	5	0	0	8
TOTAL	0	8	41	34	3	1	87

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction

Period of Record = 91070100-91093023

Stability Class: C DT/DZ

Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	7	1	0	0	9
NNE	0	2	1	0	0	0	3
NE	0	0	5	2	0	0	7
ENE	0	2	5	6	2	0	15
E	0	4	6	3	0	0	13
ESE	0	3	9	1	0	0	13
SE	0	2	10	4	0	0	16
SSE	0	1	2	5	0	0	8
S	0	2	4	12	1	0	19
SSW	1	0	3	4	1	0	9
SW	0	3	4	6	1	0	14
WSW	1	0	10	7	1	0	19
W	1	0	8	5	1	0	15
WNW	0	1	3	4	0	0	8
NW	0	1	5	3	0	0	9
NNW	0	0	5	4	0	0	9
TOTAL	3	22	87	67	7	0	186

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction

Period of Record = 91070100-91093023

Stability Class: B DT/DZ

Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	3	0	0	4
NNE	0	0	1	1	0	0	2
NE	1	0	4	1	0	0	6
ENE	0	0	10	7	1	0	18
E	0	0	7	2	0	0	9
ESE	0	2	8	1	0	0	11
SE	0	0	6	3	0	0	9
SSE	0	1	1	4	0	0	6
S	0	0	6	12	3	0	21
SSW	0	1	1	4	0	0	6
SW	0	2	4	4	0	0	10
WSW	0	0	8	10	0	0	18
W	0	0	5	5	1	0	11
WNW	0	0	7	3	1	0	11
NW	0	0	9	3	0	0	12
NNW	0	0	2	2	0	0	4
TOTAL	1	6	80	65	6	0	158

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction

Period of Record = 91070100-91093023

Stability Class: D DT/DZ

Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	7	6	7	1	0	22
NNE	0	7	12	3	0	2	24
NE	0	8	21	15	3	0	47
ENE	0	5	18	29	10	0	62
E	1	2	18	14	4	2	41
ESE	1	12	19	9	0	0	41
SE	0	11	17	7	1	0	36
SSE	1	5	21	10	5	1	43
S	0	5	24	24	13	7	73
SSW	3	3	15	42	19	2	84
SW	2	5	14	14	3	0	38
WSW	1	4	8	33	2	0	48
W	0	7	10	13	4	2	36
WNW	2	6	8	16	1	1	34
NW	0	8	19	9	0	0	36
NNW	3	5	9	10	9	1	37
TOTAL	15	100	239	255	75	18	702

Hours of Missing Data: 20

Oyster Creek Nuclear Station
1991-2 SemiAnnual Effluent Release Report

Third Quarter, 1991 380-foot Level

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: E DT/DZ
Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	1	13	5	0	20
NNE	0	3	6	7	0	0	16
NE	1	3	7	6	0	0	17
ENE	0	2	6	6	1	0	15
E	0	3	4	5	0	0	12
ESE	0	3	7	0	0	1	11
SE	0	1	12	4	0	0	17
SSE	0	3	10	5	3	1	22
S	0	2	12	18	5	1	38
SSW	0	2	15	43	20	0	80
SW	0	4	12	38	49	6	109
WSW	2	4	8	16	41	6	77
W	1	2	7	7	10	2	29
WNW	0	8	5	5	4	0	22
NW	0	2	2	5	1	1	11
NNW	0	1	2	8	3	1	15
TOTAL	4	44	116	186	142	19	511

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: G DT/DZ
Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	7	5	10	2	24
NNE	2	0	2	3	0	0	7
NE	1	1	0	2	0	0	4
ENE	1	4	3	0	0	0	8
E	0	5	4	0	0	0	9
ESE	0	3	7	0	0	0	10
SE	0	0	0	0	0	0	0
SSE	0	2	2	1	0	0	5
S	0	2	5	0	0	0	7
SSW	0	3	12	4	0	0	19
SW	2	4	10	16	1	0	33
WSW	0	3	3	8	10	4	28
W	0	5	4	3	3	0	15
WNW	0	3	9	20	4	1	37
NW	0	3	2	12	4	0	21
NNW	1	4	5	2	3	2	17
TOTAL	7	42	75	76	35	9	244

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: F DT/DZ
Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	1	7	11	0	19
NNE	0	0	6	5	0	0	11
NE	0	1	1	0	1	0	3
ENE	0	1	2	1	0	0	4
E	1	2	0	3	0	0	6
ESE	1	2	3	0	0	0	6
SE	1	2	2	0	0	0	5
SSE	1	1	4	1	0	0	7
S	0	1	5	0	1	0	7
SSW	0	0	8	10	5	0	23
SW	1	3	7	15	14	10	50
WSW	0	0	4	15	25	8	52
W	0	2	5	9	17	0	33
WNW	1	3	9	7	9	0	29
NW	0	0	4	11	9	0	24
NNW	0	2	5	8	5	1	21
TOTAL	6	20	66	92	97	19	300

Hours of Missing Data: 20

Hours at Each Wind Speed and Direction
Period of Record = 91070100-91093023
Stability Class: ALL DT/DZ
Elevation: Speed:SPD380A Direction:DIR380A Lapse:DT

Wind Direction	Wind Speed(mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	9	23	37	27	2	99
NNE	2	12	28	20	0	2	64
NE	3	13	38	29	4	0	87
ENE	1	14	48	51	15	0	129
E	2	16	42	28	4	2	94
ESE	2	26	54	11	0	1	94
SE	1	17	49	19	1	0	87
SSE	2	14	43	28	8	2	97
S	0	15	59	69	23	8	174
SSW	4	10	55	107	45	2	223
SW	5	21	53	95	69	16	259
WSW	4	11	46	92	79	18	250
W	2	17	43	45	36	5	148
WNW	3	21	43	59	19	2	147
NW	0	14	49	46	15	1	125
NNW	4	12	31	39	20	5	111
TOTAL	36	242	704	775	365	66	2188

Hours of Missing Data: 20

Fourth Quarter, 1991

380-Foot Level

Hours at Each Wind Speed and Direction
Period of Record = 91100100-91123123
Stability Class: A DT/DZ
Elevation: Speed:SP380A Direction:DIR380A Lapse:DT380A

Hours at Each Wind Speed and Direction
Period of Record = 91100100-91123123
Stability Class: C DT/DZ
Elevation: Speed:SP380A Direction:DIR380A Lapse:DT3

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

Hours of Missing Data: 6

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	1	5	2	1	4	13
NNE	0	0	2	3	0	0	5
NE	0	0	0	0	0	0	0
ENE	0	1	4	0	0	0	5
E	0	1	1	0	0	0	2
ESE	0	2	2	0	0	0	4
SE	0	0	0	0	0	0	0
SSE	0	0	0	3	1	0	4
S	0	0	0	6	3	0	9
SSW	0	1	3	4	2	0	10
SW	0	0	1	2	2	1	6
WSW	0	1	10	2	1	4	18
W	0	0	6	3	1	1	11
WNW	0	0	7	5	3	1	16
NW	0	1	3	7	5	1	17
NNW	0	0	5	6	2	0	13
TOTAL	0	8	49	43	21	12	133

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction
Period of Record = 91100100-91123123
Stability Class: B DT/DZ
Elevation: Speed:SP380A Direction:DIR380A Lapse:DT380A

Hours at Each Wind Speed and Direction
Period of Record = 91100100-91123123
Stability Class: D DT/DZ
Elevation: Speed:SP380A Direction:DIR380A Lapse:DT3

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	0	2	2	0	4
NNE	0	0	1	3	1	0	5
NE	0	0	0	0	0	0	0
ENE	0	0	1	0	0	0	1
E	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0
SE	0	0	0	1	0	0	1
SSE	0	0	0	1	0	0	1
S	0	1	0	2	2	0	5
SSW	0	1	0	1	3	1	6
SW	0	0	1	0	0	1	2
WSW	0	0	0	2	0	0	2
W	0	0	0	3	2	1	6
WNW	0	0	5	2	3	1	11
NW	0	0	1	2	4	0	7
NNW	1	0	1	3	0	0	5
TOTAL	1	2	10	22	17	4	56

Hours of Missing Data: 6

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	4	6	6	43	23	2	84
NNE	1	6	7	18	12	2	46
NE	1	2	5	6	14	10	38
ENE	1	2	1	0	0	2	6
E	1	1	0	0	0	1	3
ESE	0	3	6	1	0	2	12
SE	0	8	9	6	2	4	29
SSE	1	2	10	3	11	2	29
S	3	1	6	15	7	0	32
SSW	2	1	15	23	17	8	66
SW	1	2	8	14	12	6	43
WSW	0	9	17	18	10	1	55
W	0	6	16	17	6	3	48
WNW	2	4	12	35	15	18	86
NW	0	3	17	39	25	5	89
NNW	0	4	4	28	12	7	55
TOTAL	17	60	139	266	166	73	721

Hours of Missing Data: 6

Fourth Quarter, 1991

380-Foot Level

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: E DT/DZ

Elevation: Speed:SP380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	1	1	2	16	17	1	38
NNE	0	1	3	10	2	1	17
NE	0	5	3	1	2	4	15
ENE	0	3	2	1	2	2	10
E	0	2	1	0	2	6	11
ESE	0	0	2	1	1	0	4
SE	1	6	2	4	2	1	16
SSE	1	3	5	2	4	1	16
S	1	2	5	19	6	4	37
SSW	1	3	8	24	27	5	68
SW	1	3	8	37	52	16	117
WSW	2	1	8	10	27	6	54
W	2	2	6	25	20	7	62
WNW	1	2	5	25	30	17	80
NW	0	0	4	19	21	1	45
NNW	0	0	2	16	14	2	34
TOTAL	11	34	66	210	229	74	624

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: G DT/DZ

Elevation: Speed:SP380A Direction:DIR380A Lapse:DT3

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	7	11	10	2	4	34
NNE	0	4	7	4	0	0	15
NE	0	2	2	0	0	0	4
ENE	0	1	3	0	0	0	4
E	1	1	1	0	0	0	3
ESE	0	1	6	0	0	0	7
SE	0	1	3	0	0	0	4
SSE	0	1	2	1	0	0	4
S	0	2	3	5	6	0	16
SSW	1	1	2	10	4	0	18
SW	0	2	6	9	20	0	37
WSW	0	2	7	11	8	0	28
W	0	2	6	10	2	10	30
WNW	2	1	7	9	7	1	27
NW	0	3	12	3	5	1	24
NNW	0	6	13	9	6	1	35
TOTAL	4	37	91	81	60	17	290

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: F DT/DZ

Elevation: Speed:SP380A Direction:DIR380A Lapse:DT380A

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	0	0	3	11	6	3	23
NNE	0	0	2	8	1	0	11
NE	0	4	2	0	0	0	6
ENE	1	1	3	0	0	0	5
E	0	1	0	2	1	0	4
ESE	1	2	1	0	0	0	4
SE	0	1	6	0	0	0	7
SSE	0	0	5	3	1	0	9
S	1	1	7	5	4	0	18
SSW	0	2	6	14	6	0	28
SW	0	0	2	19	21	8	50
WSW	0	0	0	8	21	11	40
W	0	2	3	7	13	7	32
WNW	0	1	4	4	10	14	33
NW	1	1	0	9	15	2	28
NNW	1	1	3	12	10	6	33
TOTAL	5	17	47	102	109	51	331

Hours of Missing Data: 6

Hours at Each Wind Speed and Direction

Period of Record = 91100100-91123123

Stability Class: ALL DT/DZ

Elevation: Speed:SP380A Direction:DIR380A Lapse:DT3

Wind Direction	Wind Speed (mph)						TOTAL
	1-3	4-7	8-12	13-18	19-24	>24	
N	6	15	28	84	51	15	199
NNE	1	11	22	46	18	3	101
NE	1	13	12	7	16	14	63
ENE	5	11	15	1	2	4	38
E	3	10	4	2	3	7	29
ESE	1	14	17	2	1	2	37
SE	1	21	20	11	4	5	62
SSE	2	7	22	13	17	3	64
S	5	7	21	52	28	4	117
SSW	5	9	34	76	59	14	197
SW	2	7	26	81	107	32	255
WSW	2	13	42	51	67	22	197
W	2	12	37	65	44	29	189
WNW	5	9	41	85	69	52	261
NW	1	8	38	82	77	10	216
NNW	2	11	28	76	44	16	177
TOTAL	44	178	407	734	607	232	2202

Hours of Missing Data: 6

Section III: Changes to PCP and ODCM

Change Number 1

Procedure Title: Process Control Plan for Transfer and Solidification of Solid Wet Waste via CNSI Cement Solidification System (Procedure 351.36, Rev.10)

Effective Date: September 25, 1991

Description of Change: Administrative change that removes previous attachments and places them in the reference section.

Radwaste Programs
Manager: A.H. Wacha

Change Number 1

Procedure Title: Offsite Dose Calculation Manual (ODCM)

Effective Date: September, 1991

Description of Changes: Several cosmetic changes were made on tables throughout the document. Additionally, atmospheric dispersion factors were recalculated using updated meteorological data. These factors appear on pages 12, 16, 24, 27, 30, 35, and 48. Definitions for Factor of Dilution (A) and Shore Width (W) were more clearly defined on pages 19 and 20, respectively, as well as references to the origin of these (page 48). Tables A-2 through A-4 were updated with the new meteorological data to recompute atmospheric dispersion and deposition factors. On page 3, regarding the description of the Turbine Building Sump no. 1-5, the words "are designed to cause a trip" replaced "each cause a trip". Finally, several Usage Factors for Individual Dose Assessment in Appendix B were corrected: the period of buildup of activity in soil, time between slaughter and consumption of meat animal, beef cattle water consumption rate, irrigated beef ingestion (Adult), and updated footnote.

Section IV: Effluent Monitoring Instrumentation Inoperability

EFFLUENT MONITORING INSTRUMENTATION INOPERABILITY

Section 3.15 of the Technical Specifications requires that "instrumentation to monitor radioactive effluents [must be] operable when effluent is discharged or that [some] means of measuring effluent is provided." Furthermore, sections 3.15.A and 3.15.B for liquid and gaseous effluent monitoring instrumentation, respectively, state that when "less than the minimum number of ... channels are operable; ... make every reasonable effort to restore the instrument to operable status within 30 days and, if unsuccessful, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner."

During the reporting period, July 1, 1991 through December 31, 1991, the following effluent monitoring instrumentation inoperabilities greater than 30 days were recorded:

Failure to maintain operability of:

1. Liquid Radwaste Effluent Line Monitor (Table 3.15.1a)
2. Reactor Building Service Water System Effluent Line Monitor (Table 3.15.1b)

Corrective Action: The corrective actions in Tables 3.15.1 and 3.15.2 of the OC Technical Specifications were implemented. Daily overboard discharge samples of the Reactor Building Closed Cooling Water (RBCCW) System service water were taken and analyzed from the beginning of the reporting period since the RBCCW service water monitor was taken out of service for wiring and piping upgrade. It was put back into service on December 12. Item 1 is currently in the process of being repaired and tested.