

Radioactive Materials Released from Nuclear Power Plants

Annual Report 1979

Prepared by J. Tichler, C. Benkovitz

Brookhaven National Laboratory

Prepared for
U.S. Nuclear Regulatory
Commission

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PREVIOUS REPORTS IN THIS SERIES

1. "Report on Releases of Radioactivity in Effluents and Solid Wastes from Nuclear Power Plants for 1972," Directorate of Regulatory Operations, August 1973.
2. "Summary of Radioactivity Releases in Effluents from Nuclear Power Plants During 1973," NUREG-75/001, January 1975.
3. "Radioactive Materials Released from Nuclear Power Plants 1974," NUREG-0077, June 1976.
4. "Radioactive Materials Released from Nuclear Power Plants 1975," NUREG-0218, March 1977.
5. "Radioactive Materials Released from Nuclear Power Plants, 1976," NUREG-0367, March 1978.
6. "Radioactive Materials Released from Nuclear Power Plants, 1977," NUREG-0521, January 1979.
7. "Radioactive Materials Released from Nuclear Power Plants, 1978," NUREG/CR-1497, BNL-NUREG-51192, March, 1981.

ABSTRACT

Releases of radioactive materials in airborne and liquid effluents from commercial light water reactors during 1979 have been compiled and reported. Data on solid waste shipments as well as selected operating information have been included. This report supplements earlier annual reports issued by the former Atomic Energy Commission and the Nuclear Regulatory Commission. The 1979 release data are compared with previous years' releases in tabular form. Data covering specific radionuclides are summarized.

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1.0 Introduction

1.1 Purpose

This report, prepared annually by the staff of the U.S. Nuclear Regulatory Commission, presents measured data on radioactive materials in effluents from licensed commercial reactor power plants. These data were reported by licensees for plant operations during 1979. This information supplements earlier annual reports issued by the former Atomic Energy Commission and Nuclear Regulatory Commission.¹

1.2 Scope

Releases of radioactive materials are governed by 10 CFR Part 20 and 50 and by limits established in the Technical Specifications for each facility. The requirement for reporting effluent releases by nuclear power plant operators is described in 10 CFR 50.36a. Through its Office of Inspection and Enforcement, the Nuclear Regulatory Commission maintains a knowledge of radioactive releases from licensed nuclear reactors to ensure that they are within regulatory requirements. This report summarizes data from the 70 licensed nuclear power plants that were declared by the utilities to be in commercial operation as of December 31, 1979. Data are included for several licensed facilities which are permanently or indefinitely shut down (Dresden 1, Humboldt Bay, Indian Point 1, Three Mile Island 2).

1.3 Source of Data

The information included in this report was obtained from data reported by the licensees. Individual licensee reports are available in the NRC Public Document Room, 1717 H Street, NW, Washington, D.C. 20555 and in local Public Document Rooms located near each licensed facility. Licensee reports varied in the format and extent of information provided. This variability will diminish as changes in the Technical Specification for each plant will require adoption of the reporting format of Regulatory Guide 1.21, "Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light Water Cooled Nuclear Power Plants," June 1974.

Data from prior years used in the comparison tables were obtained from the seven previous annual summaries.¹

¹"Report on Releases of Radioactivity in Effluents and Solid Wastes from Nuclear Power Plants for 1972," Directorate of Regulatory Operations, August 1973. "Summary of Radioactivity Releases in Effluents from Nuclear Power Plants During 1973," NUREG-75/001, January 1975. "Radioactive Materials Released from Nuclear Power Plants 1974," NUREG-0077, June 1976. "Radioactive Materials Released from Nuclear Power Plants 1975," NUREG-0218, March 1977. "Radioactive Materials Released from Nuclear Power Plants, 1976," NUREG-0367, March 1978. "Radioactive Materials Released from Nuclear Power Plants, 1977," NUREG-0521, January 1979. "Radioactive Materials Released from Nuclear Power Plants, 1978," NUREG/CR-1497, BNL-NUREG-51192, March, 1981.

2.0 Tabulated Data

2.1 Airborne and Liquid Effluents

Table 1 through 4 list for each reactor, the measured quantities of total noble gases and of I-131 and particulates (with half lives greater than 8 days) released in effluents to the atmosphere during each of the years 1970 through 1979. Tables 5 through 8 list the total measured quantities of tritium and of mixed fission and activation products released in liquid effluents in each of the years.

2.2 Solid Waste

The total volumes, activity and the number of shipments of solid waste for each plant during 1979 are summarized in Tables 9 and 10. A comparison for the years 1972 through 1979 is made in Tables 11 and 12.

2.3 Energy Generation

Tables 15 and 16 present a summary of the thermal energy generated by each plant during 1979 and previous years from 1970. Tables 13 and 14 present a summary of net electrical energy generated by each plant during 1978 and 1979. The reader is cautioned against making simplistic comparisons of radioactive releases with the energy generated because of the many factors which affect the amount of radioactive materials released; factors such as the condition of the fuel, primary system integrity, effluent and radioactive waste treatment systems, and the extent to which these systems are used.

2.4 Individual Plant Summaries

Individual plant summaries are presented in alphabetical order. The summaries include general plant information, power production, effluent and solid waste data, and a summary of specific radionuclides measured in effluents. More detailed summaries in the format of Regulatory Guide 1.21 such as were used in the 1978 report² can be made available since all the data for 1978-1979 are stored in a computerized data base. Individuals interested in obtaining the more detailed summaries should contact the Office of Management and Program Analysis of the Nuclear Regulatory Commission.

2.5 Notation

The following notation is used:

$$1.86E+06 = 1.86 \times 10^6$$

$$1.86E-03 = 1.86 \times 10^{-3}$$

NR = Not Reported

ND = Not Detected

< = Value is less than the ability of the measuring instrumentation to detect. Value shown is the instrument detection limit.

²"Radioactive Materials Released from Nuclear Power Plants, 1978," NUREG/CR-1497, BNL-NUREG-51192, March, 1981.

3.0 Summary

Nearly all of the radioactive material reported as being released in effluents is planned and results from normal operation or is the result of anticipated operational occurrences, i.e., unplanned releases of radioactive materials from miscellaneous actions such as equipment failure, operator error, or procedure error that are not of such consequence so as to be considered an accident. In March 1979, however, an accident occurred at Three Mile Island, Unit 2 (TMI-2) that resulted in larger than normal airborne releases of radioiodine and noble gases. The values reported for TMI-2 include releases from normal operation prior to the accident, releases during the accident, and releases which occurred during recovery operations.

At present, it is difficult to compare effluent releases with those of previous years due to, among other contributors, variability in reporting structure and release requirements. Comparisons with respect to power generation are similarly difficult due to factors which strongly affect the releases such as level of fuel cladding defects, design features of plant radioactive waste treatment systems, operational occurrences, and equipment performance.

Though perhaps not identifiable as an important factor at any specific plant from the data in this report, the generic improvement in fuel performance over the last several years has either reduced or has had the potential to reduce the amount of radioactive material released in effluents from most plants. In addition, at Boiling Water Reactors (BWRs), the reduction in the amount of airborne radioactive materials being released at some plants since the early and mid-1970s is due in large part to the installation of augmented offgas (AOG) systems. Some of the BWRs that released the largest amounts of radioactive materials during 1979 (Brunswick, Oyster Creek) were those that did not have fully operational AOGs.

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TABLE I
AIRBORNE EFFLUENTS COMPARISON BY YEAR

FACILITY	FISSION AND ACTIVATION GASES (TOTAL CURIES)									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
BIG ROCK POINT	2.80E+05	2.84E+05	2.58E+05	2.30E+05	1.88E+05	5.06E+04	1.52E+04	1.34E+04	1.89E+04	6.67E+03
BROWN'S FERRY	-	-	-	-	6.40E+04	9.24E+04	<8.05E+04	<1.66E+05	1.57E+05	<2.71E+05
BRUNSWICK	-	-	-	-	-	1.90E+02	1.90E+04	2.46E+05	9.14E+04	1.16E+05
COOPER	-	-	-	-	2.00E+03	1.98E+04	3.80E+04	1.27E+03	4.09E+03	3.04E+04
DRESDEN 1	9.00E+05	7.53E+05	8.77E+05	8.40E+05	9.80E+04	5.20E+05	4.52E+05	5.20E+05	8.50E+05	83E+02
DRESDEN 2-3	-	5.80E+05	4.29E+05	8.80E+05	6.27E+05	3.69E+05	3.23E+04	3.13E+05	4.06E+04	5.31E+04
DUANE ARNOLD	-	-	-	-	-	1.58E+03	5.26E+03	3.87E+03	1.56E+03	8.71E+03
EDWIN J. HATCH	-	-	-	-	-	2.70E+02	2.80E+03	1.90E+03	1.62E+03	1.71E+03
FORT ST. VRAIN *	-	-	-	-	-	-	-	-	-	9.30E+01
HUMBOLDT BAY	5.40E+05	5.14E+05	4.30E+05	3.50E+05	5.72E+05	2.97E+05	9.30E+04	4.40E+05	4.40E+05	<4.40E+05
JAMES A. FITZPATRICK	1.00E+03	1.00E+03	3.10E+04	9.10E+04	4.90E+04	4.08E+03	4.41E+04	2.33E+04	5.88E+03	3.38E+03
LACROSSE	-	2.76E+05	7.26E+05	7.90E+04	9.12E+05	5.71E+04	1.24E+05	4.25E+04	8.45E+03	1.04E+04
MILLSTONE 1	-	7.60E+04	7.51E+05	8.70E+05	1.57E+06	2.97E+06	5.07E+05	6.20E+05	5.66E+05	2.06E+04
MONTICELLO	-	2.53E+05	5.17E+05	8.72E+05	5.98E+05	1.55E+05	1.14E+04	6.87E+03	6.42E+03	4.03E+03
NINE MILE POINT	1.00E+04	5.16E+05	8.66E+05	8.10E+05	2.79E+05	1.30E+06	1.76E+05	3.53E+03	3.02E+03	1.04E+03
OYSTER CREEK	1.10E+05	-	-	1.00E+03	<1.00E+00	1.30E+04	1.67E+05	1.77E+05	9.98E+05	1.01E+06
PEACH BOTTOM	-	-	1.80E+04	2.30E+05	5.46E+05	4.60E+04	2.09E+05	7.11E+04	3.85E+04	1.90E+05
PILGRIM	-	-	1.32E+05	9.00E+05	9.50E+05	1.10E+05	1.83E+05	4.13E+05	3.27E+04	1.39E+04
QUAD-CITIES	-	-	5.50E+04	1.80E+05	6.40E+04	4.08E+03	3.03E+03	2.56E+04	3.24E+04	3.48E+04
VERMONT YANKEE	-	-	-	-	-	-	-	3.35E+03	4.94E+03	<8.08E+03

* HIGH TEMPERATURE GAS COOLED REACTOR
N/P=NOT REPORTED

TABLE 2

AIRBORNE EFFLUENTS COMPARISON BY YEAR

FACILITY	FISSION AND ACTIVATION GASES (TOTAL CURIES)									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	-	-	-	-	1.96E+02	1.03E+03	5.69E+03	1.39E+04	7.50E+03	8.51E+03
ARKANSAS ONE 2	-	-	-	-	-	-	-	-	-	4.53E+03
BEAVER VALLEY	-	-	-	-	-	-	1.07E+00	4.73E+01	3.90E+02	1.75E+03
CALVERT CLIFFS	-	-	-	-	-	7.72E+03	9.40E+03	2.23E+04	2.76E+04	1.02E+04
CRYSTAL RIVER	-	-	-	-	-	-	-	3.35E+03	6.86E+03	7.26E+04
DAVIS-BESSE	-	-	-	-	-	-	-	1.27E+03	2.10E+03	<1.68E+03
DONALD C. COOK	-	-	-	-	-	2.64E+00	9.75E+02	3.80E+03	4.85E+04	1.09E+04
FORT CALHOUN	-	-	-	6.70E+01	3.03E+02	4.29E+02	1.94E+03	3.81E+03	1.36E+03	7.06E+02
HADDAM NECK	1.00E+00	3.00E+00	1.00E+00	3.20E+01	7.00E+00	4.80E+02	4.52E+02	3.12E+03	2.14E+03	5.53E+03
H.B. ROBINSON	-	1.00E+00	<1.00E+00	3.10E+03	2.31E+03	1.17E+03	6.40E+02	4.76E+02	8.84E+02	1.52E+03
INDIAN POINT 1-2	-	-	-	1.50E+01	5.58E+03	8.20E+03	1.16E+04	1.60E+04	1.41E+04	9.03E+03
INDIAN POINT 3	-	-	-	-	-	-	SHOWN W/ OTHER UN. T	-	8.09E+02	2.47E+02
JOSEPH M. FARLEY	-	-	-	-	-	-	-	-	3.53E+03	3.12E+03
KEWAUNEE	-	-	-	-	3.35E+03	2.45E+03	1.40E+03	2.43E+03	4.44E+02	1.52E+02
MAINE YANKEE	-	-	<1.00E+00	1.61E+02	6.36E+03	4.09E+03	1.30E+03	2.86E+02	1.43E+03	1.98E+03
MILLSTONE 2	-	-	-	-	-	-	1.57E+03	2.28E+03	7.64E+02	3.59E+02
NORTH ANNA	-	-	-	-	-	-	-	-	1.51E+04	6.28E+03
OCONEE	-	-	-	9.30E+03	1.94E+04	1.51E+04	4.39E+04	3.56E+04	4.33E+04	4.79E+04
PALISADES	-	-	1.00E+00	4.54E+02	<1.00E+00	2.61E+03	2.99E+01	5.99E+01	3.23E+02	6.84E+01
POINT BEACH	-	<1.00E+00	3.00E+00	5.75E+03	9.74E+03	4.45E+04	1.91E+03	1.13E+03	5.16E+02	9.68E+02
PRAIRIE ISLAND	-	-	-	8.72E+00	3.62E+02	2.17E+03	1.74E+03	6.73E+02	1.26E+03	6.97E+02
RANCHO SECO	-	-	-	-	-	1.18E+02	1.27E+02	2.00E+03	7.10E+03	8.81E+03
R.E. GINNA	1.00E+01	3.20E+01	1.20E+01	5.76E+02	7.57E+02	1.04E+04	5.52E+03	3.20E+03	9.72E+02	7.62E+02
SALEM	-	-	-	-	-	-	<1.00E+02	1.96E+01	1.02E+01	2.49E+02
SAN ONOFRE	<1.00E+00	8.00E+00	1.90E+01	1.10E+04	1.78E+03	1.11E+03	4.16E+02	1.54E+02	1.81E+03	6.37E+02
ST. LUCIE	-	-	-	-	-	-	1.72E+03	2.54E+04	2.93E+04	1.54E+04
SURRY	-	-	<1.00E+00	8.66E+02	6.86E+03	8.04E+03	1.91E+04	1.90E+04	4.36E+03	1.78E+03
THREE MILE ISLAND 1	-	-	-	-	-	9.16E+02	3.63E+03	2.76E+03	1.66E+04	1.57E+04
THREE MILE ISLAND 2	-	-	-	-	-	-	-	-	8.73E+00	9.97E+06
TROJAN	-	-	-	-	-	-	6.66E+02	3.07E+03	3.05E+02	9.27E+02
TURKEY POINT	-	-	-	5.30E+02	4.66E+03	1.34E+04	1.56E+04	2.33E+04	2.35E+04	1.06E+04
YANKEE ROWE	<1.00E+00	<1.00E+00	<1.00E+00	3.50E+01	4.00E+01	2.24E+01	2.57E+01	1.25E+02	6.56E+02	1.82E+02
ZION	-	-	-	4.00E+00	2.99E+03	4.88E+04	1.14E+05	3.22E+04	6.77E+04	3.41E+04

N/R=NOT REPORTED

TABLE 3

AIRBORNE EFFLUENTS COMPARISON BY YEAR (CURIES)

I-131 AND PARTICULATES

BOILING WATER REACTORS

(HALF-LIFE EQUAL TO OR GREATER THAN 8 DAYS)

FACILITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
BIG ROCK POINT	1.30E-01	6.10E-01	1.50E-01	4.60E+00	1.60E-01	1.20E-01	5.00E-02	1.00E-02	8.91E-03	1.90E-03
BROWN'S FERRY	-	-	-	-	1.20E-01	2.70E-01	<7.00E-02	1.04E-01	2.27E-01	5.03E-02
BRUNNEN	-	-	-	-	-	<1.00E-02	4.60E-01	9.32E-01	4.07E-01	9.25E-01
COOPER	-	-	-	-	2.40E-01	5.00E-02	<4.00E-02	<1.91E-02	5.41E-03	<1.79E-01
DRESDEN 1	3.30E+00	6.70E-01	2.75E+00	4.00E-02	6.80E-01	9.60E-01	8.40E-01	4.93E+00	2.28E+00	2.38E-02
DRESDEN 2-3	1.60E+00	8.68E+00	5.89E+00	6.70E+00	6.50E+00	4.31E+00	5.49E+00	6.86E+00	3.13E+00	6.97E+00
DUANE ARNOLD	-	-	-	-	-	1.10E-03	8.18E-02	2.29E-02	3.65E-02	3.35E-02
EDWIN I. HATCH	-	-	-	-	-	<1.00E-02	<1.00E-02	5.67E-03	4.13E-03	2.59E-02
FORT ST. VRAIN *	-	-	-	-	-	-	-	-	-	6.89E-07
HUMBOLDT BAY	3.50E-01	3.00E-01	4.80E-01	2.90E-01	8.40E-01	1.06E+00	8.36E-02	4.04E-03	7.26E-04	1.07E-04
JAMES A. FITZPATRICK	-	-	-	-	-	<4.70E-02	6.80E-01	1.73E-01	2.79E-01	1.42E-02
LACROSSE	<6.00E-02	<1.00E-02	7.10E-01	2.00E-01	4.00E-02	1.00E-01	<7.06E-02	1.67E-01	2.79E-02	2.53E-02
MILLSTONE 1	-	4.00E+00	1.32E+00	2.00E-01	3.26E+00	9.98E+00	2.33E+00	4.86E+00	4.55E+00	5.90E-01
MONTICELLO	-	3.60E-02	5.78E-01	1.20E+00	5.70E+00	3.71E+00	1.71E-01	8.51E-02	5.49E-02	3.39E-02
NINE MILE POINT	<1.00E-02	6.00E-02	9.70E-01	1.98E+00	8.90E-01	2.78E+00	2.20E+00	1.99E-01	1.35E-01	4.71E-02
OYSTER CREEK	3.20E-01	2.14E+00	6.48E+00	7.02E+00	3.51E+00	5.54E+00	6.39E+00	9.05E+00	1.81E+01	9.32E+00
PEACH BOTTOM	-	-	-	<1.00E-02	1.00E-02	4.00E-02	9.75E-01	2.73E-01	9.62E-02	2.58E-01
PILGRIM	-	-	3.00E-02	4.70E-01	1.45E+00	2.58E+00	6.74E-01	6.90E-01	1.81E-01	1.45E-01
QUAD-CITIES	-	-	7.50E-01	5.50E+00	8.88E+00	1.31E+00	1.33E+00	1.69E+00	2.15E+00	1.57E+00
VERMONT YANKEE	-	-	1.70E-01	7.00E-02	3.60E-01	1.00E-02	<1.00E-02	1.44E-02	2.18E-01	4.43E-01

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 4

AIRBORNE EFFLUENTS COMPARISON BY YEAR (CURIES)

I-131 AND PARTICULATES

(HALF-LIFE EQUAL TO OR GREATER THAN 8 DAYS)

FACILITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	-	-	-	-	5.00E-02	7.40E-01	5.73E-02	9.04E-03	3.19E-03	4.47E-03
ARKANSAS ONE 2	-	-	-	-	-	-	<1.00E-02*	1.52E-04	7.21E-02	4.85E-03
BEAVER VALLEY	-	-	-	-	-	7.00E-02	1.38E-01	3.07E-01	1.35E-01	4.07E-04
CALVERT CLIFFS	-	-	-	-	-	-	-	2.53E-03	1.05E-03	2.05E+00
CRYSTAL RIVER	-	-	-	-	-	-	-	2.57E-04	4.30E-04	1.88E-02
DAVIS-BESSE	-	-	-	-	-	-	-	7.45E-02	1.10E-01	5.69E-03
DONALD C. COOK	-	-	-	-	<1.00E-02	<1.00E-02	<1.00E-02	1.10E-01	1.10E-01	7.36E-02
FORT CALHOUN	-	-	-	<1.00E-02	<1.00E-02	<1.00E-02	<2.04E-02	1.34E-02	8.30E-03	1.58E-03
HADDAM NECK	<1.00E-02	3.00E-02	2.00E-02	5.00E-02	<1.00E-02	<1.00E-02	<1.00E-02	1.74E-03	5.21E-03	4.77E-02
H.B. ROBINSON	-	-	3.00E-02	3.00E-01	5.00E-02	2.00E-02	9.96E-02	3.88E-03	9.26E-04	4.10E-04
INDIAN POINT 1-2	-	-	-	<1.00E-02	4.30E-01	1.62E+00	2.42E-01	5.59E-02	2.05E-01	4.50E-01
INDIAN POINT 3	-	-	-	-	-	-	STJMN W/	OTHER UNIT	1.29E-02	3.89E-03
JOSEPH M. ARLEY	-	-	-	-	-	-	-	-	4.11E-02	2.20E-02
Kewaunee	-	-	-	-	2.00E-02	6.60E-01	<1.00E-02	2.40E-02	5.48E-03	6.18E-04
MAINE YANKEE	-	-	<1.00E-02	9.40E-01	5.00E-02	<1.00E-02	<1.00E-02	5.05E-03	2.07E-03	5.52E-02
MILLSTONE 2	-	-	-	-	-	1.00E-02	1.25E-02	4.47E-03	2.97E-03	9.79E-03
NORTH ANNA	-	-	-	-	-	-	-	-	3.19E-02	5.71E-02
OCONEE	-	-	-	1.00E-02	3.00E-02	1.00E-02	2.72E-01	5.35E-01	2.22E-01	2.28E-01
PALISADES	-	-	<1.00E-02	3.10E-01	1.00E-02	3.80E-01	4.16E-02	1.63E-02	2.07E-02	2.46E-02
POINT BEACH	-	<1.00E-02	3.00E-02	5.50E-01	1.60E-01	7.00E-02	1.85E-02	5.02E-03	2.89E-02	1.35E-02
PRAIRIE ISLAND	-	-	-	<1.00E-02	<1.00E-02	2.12E-02	1.14E-02	7.56E-03	8.96E-04	3.86E-03
RANCHO SECO	-	-	-	-	-	<1.00E-02	<1.00E-02	5.02E-03	3.21E-02	5.75E-03
R.E. GINNA	5.00E-02	1.70E-01	4.00E-02	<1.00E-02	<1.00E-02	2.00E-02	3.17E-02	2.55E-02	1.04E-02	1.88E-02
SALEM	-	-	-	-	-	-	ND	2.34E-07	4.01E-02	7.68E-03
SAN ONOFRE	<1.00E-02	<1.00E-02	<1.00E-02	1.61E+00	<1.00E-02	4.00E-02	<1.00E-02	1.86E-04	2.71E-03	1.43E-04
ST. LUCIE	-	-	-	-	-	-	<1.00E-02	1.48E-01	5.17E-01	2.02E-01
SURRY	-	-	<1.00E-02	4.00E-02	1.40E-01	5.00E-02	3.46E-01	1.20E-01	6.49E-02	7.61E-03
THREE MILE ISLAND 1	-	-	-	-	<1.00E-02	<1.00E-02	1.07E-02	3.39E-02	1.35E-01	1.24E-02
THREE MILE ISLAND 2	-	-	-	-	-	-	-	-	2.30E-03	1.42E+01
TROJAN	-	-	-	-	-	-	-	-	1.03E-02	3.39E-02
TURKEY POINT	-	-	-	6.00E-02	3.63E+00	4.30E-01	4.22E-01	1.04E+00	4.59E-01	7.91E-02
YANKEE ROWE	<1.00E-02	<1.00E-02	<1.00E-02	1.90E-01	5.30E-01	1.00E-02	<1.00E-02	8.70E-05	2.25E-04	2.49E-04
ZION	-	-	-	<1.00E-02	1.00E-02	1.40E-01	9.00E-02	5.38E-02	8.91E-02	5.74E-02

* I-131 NOT INCLUDED
N/R=NOT REPORTED

TABLE 5
LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

FACILITY	TRITIUM										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
BIG ROCK POINT	5.40E+01	1.03E+01	1.04E+01	1.97E+01	5.10E+00	5.73E+00	2.41E+00	8.83E+00	4.05E+00	5.45E+00	
BROWN'S FERRY	-	-	-	-	2.80E+00	1.04E+01	4.02E+00	2.40E+01	3.08E+01	1.32E+01	
BRUNSWICK	-	-	-	-	-	3.20E+00	5.90E+00	8.93E+00	1.41E+01	3.09E+01	
COOPER	-	-	-	-	1.70E+00	8.25E+00	8.43E+00	9.04E+00	7.51E+00	6.63E+00	
DRESDEN 1	5.00E+00	8.70E+00	4.33E+01	1.85E+01	1.88E+01	2.70E-01	2.00E-02	8.90E-02	1.31E+01	1.50E+00	
DRESDEN 2-3	3.10E+01	3.85E+01	2.59E+01	2.58E+01	2.26E+01	5.40E+01	1.97E+01	5.00E+00	1.92E+01	1.93E+01	
DUANE ARNOLD	-	-	-	-	-	3.30E-01	3.40E-01	2.13E-01	1.19E+02	2.90E-01	
EDWIN I. HATCH	-	-	-	-	-	6.12E+00	8.98E+00	1.20E+01	9.00E+00	1.23E+01	
FORT ST. VRAIN *	-	-	-	-	-	-	-	-	-	1.23E+02	
HUMBOLDT BAY	7.00E+00	7.50E+00	1.30E+01	5.13E+01	3.17E+01	2.01E+01	1.30E+01	5.26E-01	3.63E-02	3.91E-02	
JAMES A. FITZPATRICK	-	-	-	-	-	5.03E+00	4.20E+00	3.35E+00	1.90E+00	1.52E+00	
LACROSSE	2.00E+01	9.14E+01	1.20E+02	1.03E+02	1.15E+02	1.27E+02	4.10E+01	4.86E+01	4.72E+01	3.54E+01	
MILLSTONE 1	-	1.27E+01	2.09E+01	3.70E+00	2.41E+01	8.03E+01	2.01E+01	4.41E+00	3.20E+00	7.92E+00	
MONTICELLO	-	5.92E-01	<1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
NINE MILE POINT	2.00E+01	1.24E+01	2.78E+01	4.65E+01	1.87E+01	2.81E+01	2.46E+00	2.49E+00	N/R	6.78E+00	
OYSTER CREEK	2.20E+01	2.15E+01	6.16E+01	3.59E+01	1.41E+01	1.79E+01	3.86E+01	1.88E+01	1.96E+01	1.40E+00	
PEACH BOTTOM	-	-	-	<1.00E-01	1.00E+01	3.08E+01	7.37E+01	7.09E+01	3.24E+01	4.28E+01	
PILGRIM	-	-	4.20E+00	4.00E-01	1.05E+01	1.82E+01	4.67E+01	3.27E+01	2.98E+00	1.34E+01	
QUAD-CITIES	-	-	4.70E+00	2.45E+01	3.40E+01	5.37E+01	4.98E+01	2.64E+01	1.72E+01	1.76E+01	
VERMONT YANKEE	-	-	-	1.00E-01	0.00E+00	0.00E+00	1.60E+00	8.44E-01	N/R	4.04E+00	

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R-NOT REPORTED

TABLE 6

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

FACILITY	TRITIUM									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	-	-	-	-	2.58E+01	4.60E+02	2.12E+02	2.45E+02	2.94E+02	1.68E+02
ARKANSAS ONE 2	-	-	-	-	-	-	8.59E+00	1.09E+02	3.49E+02	5.27E+01
BEAVER VALLEY	-	-	-	-	-	-	2.74E+02	5.75E+02	4.56E+02	9.59E+01
CALVERT CLIFFS	-	-	-	-	-	2.63E+02	-	1.66E+02	1.54E+02	5.14E+02
CRYSTAL RIVER	-	-	-	-	-	-	-	9.01E+00	1.66E+02	1.66E+02
DAVIS-BESSE	-	-	-	-	-	-	-	2.86E+02	2.15E+02	2.45E+02
DONALD C. COOK	-	-	-	-	-	5.64E+01	1.92E+02	2.86E+02	6.24E+02	2.22E+03
FORT CALHOUN	-	-	-	1.58E+01	1.24E+02	1.11E+02	1.22E+02	1.57E+02	1.50E+02	2.58E+02
HADDAM NECK	7.40E+03	5.83E+03	5.89E+03	3.90E+03	2.24E+03	5.67E+03	4.85E+03	6.67E+03	3.94E+03	3.55E+03
H.B. ROBINSON	-	1.18E+02	4.05E+02	4.32E+02	4.49E+02	6.24E+02	9.80E+02	6.85E+02	4.73E+02	4.29E+02
INDIAN POINT 1-2	-	-	-	2.75E+01	4.79E+01	7.94E+01	3.32E+02	3.71E+02	5.12E+02	3.75E+02
INDIAN POINT 3	-	-	-	-	-	-	SHOWN W/	OTHER UNIT	2.56E+02	1.15E+02
JOSEPH M. FARLEY	-	-	-	-	-	-	-	-	5.91E+01	9.40E+01
KELAUINE	-	-	-	-	9.24E+01	2.77E+02	1.80E+02	2.95E+02	2.96E+02	2.49E+02
MAINE YANKEE	-	-	9.20E+00	1.54E+02	2.19E+02	1.77E+02	3.67E+02	1.53E+02	3.15E+02	2.02E+02
MILLSTONE 2	-	-	-	-	-	7.60E+00	2.77E+02	2.11E+02	2.01E+02	2.54E+02
NORTH ANNA	-	-	-	-	-	-	-	-	2.82E+02	3.13E+02
OCONEE	-	-	-	7.07E+01	3.50E+02	3.55E+03	2.19E+03	1.92E+03	1.17E+03	8.94E+02
PALISADES	-	-	2.08E+02	1.85E+02	8.10E+00	4.16E+01	9.63E+00	5.58E+01	1.01E+02	1.26E+02
POINT BEACH	-	2.66E+02	5.63E+02	5.56E+02	8.33E+02	8.95E+02	6.94E+02	9.99E+02	1.29E+03	8.92E+02
PRAIRIE ISLAND	-	-	-	<1.00E-01	1.42E+02	4.54E-01	1.00E-01	1.35E+03	5.51E+02	6.25E+02
RANCHO SECO	-	-	-	-	-	1.32E+02	0.00E+00	8.55E-02	N/R	N/R
R.E. GINNA	1.10E+02	1.54E+02	1.19E+02	2.86E+02	1.95E+02	2.60E+02	2.42E+02	1.19E+02	2.42E+02	2.40E+02
SALEM	-	-	-	-	-	-	4.00E-02	2.96E+02	4.46E+02	7.26E+02
SAN ONOFRE	4.80E+03	4.57E+03	3.48E+03	4.07E+03	3.81E+03	4.00E+03	7.39E+03	1.79E+03	2.50E+03	2.32E+03
ST. LUCIE	-	-	-	-	-	-	1.33E+01	2.42E+02	1.28E+02	1.28E+02
SURRY	-	-	5.00E+00	4.88E+02	2.45E+02	4.42E+02	7.82E+02	4.08E+02	7.47E+02	3.57E+02
THREE MILE ISLAND 1	-	-	-	-	1.30E+02	4.63E+02	1.89E+02	1.92E+02	1.55E+02	5.59E+01
THREE MILE ISLAND 2	-	-	-	-	-	-	-	-	3.83E+01	7.1E+01
TROJAN	-	-	-	-	-	-	3.60E+01	3.11E+02	1.59E+02	6.1E+01
TURKEY POINT	-	-	-	3.29E+02	5.80E+02	7.97E+02	7.71E+02	9.24E+02	1.17E+03	9.1E+02
YANKEE ROWE	1.50E+03	1.68E+03	8.03E+02	6.94E+02	3.14E+02	2.47E+02	1.56E+02	1.39E+02	1.96E+02	1.75E+02
ZION	-	-	-	1.00E-01	2.74E+02	1.03E+03	7.47E+02	7.24E+02	7.25E+02	6.01E+02

N/R=NOT REPORTED

TABLE 7

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

FACILITY	MIXED FISSION AND ACTIVATION PRODUCTS									
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
BOILING WATER REACTORS										
BIG ROCK POINT	4.70E+00	3.50E+00	1.10E+00	2.70E+00	1.10E+00	2.02E+00	7.70E-01	3.92E-01	2.74E-01	9.03E-01
BROWN'S FERRY	-	-	8.00E-01	-	-	2.70E+00	<3.95E+00	1.19E+00	1.32E+01	1.02E+01
BRUNSWICK	-	-	-	-	-	1.89E+00	3.29E+00	6.22E+00	3.48E+00	5.66E+00
COOPER	-	-	1.40E+00	-	-	1.74E+00	7.00E-02	7.50E-01	3.05E+00	<2.48E+00
DRESDEN 1	8.20E+00	6.20E+00	6.80E+00	9.20E+00	6.90E+00	8.40E-01	3.60E-01	6.00E-01	3.26E-01	2.65E-02
DRESDEN 2-3	-	2.30E+01	2.20E+01	2.59E+01	3.31E+01	8.10E-01	1.21E+00	4.40E-01	3.99E-01	2.65E-01
DUANE ARNOLD	-	-	-	-	-	<1.00E-02	<1.00E-02	2.32E-03	2.73E-01	5.10E-04
EDWIN I. HATCH	-	-	-	-	-	6.00E-02	4.00E-02	2.50E+01	4.03E-02	4.82E-02
FORT ST. VRAIN *	-	-	-	-	-	-	-	-	-	1.89E-04
HUMBOLDT BAY	2.40E+00	1.80E+00	1.40E+00	2.40E+00	4.40E+00	3.79E+00	9.90E-01	9.17E-01	1.95E-01	9.55E-02
JAMES A. FITZPATRICK	-	-	-	-	-	5.32E+00	6.01E+00	8.85E-01	1.54E+00	6.46E-01
LACROSSE	6.40E+00	1.71E+01	4.85E+01	3.59E+01	1.31E+01	1.42E+01	<5.78E+00	2.13E+01	8.66E+00	1.67E+00
MILLSTONE 1	-	1.97E+01	5.15E+01	3.34E+01	1.98E+02	1.99E+02	9.65E+00	5.27E-01	1.75E-01	2.10E-01
MONTICELLO	-	<1.00E-01	<1.00E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NINE MILE POINT	2.80E+01	3.22E+01	3.46E+01	4.08E+01	2.56E+01	2.10E+01	2.14E+00	3.03E-01	N/R	1.89E+00
OYSTER CREEK	1.85E+01	1.20E+01	1.00E+01	4.20E+00	7.00E-01	4.10E-01	2.20E-01	9.61E-02	1.53E-02	6.59E-03
PEACH BOTTOM	-	-	1.50E+00	9.00E-01	4.20E+00	8.01E+00	3.38E+00	2.23E+00	5.11E+00	1.95E+01
PILGRIM	-	-	2.40E+00	2.14E+01	3.88E+01	1.71E+01	6.99E+00	1.34E+00	1.77E+00	5.12E-01
QUAD-CITIES	-	-	-	<1.00E-01	0.00E+00	<1.00E-02	<1.00E-02	1.55E-01	2.24E+00	1.31E+00
VERMONT YANKEE	-	-	-	-	-	-	-	-	N/R	2.40E-04

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 8

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

FACILITY	MIXED FISSION AND ACTIVATION PRODUCTS										
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	
ARKANSAS ONE 1	-	-	-	-	6.50E+00	3.11E+00	1.31E+01	4.50E+00	6.05E+00	3.09E+00	
ARKANSAS ONE 2	-	-	-	-	-	-	-	-	-	1.30E+00	
BEAVER VALLEY	-	-	-	-	-	-	1.70E-01	6.52E-01	2.63E-01	1.21E-01	
CALVERT CLIFFS	-	-	-	-	-	1.44E+00	1.18E+00	3.48E+00	6.13E+00	7.80E+00	
CRYSTAL RIVER	-	-	-	-	-	-	-	1.54E-02	2.96E-02	4.16E-01	
DAVIS-BESSE	-	-	-	-	-	-	-	2.60E-02	9.01E-02	4.28E-02	
DONALD C. COOK	-	-	-	-	-	-	-	1.52E+00	1.48E+00	2.58E+00	
FORT CALHOUN	-	-	-	<1.00E-01	-	2.60E-01	1.87E+00	1.52E+00	1.48E+00	2.58E+00	
HADDAM NECK	6.70E+00	5.90E+00	4.80E+00	3.00E+00	2.30E+00	3.60E-01	5.50E-01	3.63E-01	5.95E-01	2.45E-01	
H.B. ROBINSON	-	7.00E-01	8.00E-01	6.00E-01	2.50E+00	1.20E+00	1.30E-01	1.71E+00	9.50E-01	8.67E-01	
INDIAN POINT 1-2	-	-	-	2.20E+00	4.20E+00	4.50E+00	3.80E-01	3.29E-01	1.78E-01	2.99E-01	
INDIAN POINT 3	-	-	-	-	-	4.93E+00	4.98E+00	3.02E+00	1.99E+00	1.94E+00	
JOSEPH M. FARLEY	-	-	-	-	-	-	SHOIN W/	OTHER UNIT	1.03E+00	4.02E-01	
KENAUKEE	-	-	-	-	4.00E-01	-	-	-	1.03E-01	5.86E-02	
MAINE YANKEE	-	-	<1.00E-01	<1.00E-01	4.00E+00	3.21E+00	2.84E+00	4.42E-01	6.99E-01	8.94E-01	
MILLSTONE 2	-	-	-	-	-	2.00E-02	2.60E-01	1.56E+00	1.04E-01	4.63E-01	
NORTH ANNA	-	-	-	-	-	-	-	-	2.79E+00	4.87E+00	
OCONEE	-	-	-	2.80E+00	1.90E+00	5.05E+00	7.93E+00	3.62E+01	2.68E-01	5.89E-01	
PALISADES	-	-	6.80E+00	2.78E+01	5.90E+00	3.45E+00	4.40E-01	9.29E-02	6.51E+00	9.24E-01	
POINT BEACH	-	1.00E-01	1.50E+00	8.00E-01	2.00E-01	2.34E+00	3.24E+00	1.50E+00	9.65E-02	1.29E-01	
PRAIRIE ISLAND	-	-	-	<1.00E-01	<1.00E-01	4.50E-01	1.00E-01	1.33E-02	6.86E-01	7.25E-01	
RANCHO SECO	-	-	-	-	-	<1.00E-02	0.00E+00	0.00E+00	4.94E-03	9.00E-03	
R.E. GINNA	1.00E+01	9.00E-01	3.00E-01	1.00E-01	1.00E-01	4.20E-01	6.90E-01	6.47E-02	N/R	N/R	
SALEM	-	-	-	-	-	-	<1.00E-02	2.88E-00	6.07E-02	8.63E-02	
SAN ONOFRE	7.60E+00	1.50E+00	3.03E+01	1.60E+01	5.00E+00	1.22E+00	7.43E+00	9.84E+00	4.02E+00	3.96E+00	
ST. LUCIE	-	-	-	-	-	-	8.00E-02	5.80E+00	1.18E+01	1.10E+01	
SUNNY	-	-	2.00E-01	1.00E-01	3.80E+00	9.27E+00	3.37E+01	6.55E+01	2.80E+00	2.67E+00	
THREE MILE ISLAND 1	-	-	-	-	1.30E+00	7.00E-02	1.00E-01	1.94E-01	2.41E+00	2.53E+00	
THREE MILE ISLAND 2	-	-	-	-	-	-	-	-	6.14E-01	4.91E-01	
TROJAN	-	-	-	-	-	-	-	-	3.92E-01	3.31E-01	
TURKEY POINT	-	-	-	<1.00E-01	1.60E+00	3.07E+00	8.65E+00	8.90E+00	7.07E-01	5.55E-01	
YANKEE ROHE	<1.00E-01	<1.00E-01	<1.00E-01	<1.00E-01	<1.00E-01	2.00E-02	<1.00E-02	1.80E-02	3.32E+00	4.11E-01	
ZION	-	-	-	<1.00E-01	<1.00E-01	<1.00E-02	1.60E-01	9.50E-01	8.14E-02	1.17E-02	
	-	-	-	-	-	-	-	-	9.51E-01	7.00E-01	

N/R=NOT REPORTED

TABLE 9
SOLID WASTE SUMMARY 1979

BOILING WATER REACTORS

FACILITY	VOLUME (CUBIC METERS)	ACTIVITY (CURIES)	NO. OF SHIPMENTS
BIG ROCK POINT	8.99E+01	2.77E+02	8
BROWN'S FERRY	2.29E+03	4.17E+03	189
BRUNSWICK	3.09E+03	4.29E+03	310
COOPER	5.65E+02	9.69E+01	45
DRESDEN 1	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT
DRESDEN 2-3	1.04E+03	8.45E+02	169
DUANE ARNOLD	7.99E+02	8.01E+02	70
EDWIN I. HATCH	9.78E+02	2.70E+02	100
FORT ST. VRAIN *	0	0	0
HUMBOLDT BAY	9.06E+01	3.35E+03	15
JAMES A. FITZPATRICK	8.04E+02	1.06E+03	84
LACROSSE	5.09E+00	1.25E+02	16
MILLSTONE 1	2.11E+03	1.16E+03	162
MONTICELLO	4.74E+02	1.31E+04	44
NINE MILE POINT	4.97E+02	1.52E+03	50
OYSTER CREEK	1.13E+03	1.34E+03	153
PEACH BOTTOM	8.47E+04	8.03E+03	301
PILGRIM	3.03E+03	2.22E+04	117
QUAD-CITIES	7.82E+02	4.26E+03	196
VERMONT YANKEL	2.71E+02	9.99E+02	25

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 10
PRESSURIZED WATER REACTORS SOLID WASTE SUMMARY 1979

FACILITY	VOLUME (CUBIC METERS)	ACTIVITY (CURIES)	NO. OF SHIPMENTS
ARKANSAS ONE 1	N/R	N/R	N/R
ARKANSAS ONE 2	N/R	N/R	N/R
BEAVER VALLEY	2.44E+02	2.95E+02	19
CALVERT CLIFFS	4.32E+02	9.71E+02	31
CRYSTAL RIVER	1.24E+03	1.20E+03	119
DAVIS-BESSE	2.60E+02	2.86E+00	13
DONALD C. COOK	1.49E+04	3.37E+02	68
FORT CALHOUN	2.44E+02	2.99E+01	18
HADDAM NECK	1.29E+03	3.05E+02	52
H.B. ROBINSON	8.34E+02	8.72E+01	106
INDIAN POINT 1-2	1.17E+03	2.16E+03	117
INDIAN POINT 3	2.25E+02	1.63E+02	12
JOSEPH M. FARLEY	1.11E+03	2.32E+02	67
KEWAUNEE	1.70E+02	3.54E+02	9
MAINE YANKEE	3.63E+02	2.77E+03	24
MILLSTONE 2	2.46E+02	1.78E+03	28
NORTH ANNA	2.95E+02	5.89E+01	25
OCONEE	1.63E+03	2.59E+03	195
PALISADES	6.84E+02	3.92E+02	30
POINT BEACH	2.69E+02	1.22E+03	20
PRAIRIE ISLAND	1.99E+01	8.83E+01	3
RANCHO SECO	1.01E+02	4.03E+00	3
R.E. GINNA	3.08E+02	1.53E+02	18
SALEM	6.86E+02	1.28E+02	36
SAN ONOFRE	8.35E+01	9.24E+01	7
ST. LUCIE	3.08E+02	1.79E+02	15
SURRY	2.74E+03	3.45E+02	156
THREE MILE ISLAND 1	7.51E+02	3.12E+01	37
THREE MILE ISLAND 2	6.37E+02	3.30E+02	35
TROJAN	9.20E+02	2.48E+02	78
TURKEY POINT	2.36E+02	1.63E+02	15
YANKEE ROWE	5.97E+02	2.69E+03	104
ZION			
	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT

N/R=NOT REPORTED

TABLE 11

SOLID WASTE COMPARISON BY YEAR

BOILING WATER REACTORS FACILITY	VOLUME (CUBIC METERS) - ACTIVITY (CURIES)				
	1975	1976	1977	1978	1979
BIG ROCK POINT	NR	2.88E+01	7.22E+01	3.10E+01	8.99E+01
BROWN'S FERRY	3.63E+02	3.20E+02	1.82E+03	2.90E+03	2.29E+03
BRUNSWICK	4.11E+02	1.79E+03	2.47E+03	2.02E+03	3.09E+03
COOPER	2.90E+02	3.01E+02	2.83E+02	3.29E+02	5.65E+02
DRESDEN 1	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT
DRESDEN 2-3	5.85E+03	7.12E+03	2.25E+03	1.77E+03	1.04E+03
DUANE ARNOLD	2.62E+02	7.90E+01	5.45E+02	1.10E+03	7.99E+02
EDWIN I. HATCH	5.84E+02	2.71E+02	5.39E+02	7.50E+02	9.78E+02
FORT ST. VRAIN *	1.27E+02	4.31E+01	3.77E+02	1.78E+02	9.06E+01
HUMBOLDT BAY	5.10E+02	1.32E+02	1.23E+03	8.70E+02	8.04E+02
JAMES A. FITZPATRICK	NR	NR	4.65E+00	3.80E+01	5.09E+00
LACROSSE	NR	NR	1.77E+03	2.00E+03	2.11E+03
MILLSTONE 1	1.78E+03	2.58E+03	1.70E+03	2.00E+03	4.74E+02
MONTICELLO	3.81E+02	5.43E+03	3.79E+03	4.99E+02	4.97E+02
NINE MILE POINT	4.89E+02	3.26E+03	5.65E+02	3.85E+02	4.74E+02
OYSTER CREEK	3.43E+04	6.72E+02	1.74E+03	1.54E+03	1.13E+03
PEACH BOTTOM	5.82E+02	2.17E+02	2.52E+03	1.96E+03	8.47E+04
PILGRIM	4.56E+02	3.14E+03	9.12E+02	1.97E+03	3.03E+03
QUAD-CITIES	1.39E+03	2.25E+03	1.20E+03	1.34E+03	7.82E+02
VERMONT YANKEE	3.08E+02	2.25E+01	1.08E+02	3.99E+02	2.71E+02

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 12

SOLID WASTE COMPARISON BY YEAR

FACILITY	1975			1976			1977			1978			1979					
	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	
ARKANSAS ONE 1																		
ARKANSAS ONE 2																		
BEAVER VALLEY																		
CALVERT CLIFFS																		
CRYSTAL RIVER																		
DAVIS-BESSE																		
DONALD C. COOK																		
FORT CALHOUN																		
HADDAM NECK																		
H. B. ROBINSON																		
INDIAN POINT 1-2																		
INDIAN POINT 3																		
JOSEPH M. FARLEY																		
KERAUNEE																		
MAINE YANKEE																		
MILLSTONE 2																		
NORTH ANNA																		
OCONEE																		
PALISADES																		
POINT BEACH																		
PRAIRIE ISLAND																		
RANCHO SECO																		
R. E. GINNA																		
SALEM																		
SAN ONOFRE																		
ST. LUCIE																		
SURRY																		
THREE MILE ISLAND 1																		
THREE MILE ISLAND 2																		
TROJAN																		
TURKEY POINT																		
YANKEE ROWE																		
ZION																		

N/R=NOT REPORTED

TABLE 13

NET ELECTRICAL ENERGY GENERATION COMPARISON BY YEAR

BOILING WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
BIG ROCK POINT	09/27/62									4.01E+05	1.14E+0
BROWN'S FERRY	08/17/73									1.69E+07	2.04E+0
	07/20/74										
BRUNSWICK	08/08/76									9.91E+06	6.82E+0
	10/08/76										
	03/20/75										
COOPER	02/21/74									4.89E+06	4.99E+0
DRESDEN 1	10/15/59									7.59E+05	0.00::
DRESDEN 2-3	06/09/72									9.53E+06	8.42E+0
	11/16/71										
QUANE ARNOLD	03/23/74									1.23E+06	2.90E+0
EDWIN I. HATCH	09/12/74									4.77E+06	5.10E+0
	07/04/78										
FORT ST. VRAIN *	01/31/74									6.09E+05	1.24E+0
HUMBOLDT BAY	02/16/63									0.00	0.00::
JAMES A. FITZPATRICK	11/17/74									4.20E+06	2.96E+0
LACROSSE	07/11/67									1.74E+05	2.01E+0
MILLSTONE 1	10/26/70									4.65E+06	4.22E+0
MONTICELLO	12/10/70									3.86E+06	4.40E+0
NINE MILE POINT	09/05/69									4.47E+06	3.00E+0
OYSTER CREEK	05/03/69									3.65E+06	4.56E+0
PEACH BOTTOM	09/16/73									1.38E+07	1.47E+0
	08/07/74										
PILGRIM	06/16/72									4.38E+06	4.84E+0
QUAD-CITIES	10/18/71									9.15E+06	8.76E+0
	04/26/72										
VERMONT YANKEE	03/24/72									3.24E+06	3.45E+0

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* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 14

NET ELECTRICAL ENERGY GENERATION COMPARISON BY YEAR

PRESSURIZED WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	08/06/74									5.25E+06	3.32E+0
ARKANSAS ONE 2	12/05/78									3.98E+03	8.81E+0
BEAVER VALLEY	05/10/76									2.48E+06	1.79E+0
CALVERT CLIFFS	10/07/74									9.91E+06	9.68E+0
	11/30/76										
CRYSTAL RIVER	01/14/77									2.59E+06	3.76E+0
DAVIS-BESSE	08/12/77									2.61E+06	3.13E+0
DONALD C. COOK	01/18/75									1.01E+07	1.16E+0
	07/01/78										
FORT CALHOUN	08/06/73									2.85E+06	3.67E+0
HADDAM NECK	07/24/67									4.71E+06	4.12E+0
H.B. ROBINSON	09/20/70									3.98E+06	4.00E+0
INDIAN POINT 1-2	08/02/62									4.37E+06	4.80E+0
	05/22/73										
INDIAN POINT 3	04/06/76									5.46E+06	4.79E+0
JOSEPH M. FARLEY	08/09/77									5.92E+06	1.74E+0
KEWAUNEE	03/07/74									3.89E+06	3.44E+0
MAINE YANKEE	10/23/72									5.35E+06	4.54E+0
MILLSTONE 2										4.50E+06	4.36E+0
	10/17/75										
NORTH ANNA	04/05/78									3.66E+06	4.19E+0
OCONEE	04/19/73									1.59E+07	1.32E+0
	11/11/73										
	09/05/74										
PALISADES	05/24/71									2.62E+06	3.43E+0
POINT BEACH	11/02/70									7.65E+06	6.77E+0
	05/30/72										
PRAIRIE ISLAND	12/01/73									7.73E+06	7.10E+0
	12/17/74										
RANCHO SECO	09/16/74									4.99E+06	5.71E+0
R.E. GINNA	11/08/69									3.22E+06	2.96E+0
SALEM	12/11/76									4.53E+06	2.04E+0
SAN ONOFRE	06/14/67									2.68E+06	3.36E+0
ST. LUCIE	04/22/76									5.00E+06	4.88E+0
SURRY	07/01/72									1.01E+07	2.87E+0
	03/07/73										
THREE MILE ISLAND 1	06/05/74									5.67E+06	8.48E+0
THREE MILE ISLAND 2	03/28/78									5.77E+05	N/R
TROJAN	12/15/75									1.67E+06	5.27E+0
TURKEY POINT	10/20/72									8.29E+06	6.71E+0
	06/11/73										
YANKEE ROWE	08/19/60									1.19E+06	1.23E+0
ZION	06/19/73									1.35E+07	1.03E+0
	12/24/73										

RT

N/R=NOT REPORTED

TABLE 15
THERMAL ENERGY GENERATION COMPARISON BY YEAR

BOILING WATER REACTORS FACILITY	INITIAL CRITICALITY	MEGAWATT HOURS									
		1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
BIG ROCK POINT	09/27/62	1.18E+06	1.21E+06	1.20E+06	1.41E+06	1.13E+06	9.80E+05	8.30E+05	1.23E+06	1.37E+06	3.96E+06
BROWN'S FERRY	08/17/73				1.37E+06	1.64E+07	8.75E+06	1.34E+07	5.37E+07	5.32E+07	6.31E+06
	07/20/74										
BRUNSWICK	08/08/76						4.72E+06	7.81E+06	1.59E+07	3.07E+07	2.12E+06
	03/20/75										
COOPER	02/21/74					6.90E+06	1.24E+07	1.19E+07	1.45E+07	1.54E+07	1.58E+06
DRESDEN 1	10/15/59				2.43E+06	1.36E+06	2.56E+06	3.42E+06	2.21E+06	2.73E+06	0.00E+00
DRESDEN 2-3	06/09/72				2.83E+07	2.18E+07	1.70E+07	2.74E+07	2.89E+07	3.13E+07	2.77E+06
	11/16/71										
DUANE ARNOLD	03/23/74						7.42E+06	6.02E+06	9.32E+06	3.96E+06	9.07E+06
EDWIN I. HATCH	09/12/74						9.75E+06	1.38E+07	1.22E+07	3.37E+07	1.62E+06
	07/04/78										
FORT ST. VRAIN *	01/31/74										
HUMBOLDT BAY	02/16/63				1.47E+06	1.27E+06	1.32E+06	6.80E+05	0.00	2.04E+06	4.78E+06
JAMES A. FITZPATRICK	11/17/74						6.81E+06	1.26E+07	1.18E+07	0.00	0.00E+00
LACROSSE	07/11/67				6.90E+05	1.08E+06	9.20E+05	6.10E+05	3.43E+05	1.30E+07	8.97E+06
MILLSTONE 1	10/26/70				5.96E+06	1.12E+07	1.21E+07	1.16E+07	1.48E+07	6.54E+05	7.48E+06
MONTICELLO	12/10/70				9.90E+06	8.28E+06	8.88E+06	1.23E+07	1.10E+07	1.43E+07	1.30E+06
NINE MILE POINT	09/05/69				1.10E+07	1.05E+07	9.68E+06	1.31E+07	9.15E+06	1.18E+07	1.35E+06
OYSTER CREEK	05/03/69				1.09E+07	1.13E+07	9.81E+06	1.18E+07	9.82E+06	1.10E+07	9.57E+06
PEACH BOTTOM	09/16/73						3.34E+07	3.72E+07	2.86E+07	4.39E+07	4.58E+06
	08/07/74										
PILGRIM	06/16/72				1.25E+07	6.00E+06	8.10E+06	7.60E+06	8.26E+06	1.33E+07	1.47E+06
QUAD-CITIES	10/18/71				3.17E+07	2.61E+07	2.31E+07	2.59E+07	2.68E+07	3.14E+07	3.00E+06
	04/26/72										
VERMONT YANKEE	03/24/72				6.08E+06	8.20E+06	1.13E+07	1.02E+07	1.11E+07	1.00E+07	1.08E+06

* HIGH TEMPERATURE GAS COOLED REACTOR
N/R=NOT REPORTED

TABLE 16

THERMAL ENERGY GENERATION COMPARISON BY YEAR

PRESSURIZED WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	08/06/74					1.99E+06	1.54E+07	1.21E+07	1.64E+07	1.64E+07	1.05E+0
ARKANSAS ONE 2	12/05/78									4.45E+04	3.45E+0
BEAVER VALLEY	05/10/76							1.97E+06	1.01E+07	8.80E+06	6.11E+0
CALVERT CLIFFS	10/07/74						1.40E+07	1.98E+07	2.97E+07	3.14E+07	3.15E+0
	11/30/76										
CRYSTAL RIVER	01/14/77								1.26E+07	7.97E+06	1.17E+0
DAVIS-BESSE	08/12/77								1.66E+06	8.52E+06	1.00E+0
DONALD C. COOK	01/18/75						1.46E+07	2.15E+07	1.55E+07	3.29E+07	3.68E+0
	07/01/78										
FORT CALHOUN	08/06/73				2.03E+06	7.58E+06	6.71E+06	7.15E+06	9.40E+06	8.98E+06	1.16E+0
HADDAM NECK	07/24/67	1.14E+07	1.34E+07	1.38E+07	7.73E+06	1.42E+07	1.34E+07	1.30E+07	1.31E+07	1.51E+07	1.32E+0
H.B.ROBINSON	09/20/70	6.00E+04	7.85E+06	1.55E+07	1.25E+07	1.56E+07	1.36E+07	1.59E+07	1.43E+07	1.33E+07	1.30E+0
INDIAN POINT 1-2	08/02/62				1.47E+06	1.15E+07	1.64E+07	7.60E+06	3.50E+07	1.48E+07	1.61E+0
	05/22/73										
INDIAN POINT 3	04/06/76									1.70E+07	1.57E+0
JOSEPH M. FARLEY	08/09/77									1.95E+07	5.77E+0
KEWAUNEE	03/07/74					5.03E+06	1.08E+07	1.08E+07	1.11E+07	1.24E+07	1.09E+0
MAINE YANKEE	10/23/72			1.44E+06	1.08E+07	1.14E+07	1.47E+07	1.94E+07	1.65E+07	1.69E+07	1.41E+0
MILLSTONE 2							6.40E+05	1.52E+07	1.42E+07	1.44E+07	1.38E+0
	10/17/75										
NORTH ANNA	04/05/78									1.22E+07	1.41E+0
OCONEE	04/19/73				6.62E+06	1.70E+07	4.68E+07	3.97E+07	4.00E+07	4.84E+07	4.37E+0
	11/11/73										
	09/05/74										
PALISADES	05/24/71			5.91E+06	7.80E+06	4.00E+05	8.91E+06	9.66E+06	1.73E+07	9.44E+06	1.20E+0
POINT BEACH	11/02/70	6.30E+05	1.00E+07	9.96E+06	1.84E+07	2.04E+07	2.09E+07	2.18E+07	2.23E+07	2.33E+07	2.08E+0
	05/30/72										
PRAIRIE ISLAND	12/01/73				1.28E+05	5.26E+06	2.25E+07	2.06E+07	2.46E+07	2.52E+07	1.12E+0
	12/17/74										
RANCHO SECO	09/16/74						4.11E+06	6.91E+06	1.81E+07	1.59E+07	1.79E+0
R.E.GINNA	11/08/69	6.84E+06	8.50E+06	7.71E+06	1.08E+07	6.71E+06	9.71E+06	6.98E+06	1.11E+07	1.05E+07	9.35E+0
SALEM	12/11/76							5.00E+04	6.70E+06	1.43E+07	6.60E+0
SAN ONOFRE	06/14/67	9.19E+06	9.60E+06	8.53E+06	7.09E+06	9.73E+06	1.00E+07	7.75E+06	7.29E+06	8.54E+06	1.05E+0
ST. LUCIE	04/22/76							3.50E+05	1.75E+07	1.64E+07	1.60E+0
SURRY	07/01/72			1.29E+06	2.26E+07	1.92E+07	2.90E+07	2.51E+07	3.10E+07	3.27E+07	9.32E+0
	03/07/73										
THREE MILE ISLAND 1	06/05/74					6.20E+06	1.76E+07	1.39E+07	1.76E+07	1.83E+07	2.83E+0
THREE MILE ISLAND 2	03/28/78									3.16E+06	N/R::
TROJAN	12/15/75							7.54E+06	2.12E+07	5.63E+06	1.70E+0
TURKEY POINT	10/20/72			2.90E+05	1.53E+07	2.55E+07	2.78E+07	2.68E+07	2.70E+07	2.81E+07	2.28E+0
	06/11/73										
YANKEE ROWE	08/19/60	4.13E+06	5.02E+06	2.40E+06	3.57E+06	3.07E+06	4.02E+06	4.25E+06	3.52E+06	4.16E+06	4.17E+0
ZION	06/19/73				2.73E+06	1.69E+07	3.28E+07	3.11E+07	3.66E+07	4.30E+07	3.31E+0
	12/24/73										

APPENDIX A
INDIVIDUAL PLANT SUMMARIES

INSTALLATION ARKANSAS ONE 1

LOCATION 6 MI WNW RUSSELLVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-313
COOLING WATER SOURCE DARDANELLE RESERVOIR

LICENSEE ARKANSAS POWER & LIGHT
LICENSED POWER (MWT) 2568.0
INITIAL CRITICALITY 08/06/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	5.80E-06
AR-41	8.04E+00
BA-133	0.
BA-139	0.
BA-140	0.
BE-7	0.
BI-214	0.
BR-84	0.
CD-109	0.
CD-113M	0.
CE-139	0.
CE-144	0.
CO-57	1.28E-11
CO-58	3.75E-05
CO-60	4.81E-05
CR-51	0.
CS-134	8.53E-06
CS-136	0.
CS-137	2.35E-05
CS-138	0.
CU-64	0.
EU-152	0.
FE-59	0.
F-18	0.
HG-203	0.
I-131	4.30E-03
I-132	0.
I-133	1.79E-04
I-134	0.
I-135	0.
KR-85	5.40E+00
KR-85M	8.54E+01
KR-87	1.33E+01
KR-88	4.62E+01
K-40	0.
LA-140	0.
MN-54	7.97E-07
MN-56	0.
MO-99	0.
NA-24	0.
NB-94	0.
NB-95	0.
NB-97	0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
NI-65	0.
NP-239	0.
PB-212	0.
PB-214	0.
RA-226	0.
RB-88	0.
RB-89	0.
RU-103	0.
RU-106	0.
SB-122	0.
SB-124	0.
SB-125	0.
SE-75	0.
SN-113	0.
SR-85	0.
SR-89	4.56E-06
SR-90	1.43E-12
SR-91	0.
SR-92	0.
TC-99M	0.
TE-132	0.
TH-228	0.
U-235	0.
W-187	0.
XE-131M	2.96E+00
XE-133	7.81E+03
XE-133M	7.63E+01
XE-135	6.55E+02
XE-135M	0.
XE-138	0.
Y-88	1.36E-06
Y-91M	0.
Y-92	0.
ZN-65	0.
ZR-95	0.
ZR-97	0.

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.07E-02
BA-133	8.39E-05
BA-140	2.26E-03
BE-7	5.99E-04
CE-144	9.74E-04
CO-57	2.90E-03
CO-58	1.57E+00
CO-60	4.56E-01
CR-51	2.94E-01
CS-134	1.01E-01
CS-136	7.62E-06

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CS-137		1.52E-01
CS-138		4.19E-04
CU-64		0.
EU-152		1.71E-05
FE-59		1.90E-02
I-131		2.83E-01
I-132		1.02E-05
I-133		3.15E-04
I-134		0.
I-135		1.63E-05
KR-85		1.15E-02
KR-85M		3.24E-03
KR-87		1.89E-05
KR-88		2.79E-04
LA-140		6.52E-03
MN-54		3.97E-02
MN-56		0.
MO-99		3.26E-04
NA-24		6.00E-05
NB-95		5.51E-02
NB-97		4.39E-03
NI-65		1.60E-05
NP-239		2.47E-02
RU-103		3.32E-03
RU-106		1.06E-03
SE-75		9.12E-04
SR-89		2.97E-03
SR-90		4.02E-04
SR-91		2.17E-05
SR-92		9.83E-04
W-187		0.
XE-131M		1.96E+00
XE-133		2.32E+02
XE-133M		1.24E+00
XE-135		4.41E-01
ZN-65		3.38E-04
ZR-95		3.11E-02
ZR-97		3.02E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.27E+01
TOTAL LIQUID RELEASE	1.68E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.10E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.28E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= ARKANSAS ONE 1

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2
 TYPE PWR
 DOCKET NO. 50-368
 COOLING WATER SOURCE COOLING TOWER

LICENSEE ARKANSAS POWER & LIGHT
 LICENSED POWER (MWT) 2815.0
 INITIAL CRITICALITY 12/05/78

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	0.
AR-41	1.42E+02
BA-133	0.
BA-139	0.
BA-140	0.
BE-7	0.
BI-214	0.
BR-84	0.
CD-109	0.
CD-113M	0.
CE-139	0.
CE-144	0.
CO-57	0.
CO-58	2.06E-05
CO-60	3.53E-06
CR-51	0.
CS-134	6.29E-06
CS-136	0.
CS-137	1.13E-05
CS-138	0.
CU-64	0.
EU-152	0.
FE-59	0.
F-18	0.
HG-203	0.
I-131	4.64E-03
I-132	0.
I-133	8.33E-06
I-134	0.
I-135	0.
KR-85	0.
KR-85M	0.
KR-87	0.
KR-88	0.
K-40	0.
LA-140	0.
MN-54	0.
MN-56	0.
MO-99	0.
NA-24	0.
NB-94	0.
NB-95	0.
NB-97	0.

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES	EFFLUENTS RELEASED	ACTIVITY (CI)
CS-137		2.58E-02
CS-138		1.20E-04
CU-64		0.
EU-152		0.
FE-59		1.48E-02
I-131		2.35E-01
I-132		8.80E-05
I-133		4.69E-02
I-134		9.40E-05
I-135		5.09E-03
KR-85		8.61E-04
KR-85M		3.29E-05
KR-87		0.
KR-88		2.03E-05
LA-140		1.17E-03
MN-54		3.67E-02
MN-56		1.09E-04
MO-99		8.27E-04
NA-24		6.72E-02
NB-95		1.26E-03
NB-97		5.87E-04
NI-65		3.43E-05
NP-239		0.
RU-103		1.38E-04
RU-106		0.
SE-75		0.
SR-89		6.52E-03
SR-90		0.
SR-91		4.71E-04
SR-92		7.19E-05
W-187		1.50E-03
XE-131M		2.14E-03
XE-133		9.63E-01
XE-133M		3.13E-03
XE-135		1.52E-02
ZN-65		3.64E-05
ZR-95		8.53E-04
ZR-97		0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.97E+00
TOTAL LIQUID RELEASE	5.27E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.95E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.28E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= ARKANSAS ONE 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-334
 COOLING WATER SOURCE OHIO RIVER

LICENSEE DUQUESNE LIGHT * OHIO EDISON * PENNSYLVANIA POWER
 LICENFFD POWER (MWT) 2652.0
 INIT CRITICALITY 05/10/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.97E-02
BA-LA-140	N/D
CO-58	6.51E-06
CO-60	1.16E-06
CS-134	N/D
CS-137	N/D
I-131	3.97E-04
I-133	3.98E-05
I-135	4.69E-05
KR-85	1.40E+01
KR-85M	N/D
KR-87	N/D
KR-88	N/D
SR-89	9.50E-07
SR-90	9.16E-06
XE-131M	4.70E+02
XE-133	1.22E+03
XE-133M	4.39E+01
XE-135	7.39E-01
XE-135M	N/D
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	N/D
CE-141	2.44E-04
CO-58	4.44E-02
CO-60	6.13E-02
CR-51	1.29E-03
CS-134	6.25E-04
CS-137	2.84E-03
FE-59	9.02E-04
I-131	8.58E-04
I-133	8.05E-04
MN-54	7.42E-03
MO-99	N/D
SR-89	1.88E-05
SR-90	4.20E-05
TC-99M	N/D
XE-133	2.98E-02
XE-135	8.11E-05
ZN-65	N/D
ZR-NB-95	5.82E-05

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= BEAVER VALLEY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION		
19	TRUCK	BARNWELL S.C.		
ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)				
			JAN-JUNE	JULY-DEC
A				
CO-58		%	3.80E+01	1.27E+01
CO-60		%	4.30E+01	8.00E+01
MN-54		%	6.00E+00	5.90E+00
B				
CO-58		%	3.80E+01	1.27E+01
CO-60		%	4.30E+01	8.00E+01
MN-54		%	6.00E+00	5.80E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 CI	5.67E+01 2.41E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 CI	1.88E+02 5.44E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 CI	
D. OTHER	M3 CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-155
 COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE CONSUMERS POWER
 LICENSED POWER (MWT) 240.0
 INITIAL CRITICALITY 09/27/62

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	3.77E-04
BR-82	1.27E-03
CO-60	3.61E-04
CR-51	6.72E-06
CS-134	4.09E-06
CS-136	6.81E-06
CS-137	3.65E-04
I-131	2.99E-04
I-133	2.79E-03
I-135	3.50E-03
KR-83M	2.68E+02
KR-85	<1.00E+00
KR-85M	3.42E+02
KR-87	8.43E+02
KR-88	4.57E+02
KR-89	6.38E+02
KR-90	7.00E+02
KR-91	8.66E+00
LA-140	2.53E-03
MN-54	5.62E-05
NP-239	5.36E-06
N-13	4.39E+02
UNIDENTIFIED	1.31E-03
XE-131M	<3.00E+00
XE-133	1.58E+02
XE-133M	7.73E+00
XE-135	5.34E+02
XE-135M	1.09E+03
XE-137	1.02E+03
XE-138	1.73E+03
XE-139	9.35E+02
XE-140	9.38E+01
ZN-65	1.07E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CO-58	1.70E-03
CO-60	1.30E-01
CR-51	5.77E-03
CS-134	5.01E-02
CS-137	4.73E-01
FE-59	5.01E-03
I-133	2.82E-04
LA-140	1.63E-04
MN-54	5.89E-02

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	3.67E-05
NP-239	1.27E-03
SB-124	4.44E-03
SR-89	4.29E-04
SR-90	1.14E-03
UNIDENTIFIED	5.35E-01
XE-133	5.45E-04
ZN-65	9.28E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.15E+00
TOTAL LIQUID RELEASE	5.45E+00

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	1.07E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.48E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION BROWN'S FERRY

LOCATION 10 MI NW DECATUR, AL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-259
COOLING WATER SOURCE TENNESSEE RIVER
UNIT NUMBER 2
TYPE BWR
DOCKET NO. 50-260
COOLING WATER SOURCE TENNESSEE RIVER
UNIT NUMBER 3
TYPE BWR
DOCKET NO. 50-296
COOLING WATER SOURCE TENNESSEE RIVER

LICENSEE TENNESSEE VALLEY AUTHORITY
LICENSED POWER (MWT) 3293.0
INITIAL CRITICALITY 08/17/73

LICENSEE TENNESSEE VALLEY AUTHORITY
LICENSED POWER (MWT) 3293.0
INITIAL CRITICALITY 07/20/74

LICENSEE TENNESSEE VALLEY AUTHORITY
LICENSED POWER (MWT) 3293.0
INITIAL CRITICALITY 08/08/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.70E+01
BA-140	<1.16E+03
CO-58	<3.55E-03
CO-60	2.49E-02
CS-134	<2.78E-03
CS-137	1.60E-03
FE-59	<8.17E-03
H-3	3.39E+01
I-131	2.73E-02
I-133	1.83E-02
I-135	8.12E-03
KR-85	<2.20E+05
KR-85M	<1.36E+03
KR-87	<1.96E+03
KR-88	<2.72E+03
LA-140	<1.02E-02
MN-54	<4.40E-03
NB-95	<4.73E-03
SR-89	9.79E-05
SR-90	1.39E-04
XE-133	<8.62E+03
XE-135	<1.02E+03
XE-135M	<3.27E+03
XE-138	<1.65E+04
ZN-65	2.40E-02
ZR-95	<6.97E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AS-74	2.01E-03
AS-76	1.24E-02
BA-LA-140	<6.35E-02
CE-141	<1.12E-02
CO-58	3.00E-03
CO-60	6.51E-02
CR-51	3.33E-01
CS-134	<3.42E-01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CS-136		<1.17E-02
CS-137		9.16E-03
CU-64		4.21E-01
FE-59		4.71E-03
F-18		3.87E-02
I-131		<3.35E-01
I-133		<2.11E-02
MN-54		1.47E-02
MN-56		<9.26E-02
MO-99		6.32E-03
NA-24		<2.83E-01
SB-122		<1.10E-02
SB-124		<1.12E-02
SR-89		2.32E-03
SR-90		3.77E-03
TC-99M		6.32E-03
XE-133		<1.29E-01
XE-135		4.56E-03
ZN-65		1.53E-01
ZR-NB-95		<3.35E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.39E+01
TOTAL LIQUID RELEASE	1.32E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.75E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.39E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS 189
MODE OF TRANSPORTATION TRUCK
DESTINATION BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG-110M	%	1.13E+00	1.07E+00
CO-58	%	2.22E+00	1.81E+00
CO-60	%	5.02E+00	5.30E+00
CR-51	%	4.94E+01	2.96E+01
CS-134	%	2.83E+00	4.13E+00
CS-137	%	4.90E+00	6.36E+00
FE-59	%	2.20E-01	1.67E-01
I-131	%	1.84E+00	2.31E+00
LA-140	%	1.94E-01	3.67E-01
MN-54	%	1.38E+00	1.11E+00
NB-95	%	1.60E+00	1.04E+00
SB-124	%	8.94E-02	8.31E-02
SR-90	%	3.63E-02	3.05E-02
UNIDENTIFIED	%	1.08E+01	1.91E+00
ZN-65	%	1.86E+01	4.40E+01
ZR-95	%	1.31E+00	7.54E-01
B			
AG-110M	%	1.26E+00	9.70E-01
CO-58	%	2.38E+00	1.71E+00
CO-60	%	6.77E+00	5.08E+00
CR-51	%	3.74E+01	2.68E+01
CS-134	%	4.10E+00	3.99E+00
CS-137	%	6.68E+00	6.07E+00
FE-59	%	2.45E-01	5.53E-01
I-131	%	1.12E+00	2.34E+00
LA-140	%	2.13E-01	3.73E-01
MN-54	%	1.89E+00	1.06E+00
NB-95	%	2.24E+00	9.74E-01
SB-124	%	1.01E-01	7.66E-02
SR-90	%	3.72E-02	2.64E-02
UNIDENTIFIED	%	1.22E+01	2.40E+00
ZN-65	%	2.17E+01	4.72E+01
ZR-95	%	1.61E+00	6.82E-01
C			
SPENT FUEL RACKS	%		9.98E+01
D			
AG-110M	%	1.35E+00	1.22E+00
CO-58	%	2.50E+00	1.96E+00
CO-60	%	7.85E+00	5.64E+00
CR-51	%	3.07E+01	3.40E+01
CS-134	%	4.87E+00	4.33E+00
CS-137	%	7.80E+00	6.80E+00
FE-59	%	2.59E-01	1.92E-01
I-131	%	7.05E-01	2.26E+00
LA-140	%	2.19E-01	3.59E-01
MN-54	%	2.21E+00	1.18E+00
N/A=NOT APPLICABLE			
N/D=NOT DETECTED			
N/R=NOT REPORTED			

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

NB-95	%	2.64E+00	1.11E+00
SB-124	%	1.09E-01	9.02E-02
SR-90	%	3.97E-02	3.44E-02
UNIDENTIFIED	%	1.31E+01	1.12E+00
ZN-65	%	2.38E+01	3.88E+01
ZR-95	%	1.80E+00	8.77E-01

TYPE OF WASTE	UNIT	YEAR TOTAL	
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	6.99E+02	
	C1	3.79E+03	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	6.10E+02	
	C1	3.47E+02	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	2.22E+02	
	C1	5.90E+00	
D. OTHER	M3	7.57E+02	
	C1	2.45E+01	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-325
COOLING WATER SOURCE CAPE FEAR RIVER
UNIT NUMBER 2
TYPE BWR
DOCKET NO. 50-324
COOLING WATER SOURCE CAPE FEAR RIVER

LICENSEE CAROLINA POWER & LIGHT
LICENSED POWER (MWT) 2436.0
INITIAL CRITICALITY 10/08/76

LICENSEE CAROLINA POWER & LIGHT
LICENSED POWER (MWT) 2436.0
INITIAL CRITICALITY 03/20/75

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	6.53E-05
AR-41	1.10E+03
BA-LA-140	8.60E-03
BA-140	N/D
CD-109	3.23E-04
CE-139	1.07E-03
CE-144	2.31E-05
CO-57	1.23E-05
CO-58	5.64E-03
CO-60	1.93E-02
CR-51	8.37E-02
CS-134	1.77E-03
CS-136	N/D
CS-137	2.18E-03
FE-59	7.14E-03
HG-203	2.63E-06
I-131	2.83E-01
I-132	3.59E-02
I-133	4.83E-01
I-135	1.13E-01
KR-85	N/D
KR-85M	4.25E+03
KR-87	8.53E+03
KR-88	7.59E+03
LA-140	N/D
MN-54	1.94E-02
NB-95	N/D
RH-109	1.97E-05
SB-122	2.54E-06
SB-124	3.74E-05
SN-113	1.21E-07
SN-113M	7.92E-08
SN-117M	1.22E-05
SR-85	7.55E-07
SR-89	6.67E-03
SR-90	3.69E-05
UNIDENTIFIED	7.35E-03
XE-133	2.26E+04
XE-133M	7.75E+02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
XE-135	3.29E+04
XE-135M	2.40E+04
XE-138	6.49E+03
Y-88	4.87E-06
ZN-65	1.33E-03
ZN-69M	3.64E-05
ZR-NB-95	2.40E-05
ZR-95	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.43E-04
AR-41	1.12E-03
AS-76	9.84E-03
BA-LA-140	N/D
BA-139	2.96E-06
CE-139	5.55E-07
CE-141	N/D
CE-144	N/D
CO-57	N/D
CO-58	9.71E-02
CO-60	4.91E-01
CR-51	3.44E-01
CS-134	3.29E-01
CS-136	3.68E-04
CS-137	6.03E-01
CS-138	N/D
CU-64	3.58E-01
FE-59	2.91E-02
F-18	1.66E-01
HG-203	4.76E-06
IN-113M	1.31E-05
I-131	2.17E-01
I-132	6.30E-07
I-133	1.77E-02
KR-85	2.41E-02
KR-85M	3.77E-05
MN-54	9.03E-01
MN-56	6.39E-04
MO-99	2.95E-03
NA-24	1.62E+00
NB-95	N/D
NB-97	9.56E-04
NB-97M	4.32E-04
NI-65	N/D
NP-239	N/D
SB-122	4.04E-02
SB-124	7.89E-05
SN-113	8.53E-06
SN-117M	1.06E-04

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

INSTALLATION= BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
310 TRUCK BARNWELL, S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A+B			
CO-58	%	5.95E+00	4.71E+00
CO-60	%	2.61E+01	1.55E+01
CR-51	%	1.94E+01	5.01E+01
CS-134	%	3.71E+00	1.42E+00
CS-137	%	4.56E+00	1.96E+00
FE-59	%	6.34E+00	3.74E+00
I-131	%		1.09E+00
MN-54	%	3.07E+01	2.03E+01
NB-95	%	2.14E-01	1.05E-02
SB-122	%	5.30E-01	2.87E-01
ZN-65	%	2.38E+00	9.41E-01
ZR-95	%		2.50E-03

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	9.55E+02
	CI	4.23E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	2.14E+03
	CI	5.68E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	0.
	CI	0.
D. OTHER	M3	0.
	CI	0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-317
COOLING WATER SOURCE CHESAPEAKE BAY
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-318
COOLING WATER SOURCE CHESAPEAKE BAY

LICENSEE BALTIMORE GAS & ELECTRIC
LICENSED POWER (MWT) 2700.0
INITIAL CRITICALITY 10/07/74

LICENSEE BALTIMORE GAS & ELECTRIC
LICENSED POWER (MWT) 2700.0
INITIAL CRITICALITY 11/30/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.27E-01
BA-139	5.05E-06
BA-140	3.29E-02
BR-82	1.08E-04
CO-58	2.47E-03
CO-60	6.31E-04
CR-51	5.12E-06
CS-134	2.26E-05
CS-137	3.06E-04
CS-138	1.25E-04
I-131	3.00E-01
I-132	7.65E-03
I-133	1.07E-01
I-134	1.97E-06
I-135	3.88E-03
KR-85	9.61E-01
KR-85M	3.55E+01
KR-87	1.96E-03
KR-88	1.24E+00
LA-140	5.00E-05
MN-54	2.32E-05
MN-56	3.27E-06
MO-99	1.95E-06
NA-24	2.39E-06
NB-95	4.50E-06
RB-88	1.57E+00
RU-103	4.17E-04
RU-106	4.08E-06
SR-85	9.19E-03
SR-89	4.42E-02
SR-90	8.59E-02
SR-91	4.26E-05
TE-132	2.39E-05
XE-131M	1.30E+00
XE-133	9.81E+03
XE-133M	3.73E+00
XE-135	3.58E+02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	9.53E-02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= CALVERT CLIFFS

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
31 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A			JAN-JUNE	JULY-DEC
BA-140	%		1.61E+00	
CO-58	%		3.05E+01	6.25E+01
CO-60	%		1.48E+01	7.68E+00
CR-51	%			1.57E+00
CS-134	%		1.36E+01	5.00E+00
CS-137	%		2.20E+01	8.09E+00
I-131	%		4.78E+00	4.10E+00
LA-140	%		2.58E+00	
MN-54	%		8.04E+00	3.79E+00
RU-106	%			2.17E+00
SB-125	%			2.36E+00
B				
CO-60	%		1.00E+02	1.00E+02
C				
CO-60	%		1.00E+02	1.00E+02

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	4.11E+01
	C1	2.95E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	3.06E+02
	C1	5.34E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	8.49E+01
	C1	6.23E+02
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-315
 COOLING WATER SOURCE LAKE MICHIGAN
 UNIT NUMBER 2
 TYPE PWR
 DOCKET NO. 50-316
 COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE INDIANA & MICHIGAN ELECTRIC
 LICENSED POWER (MWT) 3250.0
 INITIAL CRITICALITY 01/18/75

LICENSEE INDIANA & MICHIGAN ELECTRIC
 LICENSED POWER (MWT) 3391.0
 INITIAL CRITICALITY 07/01/79

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.19E-01
CE-139	1.25E-03
CE-144	4.81E-04
CO-57	1.50E-05
CO-58	8.19E-03
CO-60	3.96E-03
CR-51	1.93E-02
CS-134	4.11E-04
CS-137	7.55E-04
FE-59	2.26E-04
I-125	5.41E-04
I-129	9.34E-03
I-130	1.45E-05
I-131	1.45E-02
I-133	7.18E-04
KR-85	8.83E+03
KR-85M	2.18E-01
KR-87	4.32E-04
KR-88	2.00E-03
MN-54	1.28E-03
NA-24	1.77E-02
NB-95	6.01E-04
RB-88	1.16E-03
SN-113	3.95E-05
SR-89	6.98E-04
SR-90	1.17E-04
XE-133	1.89E+03
XE-133M	2.38E+00
XE-135	2.11E+02
ZN-65	1.16E-04
ZR-NB-95	1.09E-03
ZR-95	4.98E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	9.87E-02
CD-109	3.61E-04
CO-57	2.28E-03
CO-58	8.79E-01

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CO-60	5.27E-01
CR-51	1.37E-01
CS-134	1.79E-01
CS-136	9.68E-03
CS-137	1.88E-01
FE-59	1.93E-02
I-131	1.22E-02
I-133	6.48E-04
MN-54	7.91E-02
NA-24	1.40E-02
SB-124	1.37E-03
SN-113	8.92E-04
SR-89	2.56E-04
SR-90	1.19E-04
ZN-65	5.76E-03
ZR-NB-95	8.00E-02
ZR-97	3.10E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.58E+01
TOTAL LIQUID RELEASE	1.22E+03

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	1.63E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.27E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= DONALD C. COOK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
68 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
	CO-58	% 2.00E+00	2.50E+01
	CC-60	% 2.00E+00	2.00E+01
	CS-134	% 3.90E+01	2.00E+01
	CS-137	% 5.70E+01	3.50E+01
B			
	CO-58	% 5.00E+01	7.50E+01
	CO-60	% 3.00E+01	2.00E+01
	CS-137	% 2.00E+01	5.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.45E+04
	C1	2.87E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.05E+03
	C1	5.00E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	C1	
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION COOPER

LOCATION 70 MI S OMAHA, NB

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-298
COOLING WATER SOURCE MISSOURI RIVER

LICENSEE NEBRASKA PUBLIC POWER + IOWA POWER + LIGHT
LICENSED POWER (MWT) 2381.0
INITIAL CRITICALITY 02/21/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	2.13E-05
CO-58	3.91E-05
CO-60	7.82E-04
CR-51	1.23E-04
CS-134	4.82E-07
CS-137	1.26E-06
I-131	5.75E-02
I-133	1.12E-02
I-135	<1.49E-01
KR-83M	6.85E+02
KR-85	1.07E+02
KR-85M	1.99E+03
KR-87	2.71E+03
KR-88	5.09E+03
KR-89	1.48E+00
MN-54	2.10E-04
SR-89	5.27E-04
SR-90	4.13E-05
XE-131M	4.52E+01
XE-133	8.38E+03
XE-133M	2.81E+02
XE-135	9.68E+03
XE-135M	2.53E+02
XE-137	6.26E+00
XE-138	1.22E+03
ZN-65	8.95E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	5.65E-03
BA-LA-140	<2.96E-02
CE-141	<8.03E-03
CO-58	8.48E-03
CO-60	2.86E-01
CR-51	<8.23E-02
CS-134	1.85E-01
CS-136	1.11E-03
CS-137	2.67E-01
FE-59	<2.30E-01
I-131	3.32E-02
MN-54	6.97E-02
MN-56	1.42E-04
MO-99	<1.44E-01
NA-24	1.07E-03
NB-95	<4.91E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SB-124	3.04E-03
SR-89	9.60E-02
SR-90	7.42E-03
SR-92	3.93E-03
TC-99M	<5.21E-03
UNIDENTIFIED	<8.26E-01
XE-133	<6.77E-02
XE-135	<7.39E-03
ZN-65	<1.74E-01
ZR-95	<5.83E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.79E+00
TOTAL LIQUID RELEASE	6.63E+00

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	5.85E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.61E+10

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
MO-99		3.63E-04
NA-24		2.28E-05
SR-89		4.81E-02
SR-90		6.89E-03
TC-99M		3.71E-04
W-187		5.32E-06
XE-133		2.84E-01
XE-135		2.50E-03
ZN-65		2.06E-05
ZR-NB-95		6.83E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.01E+01
TOTAL LIQUID RELEASE	1.66E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.04E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	9.36E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= CRYSTAL RIVER

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS (DISPOSITION)
NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION
NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
119 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
	BA-140	% 1.00E+00	
	CO-58	% 2.50E+01	1.74E+01
	CO-60	% 5.00E+00	1.13E+01
	CR-51	% 1.00E+00	
	CS-134	% 2.50E+01	2.60E+01
	CS-137	% 2.50E+01	4.20E+01
	FE-59	% 1.00E+00	
	I-131	% 5.00E+00	2.88E+00
	LA-140	% 1.00E+00	
	MN-54	% 5.00E+00	5.00E-01
	SB-124	% 1.00E+00	
	ZR-NB-95	% 5.00E+00	
B			
	CO-58	%	1.70E+01
	CO-60	%	5.00E+00
	CS-134	%	2.70E+01
	CS-137	%	5.00E+01
	MN-54	%	1.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	7.40E+02
	C1	1.18E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.95E+02
	C1	1.76E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	C1	
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-346
 COOLING WATER SOURCE LAKE ERIE

LICENSEE TOLEDO EDISON AND CLEVELAND ELECTRIC ILLUMINATING
 LICENSED POWER (MWT) 2772.0
 INITIAL CRITICALITY 38/12/77

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.44E-01
BA-LA-140	<1.81E-04
CS-134	<3.36E-05
CS-137	<2.47E-05
I-131	5.02E-03
I-133	6.22E-04
I-135	<1.24E-04
KR-85	<1.50E+03
KR-85M	5.83E-03
KR-87	<2.33E+01
KR-88	<1.17E+01
SR-89	<4.10E-07
SR-90	<9.77E-07
XE-131M	5.00E-01
XE-133	7.09E+01
XE-137M	6.13E-01
XE-135	3.12E-01
XE-135M	4.30E-03
XE-138	5.60E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	2.91E-05
BA-139	1.69E-05
CE-141	7.49E-06
CO-58	2.26E-02
CO-60	2.47E-03
CR-51	3.18E-04
CS-134	1.29E-03
CS-137	3.24E-03
FE-59	1.44E-04
I-131	3.51E-03
I-133	1.97E-04
MN-54	6.21E-03
MO-99	<7.05E+01
NA-24	9.44E-05
SR-89	<3.77E-05
SR-90	<4.57E-05
TC-99M	1.14E-05
TE-132	7.63E-06
XE-133	2.44E-05
XE-135	<4.55E-04
ZN-65	4.12E-05
ZR-NB-95	1.70E-04

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION DAVIS-BESSE

LOCATION 21 MI E TOLEDO, OH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM (C1)
TOTAL AIRBORNE RELEASE 1.09E+01
TOTAL LIQUID RELEASE 2.45E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION) LITERS 4.17E+06
VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 3.84E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= DAVIS-BESSE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION

13 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC	
A				
	CO-58	%	7.20E+01	2.84E+01
	CO-60	%	5.00E+00	
	CS-137	%		2.37E+01
	MN-54	%	1.90E+01	
	SR-90	%		2.20E+01
B				
	CO-58	%	8.50E+01	8.50E+01
	CO-60	%	5.00E+00	5.00E+00
	MN-54	%	1.00E+01	1.00E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	9.54E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	C1	3.24E-01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.65E+02
D. OTHER	C1	2.54E+00
	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION DRESDEN 1

LOCATION 14 MI SW JOLIET, I

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-10
COOLING WATER SOURCE KANKAKEE RIVER

LICENSEE COMMON WEALTH EDISON
LICENSED POWER (MWT) 700.0
INITIAL CRITICALITY 10/15/59

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CO-58	6.70E-04
CO-50	9.94E-03
CS-134	1.98E-03
CS-137	4.36E-03
FE-59	1.30E-04
I-131	3.11E-03
MN-54	1.45E-03
RU-103	6.20E-04
SR-89	1.06E-03
SR-90	4.40E-04
XE-133	1.83E+02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CE-141	1.60E-04
CE-144	1.05E-03
CO-58	1.39E-03
CO-60	1.23E-02
CS-134	2.05E-03
CS-137	5.72E-03
FE-59	9.00E-05
MN-54	1.05E-03
NB-95	3.60E-04
RU-103	9.00E-05
SR-89	1.79E-03
SR-90	2.00E-04
ZR-95	2.90E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.69E+00
TOTAL LIQUID RELEASE	1.50E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.70E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.85E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2
TYPE BWR
DOCKET NO. 50-237
COOLING WATER SOURCE KANKAKEE RIVER
UNIT NUMBER 3
TYPE BWR
DOCKET NO. 50-249
COOLING WATER SOURCE KANKAKEE RIVER

LICENSEE COMMONWEALTH EDISON
LICENSED POWER (MWT) 2527.0
INITIAL CRITICALITY 06/09/72

LICENSEE COMMONWEALTH EDISON
LICENSED POWER (MWT) 2527.0
INITIAL CRITICALITY 11/16/71

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	9.00E-05
BA-140	2.88E+00
CE-141	7.86E-02
CE-144	6.87E-03
CO-58	2.31E-02
CO-60	3.50E-01
CR-51	1.08E-01
CS-134	1.63E-02
CS-136	4.62E-03
CS-137	7.09E-02
FE-59	4.87E-03
I-131	2.03E+00
I-133	1.05E+01
I-135	2.26E+01
KR-85M	1.46E+03
KR-87	1.86E+03
KR-88	3.68E+03
LA-140	8.36E-02
MN-54	5.80E-02
NB-95	1.23E-02
RU-103	1.43E-02
SB-124	2.00E-05
SR-89	3.17E+00
SR-90	1.57E-02
XE-133	5.92E+03
XE-135	1.26E+04
XE-135M	6.76E+03
XE-138	3.69E+04
ZN-65	1.41E-03
ZR-95	1.03E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	5.14E-03
CE-141	6.35E-03
CE-144	8.70E-04
CO-58	6.37E-03
CO-60	1.55E-01
CR-51	3.20E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	1.11E-02
CS-137	2.93E-02
FE-59	3.20E-04
I-131	4.84E-03
MN-54	2.84E-02
NB-95	4.47E-03
RU-103	1.86E-03
SB-124	4.00E-05
SR-99	8.11E-03
SR-90	1.83E-03
ZR-95	1.83E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.85E+02
TOTAL LIQUID RELEASE	1.93E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	6.49E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.02E+12

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= DRESDEN 2-3 & DRESDEN 1

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
150	TRUCK	BARNWELL S.C.
5	TRUCK	BEATTY NV
14	TRUCK	RICHLAND WN

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	5.78E+02
	CI	8.00E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.62E+02
	CI	4.50E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-331
COOLING WATER SOURCE CEDAR RAPIDS RIVER & CIRC WATER SYSTEM

LICENSEE IOWA ELECTRIC LIGHT & POWER
LICENSED POWER (MWT) 1658.1
INITIAL CRITICALITY 03/23/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.04E+02
CO-58	3.25E-04
CO-60	4.80E-03
CR-51	1.63E-02
CS-134	7.86E-05
CS-137	5.21E-05
FE-59	1.10E-04
I-131	9.47E-03
I-133	3.67E-02
I-135	<1.53E+01
KR-85	<3.42E+02
KR-85M	8.14E+02
KR-87	8.29E+01
KR-88	5.25E+02
MN-54	1.57E-03
N-13	2.03E+02
SR-89	3.03E-04
SR-90	1.33E-05
UNIDENTIFIED	3.51E-04
XE-133	5.73E+03
XE-135	1.13E+03
XE-135M	<3.35E+02
XE-138	1.37E+02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	8.11E-06
CO-60	2.63E-04
CS-134	2.47E-05
CS-137	7.08E-06
MN-54	8.76E-05
SR-89	<8.27E+00
SR-90	<5.62E+00
UNIDENTIFIED	1.19E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	8.89E+00
TOTAL LIQUID RELEASE	2.90E-01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	5.20E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.38E+08

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= DUANE ARNOLD

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
70	TRUCK	BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	7.99E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	8.01E+02
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
D. OTHER	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-348
 COOLING WATER SOURCE

LICENSEE ALABAMA POWER
 LICENSED POWER (MWT) 2652.0
 INITIAL CRITICALITY 08/09/77

AIRBORNE EFFLUENTS
NUCLIDES RELEASED

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.91E+02
BA-140	2.74E-03
CE-141	6.76E-04
CO-58	1.84E-03
CO-60	3.94E-04
CR-51	5.81E-03
CS-134	6.02E-04
CS-136	7.08E-04
CS-137	6.23E-04
FE-59	6.76E-04
I-131	1.30E-05
I-133	1.52E-08
KR-85	2.10E+01
KR-85M	2.94E-02
KR-87	1.68E+00
KR-88	1.94E-01
KR-89	0.
KR-90	2.76E-01
MN-54	1.27E-03
SB-124	2.43E-03
SR-89	1.48E-03
SR-90	2.43E-04
XE-131M	9.35E+01
XE-133	2.58E+03
XE-133M	3.65E+01
XE-135	1.37E+02
XE-135M	0.
XE-137	8.41E-01
XE-138	2.60E-01
ZN-65	1.90E-03
ZR-95	8.66E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.72E-04
AR-41	0.
AS-76	0.
BA-140	1.07E-05
CE-141	5.17E-06
CE-144	8.68E-05
CO-57	9.60E-05
CO-58	2.56E-02
CO-60	2.24E-02

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CR-51		2.43E-03
CS-134		1.44E-04
CS-136		4.59E-06
CS-137		4.40E-04
CU-64		3.00E-04
FE-59		4.84E-04
I-131		1.33E-03
I-132		1.25E-04
I-133		9.42E-05
I-135		7.17E-06
KR-87		0.
LA-140		6.14E-06
MN-54		2.86E-03
MO-99		3.51E-05
NA-24		1.49E-03
NB-95		6.19E-04
NP-239		5.31E-05
RU-103		0.
RU-106		3.53E-05
SR-89		0.
SR-90		1.91E-05
SR-91		9.10E-06
TC-99M		1.08E-06
XE-133		7.77E-03
XE-133M		0.
XE-135		1.20E-03
ZN-65		2.98E-05
ZR-95		2.09E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.46E+01
TOTAL LIQUID RELEASE	9.40E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.82E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.38E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= JOSEPH M. FARLEY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
67 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
	CO-58	% 5.80E+01	3.30E+01
	CO-60	% 2.60E+01	1.20E+01
	MN-54	% 5.20E+00	4.80E+01
B			
	CO-58	% 5.80E+01	2.40E+01
	CO-60	% 2.60E+01	6.00E+01
	MN-54	% 6.00E+00	1.50E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3 CI	6.00E+02 1.89E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3 CI	5.10E+02 4.30E+01
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3 CI	
D. OTHER	M3 CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-333
 COOLING WATER SOURCE LAKE ONTARIO

LICENSEE POWER AUTHORITY OF THE STATE OF NEW YORK
 LICENSED POWER (MWT) 2436.0
 INITIAL CRITICALITY 11/17/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	4.12E+01
BA-LA-140	4.89E-04
CE-141	2.37E-05
CO-58	4.45E-04
CO-60	5.20E-03
CR-51	2.86E-04
CS-134	1.19E-04
CS-137	1.57E-04
I-131	5.65E-03
I-133	1.19E-02
I-135	5.76E-03
KR-85	3.51E+00
KR-85M	1.26E+02
KR-87	6.47E+01
KR-88	1.12E+02
MN-54	1.39E-03
NB-95	6.65E-06
N-13	9.76E+01
SR-89	3.58E-04
SR-90	2.66E-06
XE-131M	1.24E+02
XE-133	1.89E+03
XE-133M	3.20E+01
XE-135	7.81E+02
XE-135M	1.62E+01
XE-138	9.00E+01
ZN-65	8.18E-05
ZR-NB-95	2.08E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	6.08E-05
AS-76	1.13E-03
BA-LA-140	1.63E-05
CE-141	6.49E-05
CE-144	7.19E-05
CO-58	5.82E-02
CO-60	2.41E-01
CR-51	3.66E-03
CS-134	4.43E-02
CS-137	9.20E-02
FE-59	1.66E-03
I-131	6.17E-04
I-133	2.79E-04
I-135	6.16E-05
N/A=NOT APPLICABLE	
N/D=NOT DETECTED	
N/R=NOT REPORTED	

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (C1)
KR-85M	9.05E-05
MN-54	1.43E-01
MO-93	4.90E-04
NA-24	4.91E-02
SR-89	2.06E-04
SR-90	1.54E-04
TC-99M	3.50E-05
XE-133	4.08E-03
XE-135	2.72E-04
ZN-65	6.89E-03
ZR-NB-95	6.61E-05

TRITIUM	(C1)
TOTAL AIRBORNE RELEASE	6.43E+00
TOTAL LIQUID RELEASE	1.52E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	8.51E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.02E+11

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= JAMES A. FITZPATRICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
2	TRUCK	BARNWELL S.C.
2	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

JAN-JUNE

JULY-DEC

A

CO-58	%		3.10E+00
CO-60	%		5.70E+01
CR-51	%		1.00E+00
CS-134	%		5.90E+00
CS-137	%		7.80E+00
MN-54	%		2.20E+01
ZN-65	%		3.40E+00

A+B

CO-58	%	3.90E+00	
CO-60	%	5.30E+01	
CR-51	%	3.00E+00	
CS-134	%	4.60E+00	
CS-137	%	6.40E+00	
FE-59	%	2.00E-01	
MN-54	%	2.40E+01	
ZN-65	%	4.10E+00	

TYPE OF WASTE

A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR
BOTTOMS, ETC.

UNIT

YEAR TOTAL

B. DRY COMPRESSIBLE WASTE, CONTAMINATED
EQUIPMENT, ETC.

M3

4.08E+02

C1

9.99E+02

C. IRRADIATED COMPONENTS, CONTROL
RODS, ETC.

M3

3.81E+02

C1

5.91E+01

D. OTHER

C1

1.51E+01

M3

3.48E-04

C1

3.48E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION FORT CALHOUN

LOCATION 19 MI N OMAHA, NB

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-285
COOLING WATER SOURCE MISSOURI RIVER

LICENSEE OMAHA PUBLIC POWER
LICENSED POWER (MWT) 1420.0
INITIAL CRITICALITY 08/06/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
ALPHA	5.54E-06
AR-41	2.12E+00
BA-140	0.
CO-58	6.96E-06
CO-60	0.
CS-134	3.80E-06
CS-137	1.17E-05
H-3	1.45E+00
I-131	1.32E-03
I-133	1.82E-03
I-135	0.
KR-85	1.24E+01
KR-85M	6.55E-02
KR-87	1.22E-01
KR-88	4.15E-01
LA-140	0.
MN-54	0.
SR-89	2.15E-04
SR-90	1.48E-06
XE-133	6.78E+02
XE-133M	5.03E+00
XE-135	6.50E+00
XE-135M	<9.96E-01
XE-138	<2.00E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
ALPHA	5.39E-05
BA-140	<3.73E-03
CE-141	<3.26E-03
CO-57	2.03E-04
CO-58	8.13E-03
CO-60	2.94E-03
CR-51	2.25E-03
CS-134	5.96E-02
CS-136	4.34E-04
CS-137	9.66E-02
FE-59	<2.66E-02
H-3	2.58E+02
I-131	1.93E-02
I-133	<4.14E-03
LA-140	<1.09E-03
MN-54	2.40E-03
MO-99	<1.88E-03
NB-95	<1.23E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
RU-103	<1.59E-03
SB-124	<1.89E-03
SN-117M	<2.69E-03
SR-89	4.05E-04
SR-90	6.28E-05
TC-99M	<5.46E-04
XE-133	3.62E+00
XE-135	3.16E-02
ZN-65	<1.22E-01
ZR-95	<2.14E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.45E+00
TOTAL LIQUID RELEASE	2.58E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.15E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.35E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= FORT CALHOUN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0	N/A	N/A

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
18	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	1.01E+01	6.60E-01
CO-60	%		6.60E-01
CS-134	%	3.31E+01	3.53E+01
CS-137	%	5.48E+01	6.27E+01
MN-54	%	1.90E+00	7.00E-01
B			
CO-58	%	1.01E+01	6.60E-01
CO-60	%		6.60E-01
CS-134	%	3.31E+01	3.53E+01
CS-137	%	5.48E+01	6.27E+01
MN-54	%	1.90E+00	7.00E-01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.87E+02
	CI	2.81E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	5.73E+01
	CI	1.81E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION FORT ST. VRAIN

LOCATION 35 MI N DENVER, CO

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1

LICENSEE PUBLIC SERVICE CO OF COLORADO

TYPE HTG

LICENSED POWER (MWT) 8+2.0

DOCKET NO. 50-267

INITIAL CRITICALITY 01/31/74

COOLING WATER SOURCE SOUTH PLATTE RIVER/SHALLOW WELLS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	2.68E+00
I-131	6.89E-07
KR-85M	1.92E-02
KR-87	1.63E-02
KR-88	2.61E-02
XE-131M	2.60E-01
XE-133	9.22E+01
XE-133M	4.88E-01
XE-135	4.86E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	1.23E+02
RU-103	2.73E-06
XE-133	1.31E-02
XE-135	1.71E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.68E+00
TOTAL LIQUID RELEASE	1.23E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	8.95E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.62E+08

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= FORT ST. VRAIN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 CI	0. 0.
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 CI	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 CI	
D. OTHER	M3 CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-244
 COOLING WATER SOURCE LAKE ONTARIO

LICENSEE ROCHESTER C. ELEC
 LICENSED POWER (MWT) 1520.1
 INITIAL CRITICALITY 11/08/69

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.55E-07
AR-41	9.00E-01
BA-LA-140	2.43E-07
CE-141	1.23E-07
CE-144	2.21E-07
CO-58	8.77E-07
CO-60	1.45E-06
CR-51	4.10E-07
CS-134	3.30E-07
CS-137	2.15E-06
7-131	9.57E-03
I-132	1.23E-03
I-133	8.69E-03
KR-85	2.00E+01
KR-85M	2.85E+00
KR-88	1.27E-02
MN-54	3.98E-07
NB-95	5.83E-07
NP-239	1.42E-06
RU-103	5.26E-07
SB-125	5.30E-07
TE-132	2.15E-06
XE-131M	9.78E-01
XE-133	6.86E+02
XE-133M	5.05E-01
XE-135	5.05E+01
ZR-95	1.62E-07

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	7.46E-04
BA-LA-140	3.54E-04
BA-140	1.64E-05
CE-PR-144	1.75E-04
CE-141	6.70E-05
CE-144	1.93E-04
CO-58	2.15E-03
CO-60	4.02E-02
CR-51	3.62E-03
CS-134	3.21E-03
CS-136	1.33E-03
CS-137	1.31E-02
FE-59	1.95E-04

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
I-131		9.25E-03
MN-54		1.32E-03
MO-99		1.10E-03
NB-95		6.64E-04
NP-239		2.12E-04
RU-103		2.85E-04
RU-106		1.35E-03
TE-127M		1.93E-04
TE-129M		1.33E-04
TE-132		1.45E-04
ZR-95		8.77E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	9.66E+01
TOTAL LIQUID RELEASE	2.40E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.31E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.02E+12

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= R.E.GINNA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
18	TRUCK	BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3 C1	3.08E+02 1.53E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION HADDAM NECK

LOCATION 9.5 MI SE MIDDLETOWN, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-213
COOLING WATER SOURCE CONNECTICUT RIVER

LICENSEE CONNECTICUT YANKEE ATOMIC POWER
LICENSED POWER (MWT) 1825.0
INITIAL CRITICALITY 07/24/67

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-37	6.09E+01
AR-41	6.29E-02
BA-LA-140	<4.00E-04
CE-141	7.53E-05
CE-144	3.58E-04
CO-58	2.74E-05
CO-60	5.85E-05
CR-51	1.52E-05
CS-134	7.00E-04
CS-137	7.97E-04
C-14	4.52E+01
H-3	1.73E+02
I-131	4.53E-02
I-133	2.51E-03
I-135	3.74E-03
KR-85	1.10E+03
KR-85M	1.43E+00
KR-87	3.40E+00
KR-88	3.16E+00
MN-54	6.78E-06
RU-103	3.30E-05
RU-106	1.33E-04
SR-89	4.87E-06
SR-90	8.16E-06
XE-131M	3.97E+01
XE-133	4.20E+03
XE-133M	7.94E+00
XE-135	3.01E+01
XE-135M	7.37E-01
XE-137	2.57E+00
XE-138	3.43E+00
ZR-NB-95	1.00E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	4.94E-05
AR-37	<3.11E-03
BA-LA-140	4.61E-04
BE-7	<4.00E-06
CE-141	5.35E-02
CE-144	2.78E-01
CO-57	<4.60E-06
CO-58	1.43E-02
CO-60	9.59E-02
CR-51	8.45E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	4.06E-02
CS-137	4.90E-02
EU-154	<7.22E-06
FE-59	<4.00E-06
H-3	3.55E+03
I-131	6.71E-02
I-133	<5.60E-06
KR-85	3.17E-04
MN-54	2.47E-03
MO-99	<4.57E-06
RU-103	6.50E-02
RU-106	3.75E-02
SB-125	<4.68E-06
SR-89	6.67E-03
SR-90	3.64E-03
TC-99M	<4.14E-06
XE-133	3.68E-01
XE-135	8.93E-03
ZN-65	<9.40E-05
ZR-NB-95	1.45E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.73E+02
TOTAL LIQUID RELEASE	3.55E+03

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	4.73E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.87E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= HADDAM NECK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS (DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
62	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)

JAN-JUNE

JULY-DEC

A

NUCLIDE	%	JAN-JUNE	JULY-DEC
CE-141	%	5.00E+00	
CE-144	%	1.50E+01	3.00E+01
CO-58	%	2.00E+00	3.40E+00
CO-60	%	2.00E+00	2.50E+00
CS-134	%	3.20E+01	1.70E+01
CS-137	%	3.50E+01	1.60E+01
NB-95	%	5.00E+00	1.00E+01
RU-103	%		5.40E+00
ZR-95	%	4.00E+00	9.70E+00

B

NUCLIDE	%	JAN-JUNE	JULY-DEC
BA-140	%	5.00E+00	
CE-141	%	2.00E+01	
CE-144	%	3.00E+01	4.20E+01
CO-58	%		6.0E+00
CO-60	%	5.00E+00	2.00E+01
CS-134	%	5.00E+00	1.00E+01
CS-137	%	5.00E+00	1.20E+01
LA-140	%	5.00E+00	
MN-54	%		2.00E+00
NB-95	%	1.00E+01	5.00E+00
RU-103	%	5.00E+00	
ZR-95	%	1.00E+01	3.00E+00

TYPE OF WASTE

UNIT

YEAR TOTAL

A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR
BOTTOMS, ETC.

M3

1.58E+02

CI

2.11E+02

B. DRY COMPRESSIBLE WASTE, CONTAMINATED
EQUIPMENT, ETC.

M3

1.14E+03

CI

9.38E+01

C. IRRADIATED COMPONENTS, CONTROL
RODS, ETC.

M3

CI

D. OTHER

M3

CI

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-321
COOLING WATER SOURCE ALTAMAHA RIVER
UNIT NUMBER 2
TYPE BWR
DOCKET NO. 50-366
COOLING WATER SOURCE ALTAMAHA RIVER

LICENSEE GEORGIA POWER
LICENSED POWER (MWT) 2436.0
INITIAL CRITICALITY 09/12/74

LICENSEE GEORGIA POWER
LICENSED POWER (MWT) 2436.0
INITIAL CRITICALITY 07/04/78

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.44E+01
BA-140	3.89E-05
CE-141	0.
CE-144	0.
CO-58	4.33E-05
CO-60	4.77E-04
CR-51	1.38E-04
CS-134	1.75E-04
CS-137	3.20E-04
FE-59	1.77E-05
I-131	2.38E-02
I-133	1.17E-03
I-135	5.54E-04
KR-85	0.
KR-85M	1.58E+02
KR-87	1.00E+01
KR-88	7.44E+01
KR-89	1.67E+00
LA-140	6.33E-05
MN-54	1.97E-05
NB-95	1.11E-06
N-13	8.68E+01
SN-113	1.10E-05
SR-89	1.36E-04
SR-90	6.89E-06
XE-131M	1.45E+02
XE-133	1.11E+03
XE-133M	1.18E+01
XE-135	2.17E+01
XE-135M	7.57E+00
XE-137	0.
XE-138	2.39E+01
ZR-95	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.40E-05
AS-76	1.63E-04
BA-140	2.59E-06

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES	EFFLUENTS RELEASED	ACTIVITY (CI)
BR-82		1.77E-06
CE-141		1.33E-05
CE-144		1.36E-05
CO-58		2.38E-03
CO-60		7.91E-03
CR-51		3.31E-03
CS-134		5.36E-03
CS-136		2.72E-04
CS-137		6.20E-03
CU-64		3.00E-03
FE-59		1.42E-04
F-18		1.16E-03
I-131		4.79E-03
I-132		5.11E-06
I-133		4.90E-05
I-135		1.56E-05
KR-85M		1.92E-05
KR-87		2.77E-06
KR-88		1.55E-05
LA-140		7.09E-06
MN-54		9.39E-04
MN-56		1.19E-05
MO-99		6.80E-05
NA-24		2.98E-03
NB-95		8.89E-05
NB-97		3.01E-05
NI-65		1.43E-05
NP-239		6.01E-05
RH-106M		1.23E-05
SB-125		7.63E-05
SR-89		3.36E-04
SR-90		8.35E-05
TC-99M		5.66E-05
W-187		1.73E-05
XE-133		9.02E-03
XE-133M		8.79E-05
XE-135		6.10E-03
XE-138		2.69E-06
ZN-65		7.99E-03
ZN-69M		9.28E-06
ZR-95		3.56E-05
ZR-97		4.03E-06

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.45E+01
TOTAL LIQUID RELEASE	1.23E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION) LITERS 5.29E+07
 N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION EDWIN I. HATCH

LOCATION 11 MI N BAXLEY, GA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 1.07E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= EDWIN I. HATCH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS 100 MODE OF TRANSPORTATION TRUCK DESTINATION BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%		2.00E+00
CO-60	%	1.22E+01	9.46E+00
CR-51	%		5.00E-01
CS-134	%	1.58E+01	
CS-134+137	%		2.84E+01
CS-137	%	1.68E+01	
OTHERS	%	2.67E+01	2.11E+01
ZN-65	%	2.83E+01	3.84E+01
B			
CO-58	%		1.40E+00
CO-60	%	1.21E+01	1.10E+01
CR-51	%		6.00E-01
CS-134	%	1.60E+01	
CS-134+137	%		2.97E+01
CS-137	%	1.70E+01	
OTHERS	%	2.68E+01	1.81E+01
ZN-65	%	2.81E+01	3.91E+01
C			
CO-60	%		1.28E+01
CS-134+137	%		3.36E+01
OTHERS	%		1.36E+01
ZN-65	%		4.00E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	5.54E+02
	C1	2.63E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.23E+02
	C1	6.87E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	6.40E-01
	C1	3.60E-02
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-133
 COOLING WATER SOURCE HUMBOLDT BAY

LICENSEE PACIFIC GAS & ELECTRIC
 LICENSED POWER (MWT) 220.0
 INITIAL CRITICALITY 02/16/63

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	8.00E-08
CE-144	N/D
CO-60	5.11E-05
CS-134	N/D
CS-137	6.29E-06
I-131	N/D
I-133	N/D
I-135	N/D
KR-83M	N/D
KR-85M	N/D
KR-87	N/D
KR-88	N/D
KR-89	N/D
MN-54	N/D
SR-89	N/D
SR-90	2.49E-06
XE-133	2.86E-06
XE-133M	N/D
XE-135	N/D
XE-135M	N/D
XE-137	N/D
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	N/D
CE-144	2.03E-03
CO-58	N/D
CO-60	1.20E-02
CR-51	N/D
CS-134	7.31E-03
CS-137	5.97E-02
I-131	N/D
MN-54	1.85E-03
MO-99	3.00E-03
NP-239	N/D
SR-89	N/D
SR-90	2.35E-04
TC-99M	1.88E-03
XE-133	N/D
XE-135	N/D
ZN-65	N/D
ZR-NB-95	N/D

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	4.00E-02		
TOTAL LIQUID RELEASE	3.91E-02		
VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)		LITERS	3.65E+05
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	9.55E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= HUMBOLDT BAY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
16	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A		
CU-60	%	3.00E+01
CS-134	%	7.84E+00
CS-137	%	5.43E+01
MN-54	%	5.42E+00
UNIDENTIFIED	%	2.42E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 CI	9.06E+01 3.35E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 CI	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 CI	
D. OTHER	M3 CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-3
COOLING WATER SOURCE
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-247
COOLING WATER SOURCE

LICENSEE CONSOLIDATED EDISON
LICENSED POWER (MWT) 615.0
INITIAL CRITICALITY 08/02/62

LICENSEE CONSOLIDATED EDISON
LICENSED POWER (MWT) 2758.0
INITIAL CRITICALITY 05/22/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	9.30E-04
CO-58	1.14E-02
CO-60	6.29E-02
CR-51	2.98E-05
CS-134	1.95E-02
CS-137	6.41E-02
FE-55	1.66E-01
I-131	1.15E-01
I-133	1.25E-02
I-135	3.51E-02
KR-85	6.19E+02
KR-85M	2.41E+01
KR-87	7.94E+00
KR-88	2.74E+01
MN-54	3.54E-03
NB-95	7.50E-07
NI-63	7.75E-03
P-32	5.95E-05
SR-89	5.52E-05
SR-90	3.60E-05
XE-131M	7.89E+01
XE-133	7.87E+03
XE-133M	9.62E+01
XE-135	2.89E+02
XE-135M	5.00E+00
XE-137	7.38E+00
XE-138	1.10E+00
ZN-65	3.21E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	4.03E-02
CE-141	1.16E-02
CO-58	2.10E-01
CO-60	1.29E-01
CR-51	6.96E-02
CS-134	1.32E-01
CS-136	1.41E-03
CS-137	3.97E-01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (Ci)
FE-55	4.64E-01
FE-59	1.47E-02
I-131	7.86E-02
MN-54	2.63E-02
MO-99	1.01E-01
NI-63	1.62E-01
P-32	2.49E-02
SR-89	4.63E-03
SR-90	7.65E-03
TC-99M	5.08E-03
XE-133	4.66E-02
XE-135	6.53E-03
ZN-65	4.76E-02
ZR-NI-95	1.29E-02

TRITIUM	(Ci)
TOTAL AIRBORNE RELEASE	5.05E+00
TOTAL LIQUID RELEASE	3.75E+02

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	6.19E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.10E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= INDIAN POINT 1-2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS 117 MODE OF TRANSPORTATION TRUCK DESTINATION BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
C058-FE55-NI63-I131	%		2.00E+01
CO-58	%	2.60E+01	
CO-60	%		1.00E+01
CS-134	%	2.50E+01	1.00E+01
CS-137	%	3.40E+01	6.00E+01
FE55-NI63-C060-I131	%	1.50E+01	
B			
C058-FE55-NI63-I131	%		2.00E+01
CO-58	%	2.60E+01	
CO-60	%		1.00E+01
CS-134	%	2.50E+01	1.00E+01
CS-137	%	3.40E+01	6.00E+01
FE55-NI63-C060-I131	%	1.50E+01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	4.50E+02
	CI	2.12E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	7.18E+02
	CI	3.52E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION INDIAN POINT 3

LOCATION 3 MI SW PEEKSKILL, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 3
TYPE PWR
DOCKET NO. 50-286
COOLING WATER SOURCE

LICENSEE POWER AUTHORITY OF THE STATE OF NEW YORK
LICENSED POWER (MWT) 2760.0
INITIAL CRITICALITY 04/06/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-133	8.87E-07
CD-109	1.35E-05
CE-139	1.71E-06
CE-141	4.13E-06
CE-144	5.05E-06
CO-57	1.51E-06
CO-58	1.84E-05
CO-60	1.57E-05
CS-134	1.27E-05
CS-137	1.96E-05
FE-55	2.32E-05
HG-203	8.19E-08
I-131	1.86E-03
I-133	1.71E-04
I-135	<4.54E-03
KR-85	2.92E+01
KR-85M	1.08E+00
KR-87	4.44E-01
KR-88	6.08E-01
NI-63	4.11E-05
RU-103	4.70E-07
SB-125	4.50E-06
SN-113	2.71E-07
SR-85	6.83E-07
SR-89	1.04E-06
SR-90	8.55E-06
XE-131M	2.45E+01
XE-133	1.57E+02
XE-133M	1.78E+00
XE-135	5.07E+00
XE-135M	5.90E+00
XE-138	2.16E+01
ZN-65	3.35E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	4.91E-03
BA-133	3.72E-05
CE-139	8.05E-04
CE-141	1.83E-03
CE-144	2.60E-04
CO-57	5.28E-06
CO-58	7.60E-02
CO-60	2.74E-02
CR-51	9.40E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CS-134		1.15E-02
CS-137		3.52E-02
FE-55		7.72E-02
FE-59		1.48E-03
HG-203		3.31E-05
I-131		5.88E-02
I-132		2.55E-05
I-133		1.02E-04
MN-54		7.60E-03
MO-99		7.00E-02
NI-63		8.75E-03
NP-239		1.98E-04
P-32		2.41E-03
RU-103		1.06E-05
RU-88		6.87E-04
SB-122		6.31E-04
SB-124		2.04E-04
SB-125		3.14E-04
SN-113		1.06E-04
SR-85		9.12E-05
SR-89		3.41E-04
SR-90		1.27E-03
TC-99M		9.33E-04
XE-133		1.16E-01
XE-135		7.39E-03
Y-89		3.50E-05
ZN-65		1.50E-03
ZR-NI-95		1.40E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	7.86E+00
TOTAL LIQUID RELEASE	1.15E+02

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	9.86E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.90E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS 12 MODE OF TRANSPORTATION TRUCK DESTINATION BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%		3.00E+01
CO-60	%		3.70E+01
CS-134	%		8.00E+00
CS-137	%		1.10E+01
MN-54	%		9.00E+00
ZN-65	%		5.00E+00
B			
CO-58	%		8.10E+01
CO-60	%		1.10E+01
CS-137	%		6.00E+00
D			
CO-58	%		8.10E+01
CO-60	%		1.20E+01
CR-51	%		7.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.20E+01
	CI	1.30E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	2.10E+02
	CI	6.40E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	2.60E+00
	CI	2.70E+01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION KEWAUNEE

LOCATION 27 MI ESE GREEN BAY, WI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-305
COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE WISCONSIN PUBLIC SERVICE
LICENSED POWER (MWT) 1650.0
INITIAL CRITICALITY 03/07/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	8.45E+00
CO-58	4.62E-07
CO-60	5.60E-05
CS-134	8.60E-07
CS-137	1.50E-05
CS-138	1.76E-07
I-131	5.41E-04
I-132	7.50E-05
I-133	2.94E-04
I-134	9.59E-06
I-135	1.05E-04
KR-85	2.73E+01
KR-85M	4.25E-01
KR-88	3.40E-01
NA-24	2.01E-06
RB-88	1.82E-05
RN-222	5.72E-04
SR-89	<3.10E-06
SR-90	<2.91E-06
UNIDENTIFIED	4.85E+00
XE-133	2.92E+01
XE-133M	1.97E-01
XE-135	1.12E+01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.30E-02
BA-140	1.64E-03
CO-57	4.87E-05
CO-58	2.88E-01
CO-60	1.80E-01
CR-51	4.99E-02
CS-134	7.90E-02
CS-137	8.55E-02
FE-59	2.29E-03
I-131	5.87E-04
MN-54	1.68E-02
NA-24	1.43E-03
NB-95	3.35E-03
SB-122	1.26E-03
SB-124	5.72E-02
SB-125	6.39E-02
SN-113	1.87E-03
SR-89	7.93E-04
SR-90	1.62E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (C1)
XE-133	1.75E-02
XE-133M	5.66E-05
XE-135	2.00E-04
ZH-88	3.10E-04
ZR-95	2.99E-03

TRITIUM

	(C1)
TOTAL AIRBORNE RELEASE	7.14E+00
TOTAL LIQUID RELEASE	2.49E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	9.51E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.27E+11

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= KEWAUNEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
9 HIGHWAY CARRIER BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

JAN-JUNE JULY-DEC

A				
CO-57	%			9.00E-01
CO-58	%	2.40E+00		4.30E+00
CO-60	%	4.23E+01		6.29E+01
CS-134	%	1.70E+01		6.30E+00
CS-137	%	3.20E+01		1.13E+01
MN-54	%	6.30E+00		1.11E+01
SB-125	%			2.30E+00
ZR-88	%			9.00E-01
B				
CO-57	%	7.00E-01		6.00E-01
CO-58	%	3.13E+01		6.00E+00
CO-60	%	6.27E+01		4.87E+01
CS-134	%	1.50E+00		4.10E+00
CS-137	%	3.00E+00		2.86E+01
MN-54	%	8.00E-01		9.00E+00
SB-125	%			1.60E+00
ZR-88	%			1.40E+00
C				
CO-57	%			1.20E+00
CO-58	%	2.40E+00		1.06E+01
CO-60	%	4.23E+01		4.76E+01
CS-134	%	1.70E+01		7.30E+00
CS-137	%	3.20E+01		1.20E+01
MN-54	%	6.30E+00		1.59E+01
SB-125	%			2.90E+00
ZR-88	%			2.50E+00
D				
CO-57	%			1.62E-01
CO-58	%	2.40E+00		2.23E+00
CO-60	%	4.23E+01		5.39E+01
CS-134	%	1.70E+01		2.04E+00
CS-137	%	3.20E+01		3.78E+01
MN-54	%	6.30E+00		3.47E+00
SB-125	%			3.11E-01
ZR-88	%			2.66E-01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	9.75E+00
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	C1	2.80E+02
	M3	2.16E+01
N/A=NOT APPLICABLE		
N/D=NOT DETECTED		
N/R=NOT REPORTED		

INSTALLATION= KEWAUNEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

EQUIPMENT, ETC.	C1	1.41E+01
C. IRRADIATED COMPONENTS, CONTROL	M3	1.59E+01
RODS, ETC.	C1	3.74E+00
D. OTHER	M3	1.23E+02
	C1	5.65E+01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION LACROSSE

LOCATION 19 MI S LACROSSE, WI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-409
COOLING WATER SOURCE MISSISSIPPI RIVER

LICENSEE DAIRYLAND POWER
LICENSED POWER (MWT) 165.0
INITIAL CRITICALITY 07/11/67

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AM-241	2.41E-07
BA+LA-140	7.89E-04
BA-133	1.64E-05
CD-109	3.13E-04
CE-139	2.14E-07
CE-141	1.81E-05
CE-144	9.42E-05
CM-241	2.84E-05
CM-243	5.62E-07
CO-57	8.46E-06
CO-58	7.16E-05
CO-60	3.09E-04
CR-51	1.73E-04
CS-134	2.05E-05
CS-136	1.05E-05
CS-137	1.16E-04
FE-59	1.58E-05
I-131	1.10E-02
I-132	3.01E-04
I-133	7.63E-03
I-134	8.02E-04
I-135	2.37E-03
KR-85	9.71E+00
KR-85M	1.84E+02
KR-87	1.12E+03
KR-88	6.80E+02
KR-89	1.32E+01
MN-54	2.03E-05
NB-94	7.20E-06
NB-95	2.48E-05
ND-147	3.22E-05
RU+RH-106	2.49E-04
RU-103	2.39E-05
SB-122	2.79E-05
SB-125	1.37E-05
SE-75	4.59E-05
SR-89	1.12E-01
SR-90	1.24E-04
XE-129M	6.98E-01
XE-131M	9.45E+00
XE-133	7.23E+02
XE-133M	8.07E+01
XE-135	3.25E+03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
XE-135M	9.01E+02
XE-137	8.04E+01
XE-138	3.25E+03
Y-91	1.06E-06
ZN-65	4.28E-05
ZR-95	2.69E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.63E-04
BA+LA-140	1.06E-01
BA-133	6.37E-05
CD-109	2.05E-01
CE-141	2.63E-02
CE-144	3.22E-01
CM-241	1.06E-03
CO-57	6.84E-02
CO-58	4.93E-01
CO-60	8.40E-01
CR-51	4.37E-03
CS-134	1.21E-01
CS-136	7.17E-04
CS-137	4.69E-01
CS-138	2.30E-04
FE-59	1.65E-03
I-131	4.76E-02
I-132	4.58E-03
I-133	2.54E-02
I-134	2.44E-04
I-135	9.03E-03
KR-85M	1.85E-04
K-87	1.88E-03
MN-54	6.45E-02
MN-56	1.04E-04
MO-99	1.68E-03
NB-95	1.62E-01
NB-97	5.07E-03
ND-147	8.08E-03
NI-65	4.17E-04
NP-239	8.41E-02
RU+RH-106	9.06E-02
RU-103	2.87E-02
RU-105	5.93E-06
SB-122	4.78E-04
SB-124	1.33E-04
SB-125	1.68E-04
SR-89	2.89E-01
SR-90	1.17E-02
SR-91	1.49E-03
SR-92	1.07E-03

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
TC-99M	3.60E-02
TE-132	3.08E-05
XE-131M	5.55E-03
XE-133	2.27E-02
XE-133M	1.74E-03
XE-135	1.04E-02
XE-135M	2.16E-02
Y-88	7.76E-07
Y-91	5.54E-04
Y-91M	4.53E-03
Y-92	3.46E-05
ZN-65	2.93E-02
ZR-95	1.09E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.65E+00
TOTAL LIQUID RELEASE	3.54E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.26E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.26E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= LACROSSE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
8	TRUCK	MORRIS IL

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
2	TRUCK	RICHLAND WN

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A		
CD-109	%	3.31E+00
CO-58	%	1.08E+01
CO-60	%	1.18E+01
CS-134	%	1.77E+01
CS-137	%	4.86E+01
OTHERS	%	4.76E+00
RU-106	%	1.72E+00
TRANSURANICS	%	1.60E-01
ZN-65	%	1.15E+00

TYPE OF WASTE

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	5.09E+00
	C1	1.25E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	
	C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	C1	
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-309
 COOLING WATER SOURCE BAY RIVER

LICENSEE MAINE YANKEE ATOMIC POWER
 LICENSED POWER (MWT) 2440.0
 INITIAL CRITICALITY 10/23/72

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	N/D
BA-LA-140	N/D
BA-140	N/D
CO-58	5.33E-05
CO-60	6.55E-05
CS-134	4.19E-05
CS-137	2.59E-04
I-131	5.43E-02
I-132	N/D
I-133	6.90E-02
I-134	N/D
I-135	6.34E-03
KR-85	2.73E+01
KR-85M	N/D
KR-87	N/D
KR-88	N/D
MN-54	9.14E-06
MO-99	6.51E-06
SB-125	3.04E-06
SR-89	N/D
SR-90	1.05E-07
UNIDENTIFIED	4.08E+01
XE-131M	6.48E+01
XE-133	1.81E+03
XE-133M	3.12E-03
XE-135	3.75E+01
XE-135M	N/D
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	N/D
CE-141	N/D
CO-57	6.16E-05
CO-58	1.84E-02
CO-60	1.40E-03
CR-51	6.27E-05
CS-134	3.30E-03
CS-137	2.14E-02
FE-59	N/D
F-18	1.08E-04
I-131	4.10E-01
I-133	5.78E-03
MN-54	3.79E-04
MO-99	6.57E-05

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (C1)
SR-89	4.00E-06
SR-90	4.45E-05
TC-99M	N/D
UNIDENTIFIED	1.83E-04
XE-133	3.98E-01
XE-133M	9.06E-04
XE-135	1.53E-03
ZN-65	N/D
ZR-95	N/D

TRITIUM	(C1)
TOTAL AIRBORNE RELEASE	2.87E+00
TOTAL LIQUID RELEASE	2.02E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.71E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.26E+11

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION= MAINE YANKEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
1	TRUCK	BARNWELL S.C.

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
23	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

		JAN-JUNE	JULY-DEC
A			
	CO60-CO58	% 2.70E+01	2.70E+01
	CS-134	% 2.80E+01	2.80E+01
	CS-137	% 4.50E+01	4.50E+01
B			
	CO-60	% 3.00E+01	3.00E+01
	CS134-CO58	% 3.00E+01	3.00E+01
	CS-137	% 4.00E+01	4.00E+01
C			
	CO58-CR51-FE59-ZR95	%	2.00E+00
	CO-60	%	3.00E+01
	FE-55	%	6.50E+01
	MN-54	%	3.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.02E+02
	CI	5.41E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	2.61E+02
	CI	1.25E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	8.40E-01
	CI	2.23E+03
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-245
COOLING WATER SOURCE LONG ISLAND SOUND

LICENSEE NORTHEAST NUCLEAR ENERGY
LICENSED POWER (MWT) 2011.0
INITIAL CRITICALITY 10/26/70

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	1.35E-01
CO-58	5.02E-04
CO-60	6.02E-03
CS-134	1.90E-04
CS-137	1.21E-03
FE-59	8.03E-04
I-131	4.00E-01
I-133	1.59E+00
I-135	1.80E+00
KR-85M	3.91E+02
KR-87	2.26E+02
KR-88	5.86E+01
MN-54	5.10E-03
SR-89	2.02E-02
SR-90	1.23E-04
XE-131M	2.19E+03
XE-133	3.35E+02
XE-135	1.99E+03
XE-135M	3.22E+03
XE-137	7.27E+03
XE-138	4.93E+03
ZN-65	1.40E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.46E-05
BA-LA-140	2.93E-03
CE-141	5.57E-02
CE-144	6.83E-04
CO-58	4.08E-03
CO-60	9.28E-02
CR-51	7.77E-03
CS-134	1.02E-03
CS-137	4.59E-03
FE-59	1.85E-03
I-131	5.51E-03
I-132	1.13E-05
I-133	7.64E-04
I-134	2.11E-05
I-135	3.74E-04
MN-54	2.79E-02
MN-56	1.63E-05
MO-99	2.38E-05
NB-95	1.83E-03
NB-97	4.23E-05

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
RU-105	6.49E-04
SR-89	8.05E-04
SR-90	1.83E-04
SR-91	3.52E-05
SR-92	9.08E-07
W-187	9.68E-05
XE-133	3.79E-01
XE-135	3.23E-01
ZN-65	1.63E-04
ZR-95	4.17E-04
ZR-97	8.82E-06

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.93E+01
TOTAL LIQUID RELEASE	7.92E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.51E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.59E+10

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
161	TRUCK	BARNWELL S.C.
1	TRUCK	PLEASANTON CA

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

		JAN-JUNE	JULY-DEC
A			
CE141-NB95-FE59-SR90-NI63	%		3.80E+00
CO-60	%	2.68E+01	4.60E+01
CS137-CS134	%		7.90E+00
FE-55	%	2.02E+01	1.90E+01
I131-CO58-LA140-BA140	%		9.80E+00
I131-LA140-CS137-CO58-SR89	%	1.25E+01	
KR85-MN54-XE131M	%	3.65E+01	
MN-54	%		1.10E+01
OTHERS	%	1.00E+00	
SR89-SB124-CE144	%		2.50E+00
XE133-CE141-BA140-CS134-NI63-SR90-CE144-NB95	%	3.00E+00	
B			
CO58-CE144-CR51-FE59	%	1.52E+01	1.40E+01
CO-60	%	5.16E+01	5.10E+01
FE55-CS137-CS134-CE141-ZR95-NB95-SR90-NI63	%	2.80E+00	
FE55-CS137-NB95	%		5.00E+00
MN-54	%	3.04E+01	2.90E+01
SR89-SR90-NI63	%		1.00E+00
C			
CO-58	%	1.00E+00	
CO-60	%	1.80E+01	
FE-55	%	7.60E+01	
MN-54	%	3.00E+00	
NI-63	%	2.00E+00	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.03E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	C1	9.99E+02
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.07E+03
	C1	9.16E+00
D. OTHER	M3	2.48E+00
	C1	1.50E+02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2
 TYPE PWR
 DOCKET NO. 50-336
 COOLING WATER SOURCE LONG ISLAND SOUND

LICENSEE NORTHEAST NUCLEAR ENERGY
 LICENSED POWER (MWT) 2560.0
 INITIAL CRITICALITY 10/17/75

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.84E+00
BA-LA-140	8.66E-06
CO-58	4.65E-02
CO-60	8.65E-03
CR-51	3.54E-02
CS-134	9.32E-05
CS-137	1.86E-04
CS-138	2.71E-03
FE-59	1.56E-07
I-131	1.42E-02
I-133	9.55E-04
I-135	1.59E-03
KR-85	9.71E+00
KR-85M	3.17E-03
KR-88	2.00E-03
MN-54	6.53E-03
NI-95	7.72E-03
RB-88	1.00E-05
SR-89	1.55E-07
SR-90	7.04E-08
XE-131M	1.07E-02
XE-133	1.75E+04
XE-135	1.74E+01
XE-135M	6.93E-03
XE-138	6.69E-04
ZN-65	1.60E-06
ZR-95	5.24E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	6.60E-02
BA-LA-140	9.36E-04
CE-141	4.74E-04
CE-144	3.58E-03
CO-58	1.63E+00
CO-60	1.56E+00
CR-51	2.21E-01
CS-134	3.27E-01
CS-136	4.50E-02

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-137	3.76E-01
FE-59	1.75E-02
I-131	1.18E-01
I-132	1.57E-04
I-133	5.02E-03
I-134	3.31E-05
I-135	9.73E-05
LA-141	6.26E-04
MN-54	1.60E-01
MN-56	3.42E-05
MO-99	1.07E-03
NA-24	7.96E-02
NB-95	7.00E-02
NB-97	9.14E-02
NI-65	3.62E-05
RU-105	4.42E-02
SP-89	1.30E-03
SR-90	1.66E-04
SR-91	2.06E-05
SR-92	4.61E-03
W-187	2.03E-02
XE-133	4.33E+00
XE-135	5.00E-02
ZN-65	1.24E-04
ZR-95	3.15E-02
ZR-97	4.08E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.04E+02
TOTAL LIQUID RELEASE	2.54E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.45E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.21E+11

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
27	TRUCK	BARNWELL S.C.
1	TRUCK	PLAIN CITY OH.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	5.11E+01	3.60E+01
CO-60	%		3.60E+01
CS134-CS137	%		5.40E+00
CS137-CS134-SB124-FE55	%	2.32E+01	
FE-55	%		6.70E+00
MN54-CO60	%	2.27E+01	
MN-54	%		5.80E+00
NB97-AG110M-NB95-1131-ZR95	%	2.50E+00	
SB124-AG110M-NB97-NB95-FE59	%		8.10E+00
SR89-SR90-NI63-RU105-SR92-CO57-CS138	%	5.00E-01	
ZN95-NI63-CO57-AR41-RU105-NA24-SR89-SR90-SR92	%		2.00E+00
B			
CE144-1131-1133-W187-NA24-MN54	%		1.20E+01
CO58-CO60	%		1.90E+01
CS-134	%		2.90E+01
CS-137	%		3.70E+01
NB95-FE59-LA140-FE55-NI63-SR89-SR90	%		3.00E+00
C			
CO58-CO60-ZR95-NB95	%	2.98E+01	
CR-51	%	4.82E+01	
FE-55	%	1.67E+01	
MN56-FE59-NI63-NB95M	%	4.29E+00	
NI59-SR89-Y90-Y91	%	1.01E+00	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	2.31E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	C1	4.08E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.48E+01
D. OTHER	C1	3.39E+01
	M3	5.66E-02
	C1	1.74E+03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION MONTICELLO

LOCATION 23 MI SE ST. CLOUD, MN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-263
COOLING WATER SOURCE MISSISSIPPI RIVER

LICENSEE NORTHERN STATES POWER
LICENSED POWER (MWT) 1670.0
INITIAL CRITICALITY 12/10/70

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	5.92E-03
CE-141	1.32E-05
CE-144	2.01E-05
CO-57	0.
CO-58	0.
CO-60	2.78E-04
CR-51	4.51E-04
CS-134	2.54E-05
CS-136	0.
CS-137	3.03E-04
FE-59	0.
I-131	1.20E-02
I-133	3.89E-02
I-135	3.09E-02
KR-83M	1.00E+01
KR-85	2.02E+01
KR-85M	8.41E+00
KR-87	5.04E+01
KR-88	2.82E+01
KR-89	9.78E+02
KR-90	3.32E+01
MN-54	7.51E-06
NB-95	0.
ND-147	0.
RU-103	9.43E-07
SB-124	0.
SB-126	0.
SR-89	1.92E-03
SR-90	1.65E-04
XE-131M	1.95E+00
XE-133	2.82E+02
XE-133M	6.62E-01
XE-135	5.64E+01
XE-135M	7.50E+01
XE-137	1.28E+03
XE-138	1.11E+03
XE-139	9.89E+01
ZN-65	2.03E-04
ZR-95	0.

LIQUID EFFLUENTS
NUCLIDES RELEASED

ACTIVITY (CI)

NONE

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION MONTICELLO

LOCATION 23 MI SE ST. CLOUD, MN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM (CI)
TOTAL AIRBORNE RELEASE 2.20E+02
TOTAL LIQUID RELEASE NONE

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION) LITERS 0.
VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= MONTICELLO

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
36	TRUCK	BARNWELL S.C.
8	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

	JAN-JUNE	JULY-DEC
A		
BA-140	%	3.06E-01
CC-60	%	1.71E+01
CR-51	%	1.31E+00
CS-134	%	1.36E+00
CS-137	%	3.39E+01
LA-140	%	6.34E-01
ZN-65	%	1.42E+01
B		
CO-60	%	8.80E+01
CS-137	%	2.20E+01
MN-54	%	4.00E+00
ZN-65	%	6.00E+00
C		
CO-60	%	9.30E+01
MN-54	%	7.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.98E+02
	CI	6.26E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	2.74E+02
	CI	3.34E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.38E+00
	CI	1.25E+04
D. OTHER	M3	0.
	CI	0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-220
 COOLING WATER SOURCE LAKE ONTARIO

LICENSEE NIAGARA MOHAWK POWER
 LICENSED POWER (MWT) 1850.0
 INITIAL CRIT. CALITY 09/05/69

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	1.35E-03
CE-141	5.04E-05
CO-58	2.25E-04
CO-60	1.06E-02
CR-51	5.90E-04
CS-134	5.46E-04
CS-136	1.79E-04
CS-137	2.19E-03
FE-59	3.10E-05
I-131	2.73E-02
I-133	4.08E-02
I-135	9.02E-02
KR-88	4.30E+02
MN-54	7.16E-04
SR-89	3.10E-03
SR-90	6.58E-05
XE-135	1.37E+02
XE-135M	1.63E+02
XE-138	3.11E+02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	6.09E-04
CE-141	2.30E-05
CO-58	5.89E-03
CO-60	4.72E-01
CS-134	3.49E-01
CS-137	1.03E+00
MN-54	2.23E-02
NP-239	1.55E-03
SR-89	1.01E-03
SR-90	3.23E-03
XE-133	<2.27E-01
XE-135	<1.39E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.14E+01
TOTAL LIQUID RELEASE	6.78E+00

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	1.34E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.93E+09

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0	N/A	N/A

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
50	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

		JAN-JUNE	JULY-DEC
A			
CO-58	?		7.94E-01
CO-60	%	3.50E+01	6.66E+01
CS-134	%	1.50E+01	1.25E+01
CS-137	%	5.00E+01	1.74E+01
MN-54	%		2.77E+00
B			
CO-58	%		9.00E-01
CO-60	%		5.69E+01
CS-134	%		8.40E+00
CS-137	%		3.18E+01
MN-54	%		2.00E+00

TYPE OF WASTE

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.99E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	1.51E+03
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	2.98E+02
	CI	5.54E+00
D. OTHER	M3	0.
	CI	0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-338
 COOLING WATER SOURCE LAKE ANNA

LICENSEE VIRGINIA ELECTRIC & POWER
 LICENSED POWER (MWT) 2775.0
 INITIAL CRITICALITY 04/05/78

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.93E-01
BA-LA-140	2.75E-06
CD-109	1.12E-04
CE-141	3.85E-08
CE-144	1.16E-07
CO-57	7.87E-07
CO-58	4.15E-03
CO-60	1.17E-04
CR-51	6.95E-05
CS-134	1.69E-07
CS-137	1.39E-03
FE-59	9.50E-05
I-131	3.54E-02
I-133	1.40E-03
KR-83M	2.20E-02
KR-85	1.41E+00
KR-85M	1.82E+01
KR-87	2.86E-01
KR-88	6.26E-01
MN-54	2.96E-04
NB-95	1.45E-05
SR-85	2.70E-06
SR-90	5.43E-07
TM-170	5.20E-04
XE-131M	3.27E+00
XE-133	6.06E+03
XE-133M	1.57E+01
XE-135	1.98E+02
XE-135M	4.45E-01
XE-38	3.32E-01
ZN-65	2.19E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CD-109	1.12E-03
CO-57	2.09E-02
CO-58	1.30E-01
CO-60	1.26E-02
CR-51	8.92E-04
CS-134	9.02E-02
CS-137	1.25E-01
FE-59	8.84E-05
I-131	1.60E-01

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
I-133		2.39E-02
KR-85		2.20E-02
MN-54		1.34E-03
NA-24		3.31E-04
SR-85		7.32E-05
SR-89		4.83E-03
SR-90		3.42E-03
TC-99		1.80E-04
TC-99M		7.51E-05
XE-131M		5.96E-03
XE-133		4.03E+00
XE-133M		2.08E-02
XE-135		2.95E-02
ZR-NB-95		8.93E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.89E+00
TOTAL LIQUID RELEASE	3.13E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.47E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.54E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= NORTH ANNA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT OR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION
NUMBER OF SHIPMENTS 25 MODE OF TRANSPORTATION PRIVATE VEHICLE DESTINATION BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION (BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
^B CO-58	%	4.00E+01	4.80E+01
CO-60	%	1.20E+01	2.21E+01
CS-134	%	2.00E+01	8.58E+00
CS-137	%	2.10E+01	1.24E+00
MN-54	%	7.00E+00	1.92E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	7.63E+01 3.33E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	2.19E+02 2.56E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION OCONEE

LOCATION 30 MI W GREENVILLE, SC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-269
COOLING WATER SOURCE KEOWEE LAKE
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-270
COOLING WATER SOURCE KEOWEE LAKE
UNIT NUMBER 3
TYPE PWR
DOCKET NO. 50-287
COOLING WATER SOURCE KEOWEE LAKE

LICENSEE DUKE POWER
LICENSED POWER (MWT) 2568.0
INITIAL CRITICALITY 04/19/73

LICENSEE DUKE POWER
LICENSED POWER (MWT) 2568.0
INITIAL CRITICALITY 11/11/73

LICENSEE DUKE POWER
LICENSED POWER (MWT) 2568.0
INITIAL CRITICALITY 09/05/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-108M	1.09E-07
AG-110M	1.75E-04
AR-41	2.71E+01
BA-LA-140	2.11E-04
BA-139	0.
CD-109	0.
CD-115	1.68E-03
CE-141	0.
CE-144	3.58E-04
CO-57	1.16E-07
CO-58	1.21E-04
CO-60	1.97E-04
CR-51	5.51E-04
CS-134	1.77E-04
CS-136	6.71E-05
CS-137	1.66E-04
CS-138	1.54E-03
FE-59	3.16E-05
F-18	0.
IN-115M	0.
I-131	1.37E-01
I-132	2.76E-03
I-133	4.86E-02
I-134	8.98E-04
I-135	1.00E-02
KR-85	1.07E+03
KR-85M	9.14E+01
KR-87	6.97E+00
KR-88	2.99E+01
KR-89	1.68E+02
MN-54	2.86E-05
MN-56	5.63E-06
MO-99	4.33E-04
NA-22	1.38E-07
NA-24	3.43E-05

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NB-95	3.23E-06
NB-97	4.04E-05
NI-65	7.37E-05
NP-239	8.29E-05
RB-88	2.26E-02
RU-103	4.68E-07
RU-106	5.76E-04
SB-124	0.
SB-125	8.13E-05
SR-89	2.29E-07
SR-90	3.20E-08
SR-91	2.13E-04
SR-92	3.37E-05
TC-99M	5.41E-06
W-187	1.35E-04
XE-131M	3.94E+02
XE-133	4.45E+04
XE-133M	7.42E+02
XE-135	7.71E+02
XE-135M	3.80E+01
XE-137	9.69E+00
XE-138	4.02E+00
Y-91M	0.
Y-92	0.
ZN-65	2.81E-05
ZR-95	2.03E-05
ZR-97	1.32E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-108M	1.27E-04
AG-110M	1.09E-02
AR-41	1.28E-04
BA-LA-140	3.33E-03
BA-139	0.
CD-109	0.
CD-115	1.78E-04
CD-115M	0.
CE-134	0.
CE-141	0.
CE-144	4.55E-03
CO-57	4.84E-04
CO-58	1.81E-01
CO-60	4.94E-02
CR-51	9.75E-03
CS-134	1.24E-01
CS-135M	0.
CS-136	1.08E-03
CS-137	2.40E-01
CS-138	9.36E-05

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
FE-59	5.09E-04
F-18	0.
IN-115M	0.
I-131	1.43E-01
I-132	5.07E-04
I-133	9.58E-03
I-134	1.98E-03
I-135	2.61E-03
KR-85	3.64E-01
KR-85M	2.32E-04
KR-87	0.
KR-88	2.78E-05
MN-54	7.43E-03
MN-56	4.52E-05
MO-99	1.60E-03
NA-24	2.58E-04
NB-95	3.99E-03
NB-97	2.70E-02
NI-65	0.
NP-239	1.11E-04
RU-103	5.29E-05
RU-103M	0.
RU-106	6.79E-03
SB-122	0.
SB-124	0.
SB-125	1.65E-03
SN-123M	0.
SN-125	0.
SR-89	8.08E-02
SR-90	7.20E-03
SR-91	1.72E-04
SR-92	3.34E-03
TC-99M	9.75E-04
W-187	1.25E-03
XE-131M	2.03E-02
XE-133	1.25E+00
XE-133M	1.52E-02
XE-135	4.22E-02
Y-88	0.
Y-92	0.
ZN-65	5.48E-06
ZR-95	1.05E-03
ZR-97	2.96E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.65E+01
TOTAL LIQUID RELEASE	8.94E+02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION OCONEE

LOCATION 30 MI W GREENVILLE, SC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.35E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.61E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= OCONEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
195	TRUCK	BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	1.63E+03 2.59E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION OYSTER CREEK

LOCATION 9 MI S TOMS RIVER, NJ

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE BWR
DOCKET NO. 50-219
COOLING WATER SOURCE BARNEGAT BAY

LICENSEE JERSEY CENTRAL POWER & LIGHT
LICENSED POWER (MWT) 1930.0
INITIAL CRITICALITY 05/03/69

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	3.45E-01
CE-141	2.77E-03
CE-143	3.66E-04
CE-144	2.43E-03
CO-57	1.24E-04
CO-58	8.21E-03
CO-60	1.62E-02
CR-51	6.71E-03
CS-134	1.36E-04
CS-137	3.27E-03
FE-59	2.98E-04
I-131	8.80E+00
I-133	2.96E+01
I-135	3.91E+01
KR-85M	4.36E+04
KR-87	1.41E+05
KR-88	1.36E+05
KR-89	2.99E+01
LA-140	2.98E-01
MN-54	5.18E-03
MO-99	7.32E-02
NA-24	1.21E-04
NI-95	1.15E-03
NP-239	1.73E-01
PA-233	1.55E-03
RU-103	2.69E-04
SB-124	7.50E-05
SR-89	7.85E-02
SR-90	5.28E-02
SR-91	2.64E+00
TC-99M	1.43E+00
XE-133	3.51E+04
XE-133M	N/D
XE-135	2.26E+05
XE-135M	9.86E+04
XE-137	6.33E+02
XE-138	3.32E+05
ZN-65	1.62E-04
ZR-95	2.62E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CE-141	1.74E-04

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CE-144		1.51E-06
CO-57		4.00E-06
CO-60		3.28E-04
CR-51		2.59E-03
CS-134		3.80E-06
CS-137		7.10E-04
I-131		1.36E-04
I-133		7.37E-04
I-135		6.13E-04
KR-88		3.65E-06
LA-140		6.07E-04
MN-54		6.60E-05
NA-24		2.30E-05
NI-95		6.00E-06
NP-239		1.76E-04
PA-233		5.63E-07
SB-124		1.21E-06
SR-89		3.04E-05
SR-90		3.28E-06
TC-99M		3.69E-04
XE-133		1.07E-02
XE-135		1.36E-02
ZR-95		7.00E-06

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.86E+01
TOTAL LIQUID RELEASE	1.40E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.16E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.78E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= OYSTER CREEK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
153	MOTOR VEHICLE	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	2.70E+01	2.87E+01
CS-134	%	4.03E+00	
CS-137	%	8.90E+00	6.00E+00
MN-54	%	8.90E+00	7.90E+00
SR-89	%	3.79E+01	3.97E+01
SR-90	%		2.80E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	6.17E+02
	C1	1.31E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	5.14E+02
	C1	2.89E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	C1	
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-255
 COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE CONSUMERS POWER
 LICENSED POWER (MWT) 2530.0
 INITIAL CRITICALITY 05/24/71

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.07E-02
CO-57	3.03E-06
CO-58	1.31E-03
CO-60	1.88E-03
CR-51	2.76E-04
CS-134	1.08E-04
CS-137	3.33E-04
FE-59	4.73E-06
I-131	1.91E-02
I-133	8.48E-03
I-135	2.25E-03
KR-85	2.55E+00
MN-54	9.25E-04
NB-95	3.31E-05
UNIDENTIFIED	6.24E-04
XE-131M	5.58E-01
XE-133	6.50E+01
XE-133M	4.76E-02
XE-135	2.08E-01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CO-57	5.00E-06
CO-58	6.50E-02
CO-60	1.49E-02
CR-51	1.26E-02
CS-134	2.02E-03
CS-136	7.00E-06
CS-137	7.91E-03
FE-59	1.27E-03
I-131	3.82E-04
MN-54	1.23E-02
NB-95	1.45E-03
UNIDENTIFIED	9.12E-03
XE-133	9.05E-03
ZR-95	5.81E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.67E+00
TOTAL LIQUID RELEASE	1.26E+02

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

INSTALLATION PALISADES

LOCATION 5 MI S SOUTH HAVEN, MI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.12E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.72E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= PALISADES

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
16	TRUCK	BARNWELL S.C.
11	TRUCK	BEATTY NV.
1	TRUCK	BEATTY-SOUTHWEST CA.
2	TRUCK	RICHLAND WA.

TYPE OF WASTE

	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3 C1	2.17E+02 1.06E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3 C1	4.66E+02 1.49E+01
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3 C1	5.00E-01 2.71E+02
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION PEACH BOTTOM

LOCATION 17.9 MI S LANCASTER, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2	LICENSEE PHILADELPHIA ELECTRIC
TYPE BWR	LICENSED POWER (MWT) 3293.0
DOCKET NO. 50-277	INITIAL CRITICALITY 09/16/73
COOLING WATER SOURCE CONOWINGO POND/SUSQUEHANNA RIVER	
UNIT NUMBER 3	LICENSEE PHILADELPHIA ELECTRIC
TYPE BWR	LICENSED POWER (MWT) 293.0
DOCKET NO. 50-278	INITIAL CRITICALITY 08/07/74
COOLING WATER SOURCE CONOWINGO POND/SUSQUEHANNA RIVER	

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	N/D
BA-140	3.34E-04
CO-58	N/D
CO-60	9.41E-04
CR-51	6.74E-04
CS-134	1.65E-03
CS-137	1.52E-03
CS-138	9.62E-02
I-131	2.58E-01
I-133	6.31E-01
I-135	4.74E-01
KR-85M	4.33E+02
KR-87	1.12E+02
KR-88	8.44E+01
LA-140	1.88E-04
NA-24	2.11E-03
RU-88	1.03E-02
RU-89	3.79E-04
SR-89	6.51E-04
SR-90	<1.53E-03
SR-91	3.26E-04
SR-92	4.26E-05
TC-99M	2.62E-03
XE-131M	1.36E+02
XE-133	1.06E+05
XE-133M	1.94E+03
XE-135	1.53E+04
XE-135M	8.69E+01
XE-138	2.31E+01
Y-91M	2.47E-03
ZN-65	8.53E-04
ZR-95	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.14E-04
BA-140	9.63E-04
CD-109	8.58E-02
CO-58	7.89E-02
CO-60	1.62E-01
CR-51	6.48E-02

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CS-134		3.92E+00
CS-137		3.26E+00
FE-55		2.04E-01
I-131		9.63E-01
I-132		3.22E-03
I-133		4.46E-01
I-135		1.18E-01
KR-85M		5.28E-02
KR-87		2.98E-02
KR-88		8.51E-02
LA-140		2.37E-02
MN-54		7.35E-03
MO-99		1.60E-04
NA-24		9.27E+00
NB-95		4.71E-04
NI-63		3.17E-02
NP-239		2.86E-02
P-32		7.19E-02
RU-103		1.77E-04
SB-122		1.94E-01
SB-124		5.36E-04
SR-89		2.03E-02
SR-90		2.48E-04
SR-91		7.33E-03
SR-92		1.42E-03
TC-99M		1.01E-01
TE-132		1.51E-02
XE-131M		1.03E-01
XE-133		1.17E+00
XE-133M		7.18E-04
XE-135		3.07E+00
XE-135M		7.05E-02
Y-91M		2.30E-02
ZN-65		4.62E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.74E+01
TOTAL LIQUID RELEASE	4.28E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	3.49E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.86E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= PEACH BOTTOM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
299	TRUCK	BARNWELL S.C.
2	TRUCK	BEATTY NEVADA

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	8.47E+04 8.03E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-293
 COOLING WATER SOURCE CAPE COD BAY

LICENSEE BOSTON EDISON
 LICENSED POWER (MWT) 1998.0
 INITIAL CRITICALITY 06/16/72

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	3.29E-02
CE-141	4.22E-04
CE-144	9.28E-05
CO-58	1.75E-06
CO-60	5.20E-04
CS-134	1.17E-05
CS-137	4.69E-04
FE-59	2.04E-06
I-131	1.04E-01
I-133	5.20E-01
I-135	7.33E-01
KR-85	5.87E-02
KR-85M	2.59E+03
KR-87	2.25E+03
KR-88	5.52E+03
MN-54	7.24E-05
RU-103	1.84E-06
RU-106	3.32E-04
SR-89	1.30E-02
SR-90	4.84E-05
XE-133	1.93E+03
XE-135	5.15E+02
XE-135M	2.08E+02
XE-138	8.61E+02
ZR-NB-95	7.54E-07

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	8.15E-03
CE-141	2.94E-03
CE-144	6.21E-04
CO-58	1.58E-03
CO-60	8.48E-02
CR-51	6.70E-03
CS-134	6.14E-03
CS-137	2.92E-02
FE-55	3.13E-01
FE-59	3.01E-04
I-131	1.87E-05
I-133	8.72E-06
MN-54	1.29E-02
M099-TC99M	2.11E-04
SR-89	1.83E-03
SR-90	4.94E-04
UNIDENTIFIED	4.22E-02

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
XE-133	4.89E-04
XE-135	1.13E-03
ZN-65	6.76E-04
ZR-NB-95	1.42E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.56E+02
TOTAL LIQUID RELEASE	1.34E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	9.24E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.17E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
117 TRACTOR TRAILER BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A			JAN-JUNE	JULY-DEC
BA-LA-140	%		1.18E+00	1.55E+00
CE-141	%		1.21E-01	1.03E+00
CE-144	%		8.50E-02	6.00E-02
CO-58	%		3.52E-01	1.07E+00
CO-60	%		1.18E+01	2.17E+01
CR-51	%		1.24E+00	1.11E+00
CS-134	%		2.18E+00	5.36E+00
CS-137	%		6.72E+00	1.60E+01
FE-55	%		7.33E+01	4.94E+01
FE-59	%		4.90E-02	2.60E-02
I-131	%		1.70E-01	4.59E-01
I-133	%		2.40E-02	3.10E-02
MN-54	%		1.70E+00	2.67E+00
MO99-TC99M	%		6.55E-01	
NA-22	%			2.00E-03
NP-239	%		4.00E-03	
RU-103	%		4.00E-02	3.80E-02
SR-90	%		2.30E-01	
TC-99M	%			4.00E-03
UNIDENTIFIED	%		7.30E-02	
ZN-65	%		7.30E-01	2.20E-01
ZR-N8-95	%		7.00E-03	4.00E-03

B			JAN-JUNE	JULY-DEC
BA-LA-140	%		1.18E+00	1.55E+00
CE-141	%		1.21E-01	1.03E+00
CE-144	%		8.50E-02	6.00E-02
CO-58	%		3.52E-01	1.07E+00
CO-60	%		1.18E+01	2.17E+01
CR-51	%		1.24E+00	1.11E+00
CS-134	%		2.18E+00	5.36E+00
CS-137	%		6.72E+00	1.60E+01
FE-55	%		7.33E+01	4.94E+01
FE-59	%		4.90E-02	2.60E-02
I-131	%		1.70E-01	4.59E-01
I-133	%		2.40E-02	3.10E-02
MN-54	%		1.70E+00	2.67E+00
MO99-TC99M	%		6.55E-01	
NA-22	%			2.00E-03
NP-239	%		4.00E-03	
RU-103	%		4.00E-02	3.80E-02
SR-90	%		2.30E-01	
TC-99M	%			4.00E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= PILGRIM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

UNIDENTIFIED	%	7.30E-02	
ZN-65	%	7.30E-01	2.20E-01
ZR-NB-95	%	7.00E-03	4.00E-03
C			
CO-60	%	3.17E+01	5.11E+01
FE-55	%	6.40E+01	3.93E+01
MN-54	%	1.70E+00	3.50E+00
NI-59	%	1.30E+00	
NI-63	%	1.30E+00	3.28E+00
SB-125	%		1.82E+00
TE-125M	%		1.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	2.96E+02
	C1	2.50E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	9.40E+02
	C1	1.71E+02
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.79E+03
	C1	1.95E+04
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-266
 COOLING WATER SOURCE LAKE MICHIGAN
 UNIT NUMBER 2
 TYPE PWR
 DOCKET NO. 50-301
 COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE WISCONSIN ELECTRIC POWER COMPANY
 LICENSED POWER (MWT) 1518.5
 INITIAL CRITICALITY 11/02/70

LICENSEE WISCONSIN ELECTRIC POWER COMPANY
 LICENSED POWER (MWT) 1518.5
 INITIAL CRITICALITY 05/30/72

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.59E+01
BA-133	2.30E-04
BA-140	6.38E-07
CD-109	1.02E-03
CE-139	1.07E-08
CE-141	2.08E-04
CE-144	1.20E-06
CO-56	1.20E-07
CO-57	2.61E-05
CO-58	2.04E-03
CO-60	1.48E-03
CR-51	6.42E-04
CS-134	2.88E-04
CS-136	4.06E-06
CS-137	2.44E-03
CS-138	7.89E-02
F-18	1.42E-03
I-131	4.32E-03
I-132	9.69E-03
I-133	7.02E-03
I-134	2.15E-05
I-135	7.77E-05
KR-85	3.15E+01
KR-85M	6.14E+01
KR-87	3.37E+01
KR-88	9.80E+01
LA-140	7.43E-05
MN-54	2.09E-05
MN-56	5.74E-06
MO-99	7.54E-06
NB-95	2.66E-04
RB-88	6.34E-02
RB-89	3.92E-06
RU-103	4.31E-04
SB-125	5.61E-09
SN-113	6.88E-07
SR-89	3.11E-06
SR-90	1.17E-06
SR-91	1.66E-06

N/A=NOT APPLICABLE

N/D=NOT DETECTED

N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
TE-132	5.71E-06
XE-133	3.05E+02
XE-133M	2.96E+00
XE-135	3.25E+02
XE-135M	2.12E+01
XE-138	3.32E+01
Y-91M	1.09E-05
ZR-95	6.03E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	3.05E-02
BI-207	3.72E-06
CE-139	3.88E-04
CE-144	2.03E-03
CO-57	1.64E-04
CO-58	4.82E-02
CO-60	1.57E-02
CR-51	5.50E-04
CS-134	1.51E-02
CS-136	1.28E-05
CS-137	5.36E-02
CS-138	2.48E-02
FE-59	9.17E-05
F-18	1.10E-02
I-131	8.76E-02
I-132	9.62E-02
I-133	1.75E-01
I-134	2.08E-02
I-135	8.50E-02
KR-85M	4.70E-05
LA-140	1.97E-02
MN-54	7.30E-03
MO-99	1.91E-03
NB-95	1.24E-03
RB-88	2.19E-02
RU-103	2.20E-03
SB-124	2.29E-04
SB-125	5.15E-04
SN-113	8.37E-05
SR-89	6.90E-05
SR-90	1.69E-05
SR-91	5.43E-04
TE-132	1.22E-04
XE-131M	5.31E-04
XE-133	1.94E-02
XE-135	2.13E-02
Y-91M	3.34E-04
ZR-95	2.19E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION POINT BEACH

LOCATION 15 MI N MANITOWOC, WI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(C1)		
TOTAL AIRBORNE RELEASE	8.04E+02		
TOTAL LIQUID RELEASE	8.92E+02		
VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)		LITERS	3.06E+08
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	5.17E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= POINT BEACH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0	N/A	N/A

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
20	TRUCK	N/R

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPILT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	2.10E+01 1.22E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	1.16E+02 2.99E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	0. 0.
D. OTHER	M3 C1	1.32E+02 1.48E+00

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION PRAIRIE ISLAND

LOCATION 26 MI SE MINNEAPOLIS, MN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-282
COOLING WATER SOURCE MISSISSIPPI RIVER
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-306
COOLING WATER SOURCE MISSISSIPPI RIVER

LICENSEE NORTHERN STATES POWER
LICENSED POWER (MWT) 1650.0
INITIAL CRITICALITY 12/01/73
LICENSEE NORTHERN STATES POWER
LICENSED POWER (MWT) 1650.0
INITIAL CRITICALITY 12/17/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.65E+00
BA-LA-140	0.
CD-109	0.
CE-139	2.12E-07
CE-141	1.42E-07
CE-144	1.06E-05
CO-57	0.
CO-58	4.44E-06
CO-60	8.42E-07
CS-134	0.
CS-137	0.
CS-138	0.
I-131	3.84E-03
I-133	6.15E-04
I-135	0.
KR-85	1.30E+00
KR-85M	8.06E-01
KR-87	2.48E+00
KR-88	0.
MN-54	0.
NA-24	0.
RB-88	4.37E-05
SB-124	0.
SR-85	0.
SR-89	0.
SR-90	0.
XE-131M	6.09E-03
XE-133	6.68E+02
XE-133M	1.85E+00
XE-135	1.92E+01
XE-135M	0.
XE-138	0.
Y-88	1.15E-06
ZR-NB-95	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	0.
AR-41	1.34E-05

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	0.
CD-109	0.
CO-57	5.20E-06
CO-58	3.10E-03
CO-60	9.51E-04
CR-51	4.34E-04
CS-134	3.80E-06
CS-136	0.
CS-137	5.60E-06
FE-59	4.16E-04
I-131	7.55E-04
KR-85	0.
KR-85M	0.
KR-88	0.
MN-54	3.62E-05
MO-99	6.75E-05
NA-24	0.
RB-88	0.
SB-124	7.50E-04
SN-113	3.30E-06
SR-85	0.
SR-89	0.
SR-90	0.
TC-99M	9.10E-05
W-187	0.
XE-131M	0.
XE-133	1.66E-01
XE-133M	3.48E-04
XE-135	4.38E-03
ZN-65	0.
ZR-NB-95	9.30E-06
ZR-NB-97	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.56E+02
TOTAL LIQUID RELEASE	6.25E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.76E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.11E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= PRAIRIE ISLAND

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
2	TRUCK	BARNWELL S.C.
1	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)

		JAN-JUNE	JULY-DEC
A			
CO-57	%		1.90E-01
CO-58	%	2.04E+01	1.18E+01
CO-60	%	4.19E+01	3.13E+01
CS-134	%	9.40E+00	1.79E+01
CS-137	%	2.35E+01	3.64E+01
MN-54	%		2.38E+00
B			
CO-60	%	8.70E+00	
CS-134	%	2.42E+01	
CS-137	%	3.54E+01	
SB-124	%	2.34E+01	

TYPE OF WASTE

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	4.11E+00
	CI	8.71E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	1.58E+01
	CI	1.20E+00
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-254
 COOLING WATER SOURCE MISSISSIPPI RIVER
 UNIT NUMBER 2
 TYPE BWR
 DOCKET NO. 50-265
 COOLING WATER SOURCE MISSISSIPPI RIVER

LICENSEE COMMONWEALTH EDISON AND IOWA-ILLINOIS GAS + ELECTRIC
 LICENSED POWER (MWT) 2511.0
 INITIAL CRITICALITY 10/18/71

LICENSEE COMMONWEALTH EDISON AND IOWA-ILLINOIS GAS + ELECTRIC
 LICENSED POWER (MWT) 2511.0
 INITIAL CRITICALITY 04/26/72

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.68E-05
BA-140	3.38E-01
CE-141	4.33E-03
CE-144	2.23E-04
CO-58	1.88E-03
CO-60	1.45E-02
CR-51	2.28E-02
CS-134	6.03E-03
CS-136	3.15E-03
CS-137	8.63E-03
FE-59	5.75E-05
I-131	9.47E-01
I-133	5.68E+00
I-135	7.51E+00
KR-85	N/D
KR-85M	3.28E+03
KR-87	1.32E+04
KR-88	5.16E+03
LA-140	N/D
MN-54	6.17E-04
NB-95	1.52E-04
RU-103	1.51E-05
SR-89	1.66E-01
SR-90	3.45E-03
UNIDENTIFIED	1.78E-01
XE-133	1.30E+04
XE-135	2.63E+03
XE-135M	8.91E+02
XE-138	6.34E+03
ZN-65	8.02E-04
ZR-95	2.35E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	7.16E-04
BA-140	1.66E-01
CE-141	3.34E-03
CO-58	2.40E-03
CO-60	1.87E-01
CR-51	N/D
CS-134	2.03E-01

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-136	1.01E-02
CS-137	3.21E-01
FE-59	N/D
I-131	1.14E-01
LA-140	5.39E-02
MN-54	7.00E-03
MO-99	N/D
NB-95	N/D
SR-89	5.20E-01
SR-90	5.39E-03
UNIDENTIFIED	1.04E-01
XE-133	N/D
XE-135	N/D
ZN-65	4.58E-03
ZR-95	N/D

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.46E+02
TOTAL LIQUID RELEASE	1.76E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	5.15E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	7.57E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= QUAD-CITIES

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
188	TRUCK	BARNWELL S.C.
1	TRUCK	BEATTY NV.
3	TRUCK	HANFORD WA.
4	TRUCK	RICHLAND WA.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	7.82E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	4.26E+03
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
D. OTHER	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1	LICENSEE SACRAMENTO MUNICIPAL UTILITY
TYPE PWR	LICENSED POWER (MWT) 2772.0
DOCKET NO. 50-312	INITIAL CRITICALITY 09/16/74
COOLING WATER SOURCE COOLING TOWERS-FOLSOM CANAL	

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.63E+00
BA-LA-140	0.
CO-58+CO-60+MN-54	1.47E-04
CS-134	1.35E-04
CS-137	3.83E-04
I-131	4.55E-03
I-133	8.08E-04
I-135	N/D
KR-85	7.39E+00
KR-85M	1.40E+01
KR-87	1.90E-01
KR-88	1.11E+00
SR-89	0.
SR-90	0.
XE-131M	2.31E+00
XE-133	8.12E+03
XE-133M	2.49E+01
XE-135	6.61E+02
XE-135M	N/D
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
-------------------	---------------

NONE

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.42E+02
TOTAL LIQUID RELEASE	NONE

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	NONE
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	NONE

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= RANCHO SECO

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
3	TRUCK	BEATTY NV.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)	JAN-JUNE	JULY-DEC
B		
CO-58	%	6.30E+01
CO-60	%	2.00E+01
CR-51+AG-110M	%	1.00E+00
MN-54	%	1.60E+01
D		
CO-58	%	6.30E+01
CO-60	%	2.00E+01
CR-51+AG-110M	%	1.00E+00
MN-54	%	1.60E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3 C1	0. 0.
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3 C1	9.30E+01 4.02E+00
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3 C1	0. 0.
D. OTHER	M3 C1	8.09E+00 7.87E-03

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-261
COOLING WATER SOURCE ROBINSON INPOUNDMENT

LICENSEE CAROLINA POWER & LIGHT
LICENSED POWER (MWT) 2300.0
INITIAL CRITICALITY 09/20/70

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.35E+00
BE-7	3.20E-07
CE-139	7.09E-09
CE-141	6.72E-06
CE-144	2.36E-05
CO-57	1.45E-07
CO-59	1.19E-04
CO-60	3.28E-04
I-131	3.74E-06
I-137	5.77E-05
I-135	1.07E-04
MN-54	1.77E-05
XE-133	1.53E+03
XE-135	2.34E+01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	1.22E-03
CE-141	1.89E-05
CE-144	5.23E-05
CO-57	1.13E-04
CO-58	1.00E-01
CO-60	7.88E-02
CR-51	0.
CS-134	3.44E-03
CS-136	4.74E-02
CS-137	3.03E-02
FE-59	2.29E-03
I-131	3.70E-03
MN-54	3.01E-02
SB-124	8.47E-04
SB-125	1.14E-03
XE-133	2.14E-03
XE-135	1.06E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.02E+01
TOTAL LIQUID RELEASE	4.29E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.80E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.60E+11
N/A=NOT APPLICABLE		
N/D=NOT DETECTED		
N/R=NOT REPORTED		

INSTALLATION= H.B.ROBINSON

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
15	RAIL	SOUTHPORT N.C.

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
91	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A				
CO-58	%	4.10E+01	7.00E+00	
CO-60	%	4.60E+01	8.60E+01	
CS-137	%	6.00E+00	3.00E+00	
MN-54	%		3.00E+00	
OTHERS	%	7.00E+00	1.00E+00	
B				
CO-58	%	2.80E+01	4.60E+01	
CO-60	%	6.80E+01	4.70E+01	
MN-54	%	2.00E+00	6.00E+00	
OTHERS	%	2.00E+00	1.00E+00	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	4.56E+02
	CI	7.12E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	3.78E+02
	CI	1.60E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	0.
	CI	0.
D. OTHER	M3	0.
	CI	0.

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-272
 COOLING WATER SOURCE DELAWARE RIVER

LICENSEE PSE&G
 LICENSED POWER (MWT) 3338.0
 INITIAL CRITICALITY 12/11/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	3.06E-01
CO-58	1.08E-04
CO-60	7.84E-04
CS-134	3.37E-06
CS-137	5.08E-06
F-18	2.08E-06
I-131	5.47E-03
I-133	2.68E-03
KR-85	1.34E+00
KR-85M	1.17E+00
KR-87	7.93E-02
KR-88	1.10E+00
RU-88	9.59E+00
XE-133	2.26E+02
XE-133M	3.22E+00
XE-135	1.52E+01
XE-135M	5.69E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CD-109	2.08E-03
CE-144	8.50E-04
CO-58	1.41E+00
CO-60	1.88E+00
CR-51	9.40E-02
CS-134	5.67E-02
CS-136	5.01E-04
CS-137	4.44E-02
FE-59	2.64E-02
F-18	8.85E-04
H-3	7.26E+02
I-131	1.89E-02
I-133	2.90E-03
MN-54	3.97E-01
NA-24	4.34E-03
NI-95	2.59E-02
PB-214	3.78E-04
SB-124	1.22E-02
SN-113	7.84E-05
W-187	4.99E-04
XE-133	1.38E+00
XE-133M	1.37E-02
XE-135	2.60E-02

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTSLIQUID EFFLUENTS
NUCLIDES RELEASED
ZR-95ACTIVITY (CI)
1.03E-02TRITIUM (CI)
TOTAL AIRBORNE RELEASE 2.91E+03
TOTAL LIQUID RELEASE 7.26E+02VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION) LITERS 1.83E+07
VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 5.88E+10N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= SALEM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0	N/A	N/A

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
36	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)	JAN-JUNE	JULY-DEC
A		
CO-58	% 4.30E+01	4.33E+01
CO-60	% 4.30E+01	4.33E+01
MN-54	% 1.00E+01	1.00E+01
OTHERS	% 4.00E+00	4.00E+00
B		
CO-58	% 7.30E+01	7.30E+01
CO-60	% 1.10E+01	1.10E+01
MN-54	% 1.00E+01	1.00E+01
OTHERS	% 6.00E+00	6.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	2.59E+02
	CI	6.04E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	4.27E+02
	CI	6.71E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION SAN ONOFRE

LOCATION 2.5 MI S SAN CLEMENTE, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-206
COOLING WATER SOURCE PACIFIC OCEAN

LICENSEE SOUTHERN CALIFORNIA EDISON AND SAN DIEGO
LICENSED POWER (MWT) 1347.0 GAS + ELECTRIC
INITIAL CRITICALITY 08/14/67

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.07E+00
CO-58	1.33E-05
CO-60	7.55E-06
I-131	1.22E-04
KR-85	6.16E+01
KR-85M	2.15E+00
KR-87	5.03E-01
KR-88	2.26E+00
XE-131M	2.72E+00
XE-133	5.18E+02
XE-133M	1.98E+00
XE-135	1.43E+01
XE-135M	2.45E-02
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	2.97E-02
CO-58	9.27E+00
CO-60	6.89E-01
CR-51	2.24E-01
CS-134	2.34E-02
CS-137	4.67E-02
C-14	2.00E-03
FE-55	3.72E-01
FE-59	1.97E-01
I-131	2.52E-02
MN-54	7.67E-03
NB-95	1.60E-02
NI-63	6.23E-03
RU-103	1.36E-02
SR-89	1.63E-02
SR-90	6.73E-04
S-35	3.90E-03
TC-99M	3.15E-02
XE-133	6.81E+00
XE-135	9.30E+00

TRITIUM

	(CI)
TOTAL AIRBORNE RELEASE	2.82E+01
TOTAL LIQUID RELEASE	2.32E+03

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION) LITERS 3.00E+07

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION SAN ONOFRE

LOCATION 2.5 MI S SAN CLEMENTE, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 5.76E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= SAN ONOFRE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
6	TRUCK	BEATTY NV.
1	TRUCK	RICHLAND WA.

TYPE OF WASTE

A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR
BOTTOMS, ETC.
B. DRY COMPRESSIBLE WASTE, CONTAMINATED
EQUIPMENT, ETC.
C. IRRADIATED COMPONENTS, CONTROL
RODS, ETC.
D. OTHER

UNIT	YEAR TOTAL
M3	8.35E+01
CI	9.24E+01
M3	
CI	
M3	
CI	
M3	
CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-335
 COOLING WATER SOURCE ATLANTIC OCEAN

LICENSEE FLORIDA POWER & LIGHT
 LICENSED POWER (MWT) 2560.0
 INITIAL CRITICALITY 04/22/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.49E+01
CO-58	1.52E-05
CO-60	7.45E-06
CR-51	7.76E-07
CS-137	2.81E-06
I-131	1.00E-01
I-133	1.03E+00
I-135	1.02E-04
KR-85	7.73E+01
KR-85M	1.34E+02
KR-87	1.36E+02
KR-88	2.81E+02
MN-54	1.11E-03
RB-88	5.98E-03
SB-124	9.08E-08
XE-131M	8.25E+02
XE-133	1.33E+04
XE-133M	1.35E+02
XF-135	2.55E+02
XE-135M	1.11E+01
XE-138	1.28E+02
ZR-95	7.38E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.26E-02
AR-41	5.29E-05
BA-140	3.49E-04
BA-140-LA-140	4.78E-03
BR-82	6.15E-03
CE-141	8.15E-04
CE-144	2.91E-03
CE-144-PR-144	1.94E-02
CO-57	1.46E-03
CO-58	1.04E+00
CO-60	1.90E-01
CR-51	1.41E-01
CS-134	2.77E-01
CS-136	3.14E-03
CS-137	3.83E-01
FE-59	1.01E-02
I-131	4.81E-02
I-132	1.53E-04

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS	ACTIVITY (CI)
NUCLIDES RELEASED	
I-133	9.57E-03
I-134	1.09E-04
I-135	2.47E-03
KR-85	1.41E-01
MN-54	5.65E-02
MN-56	4.40E-02
MO-99	2.05E-04
MO-99-TC-99M	9.61E-04
NA-24	8.76E-05
NI-65	1.15E-02
NP-239	1.27E-03
RU-103	7.23E-04
SB-122	1.53E-01
SB-124	3.94E-02
SB-125	2.75E-02
SN-113	3.13E-04
SN-113-IN-113M	1.15E-03
SR-89	7.57E-04
SR-90	1.00E-06
SR-90-7-90	5.27E-05
W-187	2.62E-02
XE-131M	2.89E-02
XE-133	2.96E-01
XE-133M	2.96E-03
XE-135	1.72E-03
XE-135M	2.04E-03
XE-138	1.60E-03
ZN-65	3.29E-03
ZR-95	1.80E-02
ZR-95-NB-95	5.41E-02
ZR-97	2.58E-04
ZR-97-NB-97	3.69E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.40E+02
TOTAL LIQUID RELEASE	1.28E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.94E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.13E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= ST. LUCIE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
15 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A

CO-58	%	1.50E+01	
CO-60	%		2.00E+00
CS-134	%	2.20E+01	3.40E+01
CS-137	%	4.90E+01	6.10E+01

B

CO-58	%	1.90E+01	
CO-60	%	6.20E+01	7.60E+01
CS-137	%		1.20E+01
MN-54	%		5.00E+00
ZR-95	%	1.30E+01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.52E+01
	CI	1.68E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	2.93E+02
	CI	1.05E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION SURRY

LOCATION 19 MI NW NEWPORT NEWS, VA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-280
COOLING WATER SOURCE JAMES RIVER
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-281
COOLING WATER SOURCE JAMES RIVER

LICENSEE VIRGINIA ELECTRIC & POWER
LICENSED POWER (MWT) 2441.0
INITIAL CRITICALITY 07/01/72

LICENSEE VIRGINIA ELECTRIC & POWER
LICENSED POWER (MWT) 2441.0
INITIAL CRITICALITY 03/07/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.26E+00
CO-58	3.18E-04
CO-60	7.95E-04
CR-51	5.03E-05
CS-134	4.97E-05
CS-137	2.25E-04
CS-138	1.09E-02
I-131	6.17E-03
I-132	1.21E-04
I-133	7.82E-05
I-134	4.74E-07
I-135	7.52E-06
KR-85	3.40E-01
KR-85M	7.84E-01
KR-87	1.10E+00
KR-88	5.50E-01
MN-54	1.02E-05
RB-88	2.45E-03
XE-133	1.70E+03
XE-133M	9.70E+00
XE-135	6.63E+01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	6.76E-04
BA-LA-140	4.01E-04
CE-141	1.61E-04
CE-144	3.23E-03
CO-57	2.01E-03
CO-58	1.80E+00
CO-60	1.65E+00
CR-51	1.99E-01
CS-134	4.30E-01
CS-136	1.13E-04
CS-137	9.81E-01
C-14	2.48E-02
FE-59	1.62E-04
I-131	6.38E-02
I-132	1.41E-01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION SURRY

LOCATION 19 MI NW NEWPORT NEWS, VA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
I-133	1.32E-01
I-134	1.16E-01
I-135	1.92E-01
KR-85	1.18E+00
MN-54	4.02E-02
NA-24	2.39E-01
NB-95	1.93E-02
SR-89	1.14E-03
SR-90	4.37E-04
XE-133	4.12E-01
XE-135	6.95E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	8.03E+01
TOTAL LIQUID RELEASE	3.57E+02

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	5.26E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.35E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= SURRY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION
156

DESTINATION
BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	2.74E+03 3.45E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION THREE MILE ISLAND 1

LOCATION 10 MI SE HARRISBURG, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-289
COOLING WATER SOURCE SUSQUEHANNA RIVER

LICENSEE METROPOLITAN EDISON + JERSEY CENTRAL POWER + LIGHT
LICENSED POWER (MWT) 2535.0
INITIAL CRITICALITY 06/05/74

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.82E+01
BA-LA-140	N/D
CO-58	4.92E-04
CO-60	6.16E-05
CS-134	2.80E-05
CS-137	7.32E-04
I-131	1.10E-02
I-133	4.07E-06
I-135	N/D
KR-85	1.89E-01
KR-85M	8.87E-02
KR-87	N/D
KR-88	1.85E-01
NB-95	1.79E-05
RU-103	6.74E-05
SR-89	5.01E-05
SR-90	2.10E-06
XE-131M	2.52E+00
XE-133	2.18E+03
XE-133M	7.06E+00
XE-135	2.57E+01
XE-135M	N/D
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110	9.22E-04
AG-110M	1.54E-03
BA-LA-140	2.28E-02
BA-140	1.06E-03
CE-141	5.14E-05
CE-144	2.49E-04
CO-57	3.21E-06
CO-58	6.21E-02
CO-60	1.45E-02
CR-51	6.79E-03
CS-134	2.33E-02
CS-136	1.58E-03
CS-137	1.02E-01
FE-59	1.33E-04
I-131	1.42E-01
LA-140	2.59E-03
MN-54	1.46E-03
MO-99	8.56E-06
NB-95	9.17E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
P-32	6.48E-04
RU-103	3.00E-04
SB-122	2.02E-04
SB-124	4.24E-04
SB-125	2.66E-03
SB-126	1.02E-05
SR-89	9.18E-02
SR-90	7.35E-03
TC-99M	2.85E-04
XE-133	2.21E-02
XE-135	N/D
ZN-65	3.94E-04
ZR-NI-95	3.00E-03
ZR-95	3.05E-05
ZR-97	1.01E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.42E+01
TOTAL LIQUID RELEASE	5.59E+01

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	3.14E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.85E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= THREE MILE ISLAND 1 AND 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0	N/A	N/A

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
12	TRUCK	BARNWELL S.C.
4	TRUCK	LYNCHBURG VA
21	TRUCK	RICHLAND WA

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A+B	%	JAN-JUNE	JULY-DEC
BA-140	%	2.50E-01	
CO-57	%	1.90E-02	
CO-58	%	1.90E+01	
CO-60	%	1.90E+01	
CS-134	%	1.83E+01	
CS-136	%	1.26E-01	
CS-137	%	1.90E+01	
H-3	%	5.00E-04	
I-131	%	3.00E+00	
I-132	%	6.10E-03	
LA-140	%	6.00E-02	
MN-54	%	1.90E+01	
MO-99	%	1.50E-01	
SB-122	%	3.70E-03	
SR-89	%	5.30E-01	
SR-90	%	2.00E-02	
XE-131M	%	3.20E-01	
XE-133	%	2.70E-01	
B			
CS-134	%		1.00E+01
CS-137	%		3.00E+01
SR-89	%		5.00E+01
SR-90	%		5.00E+00
Y-90	%		5.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	6.80E+00
	C1	1.64E-02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	7.44E+02
	C1	3.12E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	C1	
D. OTHER	M3	
	C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2
 TYPE PWR
 DOCKET NO. 50-320
 COOLING WATER SOURCE SUSQUEHANNA RIVER

LICENSEE METROPOLITAN EDISON & JERSEY CENTRAL POWER & LIGHT
 LICENSED POWER (MWT) 2772.0
 INITIAL CRITICALITY 03/28/78

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.97E-01
BA-LA-140	N/D
BA-140	2.00E-04
CO-58	3.94E-04
CO-60	9.21E-05
CS-134	1.04E-05
CS-136	2.46E-07
CS-137	4.31E-05
CS-138	1.66E-05
I-131	1.42E+01
I-133	2.39E+00
I-135	N/D
KR-85	4.80E+02
KR-85M	6.01E-04
KR-87	N/D
KR-88	6.10E+04
RU-106	9.85E-05
SR-85	4.30E-07
SR-89	6.22E-05
SR-90	3.12E-05
XE-131M	5.65E-05
XE-133	8.21E+06
XE-133M	1.19E+04
XE-135	1.58E+06
XE-135M	1.41E+05
XE-138	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110	1.07E-03
AG-110M	1.98E-04
BA-LA-140	6.98E-04
CE-141	N/D
CO-58	2.11E-02
CO-60	3.88E-03
CR-51	2.10E-03
CS-134	1.94E-03
CS-137	2.18E-03
FE-59	1.39E-03
I-131	2.35E-01
I-133	4.70E-02
MN-54	1.13E-02
MO-99	3.85E-05
RU-103	2.10E-04
SB-122	1.01E-04

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
 AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SB-124	9.26E-05
SR-89	9.53E-05
SR-90	2.29E-03
TC-99M	N/D
W-187	3.43E-04
XE-133	3.13E-02
XE-135	3.98E-04
ZN-65	N/D
ZR-NI-95	5.79E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.47E+02
TOTAL LIQUID RELEASE	7.81E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.63E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.85E+10

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-344
 COOLING WATER SOURCE COLUMBIA RIVER

LICENSEE PORTLAND GENERAL ELECTRIC
 LICENSED POWER (MWT) 3411.0
 INITIAL CRITICALITY 12/15/75

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	7.71E-08
AR-41	4.34E-01
BA-140	<1.30E-03
CE-144	8.67E-04
CO-58	3.81E-04
CO-60	5.71E-05
CR-51	4.22E-08
CS-134	1.73E-05
CS-137	3.81E-04
FE-59	8.20E-07
I-131	1.43E-02
I-132	2.64E-05
I-133	1.15E-02
I-134	7.30E-06
I-135	6.67E-03
KR-85	1.04E+00
KR-85M	1.16E+00
KR-87	9.33E-01
KR-88	1.57E+00
KR-89	3.83E-03
LA-140	<1.46E-02
MN-54	1.48E-03
NB-95	3.72E-06
SB-124	5.55E-06
SB-125	1.13E-05
SR-89	4.20E-05
SR-90	1.58E-05
UNIDENTIFIED	3.31E+00
XE-131M	2.49E+00
XE-133	8.68E+02
XE-133M	7.44E+00
XE-135	3.74E+01
XE-135M	3.58E+00
XE-137	2.27E-01
XE-138	4.30E-01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.69E-02
BA-140	<1.50E-02
CE-141	2.05E-03
CE-144	3.76E-03
CO-57	1.29E-03
CO-58	1.42E-01
CO-60	1.72E-01

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
CR-51		7.21E-02
CS-134		2.11E-03
CS-136		8.78E-05
CS-137		5.16E-03
FE-59		4.01E-03
I-131		1.18E-02
I-133		1.93E-03
I-134		1.11E-04
I-135		6.89E-04
LA-140		<4.05E-03
MN-54		3.59E-02
MO-99		2.12E-04
NA-24		1.77E-04
NB-95		2.07E-02
NP-239		8.74E-04
RU-103		5.91E-03
SB-124		4.33E-03
SB-125		9.97E-03
SB-127		3.09E-04
SN-113		2.62E-03
SR-89		1.75E-03
SR-90		1.00E-04
TC-99M		2.15E-04
UNIDENTIFIED		7.57E-05
W-187		1.02E-03
XE-133		2.19E-01
XE-133M		1.59E-03
XE-135		2.63E-03
XE-135M		6.38E-05
ZN-65		2.62E-04
ZR-95		1.31E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.05E+01
TOTAL LIQUID RELEASE	6.80E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.12E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.04E+10

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= TROJAN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
35 TRUCK RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) JAN-JUNE JULY-DEC

A

CO-57	%	8.16E-01	
CO-58	%	1.34E+01	2.24E+01
CO-60	%	5.92E+01	6.13E+01
CS-134	%	2.42E+00	1.74E-02
CS-137	%	4.38E+00	5.03E+00
I-131	%		5.78E-04
MN-54	%	1.73E+01	1.12E+01
SB-124	%	2.41E+00	

B

CE-144	%	1.20E-01	
CO-57	%	1.20E-01	
CO-58	%	4.92E+01	5.93E+01
CO-60	%	4.35E+01	3.58E+01
CR-51	%		2.04E+00
CS-134	%	1.20E-01	
CS-137	%	1.20E-01	5.97E-01
MN-54	%	6.39E+00	2.04E+00
NB-95	%	1.20E-01	
SB-124	%	1.20E-01	
SN-113	%	1.20E-01	
ZR-95	%	2.41E-01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	6.62E+01
	CI	3.19E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	5.71E+02
	CI	1.15E+01
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	
	CI	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION TURKEY POINT

LOCATION 10 MI E FLORIDA CITY, FL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 3
TYPE PWR
DOCKET NO. 50-250
COOLING WATER SOURCE CLOSED CANAL SYSTEM
UNIT NUMBER 4
TYPE PWR
DOCKET NO. 50-251
COOLING WATER SOURCE CLOSED CANAL SYSTEM

LICENSEE FLORIDA POWER & LIGHT
LICENSED POWER (MWT) 2200.0
INITIAL CRITICALITY 10/20/72

LICENSEE FLORIDA POWER & LIGHT
LICENSED POWER (MWT) 2200.0
INITIAL CRITICALITY 06/11/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.37E+01
BA-140	3.66E-04
BR-82	1.55E-03
CE-141	1.06E-04
CE-144	7.30E-05
CO-57	5.51E-05
CO-58	2.09E-02
CO-60	1.92E-02
CR-51	3.24E-03
CS-134	3.83E-04
CS-136	3.20E-06
CS-137	6.17E-04
FE-59	1.67E-04
I-131	3.19E-02
I-133	1.56E-02
I-135	1.75E-03
KR-85	9.57E-01
KR-85M	1.35E+00
KR-87	2.67E-01
KR-88	9.81E-01
LA-140	3.70E-04
MN-54	5.99E-04
NB-95	3.29E-04
RU-103	3.91E-04
SB-124	1.57E-04
SB-125	1.50E-05
SR-89	8.30E-05
SR-90	1.58E-05
XE-131M	2.03E+00
XE-133	1.05E+04
XE-133M	6.82E+00
XE-135	2.96E+01
XE-135M	1.85E+00
XE-138	7.07E-01
ZN-65	1.50E-04
ZR-95	1.08E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	3.14E-03
BA-140	N/D
CO-57	1.36E-05
CO-58	4.86E-02
CO-60	8.51E-02
CR-51	4.78E-03
CS-134	3.06E-02
CS-136	N/D
CS-137	4.81E-02
FE-59	1.70E-04
F-18	1.27E-02
I-131	2.02E-02
I-132	1.33E-02
I-133	5.59E-02
I-134	2.85E-03
I-135	3.36E-02
LA-140	2.24E-04
MN-54	1.11E-03
MO-99/TC-99M	1.19E-04
NA-24	5.03E-03
NB-95	3.29E-04
RU-103	2.69E-04
SB-124	1.56E-02
SB-125	1.69E-02
SR-89	7.84E-03
SR-90	1.31E-03
TE-132	9.41E-04
UNIDENTIFIED	1.01E-03
ZR-95	2.78E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	9.36E-01
TOTAL LIQUID RELEASE	9.40E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.66E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.17E+12

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= TURKEY POINT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
78	TRUCK	BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	9.20E+02 2.48E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE BWR
 DOCKET NO. 50-271
 COOLING WATER SOURCE CONNECTICUT RIVER

LICENSEE VERMONT YANKEE NUCLEAR POWER
 LICENSED POWER (MWT) 1593.0
 INITIAL CRITICALITY 03/24/72

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	1.17E-03
CD-109	4.54E-04
CE-134	1.61E-05
CE-139	2.80E-05
CO-58	8.61E-04
CO-60	9.79E-03
CS-134	5.46E-03
CS-137	5.29E-03
I-131	4.13E-01
I-133	1.21E-01
I-135	5.06E-02
KR-85	6.90E-05
KR-85M	<3.39E+01
KR-87	<1.03E+02
KR-88	<8.68E+01
MN-54	2.27E-04
SR-89	2.61E-03
SR-90	1.19E-05
XE-133	<4.45E+03
XE-135	<2.20E+02
XE-135M	<9.79E+02
XE-138	<2.20E+03
ZN-65	3.55E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	<3.21E-05
CE-141	<5.66E-06
CO-58	<1.10E-05
CO-60	<1.54E-05
CR-51	<5.03E-05
CS-134	<8.62E-06
CS-137	<1.08E-05
FE-59	<2.58E-05
I-131	<5.68E-06
MN-54	5.85E-05
MO-99	<2.90E-06
SR-89	<4.84E-06
SR-90	2.71E-06
TC-99M	<3.09E-06
XE-133	2.92E-02
XE-135	7.64E-02
ZN-65	<2.89E-05
ZR-NB-95	<2.27E-05

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.65E+01
TOTAL LIQUID RELEASE	4.04E+00

VOLUME OF LIQUID WASTE RELEASED (PRIOR TO DILUTION)	LITERS	4.84E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	9.87E+08

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= VERMONT YANKEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
0

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS MODE OF TRANSPORTATION DESTINATION
25 TRUCK BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-LA-140	X	4.00E+00	5.18E-01
BA-140	X		1.54E-03
CE-139	X		4.69E-02
CE-141	X		7.31E-01
CO-58	X	5.00E+00	1.71E+01
CO-60	X		4.51E-02
CR-51	X		2.90E+01
CS-134	X	3.00E+01	5.11E+01
CS-137	X	5.00E+01	1.04E-01
I-131	X		5.71E-03
I-134	X		2.67E-01
MN-54	X		5.50E-03
MN-56	X		1.21E-01
ZN-65	X	2.00E+00	1.27E-02
ZR-95	X		
B			
BA-LA-140	X	4.00E+00	9.80E-01
CO-58	X		2.43E+01
CO-60	X	5.00E+00	2.31E+01
CS-134	X	3.00E+01	4.08E+01
CS-137	X	5.00E+01	2.45E+00
MN-54	X		8.38E+00
ZN-65	X	2.00E+00	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.05E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	CI	9.48E+02
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	1.65E+02
D. OTHER	CI	5.06E+01

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
 TYPE PWR
 DOCKET NO. 50-29
 COOLING WATER SOURCE DEERFIELD RIVER

LICENSEE YANKEE ATOMIC ELECTRIC
 LICENSED POWER (MWT) 600.0
 INITIAL CRITICALITY 08/19/60

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	<2.46E-06
AR-37	2.17E+00
AR-41	2.21E+00
BA-LA-140	1.03E-06
CE-141	<7.36E-06
CE-144	<9.81E-06
CO-58	4.02E-06
CO-60	2.20E-05
CR-51	<1.40E-05
CS-134	4.93E-06
CS-137	7.90E-06
C-14	2.08E-01
FE-59	3.49E-07
H-3	3.57E+00
I-131	1.75E-04
I-133	7.65E-05
I-135	1.03E-04
KR-85	1.64E+00
KR-85M	1.69E+00
KR-87	1.35E+00
KR-88	2.52E+00
MN-54	3.40E-05
SB-124	<1.29E-05
SR-89	3.03E-07
SR-90	2.10E-07
XE-131M	3.21E+00
XE-133	1.17E+02
XE-133M	1.86E+00
XE-135	2.55E+01
XE-135M	2.21E+01
XE-138	7.48E-01
ZR-NB-95	2.43E-07

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	9.43E-07
BA-LA-140	<1.96E-04
CE-141	<5.70E-05
CE-144	7.39E-07
CO-58	1.84E-05
CO-60	1.86E-04
CR-51	<6.36E-04
CS-134	2.02E-03
CS-137	2.65E-03
FE-59	2.02E-06

N/A=NOT APPLICABLE
 N/D=NOT DETECTED
 N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	1.35E+02
I-131	4.06E-03
I-133	3.99E-04
MN-54	1.07E-04
MO-99	1.75E-06
SB-124	3.19E-07
SE-75	<3.94E-04
SR-89	2.19E-03
SR-90	1.61E-05
TC-99M	<3.47E-05
UNIDENTIFIED	1.02E-04
XE-133	2.27E-01
XE-135	1.27E-03
ZN-65	<1.23E-04
ZR-NB-95	3.15E-07

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.57E+00
TOTAL LIQUID RELEASE	1.75E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.07E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.36E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= YANKEE ROWE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
15	TRUCK	BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3	1.38E+02
	CI	2.73E+00
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3	8.97E+01
	CI	8.89E+00
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3	
	CI	
D. OTHER	M3	8.21E+00
	CI	1.51E+02

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-295
COOLING WATER SOURCE LAKE MICHIGAN
UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-304
COOLING WATER SOURCE LAKE MICHIGAN

LICENSEE COMMONWEALTH EDISON
LICENSED POWER (MWT) 3250.0
INITIAL CRITICALITY 06/19/73

LICENSEE COMMONWEALTH EDISON
LICENSED POWER (MWT) 3250.0
INITIAL CRITICALITY 12/24/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	7.53E+00
BA-LA-140	6.51E-06
CO-58	3.82E-04
CO-60	4.99E-02
CR-51	7.94E-05
CS-134	4.01E-03
CS-137	3.59E-03
FE-59	1.33E-04
I-131	6.38E-03
I-133	5.98E-03
I-135	5.61E-05
KR-85	2.63E+00
KR-85M	1.67E+00
KR-88	4.16E+01
MN-54	4.66E-05
MO-99	1.84E-05
NA-24	5.22E-05
NB-95	1.36E-04
NP-239	1.20E-05
SB-124	N/D
SR-89	4.90E-11
SR-90	2.00E-11
TC-99M	6.75E-05
XE-131M	2.38E+02
XE-133	3.06E+04
XE-133M	1.70E+01
XE-135	3.19E+03
ZR-95	9.73E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	6.55E-03
BA-LA-140	1.89E-03
CO-57	6.54E-04
CO-58	1.41E-01
CO-60	1.93E-01
CR-51	5.92E-02
CS-134	1.04E-01
CS-137	1.27E-01
CU-64	N/D
FE-59	9.35E-04

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
AIRBORNE AND LIQUID EFFLUENTS

LIQUID NUCLIDES RELEASED	EFFLUENTS	ACTIVITY (CI)
I-131		1.08E-02
I-132		N/D
I-133		N/D
MN-54		1.35E-02
MO-99		N/D
NA-24		1.01E-02
NB-95		1.14E-02
NP-239		3.13E-04
SB-124		1.46E-02
SR-89		5.55E-04
SR-90		4.23E-04
TC-99M		7.83E-04
W-187		1.16E-03
XE-133		1.20E+00
XE-133M		1.36E-03
XE-135		2.53E-01
ZN-65		N/D
ZR-95		3.81E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	
TOTAL LIQUID RELEASE	6.01E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.39E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	9.20E+11

N/A=NOT APPLICABLE
N/D=NOT DETECTED
N/R=NOT REPORTED

INSTALLATION= ZION

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1979
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
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N/R

N/R

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS, ETC.	M3 C1	5.97E+02 2.69E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT, ETC.	M3 C1	
C. IRRADIATED COMPONENTS, CONTROL RODS, ETC.	M3 C1	
D. OTHER	M3 C1	

N/A=NOT APPLICABLE
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