EXECUTIVE SUMMARY

Oyster Creek Nuclear Station
Effluent and Off Site Dose Report
January 1, 1997 through December 31, 1997
Revised 04/23/98

This report summarizes the radioactive liquid and gaseous releases (effluents) from Oyster Creek and the calculated maximum hypothetical radiation exposure to the public resulting from these releases. This report covers the period of operation from January 1, 1997 through December 31,1997.

Radiological releases from the plant are monitored by installed plant radiation monitors which survey the plant stack for gaseous releases to the atmosphere and outfall pipes for liquid discharges to the cooling water discharge canal. These monitors and associated sample analyses provide a means to accurately determine the type 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 is calculated. Similarly, liquid effluent data are used to calculate a maximum hypothetical dose to an individual from liquid effluents for any shoreline exposure. Doses to the public from consumption of shellfish and fish withdrawn from the canal are also calculated.

Calculations of the maximum hypothetical dose to an individual from liquid and gaseous effluents are performed using a mathematical model which is based on the methods defined by the U.S. Nuclear Regulatory Commission.

The maximum hypothetical doses are conservative overestimates of the actual off site doses which are likely to occur. For example, the dose does not take into consideration the removal of radioactive material from the salt water by precipitation of insoluble salts, absorption onto sediment, or biological removal.

Dewatering is currently being performed in lieu of solidification.

Liquid discharges made during 1997 consisted of 0.01 curies of tritium from flushing of the fire service system.

Airborne discharges made during this same time period consisted of 135 curies of tritium, 0.00184 curies of particulates, 0.0154 curies of Iodines, and 21.9 curies of noble gases. This includes 17 curies of tritium from the isolation condensers.

The maximum hypothetical calculated organ dose to any individual due to gaseous effluents was about 0.031 millirem to the thyroid. The maximum hypothetical calculated whole body dose to any individual due to gaseous effluents was 0.027 mrem.

The maximum hypothetical calculated organ dose to any individual due to liquid effluents was about 0.0000001 mrem to the liver. The maximum hypothetical calculated whole body dose to any individual due to liquid effluents was 0.0000001 mrem.

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The total maximum hypothetical whole body dose of 0.027 mrem received by any individual from effluents from the Oyster Creek Nuclear Station for the reporting period is about 11,000 times lower than the dose the average individual in the Oyster Creek area received from natural background radiation including that from radon (300 mrem) during the same time period. Natural background radiation dose averages about 100 millirem whole body per year in the central New Jersey area. In addition, the average equivalent dose to the whole body from naturally occurring radon is about 200 millirem per year.

The maximum dose which could be received by a hypothetical individual from any effluent stream is about 0.3 percent of the annual guidelines established by the Nuclear Regulatory Commission.

Maximum Offsite Dose Due to Radionuclides in Effluents January -December 1997

ODCM	4.6.1.1.4.A Liquid Dose WB mrem	4.6.1.1.4.A Liquid Dose Organ mrem	4.6.1.1.6.A Air Dose Beta mrem	4.6.1.1.6.A (GAS) Gamma mrem	4.6.1.1.7.A (Thyroid) Organ mrem	4.6.1.1.8.A (Liver) Organ mrem	4.6.1.1.8.A Whole Body mrem	4.6.1.1.8.A (Thyroid) Organ mrem
1997 Total	1.1E-7	1.1E-7	1.1E-5	1.5E-4	3.1E-2	2.7E-2	2.7E-2	3.1E-2
ODCM Limit	3	10	20	10	15	25	25	75
Fraction of Annual Limit	3.6E-8	1.1E-8	5.5E-7	1.5E-5	2.1E-3	1.1E-3	1.1E-3	4.1E-4

OYSTER CREEK NUCLEAR GENERATING STATION
FIRST QUARTER 1997
GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES	QUANTITY * (ci)	
Total Fission Gases Released:	0.00E+00	ci
Average Rate of Release:	0.00E+00	uCi/sec

IODINES	QUANTITY (ci)
I131	1.10E-05
Total Iodines Released:	1.10E-05 ci
Average Rate of Release:	1.41E-06 uCi/sec

PARTICULATES	QUANTITY (ci)
GROSSA	4.87E-07
Total Particulates Released:	4.87E-07 ci
Average Rate of Release:	6.26E-08 uCi/sec

RADIONUCLIDE	QUANTITY (ci)
H3	1.23E+00
Avg. Rate of Release for H3:	1.58E-01 uCi/sec

* Quantity of noble gases derived from gross activity.

OYSTER CREEK NUCLEAR GENERATING STATION
SECOND QUARTER 1997
GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES	QUANTITY * (ci)	
Total Fission Gases Released:	0.00E+00	ci
Average Rate of Release:	0.00E+00	uCi/sec

IODINES	QUANTITY (ci)
I133	2.14E-06
Total Iodines Released:	2.14E-06 ci
Average Rate of Release:	2.72E-07 uCi/sec

PARTICULATES	QUANTITY (ci)
SR90	5.09E-07
GROSSA	4.51E-07
Total Particulates Released:	9.60E-07 ci
Average Rate of Release:	1.22E-07 uCi/sec

RADIONUCLIDE	QUANTITY (ci)	
H3	1.24E+00	
Avg. Rate of Release for H3:	1.58E-01	uCi/sec

* Quantity of noble gases derived from gross activity.

OYSTER CREEK NUCLEAR GENERATING STATION
THIRD QUARTER 1997
GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES	QUANTITY * (ci)	
Total Fission Gases Released:	0.00E+00	ci
Average Rate of Release:	0.00E+00	uCi/sec

IODINES	QUANTITY (ci)
I131	6.70E-07
I133	5.23E-06
Total Iodines Released:	5.90E-06 ci
Average Rate of Release:	7.43E-07 uCi/sec

PARTICULATES	QUANTITY (ci)	
GROSSA	5.33E-07	
Total Particulates Released:	5.33E-07	ci
Average Rate of Release:	6.71E-08	uCi/sec

RADIONUCLIDE	QUANTITY (ci)	
H3	1.09E+01	
Avg. Rate of Release for H3:	1.38E+00	uCi/sec

* Quantity of noble gases derived from gross activity.

OYSTER CREEK NUCLEAR GENERATING STATION
FOURTH QUARTER 1997
GASEOUS EFFLUENT GROUND-LEVEL RELEASES

FISSION GASES	QUANTITY (ci)	
Total Fission Gases Released:	0.00E+00	ci
Average Rate of Release:	0.00E+00	uCi/sec

IODINES	QUANTITY (ci)	
Total Iodines Released:	0.00E+00	ci
Average Rate of Release:	0.00E+00	uCi/sec

PARTICULATES	QUANTITY (ci)	
GROSSA	8.33E-07	
Total Particulates Released:	8.33E-07	ci
Average Rate of Release:	1.05E-07	uCi/sec

RADIONUCLIDE	QUANTITY (ci)	
H3	3.89E+00	
Avg. Rate of Release for H3:	4.89E-01	uCi/sec

* Quantity of noble gases derived from gross activity.