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Radioactive Materials Released from Nuclear Power Plants

Annual Report 1980

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.

8. "Radioactive Materials Released from Nuclear Power Plants, 1979," NUREG/CR-2227, BNL-NUREG-51416, November 1981.

ABSTRACT

Releases of radioactive materials in airborne and liquid effluents from commercial light water reactors during 1980 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 1980 release data are summarized 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 1980. 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, 1980. 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 eight previous annual summaries.[1]

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[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. "Radioactive Materials Released from Nuclear Power Plants, 1979, NUREG/CR-2227, BNL-NUREG-51416, November 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 1980. 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 1980 are summarized in Tables 9 and 10. A comparison for the years 1972 through 1980 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 1980 and previous years from 1970. Tables 13 and 14 present a summary of net electrical energy generated by each plant during 1978-1980. 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. The activity released for each nuclide for the year for both airborne and liquid effluents is calculated by summing releases for each quarter. Values which represent minimum detectable levels are not included in the summation unless they are the only type of values present, in which case the annual value is the summation of quarterly minimum detectable levels and is preceded by a < sign. More detailed summaries in the format of Regulatory Guide 1.21 such as were used in the 1978 report[2] can be made available since all the data for 1978-1980 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.

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

2.5 Notation

The following notation is used:

1.86E+06 = 1.86×10^{6}

1.86E-03 = 1.86×10^{-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.

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.

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.

4.0 List of Tables

TABLE 1

AIRBORNE EFFLUENTS COMPARISON BY YEAR

BOILING WATER REACTORS FISSION AND ACTIVATION GASES (TOTAL CURIES)

FACILITY	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	1.83E+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	6.91E+04
DUANE ARNOLD	-	-	-	-	-	1.58E+03	5.26E+03	3.87E+03	1.56E+03	8.71E+03
EDWIN I. 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	-	-	-	-	-	4.08E+03	4.41E+04	2.33E+04	5.88E+03	3.38E+03
LACROSSE	1.00E+03	1.00E+03	3.10E+04	9.10E+04	4.90E+04	5.71E+04	1.24E+05	4.25E+04	8.45E+03	1.04E+04
MILLSTONE POINT 1	-	2.76E+05	7.26E+05	7.90E+04	9.12E+05	2.97E+06	5.07E+05	6.20E+05	5.66E+05	2.06E+04
MONTICELLO	-	7.60E+04	7.51E+05	8.70E+05	1.57E+06	1.55E+05	1.14E+04	6.87E+03	6.42E+03	4.03E+03
NINE MILE POINT	1.00E+04	2.53E+05	5.17E+05	8.72E+05	5.58E+05	1.30E+06	1.76E+05	3.53E+03	3.02E+03	1.04E+03
OYSTER CREEK	1.10E+05	5.16E+05	8.66E+05	8.10E+05	2.79E+05	2.06E+05	1.67E+05	1.77E+05	9.98E+05	1.01E+06
PEACH BOTTOM	-	-	-	<1.00E+03	<1.00E+00	1.30E+04	2.09E+05	7.11E+04	3.85E+04	1.90E+05
PILGRIM	-	-	1.80E+04	2.30E+05	5.46E+05	4.60E+04	1.83E+05	4.13E+05	3.27E+04	1.39E+04
QUAD-CITIES	-	-	1.32E+05	9.00E+05	9.50E+05	1.10E+05	3.36E+04	2.56E+04	3.24E+04	3.48E+04
VERMONT YANKEE	-	-	5.50E+04	1.80E+05	6.40E+04	4.08E+03	3.03E+03	3.35E+03	4.94E+03	<8.08E+03

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

TABLE 1

AIRBORNE EFFLUENTS COMPARISON BY YEAR

BOILING WATER REACTORS — FISSION AND ACTIVATION GASES (TOTAL CURIES)

FACILITY	1980
BIG ROCK POINT	2.15E+04
BROWN'S FERRY	<1.66E+05
BRUNSWICK	6.93E+04
COOPER	5.03E+03
DRESDEN 1	7.03E+01
DRESDEN 2-3	4.30E+04
DUANE ARNOLD	2.70E+03
EDWIN I. HATCH 1	3.82E+04
EDWIN I. HATCH 2	2.95E+02
FORT ST. VRAIN *	9.13E+01
HUMBOLDT BAY	<4.40E-05
JAMES A. FITZPATRICK	7.68E+04
LACROSSE	4.71E+03
MILLSTONE 1	1.19E+04
MONTICELLO	3.83E+03
NINE MILE POINT	5.87E+02
OYSTER CREEK	3.12E+04
PEACH BOTTOM	1.53E+04
PILGRIM	2.62E+04
QUAD-CITIES	2.15E+04
VERMONT YANKEE	1.63E+03

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

TABLE 2

AIRBORNE EFFLUENTS COMPARISON BY YEAR

PRESSURIZED WATER REACTORS FISSION AND ACTIVATION GASES (TOTAL CURIES)

FACILITY	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 UNIT		8.09E+02	2.47E+02
JOSEPH M. FARLEY	-	-	-	-	-	-	-	-	3.53E+03	3.18E+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 POINT 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	2.24E+03
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 2

AIRBORNE EFFLUENTS COMPARISON BY YEAR

PRESSURIZED WATER REACTORS FISSION AND ACTIVATION GASES (TOTAL CURIES)

FACILITY	1980
ARKANSAS ONE 1	3.80E+04
ARKANSAS ONE 2	9.37E+03
BEAVER VALLEY	8.64E+01
CALVERT CLIFFS	2.96E+03
CRYSTAL RIVER	3.65E+04
DAVIS-BESSE	<3.35E+03
DONALD C. COOK	3.76E+03
FORT CALHOUN	2.97E+02
HADDAM NECK	2.68E+03
H.B.ROBINSON	5.82E+02
INDIAN POINT 1-2	9.38E+03
INDIAN POINT 3	1.11E+03
JOSEPH M. FARLEY	1.92E+04
KEWAUNEE	1.22E+02
MAINE YANKEE	3.87E+03
MILLSTONE 2	1.33E+03
NORTH ANNA	3.50E+03
OCONEE	1.92E+04
PALISADES	1.40E+02
POINT BEACH	6.41E+02
PRAIRIE ISLAND	2.60E+02
RANCHO SECO	1.58E+03
R.E.GINNA	8.61E+02
SALEM 1	7.82E+01
SALEM 2	7.74E+00
SAN ONOFRE	1.05E+03
SEQUOYAH	3.01E+03
ST. LUCIE	8.97E+03
SURRY	6.17E+03
THREE MILE ISLAND 1	4.64E-03
THREE MILE ISLAND 2	4.72E+04
TMI 2/EPICOR	2.16E+00
TROJAN	3.91E+02
TURKEY POINT	4.24E+03
YANKEE ROWE	7.07E+01
ZION	5.78E+03

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
BRUNSWICK	-	-	-	-	-	<1.00E-02	4.60E-01	9.32E-01	4.07E-01	9.52E-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	-	-	-	-	-	<4.00E-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 POINT 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	5.64E+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 COOOLED REACTOR
N/R=NOT REPORTED

TABLE 3

AIRBORNE EFFLUENTS COMPARISON BY YEAR (CURIES)

I-131 AND PARTICULATES

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

BOILING WATER REACTORS

FACILITY	1980
BIG ROCK POINT	2.94E-02
BROWN'S FERRY	1.05E-01
BRUNSWICK	2.12E+00
COOPER	<1.52E-01
DRESDEN 1	1.46E-02
DRESDEN 2-3	1.10E+01
DUANE ARNOLD	8.50E-02
EDWIN I. HATCH 1	4.29E-01
EDWIN I. HATCH 2	1.33E-02
FORT ST. VRAIN *	1.25E-06
HUMBOLDT BAY	5.11E-04
JAMES A. FITZPATRICK	1.25E-01
LACROSSE	1.32E-02
MILLSTONE 1	3.32E-01
MONTICELLO	2.83E-02
NINE MILE POINT	2.55E-02
OYSTER CREEK	1.25E+00
PEACH BOTTOM	2.94E-02
PILGRIM	1.04E-01
QUAD-CITIES	5.90E-01
VERMONT YANKEE	1.70E-02

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

TABLE 4

AIRBORNE EFFLUENTS COMPARISON BY YEAR (CURIES)

I-131 AND PARTICULATES

PRESSURIZED WATER REACTORS (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	-	-	-	-	-	-	-	-	-	4.65E-03
BEAVER VALLEY	-	-	-	-	-	-	<1.00E-02*	1.52E-04	7.21E-02	4.07E-04
CALVERT CLIFFS	-	-	-	-	-	7.00E-02	1.38E-01	3.07E-01	1.35E-01	2.05E+00
CRYSTAL RIVER	-	-	-	-	-	-	-	2.53E-03	1.05E-03	1.88E-02
DAVIS-BESSE	-	-	-	-	-	-	-	2.57E-04	4.30E-04	5.69E-03
DONALD C. COOK	-	-	-	-	-	<1.00E-02	<1.00E-02	7.45E-02	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		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	-	-	-	-	-	-	SHOWN W/OTHER UNIT		1.29E-02	3.89E-03
JOSEPH M. FARLEY	-	-	-	-	-	-	-	-	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 POINT 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	2.88E-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	-	-	-	-	-	-	1.64E-02	5.05E-02	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	6.74E-02

ND=NOT DETECTABLE
N/R=NOT REPORTED

TABLE 4

AIRBORNE EFFLUENTS COMPARISON BY YEAR (CURIES)

I-131 AND PARTICULATES

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

FACILITY	1980
ARKANSAS ONE 1	1.66E-01
ARKANSAS ONE 2	6.90E-03
BEAVER VALLEY	1.91E-03
CALVERT CLIFFS	7.44E-02
CRYSTAL RIVER	6.77E-03
DAVIS-BESSE	2.01E-03
DONALD C. COOK	6.88E-02
FORT CALHOUN	2.42E-03
HADDAM NECK	8.01E-03
H.B.ROBINSON	1.13E-03
INDIAN POINT 1-2	6.42E-02
INDIAN POINT 3	2.53E-02
JOSEPH M. FARLEY	2.37E-03
KEWAUNEE	2.61E-04
MAINE YANKEE	1.88E-03
MILLSTONE 2	1.94E-02
NORTH ANNA	1.26E-02
OCONEE	1.33E-01
PALISADES	2.76E-02
POINT BEACH	1.28E-03
PRAIRIE ISLAND	1.83E-03
RANCHO SECO	9.96E-03
R.E.GINNA	9.00E-03
SALEM 1	2.17E-01
SALEM 2	5.44E-05
SAN ONOFRE	8.41E-01
SEQUOYAH	2.57E-03
ST. LUCIE	6.20E-02
SURRY	1.85E-02
THREE MILE ISLAND 1	2.93E-04
THREE MILE ISLAND 2	5.67E-04
TMI 2/EPICOR	6.83E-06
TROJAN	2.51E-02
TURKEY POINT	7.05E-02
YANKEE ROWE	9.56E-05
ZION	3.00E-03

TABLE 5

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

BOILING WATER REACTORS — TRITIUM

FACILITY	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 POINT 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 COOOLED REACTOR
N/R=NOT REPORTED

TABLE 5

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

BOILING WATER REACTORS — TRITIUM

FACILITY	1980
BIG ROCK POINT	6.18E+00
BROWN'S FERRY	2.18E+01
BRUNSWICK	1.28E+01
COOPER	8.77E+00
DRESDEN 1	N/R
DRESDEN 2-3	6.20E+01
DUANE ARNOLD	N/R
EDWIN I. HATCH 1	1.42E+01
EDWIN I. HATCH 2	1.07E+01
FORT ST. VRAIN *	2.06E+02
HUMBOLDT BAY	9.70E-02
JAMES A. FITZPATRICK	2.81E+00
LACROSSE	7.20E+01
MILLSTONE 1	2.73E+01
MONTICELLO	0.
NINE MILE POINT	N/R
OYSTER CREEK	1.54E+02
PEACH BOTTOM	3.73E+01
PILGRIM	4.00E+01
QUAD-CITIES	1.03E+01
VERMONT YANKEE	N/R

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

TABLE 6

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

PRESSURIZED WATER REACTORS TRITIUM

FACILITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	-	-	-	-	2.56E+01	4.60E+02	2.12E+02	2.45E+02	2.94E+02	1.68E+02
ARKANSAS ONE 2	-	-	-	-	-	-	-	-	-	5.27E+01
BEAVER VALLEY	-	-	-	-	-	-	8.60E+00	1.08E+02	3.49E+02	9.59E+01
CALVERT CLIFFS	-	-	-	-	-	2.63E+02	2.74E+02	5.75E+02	4.56E+02	5.14E+02
CRYSTAL RIVER	-	-	-	-	-	-	-	1.66E+02	1.54E+02	1.66E+02
DAVIS-BESSE	-	-	-	-	-	-	-	9.01E+00	2.15E+02	2.45E+02
DONALD C. COOK	-	-	-	-	-	5.64E+01	1.92E+02	2.86E+02	6.24E+02	1.22E+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
KEWAUNEE	-	-	-	-	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 POINT 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	8.85E+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	3.39E+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	7.81E+01
TROJAN	-	-	-	-	-	-	3.60E+01	3.11E+02	1.59E+02	6.80E+01
TURKEY POINT	-	-	-	3.29E+02	5.80E+02	7.97E+02	7.71E+02	9.24E+02	1.17E+03	9.40E+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 6

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

PRESSURIZED WATER REACTORS — TRITIUM

FACILITY	1980
ARKANSAS ONE 1	2.12E+02
ARKANSAS ONE 2	2.89E+02
BEAVER VALLEY	3.98E+01
CALVERT CLIFFS	4.91E+02
CRYSTAL RIVER	1.95E+02
DAVIS-BESSE	1.08E+02
DONALD C. COOK	7.82E+02
FORT CALHOUN	5.44E+01
HADDAM NECK	3.29E+03
H.B.ROBINSON	1.89E+02
INDIAN POINT 1-2	2.76E+02
INDIAN POINT 3	4.27E+02
JOSEPH M. FARLEY	5.70E+02
KEWAUNEE	2.33E+02
MAINE YANKEE	2.18E+02
MILLSTONE 2	2.68E+02
NORTH ANNA	4.03E+02
OCONEE	7.12E+02
PALISADES	7.47E+01
POINT BEACH	7.61E+02
PRAIRIE ISLAND	5.43E+02
RANCHO SECO	1.47E-02
R.E.GINNA	1.60E+02
SALEM 1	0.
SALEM 2	N/R
SAN ONOFRE	1.03E+03
SEQUOYAH	3.23E-01
ST. LUCIE	2.72E+02
SURRY	3.85E+02
THREE MILE ISLAND 1	3.26E+01
THREE MILE ISLAND 2	6.10E-04
TMI 2/EPICOR	N/R
TROJAN	1.24E+02
TURKEY POINT	7.49E+02
YANKEE ROWE	5.84E+01
ZION	7.45E+02

TABLE 7

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

BOILING WATER REACTORS — MIXED FISSION AND ACTIVATION PRODUCTS

FACILITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
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	5.10E+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	1.58E+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	8.86E+00	1.67E+00
MILLSTONE POINT 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	9.81E-02	1.53E-02	6.59E-03
PEACH BOTTOM	-	-	-	<1.00E-01	9.00E-01	9.30E-01	3.38E+00	2.23E+00	5.11E+00	1.95E+01
PILGRIM	-	-	1.50E+00	9.00E-01	4.20E+00	8.01E+00	2.33E+00	3.41E+00	1.77E+00	5.12E-01
QUAD-CITIES	-	-	2.40E+00	2.14E+01	3.88E+01	1.71E+01	6.99E+00	1.34E+00	2.24E+00	1.31E+00
VERMONT YANKEE	-	-	-	<1.00E-01	0.00E+00	<1.00E-02	<1.00E-02	1.55E-01	N/R	2.40E-04

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

TABLE 7

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

BOILING WATER REACTORS — MIXED FISSION AND ACTIVATION PRODUCTS

FACILITY	1980
BIG ROCK POINT	7.82E-01
BROWN'S FERRY	9.38E+00
BRUNSWICK	1.26E+00
COOPER	<1.10E+01
DRESDEN 1	N/R
DRESDEN 2-3	7.16E-01
DUANE ARNOLD	N/R
EDWIN I. HATCH 1	6.83E-02
EDWIN I. HATCH 2	4.57E-02
FORT ST. VRAIN *	6.37E-05
HUMBOLDT BAY	1.39E-01
JAMES A. FITZPATRICK	1.51E+00
LACROSSE	2.13E+00
MILLSTONE 1	7.24E-01
MONTICELLO	0.
NINE MILE POINT	N/R
OYSTER CREEK	5.06E-01
PEACH BOTTOM	1.90E+00
PILGRIM	2.73E+00
QUAD-CITIES	1.31E+01
VERMONT YANKEE	N/R

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

TABLE 8

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

PRESSURIZED WATER REACTORS — MIXED FISSION AND ACTIVATION PRODUCTS

FACILITY	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
ARKANSAS ONE 1	-	-	-	-	6.50E+00	3.11E+01	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	-	-	-	-	-	2.60E-01	1.87E+00	1.52E+00	1.48E+00	2.58E+00
FORT CALHOUN	-	-	-	<1.00E-01	2.30E+00	3.60E-01	5.50E-01	3.63E-01	5.95E-01	2.45E-01
HADDAM NECK	6.70E+00	5.90E+00	4.80E+00	3.00E+00	2.20E+00	1.20E+00	1.30E-01	1.71E+00	9.50E-01	8.67E-01
H.B.ROBINSON	-	7.00E-01	8.00E-01	6.00E-01	2.50E+00	4.50E-01	3.80E-01	3.29E-01	1.78E-01	2.99E-01
INDIAN POINT 1-2	-	-	-	2.20E+00	4.20E+00	4.93E+00	<4.98E+00	3.02E+00	1.99E+00	1.94E+00
INDIAN POINT 3	-	-	-	-	-	-	SHOWN W/	OTHER UNIT	1.03E+00	4.02E-01
JOSEPH M. FARLEY	-	-	-	-	-	-	-	-	1.03E-01	5.86E-02
KEWAUNEE	-	-	-	-	4.00E-01	7.20E-01	2.83E+00	1.26E+00	6.99E-01	8.94E-01
MAINE YANKEE	-	-	<1.00E-01	<1.00E-01	4.00E+00	3.21E+00	<2.84E+00	4.42E-01	1.04E-01	4.63E-01
MILLSTONE POINT 2	-	-	-	-	-	2.00E-02	2.60E-01	1.56E+00	2.79E+00	4.87E+00
NORTH ANNA	-	-	-	-	-	-	-	-	2.68E-01	5.89E-01
OCONEE	-	-	-	2.80E+00	1.90E+00	5.05E+00	7.93E+00	3.62E+01	6.51E+00	9.24E-01
PALISADES	-	-	6.80E+00	2.78E+01	5.90E+00	3.45E+00	4.40E-01	9.29E-02	9.65E-02	1.28E-01
POINT BEACH	-	1.00E-01	1.50E+00	8.00E-01	2.00E-01	2.34E+00	3.24E+00	1.50E+00	6.86E-01	7.25E-01
PRAIRIE ISLAND	-	-	-	<1.00E-01	<1.00E-01	4.50E-01	1.00E-01	1.33E-02	4.94E-03	9.00E-03
RANCHO SECO	-	-	-	-	-	<1.00E-02	0.00E+00	0.00E+00	N/R	N/R
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	6.07E-02	8.63E-02
SALEM	-	-	-	-	-	-	<1.00E-02	2.88E+00	4.02E+00	3.98E+00
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	1.18E+01	1.10E+01
ST. LUCIE	-	-	-	-	-	-	8.00E-02	5.80E+00	2.80E+00	2.67E+00
SURRY	-	-	2.00E-01	1.00E-01	3.80E+00	9.27E+00	3.37E+01	6.55E+01	2.41E+00	2.53E+00
THREE MILE ISLAND 1	-	-	-	-	1.30E+00	7.00E-02	1.00E-01	1.94E-01	6.14E-01	4.91E-01
THREE MILE ISLAND 2	-	-	-	-	-	-	-	-	3.92E-01	3.31E-01
TROJAN	-	-	-	-	-	-	2.77E+00	4.19E+00	7.07E-01	5.55E-01
TURKEY POINT	-	-	-	<1.00E-01	1.60E+00	3.07E+00	<8.65E+00	8.90E+00	3.32E+00	4.10E-01
YANKEE ROWE	<1.00E-01	<1.00E-01	<1.00E-01	<1.00E-01	<1.00E-01	2.00E-02	<1.00E-02	1.80E-02	8.14E-02	1.17E-02
ZION	-	-	-	<1.00E-01	<1.00E-01	<1.00E-02	1.60E-01	9.50E-01	9.51E-01	7.00E-01

N/R=NOT REPORTED

TABLE 8

LIQUID EFFLUENTS COMPARISON BY YEAR (CURIES)

PRESSURIZED WATER REACTORS

MIXED FISSION AND ACTIVATION PRODUCTS

FACILITY	1980
ARKANSAS ONE 1	3.42E+00
ARKANSAS ONE 2	4.13E+00
BEAVER VALLEY	1.04E-01
CALVERT CLIFFS	4.53E+00
CRYSTAL RIVER	1.46E-01
DAVIS-BESSE	2.07E-01
DONALD C. COOK	1.37E+00
FORT CALHOUN	5.04E-01
HADDAM NECK	2.76E-01
H.B.ROBINSON	3.58E-01
INDIAN POINT 1-2	1.26E+00
INDIAN POINT 3	2.90E+00
JOSEPH M. FARLEY	6.18E-02
KEWAUNEE	6.17E-01
MAINE YANKEE	2.97E-01
MILLSTONE 2	2.81E+00
NORTH ANNA	1.05E+00
OCONEE	1.54E+00
PALISADES	8.73E-03
POINT BEACH	6.29E-01
PRAIRIE ISLAND	1.32E-02
RANCHO SECO	3.78E-03
R.E.GINNA	1.96E-02
SALEM 1	2.65E+00
SALEM 2	3.89E-01
SAN ONOFRE	1.12E+01
SEQUOYAH	N/R
ST. LUCIE	2.36E+00
SURRY	3.85E+00
THREE MILE ISLAND 1	1.83E-01
THREE MILE ISLAND 2	1.45E-05
TMI 2/EPICOR	N/R
TROJAN	7.87E-01
TURKEY POINT	6.78E-01
YANKEE ROWE	1.75E-02
ZION	4.74E-01

TABLE 9

BOILING WATER REACTORS SOLID WASTE SUMMARY 1980

FACILITY	VOLUME (CUBIC METERS)	ACTIVITY (CURIES)	NO. OF SHIPMENTS
BIG ROCK POINT	4.20E+01	3.09E+01	6
BROWN'S FERRY	2.49E+03	6.46E+03	210
BRUNSWICK	6.73E+03	7.55E+03	456
COOPER	4.35E+02	7.05E+02	68
DRESDEN 1	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT
DRESDEN 2-3	1.16E+03	4.46E+03	267
DUANE ARNOLD	7.35E+02	7.00E+02	86
EDWIN I. HATCH 1	4.64E+02	9.62E+02	87
EDWIN I. HATCH 2	2.59E+02	8.27E+01	42
FORT ST. VRAIN *	0.	0.	N/R
HUMBOLDT BAY	8.20E+01	6.95E+01	9
JAMES A. FITZPATRICK	7.50E+02	8.86E+02	82
LACROSSE	4.32E+01	2.02E+01	5
MILLSTONE 1	2.30E+03	2.36E+03	179
MONTICELLO	7.42E+02	7.57E+02	69
NINE MILE POINT	8.14E+02	2.32E+04	65
OYSTER CREEK	2.03E+03	1.32E+03	167
PEACH BOTTOM	2.64E+03	6.69E+03	347
PILGRIM	2.94E+03	1.60E+03	152
QUAD-CITIES	1.67E+03	4.07E+03	325
VERMONT YANKEE	4.84E+02	9.20E+02	50

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

TABLE 10

PRESSURIZED WATER REACTORS SOLID WASTE SUMMARY 1980

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	2.84E+02	5.34E+02	29
CALVERT CLIFFS	2.51E+02	1.48E+04	42
CRYSTAL RIVER	9.27E+02	2.05E+03	92
DAVIS-BESSE	3.30E+02	3.00E+01	28
DONALD C. COOK	2.10E+03	1.04E+03	102
FORT CALHOUN	4.06E+02	1.32E+03	37
HADDAM NECK	1.26E+03	4.89E+02	74
H.B.ROBINSON	3.99E+03	3.08E+02	92
INDIAN POINT 1-2	1.03E+03	3.32E+02	91
INDIAN POINT 3	3.47E+02	2.02E+02	31
JOSEPH M. FARLEY	4.41E+02	2.26E+02	33
KEWAUNEE	1.03E+02	1.37E+03	28
MAINE YANKEE	4.57E+02	4.79E+03	51
MILLSTONE 2	7.51E+00	2.28E+02	3
NORTH ANNA	2.64E+02	1.54E+02	27
OCONEE	1.32E+03	2.91E+03	138
PALISADES	7.31E+02	1.18E+02	32
POINT BEACH	4.49E+02	9.35E+02	29
PRAIRIE ISLAND	5.25E+02	1.98E+02	28
RANCHO SECO	4.60E+02	1.12E+02	30
R.E.GINNA	4.00E+02	4.60E+02	26
SALEM 1	1.01E+03	4.59E+02	87
SALEM 2	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT	SHOWN W/OTHER UNIT
SAN ONOFRE	7.12E+02	4.35E+02	36
SEQUOYAH	N/R	N/R	N/R
ST. LUCIE	3.12E+02	7.46E+02	26
SURRY	2.01E+03	7.06E+02	110
THREE MILE ISLAND 1	4.62E+02	2.30E+02	18
THREE MILE ISLAND 2	7.67E+02	1.26E+02	42
TMI 2/EPICOR	N/R	N/R	N/R
TROJAN	5.14E+02	4.59E+01	26
TURKEY POINT	7.24E+02	1.61E+02	67
YANKEE ROWE	2.07E+02	9.57E+01	16
ZION	1.64E+03	2.55E+03	N/R

TABLE 11

SOLID WASTE COMPARISON BY YEAR

BOILING WATER REACTORS VOLUME(CUBIC METERS) - ACTIVITY(CURIES)

FACILITY	1975		1976		1977		1978		1979	
BIG ROCK POINT	N/R	N/R	2.88E+01	3.69E+00	7.22E+01	9.68E+02	3.10E+01	2.56E+01	8.99E+01	2.77E+02
BROWN'S FERRY	N/R	N/R	3.20E+02	1.03E+02	1.82E+03	1.10E+04	2.90E+03	1.33E+03	2.29E+03	4.17E+03
BRUNSWICK	N/R	N/R	1.79E+03	6.46E+02	2.47E+03	3.24E+03	2.02E+03	2.14E+03	3.09E+03	4.29E+03
COOPER	N/R	N/R	3.01E+02	3.20E+02	2.83E+02	2.85E+02	3.29E+02	3.84E+02	5.65E+02	9.69E+01
DRESDEN 1	N/R	N/R	SHOWN W/OTHER UNIT		SHOWN W/OTHER UNIT		SHOWN W/OTHER UNIT		SHOWN W/OTHER UNIT	
DRESDEN 2-3	N/R	N/R	7.12E+03	4.33E+03	2.25E+03	1.13E+04	1.77E+03	1.88E+03	1.04E+03	8.45E+02
DUANE ARNOLD	N/R	N/R	5.95E+02	1.87E+02	5.45E+02	4.98E+02	1.10E+03	1.86E+03	7.99E+02	8.01E+02
EDWIN I. HATCH	N/R	N/R	4.12E+02	2.91E+02	5.39E+02	3.81E+02	7.50E+02	1.09E+04	9.78E+02	2.70E+02
FORT ST. VRAIN *	N/R	N/R	-	-	-	-	-	-	0.	0.
HUMBOLDT BAY	N/R	N/R	8.49E+01	4.09E+00	3.77E+02	2.00E+01	1.78E+02	7.91E-01	9.06E+01	3.35E+03
JAMES A. FITZPATRICK	N/R	N/R	6.19E+02	3.41E+02	1.23E+03	6.17E+03	8.70E+02	3.19E+02	8.04E+02	1.06E+03
LACROSSE	N/R	N/R	NR	NR	4.65E+00	5.88E+02	3.80E+01	6.18E+01	5.09E+00	1.25E+02
MILLSTONE POINT 1	N/R	N/R	1.33E+03	1.70E+03	1.77E+03	3.03E+03	2.00E+03	8.15E+04	2.11E+03	1.16E+03
MONTICELLO	N/R	N/R	2.85E+02	3.79E+03	5.73E+02	2.91E+04	4.99E+02	6.35E+04	4.74E+02	1.31E+04
NINE MILE POINT	N/R	N/R	5.38E+02	2.51E+03	6.65E+02	2.51E+04	3.85E+02	2.24E+04	4.97E+02	1.52E+03
OYSTER CREEK	N/R	N/R	1.20E+03	1.29E+03	1.74E+03	2.73E+02	1.54E+03	1.15E+03	1.13E+03	1.34E+03
PEACH BOTTOM	N/R	N/R	1.20E+03	5.85E+02	2.52E+03	1.82E+03	1.96E+03	4.97E+03	2.40E+03	8.03E+03
PILGRIM	N/R	N/R	9.12E+02	3.69E+04	5.84E+02	5.70E+03	1.97E+03	4.92E+04	3.03E+03	2.22E+04
QUAD-CITIES	N/R	N/R	1.00E+03	2.35E+03	1.20E+03	7.53E+03	1.34E+03	3.27E+03	7.82E+02	4.26E+03
VERMONT YANKEE	N/R	N/R	2.38E+02	2.93E+01	1.08E+02	1.76E+02	3.99E+02	5.39E+04	2.71E+02	9.99E+02

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

TABLE 11

SOLID WASTE COMPARISON BY YEAR

BOILING WATER REACTORS VOLUME(CUBIC METERS) - ACTIVITY(CURIES)

FACILITY	1980	
BIG ROCK POINT	4.20E+01	3.09E+01
BROWN'S FERRY	2.49E+03	6.46E+03
BRUNSWICK	6.73E+03	7.55E+03
COOPER	4.35E+02	7.05E+02
DRESDEN 1	SHOWN W/OTHER UNIT	
DRESDEN 2-3	1.16E+03	4.46E+03
DUANE ARNOLD	7.35E+02	7.00E+02
EDWIN I. HATCH 1	4.64E+02	9.62E+02
EDWIN I. HATCH 2	2.59E+02	8.27E+01
FORT ST. VRAIN *	0.	0.
HUMBOLDT BAY	8.20E+01	6.95E+01
JAMES A. FITZPATRICK	7.50E+02	8.86E+02
LACROSSE	4.32E+01	2.02E+01
MILLSTONE 1	2.30E+03	2.36E+03
MONTICELLO	7.42E+02	7.57E+02
NINE MILE POINT	8.14E+02	2.32E+04
OYSTER CREEK	2.03E+03	1.32E+03
PEACH BOTTOM	2.64E+03	6.69E+03
PILGRIM	2.94E+03	1.60E+03
QUAD-CITIES	1.67E+03	4.07E+03
VERMONT YANKEE	4.84E+02	9.20E+02

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

TABLE 12

SOLID WASTE COMPARISON BY YEAR

PRESSURIZED WATER REACTORS VOLUME(CUBIC METERS) - ACTIVITY(CURIES)

FACILITY	1975		1976		1977		1978		1979	
ARKANSAS ONE 1	N/R	N/R	NR	NR	3.17E+02	1.26E+02	N/R	N/R	N/R	N/R
ARKANSAS ONE 2	N/R	N/R	-	-	-	-	-	-	N/R	N/R
BEAVER VALLEY	N/R	N/R	4.30E+01	4.26E-02	2.67E+02	8.18E+00	4.39E+02	2.25E+02	2.44E+02	2.95E+02
CALVERT CLIFFS	N/R	N/R	1.18E+02	1.22E+02	3.09E+02	9.83E+02	6.03E+02	1.12E+03	4.32E+02	9.71E+02
CRYSTAL RIVER	N/R	N/R	-	-	4.48E+02	3.48E+00	6.87E+02	2.72E+04	1.24E+03	1.20E+03
DAVIS-BESSE	N/R	N/R	-	-	0.00E+00	0.00E+00	3.40E+02	3.30E+00	2.60E+02	2.86E+00
DONALD C. COOK	N/R	N/R	1.69E+02	2.62E-01	6.84E+02	8.28E+01	1.28E+03	2.25E+02	1.09E+03	3.37E+02
FORT CALHOUN	N/R	N/R	7.57E+02	1.27E+02	5.97E+02	6.46E+02	5.84E+02	1.06E+02	2.44E+02	2.99E+01
HADDAM NECK	N/R	N/R	7.67E+02	7.46E+02	1.68E+03	8.41E+02	2.29E+02	1.44E+02	1.29E+03	3.05E+02
H.B.ROBINSON	N/R	N/R	3.16E+02	6.29E+01	2.59E+02	1.24E+03	8.22E+02	2.40E+02	8.34E+02	8.72E+01
INDIAN POINT 1-2	N/R	N/R	9.19E+02	9.46E+02	1.06E+03	1.45E+03	8.43E+03	2.37E+03	1.17E+03	2.16E+03
INDIAN POINT 3	N/R	N/R	SHOWN W/OTHER UNIT		SHOWN W/OTHER UNIT		5.94E+02	6.49E+01	2.25E+02	1.63E+02
JOSEPH M. FARLEY	N/R	N/R	-		-		2.69E+02	5.72E+00	1.11E+03	2.32E+02
KEWAUNEE	N/R	N/R	5.94E+02	4.94E+01	3.37E+01	3.66E+02	7.98E+01	1.50E+03	1.70E+02	3.54E+02
MAINE YANKEE	N/R	N/R	1.84E+02	5.04E+02	1.84E+02	1.53E+04	5.81E+02	4.14E+03	3.63E+02	2.77E+03
MILLSTONE POINT 2	N/R	N/R	2.80E+02	1.80E+00	9.35E+01	5.80E+01	1.55E+02	1.70E+01	2.46E+02	1.78E+03
NORTH ANNA	N/R	N/R	-		-		2.14E+01	3.59E+00	2.95E+02	5.89E+01
OCONEE	N/R	N/R	2.22E+03	7.83E+02	1.07E+03	7.37E+03	1.58E+03	5.93E+03	1.63E+03	2.59E+03
PALISADES	N/R	N/R	6.81E+01	9.58E+01	4.43E+02	8.71E+01	7.17E+02	3.40E+03	6.84E+02	3.92E+02
POINT BEACH	N/R	N/R	1.99E+02	3.04E+02	6.84E+03	5.68E+02	1.61E+02	1.51E+03	2.69E+02	1.22E+03
PRAIRIE ISLAND	N/R	N/R	1.52E+02	6.53E+01	6.43E+02	2.46E+02	1.95E+02	1.53E+02	1.99E+01	8.83E+01
RANCHO SECO	N/R	N/R	1.11E+02	2.80E+01	5.06E+01	1.21E+03	1.29E+02	1.27E+03	1.01E+02	4.03E+00
R.E.GINNA	N/R	N/R	2.80E+02	9.78E+01	3.49E+02	6.90E+02	5.96E+01	6.27E+02	3.08E+02	1.53E+02
SALEM	N/R	N/R	0.00E+00	0.00E+00	4.25E+02	2.20E+00	2.27E+02	1.94E+02	6.86E+02	1.28E+02
SAN ONOFRE	N/R	N/R	1.45E+02	6.98E+02	3.68E+02	6.02E+01	1.31E+02	7.17E+00	8.35E+01	9.24E+01
ST. LUCIE	N/R	N/R	8.68E+01	1.57E+00	3.85E+02	3.27E+03	3.58E+02	1.26E+04	3.08E+02	1.79E+02
SURRY	N/R	N/R	7.00E+02	6.17E+02	7.93E+02	6.10E+02	6.03E+02	5.66E+02	2.74E+03	3.45E+02
THREE MILE ISLAND 1	N/R	N/R	4.06E+02	1.85E+02	2.18E+02	4.73E+01	3.89E+02	2.34E+02	7.51E+02	3.12E+01
THREE MILE ISLAND 2	N/R	N/R	-		-		SHOWN W/OTHER UNIT		SHOWN W/OTHER UNIT	
TROJAN	N/R	N/R	4.37E+01	4.32E+00	1.01E+02	8.31E+01	2.26E+02	4.48E+02	6.37E+02	3.30E+02
TURKEY POINT	N/R	N/R	1.44E+03	4.77E+02	1.07E+03	4.26E+02	1.75E+03	1.72E+03	9.20E+02	2.48E+02
YANKEE ROWE	N/R	N/R	3.60E+02	2.65E+01	2.81E+02	3.54E+00	2.60E+02	9.75E+00	2.36E+02	1.63E+02
ZION	N/R	N/R	2.06E+03	6.82E+01	1.97E+03	2.25E+02	1.63E+03	1.86E+03	5.97E+02	2.69E+03

N/R=NOT REPORTED

TABLE 12

SOLID WASTE COMPARISON BY YEAR

PRESSURIZED WATER REACTORS VOLUME(CUBIC METERS) - ACTIVITY(CURIES)

FACILITY	1980	
ARKANSAS ONE 1	N/R	N/R
ARKANSAS ONE 2	N/R	N/R
BEAVER VALLEY	2.84E+02	5.34E+02
CALVERT CLIFFS	2.51E+02	1.48E+04
CRYSTAL RIVER	9.27E+02	2.05E+03
DAVIS-BESSE	3.30E+02	3.00E+01
DONALD C. COOK	2.10E+03	1.04E+03
FORT CALHOUN	4.06E+02	1.32E+03
HADDAM NECK	1.26E+03	4.89E+02
H.B.ROBINSON	3.99E+03	3.08E+02
INDIAN POINT 1-2	1.03E+03	3.32E+02
INDIAN POINT 3	3.47E+02	2.02E+02
JOSEPH M. FARLEY	4.41E+02	2.26E+02
KEWAUNEE	1.03E+02	1.37E+03
MAINE YANKEE	4.57E+02	4.79E+03
MILLSTONE 2	7.51E+00	2.28E+02
NORTH ANNA	2.64E+02	1.54E+02
OCONEE	1.32E+03	2.91E+03
PALISADES	7.31E+02	1.18E+02
POINT BEACH	4.49E+02	9.35E+02
PRAIRIE ISLAND	5.25E+02	1.98E+02
RANCHO SECO	4.60E+02	1.12E+02
R.E.GINNA	4.00E+02	4.60E+02
SALEM 1	1.01E+03	4.59E+02
SALEM 2	SHOWN W/OTHER UNIT	
SAN ONOFRE	7.12E+02	4.35E+02
SEQUOYAH	N/R	N/R
ST. LUCIE	3.12E+02	7.46E+02
SURRY	2.01E+03	7.06E+02
THREE MILE ISLAND 1	4.62E+02	2.30E+02
THREE MILE ISLAND 2	7.67E+02	1.26E+02
TMI 2/EPICOR	N/R	N/R
TROJAN	5.14E+02	4.59E+01
TURKEY POINT	7.24E+02	1.61E+02
YANKEE ROWE	2.07E+02	9.57E+01
ZION	1.64E+03	2.55E+03

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

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

TABLE 13

NET ELECTRICAL ENERGY GENERATION COMPARISON BY YEAR

BOILING WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1980
BIG ROCK POINT	09/27/62	4.05E+05
BROWN'S FERRY	08/17/73	6.06E+06
	07/20/74	5.62E+06
	08/08/76	6.94E+06
BRUNSWICK	10/08/76	3.94E+06
	03/20/75	1.86E+05
COOPER	02/21/74	3.79E+06
DRESDEN 1	10/15/59	0.
DRESDEN 2-3	06/09/72	4.58E+06
	11/16/71	4.33E+06
DUANE ARNOLD	03/23/74	2.80E+06
EDWIN I. HATCH 1	09/12/74	4.79E+06
EDWIN I. HATCH 2	07/04/78	3.64E+06
FORT ST. VRAIN *	01/31/74	6.76E+05
HUMBOLDT BAY	02/16/63	0.
JAMES A. FITZPATRICK	11/17/74	4.33E+06
LACROSSE	07/11/67	2.15E+06
MILLSTONE 1	10/26/70	3.40E+06
MONTICELLO	12/10/70	3.45E+06
NINE MILE POINT	09/05/69	4.54E+06
OYSTER CREEK	05/03/69	1.96E+06
PEACH BOTTOM	09/16/73	4.34E+06
	08/07/74	7.23E+06
PILGRIM	06/16/72	3.04E+06
QUAD-CITIES	10/18/71	3.44E+06
	04/26/72	3.61E+06
VERMONT YANKEE	03/24/72	2.98E+06

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

N/R=NOT REPORTED

TABLE 14

NET ELECTRICAL ENERGY GENERATION COMPARISON BY YEAR

PRESSURIZED WATER REACTORS — MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1980
ARKANSAS ONE 1	08/06/74	3.78E+06
ARKANSAS ONE 2	12/05/78	3.65E+06
BEAVER VALLEY	05/10/76	3.01E+05
CALVERT CLIFFS	10/07/74	4.53E+06
	11/30/76	6.41E+06
CRYSTAL RIVER	01/14/77	3.35E+06
DAVIS-BESSE	08/12/77	2.09E+06
DONALD C. COOK	01/18/75	6.46E+06
	07/01/78	6.70E+06
FORT CALHOUN	08/06/73	2.01E+06
HADDAM NECK	07/24/67	3.56E+06
H.B.ROBINSON	09/20/70	3.21E+06
INDIAN POINT 1-2	08/02/62	0.
	05/22/73	4.26E+06
INDIAN POINT 3	04/06/76	3.07E+06
JOSEPH M. FARLEY	08/09/77	4.60E+06
KEWAUNEE	03/07/74	3.63E+06
MAINE YANKEE	10/23/72	4.40E+06
MILLSTONE 2	10/17/75	4.88E+06
NORTH ANNA	04/05/78	5.63E+06
	06/12/80	3.50E+05
OCONEE	04/19/73	5.12E+06
	11/11/73	3.88E+06
	09/05/74	5.22E+06
PALISADES	05/24/71	2.38E+06
POINT BEACH	11/02/70	2.48E+06
	05/30/72	3.59E+06
PRAIRIE ISLAND	12/01/73	3.11E+06
	12/17/74	3.47E+06
RANCHO SECO	09/16/74	4.42E+06
R.E.GINNA	11/08/69	3.09E+06
SALEM 1	12/11/76	5.68E+06
SALEM 2	08/02/80	0.
SAN ONOFRE	06/14/67	8.17E+05
SEQUOYAH	07/05/80	5.18E+05
ST. LUCIE	04/22/76	5.20E+06
SURRY	07/01/72	2.47E+06
	03/07/73	2.24E+06
THREE MILE ISLAND 1	06/05/74	0.
THREE MILE ISLAND 2	03/28/78	0.
TMI 2/EPICOR	03/28/78	0.
TROJAN	12/15/75	6.07E+06
TURKEY POINT	10/20/72	4.39E+06
	06/11/73	3.85E+06
YANKEE ROWE	08/19/60	2.92E+05
ZION	06/19/73	6.51E+06
	12/24/73	5.28E+06

TABLE 15

THERMAL 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	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+05
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+07
	07/20/74										
	08/08/76										
BRUNSWICK	10/08/76						4.72E+06	7.81E+06	1.59E+07	3.07E+07	2.12E+07
	03/20/75										
COOPER	02/21/74					6.90E+06	1.24E+07	1.19E+07	1.45E+07	1.54E+07	1.58E+07
DRESDEN 1	10/15/59	4.77E+06	2.38E+06	3.76E+06	2.43E+06	1.36E+06	2.56E+06	3.42E+06	2.21E+06	2.73E+06	0.00
DRESDEN 2-3	06/09/72	4.11E+06	1.23E+07	2.52E+07	2.83E+07	2.18E+07	1.70E+07	2.74E+07	2.89E+07	3.13E+07	2.77E+07
	11/16/71										
DUANE ARNOLD	03/23/74						7.42E+06	8.02E+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+07
	07/04/78										
FORT ST. VRAIN *	01/31/74									2.04E+06	4.78E+05
HUMBOLDT BAY	02/16/63	1.40E+06	1.14E+06	1.25E+06	1.47E+06	1.27E+06	1.32E+06	6.80E+05	0.00	0.00	0.00
JAMES A. FITZPATRICK	11/17/74						6.81E+06	1.26E+07	1.18E+07	1.30E+07	8.97E+06
LACROSSE	07/11/67	4.50E+05	7.10E+05	8.20E+05	6.90E+05	1.08E+06	9.20E+05	6.10E+05	3.43E+05	6.54E+05	7.48E+05
MILLSTONE POINT 1	10/26/70	2.60E+05	1.11E+07	9.69E+06	5.96E+06	1.12E+07	1.21E+07	1.16E+07	1.48E+07	1.43E+07	1.30E+07
MONTICELLO	12/10/70		4.37E+06	1.10E+07	9.90E+06	8.28E+06	8.88E+06	1.23E+07	1.10E+07	1.18E+07	1.35E+07
NINE MILE POINT	09/05/69	5.94E+06	9.94E+06	1.00E+07	1.10E+07	1.05E+07	9.68E+06	1.31E+07	9.15E+06	1.39E+07	9.67E+06
OYSTER CREEK	05/03/69	1.06E+07	1.17E+07	1.30E+07	1.09E+07	1.13E+07	9.81E+06	1.18E+07	9.82E+06	1.10E+07	1.38E+07
PEACH BOTTOM	09/16/73					1.23E+07	3.34E+07	3.72E+07	2.86E+07	4.39E+07	4.58E+07
	08/07/74										
PILGRIM	06/16/72			2.65E+06	1.25E+07	6.00E+06	8.10E+06	7.60E+06	8.26E+06	1.33E+07	1.47E+07
QUAD-CITIES	10/18/71			1.25E+07	3.17E+07	2.61E+07	2.31E+07	2.59E+07	2.68E+07	3.14E+07	3.00E+07
	04/26/72										
VERMONT YANKEE	03/24/72			1.48E+06	6.08E+06	8.20E+06	1.13E+07	1.02E+07	1.11E+07	1.00E+07	1.08E+07

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

TABLE 15

THERMAL ENERGY GENERATION COMPARISON BY YEAR

BOILING WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1980
BIG ROCK POINT	09/27/62	1.40E+06
BROWN'S FERRY	08/17/73	1.92E+07
	07/20/74	1.74E+07
	08/08/76	2.13E+07
BRUNSWICK	10/08/76	1.23E+07
	03/20/75	5.38E+06
COOPER	02/21/74	1.36E+07
DRESDEN 1	10/15/59	0.
DRESDEN 2-3	06/09/72	1.57E+07
	11/16/71	1.42E+07
DUANE ARNOLD	03/23/74	8.87E+06
EDWIN I. HATCH 1	09/12/74	1.54E+07
EDWIN I. HATCH 2	07/04/78	1.16E+07
FORT ST. VRAIN *	01/31/74	2.23E+06
HUMBOLDT BAY	02/16/63	0.
JAMES A. FITZPATRICK	11/17/74	1.30E+07
LACROSSE	07/11/67	8.00E+05
MILLSTONE 1	10/26/70	1.04E+07
MONTICELLO	12/10/70	1.07E+07
NINE MILE POINT	09/05/69	1.41E+07
OYSTER CREEK	05/03/69	6.27E+06
PEACH BOTTOM	09/16/73	1.37E+07
	08/07/74	2.26E+07
PILGRIM	06/16/72	9.20E+06
QUAD-CITIES	10/18/71	1.17E+07
	04/26/72	1.22E+07
VERMONT YANKEE	03/24/72	9.38E+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+07
ARKANSAS ONE 2	12/05/78									4.45E+04	3.45E+06
BEAVER VALLEY	05/10/76							1.97E+06	1.01E+07	8.80E+06	6.11E+06
CALVERT CLIFFS	10/07/74						1.40E+07	1.98E+07	2.97E+07	3.14E+07	3.15E+07
	11/30/76										
CRYSTAL RIVER	01/14/77								1.26E+07	7.97E+06	1.17E+07
DAVIS-BESSE	08/12/77								1.66E+06	8.52E+06	1.00E+07
DONALD C. COOK	01/18/75						1.46E+07	2.15E+07	1.55E+07	3.29E+07	3.68E+07
	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+07
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+07
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+07
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+07
	05/22/73										
INDIAN POINT 3	04/06/76									1.70E+07	1.57E+07
JOSEPH M. FARLEY	08/09/77									1.95E+07	5.77E+06
KEWAUNEE	03/07/74					5.03E+06	1.08E+07	1.08E+07	1.11E+07	1.24E+07	1.09E+07
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+07
MILLSTONE POINT 2	10/17/75						6.40E+05	1.52E+07	1.42E+07	1.44E+07	1.38E+07
NORTH ANNA	04/05/78									1.22E+07	1.41E+07
OCONEE	04/19/73				6.62E+06	1.70E+07	4.68E+07	3.97E+07	4.00E+07	4.84E+07	4.37E+07
	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+07
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+07
	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+08
	12/17/74										
RANCHO SECO	09/16/74						4.11E+06	6.91E+06	1.81E+07	1.59E+07	1.79E+07
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+06
SALEM	12/11/76							5.00E+04	6.70E+06	1.43E+07	6.60E+06
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+07
ST. LUCIE	04/22/76							3.50E+05	1.75E+07	1.64E+07	1.60E+07
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+06
	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+06
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+07
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+07
	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+06
ZION	06/19/73				2.73E+06	1.69E+07	3.28E+07	3.11E+07	3.66E+07	4.30E+07	3.31E+07
	12/24/73										

N/R=NOT REPORTED

TABLE 16

THERMAL ENERGY GENERATION COMPARISON BY YEAR

PRESSURIZED WATER REACTORS

MEGAWATT HOURS

FACILITY	INITIAL CRITICALITY	1980
ARKANSAS ONE 1	08/06/74	1.29E+07
ARKANSAS ONE 2	12/05/78	1.18E+07
BEAVER VALLEY	05/10/76	1.13E+06
CALVERT CLIFFS	10/07/74	1.52E+07
	11/30/76	2.05E+07
CRYSTAL RIVER	01/14/77	1.04E+07
DAVIS-BESSE	08/12/77	6.71E+06
DONALD C. COOK	01/18/75	2.02E+07
	07/01/78	2.14E+07
FORT CALHOUN	08/06/73	6.48E+06
HADDAM NECK	07/24/67	1.14E+07
H.B.ROBINSON	09/20/70	1.07E+07
INDIAN POINT 1-2	08/02/62	0.
	05/22/73	1.50E+07
INDIAN POINT 3	04/06/76	1.15E+07
JOSEPH M. FARLEY	08/09/77	1.54E+07
KEWAUNEE	03/07/74	1.15E+07
MAINE YANKEE	10/23/72	1.41E+07
MILLSTONE 2	10/17/75	1.55E+07
NORTH ANNA	04/05/78	1.89E+07
	06/12/80	1.12E+06
OCONEE	04/19/73	1.52E+07
	11/11/73	1.20E+07
	09/05/74	1.59E+07
PALISADES	05/24/71	8.19E+06
POINT BEACH	11/02/70	8.09E+06
	05/30/72	1.11E+07
PRAIRIE ISLAND	12/01/73	1.06E+07
	12/17/74	1.14E+07
RANCHO SECO	09/16/74	1.39E+07
R.E.GINNA	11/08/69	9.93E+06
SALEM 1	12/11/76	1.84E+07
SALEM 2	08/02/80	0.
SAN ONOFRE	06/14/67	2.55E+06
SEQUOYAH	07/05/80	1.67E+06
ST. LUCIE	04/22/76	1.70E+07
SURRY	07/01/72	8.67E+06
	03/07/73	7.26E+06
THREE MILE ISLAND 1	06/05/74	0.
THREE MILE ISLAND 2	03/28/78	0.
TMI 2/EPICOR	03/28/78	0.
TROJAN	12/15/75	1.97E+07
TURKEY POINT	10/20/72	1.47E+07
	06/11/73	1.32E+07
YANKEE ROWE	08/19/60	1.13E+06
ZION	06/19/73	2.22E+07
	12/24/73	1.75E+07

APPENDIX A

INDIVIDUAL PLANT SUMMARIES

INSTALLATION ARKANSAS ONE 1 LOCATION 6 MI WNW RUSSELLVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
BE-7	0.
NA-24	0.
K-40	6.91E-06
AR-41	0.
CR-51	7.57E-07
MN-54	0.
MN-56	0.
CO-57	0.
CO-58	7.64E-06
FE-59	0.
CO-60	1.69E-05
CU-64	0.
NI-65	0.
ZN-65	0.
SE-75	0.
BR-84	0.
KR-85	1.00E+02
KR-85M	6.88E+01
SR-85	0.
KR-87	0.
KR-88	4.38E+01
RB-88	0.
Y-88	0.
RB-89	0.
SR-89	6.88E-05
SR-90	0.
SR-91	0.
Y-91M	0.
SR-92	0.
Y-92	0.
NB-94	0.
NB-95	0.
ZR-95	0.
NB-97	0.
ZR-97	0.
MO-99	0.
TC-99M	1.48E-07
RU-103	0.
RU-106	0.
CD-109	0.
AG-110M	0.
CD-113M	0.
SN-113	0.
SB-122	0.
SB-124	0.

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

INSTALLATION ARKANSAS ONE 1 LOCATION 6 MI WNW RUSSELLVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
SB-125	0.
I-131	1.66E-01
XE-131M	6.44E+01
I-132	0.
TE-132	0.
BA-133	0.
I-133	1.46E-03
XE-133	3.72E+04
XE-133M	8.97E+01
CS-134	6.44E-06
I-134	0.
I-135	0.
XE-135	5.20E+02
XE-135M	0.
CS-136	0.
CS-137	1.98E-05
CS-138	0.
XE-138	0.
BA-139	0.
CE-139	0.
BA-140	0.
LA-140	0.
CE-144	0.
EU-152	0.
W-187	0.
HG-203	0.
BI-214	0.
PB-214	0.
RA-226	1.34E-06
TH-228	1.73E-06
U-235	0.
NP-239	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	1.66E-03
NA-24	4.82E-04
CR-51	9.89E-02
MN-54	1.53E-02
MN-56	0.
CO-57	6.66E-04
CO-58	8.47E-01
FE-59	7.82E-03
CO-60	4.01E-01
CU-64	0.
NI-65	0.
ZN-65	4.47E-05
SE-75	1.61E-04
KR-85	2.75E+00
KR-85M	3.25E-03

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

INSTALLATION ARKANSAS ONE 1 LOCATION 6 MI WNW RUSSELLVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
KR-87	2.99E-05
KR-88	1.75E-04
SR-89	4.98E-02
SR-90	0.
SR-91	2.13E-06
SR-92	8.33E-04
NB-95	2.64E-02
ZR-95	1.08E-02
NB-97	1.80E-02
ZR-97	8.85E-05
MO-99	3.26E-02
RU-103	1.37E-02
RU-106	6.25E-04
AG-110M	2.61E-02
I-131	7.77E-01
XE-131M	6.86E+00
I-132	1.72E-04
BA-133	2.40E-05
I-133	1.82E-02
XE-133	6.99E+02
XE-133M	2.64E+00
CS-134	3.89E-01
I-134	0.
I-135	1.52E-03
XE-135	5.52E-01
CS-136	9.63E-03
CS-137	6.34E-01
CS-138	6.87E-04
BA-140	7.01E-04
LA-140	4.74E-02
CE-144	1.62E-03
EU-152	0.
W-187	1.39E-04
NP-239	5.80E-07

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.29E+02
TOTAL LIQUID RELEASE	2.12E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	4.98E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.20E+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 1980
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	
	CI	
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

INSTALLATION ARKANSAS ONE 2 LOCATION 6 MI WNW RUSSELVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
BE-7	3.34E-05
NA-24	0.
K-40	1.11E-06
AR-41	3.40E+01
CR-51	2.18E-06
MN-54	0.
MN-56	0.
CO-57	0.
CO-58	6.10E-06
FE-59	0.
CO-60	1.01E-05
CU-64	0.
NI-65	0.
ZN-65	0.
SE-75	0.
BR-84	0.
KR-85	4.82E+00
KR-85M	1.86E+01
SR-85	0.
KR-87	0.
KR-88	2.35E+01
RB-88	0.
Y-88	0.
RB-89	0.
SR-89	7.90E-05
SR-90	1.08E-05
SR-91	0.
Y-91M	0.
SR-92	0.
Y-92	0.
NB-94	0.
NB-95	0.
ZR-95	0.
NB-97	0.
ZR-97	0.
MO-99	0.
TC-99M	4.94E-07
RU-103	0.
RU-106	0.
CD-109	0.
AG-110M	0.
CD-113M	0.
SN-113	0.
SB-122	0.
SB-124	0.

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

INSTALLATION ARKANSAS ONE 2 LOCATION 6 MI WNW RUSSELVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
SB-125	0.
I-131	6.38E-03
XE-131M	1.39E+01
I-132	1.43E-06
TE-132	0.
BA-133	0.
I-133	5.14E-04
XE-133	9.01E+03
XE-133M	9.95E+00
CS-134	1.65E-05
I-134	0.
I-135	6.96E-06
XE-135	2.49E+02
XE-135M	0.
CS-136	0.
CS-137	1.19E-05
CS-138	0.
XE-138	0.
BA-139	0.
CE-139	0.
BA-140	0.
LA-140	0.
CE-144	0.
EU-152	0.
W-187	0.
HG-203	0.
BI-214	1.59E-05
PB-214	0.
RA-226	0.
TH-228	2.65E-06
U-235	0.
NP-239	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	4.40E-03
NA-24	2.85E-03
CR-51	4.09E-02
MN-54	1.78E-02
MN-56	0.
CO-57	1.13E-04
CO-58	4.62E-01
FE-59	9.34E-03
CO-60	2.28E-02
CU-64	0.
NI-65	0.
ZN-65	5.82E-04
SE-75	2.00E-05
KR-85	3.35E+00
KR-85M	6.97E-03

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

INSTALLATION ARKANSAS ONE 2 LOCATION 6 MI WNW RUSSELVILLE, AR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
KR-87	1.15E-04
KR-88	4.15E-05
SR-89	1.68E-02
SR-90	0.
SR-91	3.86E-06
SR-92	6.48E-05
NB-95	6.87E-03
ZR-95	4.85E-03
NB-97	7.84E-04
ZR-97	1.15E-04
MO-99	2.90E-03
RU-103	9.36E-04
RU-106	0.
AG-110M	5.89E-03
I-131	2.10E+00
XE-131M	6.97E-01
I-132	1.21E-04
BA-133	1.42E-04
I-133	3.76E-02
XE-133	1.75E+02
XE-133M	1.01E+00
CS-134	2.41E-01
I-134	0.
I-135	4.44E-04
XE-135	3.66E-01
CS-136	1.49E-02
CS-137	1.12E+00
CS-138	0.
BA-140	1.74E-04
LA-140	5.33E-03
CE-144	4.35E-03
EU-152	0.
W-187	1.19E-03
NP-239	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.24E+00
TOTAL LIQUID RELEASE	2.89E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.20E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.20E+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 1980
SOLID WASTES

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

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

INSTALLATION BEAVER VALLEY LOCATION SHIPPINGPORT, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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
LICENSED POWER (MWT) 2652.0
INITIAL CRITICALITY 05/10/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	1.28E-05
KR-85	5.11E-02
KR-85M	N/D
KR-87	N/D
KR-88	N/D
SR-89	5.33E-07
SR-90	1.20E-08
I-131	4.45E-04
XE-131M	6.49E-01
I-133	1.38E-06
XE-133	8.52E+01
XE-133M	4.17E-01
CS-134	N/D
I-135	N/D
XE-135	4.30E-02
XE-135M	N/D
CS-137	2.37E-06
XE-138	N/D
BA-LA-140	N/D
CE-144	4.39E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	N/D
MN-54	3.00E-03
CO-58	9.61E-03
FE-59	N/D
CO-60	8.45E-02
ZN-65	N/D
SR-89	3.70E-04
SR-90	2.75E-05
ZR-NB-95	1.21E-04
MO-99	N/D
TC-99M	N/D
I-131	N/D
XE-133	N/D
CS-134	9.85E-04
XE-135	N/D
CS-137	4.83E-03
BA-LA-140	N/D
CE-141	N/D

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

INSTALLATION BEAVER VALLEY LOCATION SHIPPINGPORT, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	4.77E+00		
TOTAL LIQUID RELEASE	3.98E+01		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	2.69E+06
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	1.54E+09

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

INSTALLATION= BEAVER VALLEY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	7.19E+01	9.19E+01
CS-137	%	1.08E+01	4.60E+00
MN-54	%	8.60E+00	3.50E+00
B			
CO-58	%	1.02E+01	3.00E+00
CO-60	%	7.12E+01	9.15E+01
MN-54	%	8.20E+00	4.75E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	8.69E+01
BOTTOMS,ETC.	CI	5.33E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.97E+02
EQUIPMENT,ETC.	CI	1.13E+00
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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

INSTALLATION BIG ROCK POINT LOCATION 4 MI NE CHARLEVOIX, MI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
N-13	1.56E+03
MN-54	2.47E-05
CO-58	8.20E-07
FE-59	4.73E-06
CO-60	1.18E-04
ZN-65	3.20E-06
BR-82	6.56E-03
KR-83M	3.83E+02
KR-85	2.45E-02
KR-85M	4.44E+02
KR-87	1.64E+03
KR-88	9.55E+02
KR-89	1.06E+03
KR-90	1.19E+03
KR-91	1.48E+01
SR-91	1.43E-02
I-131	1.07E-03
XE-131M	1.34E-01
I-133	1.00E-02
XE-133	9.11E+01
XE-133M	6.69E+00
I-135	1.26E-02
XE-135	1.30E+03
XE-135M	2.19E+03
CS-136	1.32E-04
CS-137	1.09E-04
XE-137	1.69E+03
XE-138	7.62E+03
XE-139	1.59E+03
BA+LA-140	1.18E-03
BA-140	4.50E-03
LA-140	1.45E-02
XE-140	1.60E+02
NP-239	5.34E-05
UNIDENTIFIED	7.90E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	7.13E-03
MN-54	1.66E-02
FE-59	2.06E-03
CO-60	5.25E-02
SR-89	4.30E-04
SR-90	1.11E-03
I-131	4.34E-04

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

INSTALLATION BIG ROCK POINT LOCATION 4 MI NE CHARLEVOIX, MI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	3.36E-02
CS-137	5.53E-01
LA-140	1.38E-05
UNIDENTIFIED	1.14E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.26E+01
TOTAL LIQUID RELEASE	6.18E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.25E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.28E+10

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

INSTALLATION= BIG ROCK POINT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	1.20E+01
	CI	3.01E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	3.00E+01
	CI	8.70E-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 BROWN'S FERRY LOCATION 10 MI NW DECATUR, AL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 — LICENSEE TENNESSEE VALLEY AUTHORITY
TYPE BWR — LICENSED POWER (MWT) 3293.0
DOCKET NO. 50-259 — INITIAL CRITICALITY 08/17/73
COOLING WATER SOURCE TENNESSEE RIVER

UNIT NUMBER 2 — LICENSEE TENNESSEE VALLEY AUTHORITY
TYPE BWR — LICENSED POWER (MWT) 3293.0
DOCKET NO. 50-260 — INITIAL CRITICALITY 07/20/74
COOLING WATER SOURCE TENNESSEE RIVER

UNIT NUMBER 3 — LICENSEE TENNESSEE VALLEY AUTHORITY
TYPE BWR — LICENSED POWER (MWT) 3293.0
DOCKET NO. 50-296 — INITIAL CRITICALITY 08/08/76
COOLING WATER SOURCE TENNESSEE RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	3.56E+01
MN-54	7.09E-04
CO-58	6.18E-04
FE-59	1.16E-03
CO-60	2.84E-02
ZN-65	1.27E-02
KR-85	7.54E-03
KR-85M	2.44E+01
KR-87	6.65E+01
KR-88	3.57E+02
SR-89	1.54E-03
SR-90	4.85E-03
NB-95	1.02E-03
ZR-95	1.91E-03
I-131	6.85E-02
I-133	<6.96E-02
XE-133	3.00E+04
CS-134	1.10E-04
I-135	<9.28E-02
XE-135	5.08E+02
XE-135M	5.55E+02
CS-137	1.19E-04
XE-138	3.14E+03
BA-140	4.82E-04
LA-140	4.93E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	<1.71E-01
CR-51	<1.79E-01
MN-54	<2.61E-02
MN-56	3.39E-04
CO-58	<1.68E-02
FE-59	<1.70E-02
CO-60	2.13E-02
CU-64	<1.55E-01
ZN-65	2.52E-02

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SR-89	5.08E-02
SR-90	4.77E-03
ZR-NB-95	<1.54E-02
MO-99	<6.49E-03
TC-99M	<6.49E-03
SB-124	<1.08E-02
I-131	<6.32E-02
I-133	<1.81E-02
XE-133	5.18E-02
CS-134	<1.33E-01
XE-135	<1.27E-01
CS-136	<1.18E-02
CS-137	<1.63E-01
BA-LA-140	<2.83E-03
CE-141	<2.84E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.07E+01
TOTAL LIQUID RELEASE	2.18E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.82E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.68E+11

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

INSTALLATION= BROWN'S FERRY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-DEC
A		
AG-110M	%	1.59E+00
CO-58	%	1.73E+00
CO-60	%	7.75E+00
CR-51	%	3.28E+01
CS-134	%	1.06E+01
CS-137	%	1.21E+01
FE-59	%	5.98E-01
I-131	%	2.22E+00
LA-140	%	2.02E-01
MN-54	%	1.33E+00
NB-95	%	8.10E-01
OTHERS	%	4.42E-01
SB-124	%	6.20E-02
SR-90	%	2.90E-02
ZN-65	%	2.55E+01
ZR-95	%	4.08E-01
B		
AG-110M	%	1.74E+00
CO-58	%	1.80E+00
CO-60	%	8.57E+00
CR-51	%	2.90E+01
CS-134	%	1.04E+01
CS-137	%	1.23E+01
FE-59	%	8.15E-01
I-131	%	2.10E+00
LA-140	%	2.54E-01
MN-54	%	1.49E+00
NB-95	%	8.71E-01
OTHERS	%	5.56E-01
SB-124	%	6.03E-02
SR-90	%	2.92E-02
ZN-65	%	2.86E+01
ZR-95	%	4.08E-01
C		
AG-110M	%	2.83E+00
CO-58	%	1.79E+00
CO-60	%	8.61E+00
CR-51	%	3.09E+01
CS-134	%	1.17E+01
CS-137	%	1.47E+01
FE-59	%	1.48E+00
I-131	%	1.29E+00
LA-140	%	3.88E-01
MN-54	%	1.44E+00
NB-95	%	1.12E+00
OTHERS	%	6.91E-01

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

INSTALLATION= BROWN'S FERRY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980

SOLID WASTES

SB-124	%	6.94E-01
SR-90	%	2.86E-02
ZN-65	%	2.41E+01
ZR-95	%	4.25E-01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	7.74E+02
BOTTOMS,ETC.	CI	6.01E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.06E+03
EQUIPMENT,ETC.	CI	4.47E+02
C.IRRADIATED COMPONENTS, CONTROL	M3	6.54E+02
RODS,ETC.	CI	3.53E+00
D. OTHER	M3	
	CI	

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

INSTALLATION BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE CAROLINA POWER &LIGHT
TYPE BWR LICENSED POWER (MWT) 2436.0
DOCKET NO. 50-325 INITIAL CRITICALITY 10/08/76
COOLING WATER SOURCE CAPE FEAR RIVER
UNIT NUMBER 2 LICENSEE CAROLINA POWER &LIGHT
TYPE BWR LICENSED POWER (MWT) 2436.0
DOCKET NO. 50-324 INITIAL CRITICALITY 03/20/75
COOLING WATER SOURCE CAPE FEAR RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.59E+03
CR-51	2.57E-01
MN-54	1.26E-01
CO-57	4.74E-04
CO-58	1.38E-02
FE-59	3.79E-03
CO-60	7.77E-02
ZN-65	6.02E-04
ZN-69M	N/D
KR-85	N/D
KR-85M	3.63E+03
SR-85	N/D
KR-87	6.41E+03
KR-88	5.13E+03
Y-88	N/D
SR-89	2.89E-03
SR-90	2.37E-05
ZR-NB-95	N/D
MO-99	2.78E-03
TC-99M	5.81E-02
RU-103	9.40E-05
CD-109	N/D
RH-109	1.47E-03
AG-110M	1.01E-03
SN-113	N/D
SN-113M	N/D
SN-117M	2.17E-04
SN-122	2.46E-05
I-131	2.68E-01
I-132	7.81E-02
I-133	2.37E-01
XE-133	1.59E+04
XE-133M	6.49E+02
CS-134	4.38E-01
I-135	2.59E-01
XE-135	2.02E+04
XE-135M	7.06E+03
CS-136	2.50E-03
CS-137	5.20E-01
XE-138	7.38E+03
CE-139	8.32E-03

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

INSTALLATION BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BA-LA-140	3.56E-02
CE-144	2.66E-04
HG-203	N/D
UNIDENTIFIED	4.12E+03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	3.96E-02
NA-24	1.73E-01
AR-41	8.56E-04
CR-51	1.23E-01
MN-54	1.45E-01
MN-56	1.11E-04
CO-57	N/D
CO-58	1.72E-02
FE-59	7.10E-03
CO-60	2.20E-01
CU-64	6.22E-02
NI-65	N/D
ZN-65	1.71E-03
AS-76	1.76E-03
KR-85	7.91E-04
KR-85M	3.11E-05
SR-85	3.19E-06
SR-89	1.84E-03
SR-90	7.30E-04
SR-91	N/D
Y-91M	1.21E-04
SR-92	1.86E-05
ZR-NB-95	1.18E-04
NB-97	5.67E-04
NB-97M	3.90E-06
ZR-97	4.06E-06
MO-99	6.28E-04
TC-99M	1.67E-03
TC-101	N/D
AG-110M	2.74E-04
IN-113M	N/D
SN-113	N/D
SN-117M	N/D
SB-122	9.21E-03
SB-124	N/D
TE-129M	N/D
I-131	1.15E-01
XE-131M	5.98E-03
I-132	3.47E-04
TE-132	9.89E-04
I-133	1.23E-02
XE-133	1.61E-01
XE-133M	2.90E-03

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

INSTALLATION BRUNSWICK LOCATION 20 MI S WILMINGTON, NC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	1.18E-01
XE-135	3.44E-02
XE-135M	9.34E-04
CS-136	1.53E-03
CS-137	1.68E-01
CS-138	N/D
BA-139	7.69E-05
CE-139	N/D
BA-LA-140	1.46E-05
CE-141	N/D
CE-144	N/D
W-187	N/D
NP-239	8.61E-03
UNIDENTIFIED	3.26E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	8.80E+00
TOTAL LIQUID RELEASE	1.28E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.75E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.55E+11

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

INSTALLATION= BRUNSWICK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
422	TRUCK	BARNWELL S.C.
34	TRUCK	WASHINGTON STATE

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) A+B		JAN-JUNE	JULY-DEC
CO-58	%	4.25E+00	2.25E+00
CO-60	%	1.32E+01	2.24E+01
CR-51	%	3.69E+01	1.94E+01
CS-134	%	7.64E+00	5.20E+00
CS-136	%	8.00E-04	
CS-137	%	8.50E+00	7.23E+00
FE-59	%	4.68E+00	2.05E+00
I-131	%	6.95E+00	7.90E+00
I-133	%		5.00E-02
LA-140	%		6.00E-02
MN-54	%	1.65E+01	2.04E+01
NA-24	%		3.70E-01
NB-95	%	8.00E-02	
SB-122	%	5.70E-01	5.10E-01
SR-92	%		2.00E-02
TC-99M	%		4.87E+00
ZN-65	%	7.00E-01	6.30E-01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.20E+03
BOTTOMS,ETC.	CI	7.39E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	5.53E+03
EQUIPMENT,ETC.	CI	1.60E+02
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	0.
D. OTHER	M3	0.
	CI	0.

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

INSTALLATION CALVERT CLIFFS LOCATION 45 MI SE WASHINGTON, D.C.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-317
COOLING WATER SOURCE CHESAPEAKE BAY
LICENSEE BALTIMORE GAS & ELECTRIC
LICENSED POWER (MWT) 2700.0
INITIAL CRITICALITY 10/07/74

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 11/30/76

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	3.74E-01
MN-54	1.83E-06
MN-56	2.05E-05
CO-58	1.84E-02
BR-82	4.70E-05
KR-85M	7.23E+00
KR-87	2.80E-03
KR-88	2.18E-01
RB-88	1.30E-02
SR-89	3.52E-05
SR-90	3.91E-05
SR-91	6.57E-06
MO-99	1.10E-06
RU-103	9.51E-08
RU-106	7.23E-06
SB-125	1.55E-06
I-131	5.54E-02
XE-131M	6.88E+00
I-132	1.70E-03
I-133	2.23E-02
XE-133	2.86E+03
XE-133M	3.51E+00
I-134	2.38E-05
I-135	2.84E-02
XE-135	8.29E+01
CS-138	1.33E-02
BA-139	8.54E-06
BA-140	6.79E-05
LA-140	5.70E-05
CE-141	7.00E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	7.37E-01
MN-54	8.67E-02
MN-56	1.24E-03
CO-57	8.17E-04
CO-58	2.00E+00
FE-59	7.37E-03
CO-60	4.41E-01
ZN-65	2.40E-02

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

INSTALLATION CALVERT CLIFFS LOCATION 45 MI SE WASHINGTON, D.C.

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
KR-85M	1.79E-04
SR-89	1.41E-02
SR-90	2.30E-02
SR-91	6.13E-04
NB-95	3.84E-02
ZR-95	2.12E-01
ZR-97	5.84E-04
MO-99	8.73E-04
RU-103	2.48E-02
RU-106	7.33E-04
AG-110M	3.01E-02
SN-113	4.15E-03
SB-124	1.67E-02
SB-125	2.05E-01
I-131	1.58E-01
I-132	1.62E-03
I-133	6.95E-02
XE-133	1.55E+01
XE-133M	1.06E-01
CS-134	1.06E-01
I-135	7.03E-03
XE-135	2.10E-01
XE-135M	3.22E-03
CS-137	1.83E-01
BA-140	6.05E-03
LA-140	3.13E-02
CE-141	2.69E-03
UNIDENTIFIED	1.04E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.79E+01
TOTAL LIQUID RELEASE	4.91E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.24E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.39E+12

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

INSTALLATION= CALVERT CLIFFS

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	MOTOR TRANSIT	BARNWELL S.C.
11	TRUCK	BARNWELL S.C.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-140	%	1.47E+00	2.49E+00
CO-58	%	4.98E+01	4.42E+01
CO-60	%	6.72E+00	6.75E+00
CS-134	%	1.17E+01	5.43E+00
CS-137	%	2.11E+01	5.35E+00
I-131	%	1.01E+00	2.37E+01
LA-140	%		4.45E+00
MN-54	%	6.34E+00	7.54E+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	4.73E+01
	CI	5.04E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	1.34E+02
	CI	1.10E+00
C.IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	6.92E+01
	CI	1.43E+04
D. OTHER	M3	
	CI	

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

INSTALLATION DONALD C. COOK LOCATION 11 MI SSW ST. JOSEPH, MI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-315
COOLING WATER SOURCE LAKE MICHIGAN
LICENSEE INDIANA & MICHIGAN ELECTRIC
LICENSED POWER (MWT) 3250.0
INITIAL CRITICALITY 01/18/75

UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-316
COOLING WATER SOURCE LAKE MICHIGAN
LICENSEE INDIANA & MICHIGAN ELECTRIC
LICENSED POWER (MWT) 3391.0
INITIAL CRITICALITY 07/01/78

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	2.64E-02
AR-41	2.52E-01
CR-51	1.46E-05
MN-54	1.26E-04
CO-58	1.85E-04
CO-60	1.30E-03
ZN-65	1.03E-05
KR-85	2.16E+03
KR-85M	1.58E-01
KR-87	4.75E-02
KR-88	3.75E-02
RB-88	2.33E-05
YB-88	2.77E-07
RB-89	5.48E-05
SR-89	1.47E-07
SR-90	8.86E-07
NB-95	1.85E-05
AG-110M	1.29E-06
I-130	1.99E-06
I-131	1.27E-02
I-133	1.40E-02
XE-133	1.49E+03
XE-133M	4.10E+00
CS-134	3.34E-04
I-135	1.38E-05
XE-135	1.11E+02
CS-137	1.46E-03
CE-139	1.23E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	3.46E-02
CR-51	3.38E-02
MN-54	5.33E-02
CO-57	1.75E-03
CO-58	5.48E-01
FE-59	4.28E-03
CO-60	3.14E-01
ZN-65	3.17E-03
SR-89	1.19E-03
SR-90	2.31E-03

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

INSTALLATION DONALD C. COOK LOCATION 11 MI SSW ST. JOSEPH, MI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
ZR-NB-95	2.20E-02
ZR-97	6.40E-04
CD-109	1.06E-03
AG-110M	2.27E-02
SN-113	1.06E-03
SB-124	4.12E-03
SB-125	6.37E-04
I-131	7.31E-02
I-133	2.03E-02
CS-134	1.82E-02
CS-136	1.01E-03
CS-137	2.41E-02
CE-144	8.90E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.11E+00
TOTAL LIQUID RELEASE	7.82E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.11E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.20E+12

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

INSTALLATION= DONALD C. COOK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
77	TRUCK	BARNWELL S.C.
21	TRUCK	BEATTY NV.
4	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	3.50E+01	4.50E+01
CO-60	%	2.50E+01	1.00E+01
CS-134	%	1.50E+01	2.00E+01
CS-137	%	2.50E+01	2.50E+01
B			
CO-58	%	1.50E+01	7.50E+01
CO-60	%	5.00E+01	5.00E+00
CS-137	%	3.50E+01	2.00E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	8.43E+02
BOTTOMS,ETC.	CI	9.06E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.26E+03
EQUIPMENT,ETC.	CI	1.30E+02
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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 1980
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)
CR-51	6.38E-04
MN-54	1.20E-03
CO-58	3.40E-04
CO-60	4.38E-03
ZN-65	1.15E-04
KR-83M	1.13E+02
KR-85	9.63E+01
KR-85M	3.83E+02
KR-87	4.48E+02
KR-88	8.32E+02
KR-89	3.39E-01
SR-89	3.45E-04
SR-90	3.42E-05
I-131	1.71E-02
XE-131M	6.18E+00
I-133	6.95E-03
XE-133	1.31E+03
XE-133M	3.73E+01
CS-134	<5.80E-04
I-135	<1.05E-01
XE-135	1.50E+03
XE-135M	5.00E+01
CS-137	<8.64E-04
XE-137	1.52E+00
XE-138	2.45E+02
BA-LA-140	7.56E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	5.63E-03
CR-51	<3.15E-01
MN-54	3.34E-01
CO-58	6.22E-02
FE-59	1.27E-02
CO-60	4.20E+00
ZN-65	<5.81E-02
SR-89	4.45E-02
SR-90	6.55E-03
SR-92	1.29E-03
NB-95	<1.27E-02
ZR-NB-95	<1.27E-02
ZR-95	<2.75E-02
MO-99	5.85E-03
TC-99M	<2.14E-02
AG-110M	6.74E-03

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SB-124	1.09E-02
I-131	<1.93E+00
XE-133	<8.98E+00
CS-134	4.58E-01
XE-135	<1.47E-01
CS-136	8.35E-02
CS-137	7.30E-01
BA-LA-140	<4.79E-02
CE-141	<3.36E-02
UNIDENTIFIED	<6.15E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.91E+00
TOTAL LIQUID RELEASE	8.77E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.87E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.27E+10

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

INSTALLATION= COOPER

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	BEATTY NV.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG-110M	%	8.39E-01	1.67E+00
BA-LA-140	%	7.57E-02	
CO-58	%	2.18E+00	1.37E+00
CO-60	%	2.66E+01	2.57E+01
CR-51	%	7.18E+00	2.43E+01
CS-134	%	1.91E+01	1.43E+01
CS-136	%	1.07E-01	
CS-137	%	2.44E+01	2.00E+01
FE-59	%		3.30E-02
I-131	%	6.92E+00	1.04E-01
MN-54	%	1.08E+01	1.14E+01
SB-124	%	1.02E-01	
ZN-65	%	1.53E+00	9.14E-01
ZR-NB-95	%	1.84E-01	1.65E-01
B			
AG-110M	%	6.29E-01	6.91E-01
CO-58	%	2.73E+00	1.88E+00
CO-60	%	3.17E+01	3.53E+01
CR-51	%	2.29E+00	3.14E+00
CS-134	%	2.05E+01	1.88E+01
CS-137	%	2.48E+01	2.39E+01
FE-59	%	1.87E-01	5.13E-02
I-131	%	2.27E+00	3.01E+00
MN-54	%	1.39E+01	1.20E+01
ZN-65	%	1.01E+00	1.14E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.44E+02
BOTTOMS,ETC.	CI	7.03E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	2.91E+02
EQUIPMENT,ETC.	CI	1.67E+00
C. IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	
D. OTHER	M3	0.
	CI	

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

INSTALLATION CRYSTAL RIVER LOCATION 70 MI N TAMPA, FL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 3
TYPE PWR
DOCKET NO. 50-302
COOLING WATER SOURCE GULF OF MEXICO

LICENSEE FLORIDA POWER
LICENSED POWER (MWT) 2452.0
INITIAL CRITICALITY 01/14/77

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.71E+02
CR-51	<9.05E-05
MN-54	<1.38E-05
CO-57	<6.14E-06
CO-58	2.60E-05
FE-59	<3.54E-05
CO-60	3.20E-06
ZN-65	<2.81E-05
KR-85	3.89E+02
KR-85M	1.25E+02
KR-87	2.35E+01
KR-88	1.14E+02
KR-89	3.68E+03
SR-89	6.69E-05
SR-90	1.01E-05
NB-95	<1.34E-05
ZR-95	<1.90E-05
AG-110M	<1.81E-05
SB-126	<1.12E-05
I-131	6.66E-03
XE-131M	2.57E+02
I-133	5.24E-04
XE-133	2.87E+04
XE-133M	6.20E+02
CS-134	2.83E-07
I-135	<2.09E+00
XE-135	2.24E+03
XE-135M	3.84E+00
CS-137	1.17E-06
XE-137	3.87E+01
XE-138	2.27E-03
BA-LA-140	<1.62E-04
CE-141	<1.39E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	<1.72E-03
CR-51	5.17E-03
MN-54	3.62E-03
CO-57	4.23E-06
CO-58	4.43E-02
FE-59	4.61E-04
CO-60	3.62E-02
CU-64	<3.03E-01
ZN-65	<8.50E-03

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

INSTALLATION CRYSTAL RIVER LOCATION 70 MI N TAMPA, FL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
ZN-69M	2.46E-05
AS-76	<4.26E-03
SR-89	1.27E-03
SR-90	7.03E-05
ZR-NB-95	1.46E-02
ZR-NB-97	1.44E-03
MO-99	4.86E-06
TC-99M	9.67E-04
RU-103	4.00E-06
AG-110M	1.55E-02
SB-124	2.45E-05
SB-126	1.42E-05
I-131	1.53E-02
I-132	2.02E-06
I-133	9.15E-05
XE-133	6.22E-01
CS-134	5.25E-03
I-135	2.60E-05
XE-135	1.48E-03
CS-136	1.54E-04
CS-137	7.83E-03
BA-LA-140	4.23E-03
CE-141	2.62E-05
CE-144	3.55E-04
NP-239	3.04E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.12E+01
TOTAL LIQUID RELEASE	1.95E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.82E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.68E+11

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

INSTALLATION= CRYSTAL RIVER

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	1.00E-01	6.75E+00
CO-60	%		8.06E+00
CS-134	%	2.50E-01	2.83E+01
CS-137	%	5.00E-01	5.60E+01
B			
CO-58	%	1.00E-01	5.57E+01
CO-60	%	1.00E-01	2.14E+01
CS-134	%	3.00E-01	7.20E+00
CS-137	%	4.00E-01	1.23E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	5.48E+02
	CI	1.86E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	3.79E+02
	CI	1.83E+02
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 DAVIS-BESSE LOCATION 21 MI E TOLEDO, OH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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 08/12/77

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.53E-07
KR-85	<1.49E+03
KR-85M	2.87E-02
KR-87	<8.65E+00
KR-88	<1.10E+01
SR-89	<4.57E-06
SR-90	<8.11E-06
I-131	2.01E-03
I-133	6.21E-04
XE-133	2.35E+01
XE-133M	5.40E-02
CS-134	<1.56E-04
I-135	<1.08E-03
XE-135	4.62E-01
XE-135M	<8.49E+00
CS-137	<1.14E-04
XE-138	1.12E-02
BA-LA-140	<7.97E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	3.92E-05
CR-51	5.45E-04
MN-54	9.45E-03
CO-58	1.42E-01
FE-59	6.88E-04
CO-60	1.70E-02
ZN-65	7.74E-06
SR-89	<5.72E-05
SR-90	<9.32E-05
Y-91	6.36E-03
ZR-NB-95	1.17E-04
ZR-97	1.26E-05
MO-99	<9.97E-04
TC-99M	1.19E-05
I-131	5.05E-03
I-133	3.41E-04
XE-133	<3.31E-04
CS-134	6.82E-03
XE-135	<1.20E-04
CS-136	1.81E-04
CS-137	1.70E-02
BA-LA-140	1.75E-05
CE-141	<1.99E-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 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	5.94E+00		
TOTAL LIQUID RELEASE	1.08E+02		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	4.23E+06
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	3.69E+10

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

INSTALLATION= DAVIS-BESSE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	7.18E+01	4.43E+01
CS-137	%	8.20E+00	1.64E+01
SR-90	%	8.30E+00	2.23E+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	M3	1.37E+02
BOTTOMS,ETC.	CI	1.96E+00
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.93E+02
EQUIPMENT,ETC.	CI	2.81E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	
D. OTHER	M3	0.
	CI	

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

INSTALLATION DRESDEN 1 LOCATION 14 MI SW JOLIET, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE COMMON WEALTH EDISON
TYPE BWR LICENSED POWER (MWT) 700.0
DOCKET NO. 50-10 INITIAL CRITICALITY 10/15/59
COOLING WATER SOURCE KANKAKEE RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	0.
MN-54	9.90E-04
CO-58	0.
CO-60	4.84E-03
KR-85M	0.
KR-87	0.
KR-88	0.
SR-89	1.40E-03
SR-90	6.50E-04
NB-95	0.
ZR-95	0.
RU-103	0.
I-131	3.63E-03
I-133	0.
XE-133	6.01E+01
CS-134	1.70E-03
I-135	0.
XE-135	0.
XE-135M	0.
CS-137	4.08E-03
XE-138	0.
BA-140	0.
CE-141	0.
CE-144	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	
TOTAL LIQUID RELEASE	

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

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

INSTALLATION DRESDEN 2-3 LOCATION 14 MI SW JOLIET, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2 LICENSEE COMMONWEALTH EDISON
TYPE BWR LICENSED POWER (MWT) 2527.0
DOCKET NO. 50-237 INITIAL CRITICALITY 06/09/72
COOLING WATER SOURCE KANKAKEE RIVER
UNIT NUMBER 3 LICENSEE COMMONWEALTH EDISON
TYPE BWR LICENSED POWER (MWT) 2527.0
DOCKET NO. 50-249 INITIAL CRITICALITY 11/16/71
COOLING WATER SOURCE KANKAKEE RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	1.15E-01
MN-54	9.61E-02
CO-58	2.23E-02
FE-59	1.81E-02
CO-60	6.39E-01
ZN-65	9.15E-03
KR-85M	9.25E+02
KR-87	4.21E+02
KR-88	1.74E+03
SR-89	1.44E+00
SR-90	1.12E-02
NB-95	2.15E-02
ZR-95	3.09E-02
RU-103	3.10E-02
AG-110M	5.10E-04
SB-124	1.53E-03
I-131	3.53E+00
I-133	1.09E+01
XE-133	1.08E+04
CS-134	1.47E-02
I-135	1.82E+01
XE-135	1.08E+04
XE-135M	3.19E+03
CS-136	5.16E-03
CS-137	7.98E-02
XE-138	1.50E+04
BA-140	4.65E+00
LA-140	3.72E-02
CE-141	1.58E-01
CE-144	5.83E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	1.63E-02
MN-54	4.01E-02
CO-58	8.93E-03
FE-59	6.97E-03
CO-60	1.96E-01
ZN-65	0.
SR-89	5.79E-03
SR-90	1.92E-03

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

INSTALLATION DRESDEN 2-3 LOCATION 14 MI SW JOLIET, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
NB-95	2.59E-02
ZR-95	1.48E-02
RU-103	1.13E-02
AG-110M	1.44E-03
SB-124	1.30E-04
I-131	3.58E-02
CS-134	1.08E-02
CS-137	3.72E-02
BA-140	1.89E-03
LA-140	2.15E-03
CE-141	4.25E-02
CE-144	2.10E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.18E+03
TOTAL LIQUID RELEASE	6.20E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	8.51E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.80E+12

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

INSTALLATION= DRESDEN 1 & DRESDEN 2-3

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	5.37E+02
	CI	4.42E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	6.21E+02
	CI	4.09E+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 DUANE ARNOLD LOCATION 8 MI NW CEDAR RAPIDS, IA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE IOWA ELECTRIC LIGHT & POWER
TYPE BWR LICENSED POWER (MWT) 1658.1
DOCKET NO. 50-331 INITIAL CRITICALITY 03/23/74
COOLING WATER SOURCE CEDAR RAPIDS RIVER & CIRC WATER SYSTEM

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
N-13	8.89E+01
AR-41	8.86E+00
CR-51	1.94E-02
MN-54	4.24E-03
CO-57	8.26E-06
CO-58	4.58E-04
FE-59	7.60E-04
CO-60	6.05E-03
KR-85	<2.61E+01
KR-85M	1.14E+02
KR-87	5.37E+00
KR-88	9.46E+01
SR-89	6.46E-04
SR-90	1.10E-04
I-131	4.48E-02
I-133	1.66E-01
XE-133	2.03E+03
CS-134	1.17E-04
I-135	9.84E-02
XE-135	9.74E+01
XE-135M	2.53E+01
CS-137	1.54E-04
XE-138	1.96E+02
BA-140	5.51E-04
CE-141	1.69E-04
UNIDENTIFIED	8.12E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.62E+00
TOTAL LIQUID RELEASE	

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

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

INSTALLATION= DUANE ARNOLD

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
85	TRUCK	BARNWELL S.C.
1	TRUCK	BEATTY NV.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	7.35E+02
	CI	7.00E+02
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

INSTALLATION JOSEPH M. FARLEY LOCATION DOTHAN, AL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	ACTIVITY (CI)
AR-41	5.79E+03
CR-51	2.04E-07
MN-54	3.85E-07
CO-58	2.74E-05
FE-59	1.26E-11
CO-60	2.74E-05
ZN-65	9.32E-09
KR-85	2.13E+01
KR-85M	6.59E+00
KR-87	1.41E+00
KR-88	2.37E-02
KR-89	0.
SR-89	2.12E-03
KR-90	2.72E-01
SR-90	2.40E-13
ZR-95	1.35E-11
SB-124	2.54E-11
I-131	1.88E-04
XE-131M	9.50E+01
I-133	4.90E-04
XE-133	1.28E+04
XE-133M	3.67E+01
CS-134	2.81E-07
XE-135	4.06E+02
XE-135M	1.54E-01
CS-136	1.04E-11
CS-137	4.11E-06
XE-137	1.26E-01
XE-138	1.08E-01
BA-140	3.22E-11
CE-141	7.20E-09

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	2.47E-03
CR-51	1.61E-03
MN-54	2.38E-03
CO-57	4.02E-05
CO-58	1.30E-02
FE-59	3.48E-04
CO-60	1.92E-02
CU-64	1.89E-05
NI-65	4.24E-06
ZN-65	1.70E-06
AS-76	0.

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

INSTALLATION JOSEPH M. FARLEY LOCATION DOTHAN, AL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SR-89	1.68E-04
SR-90	4.69E-05
SR-91	0.
NB-95	3.69E-04
ZR-95	1.57E-05
ZR-97	3.90E-06
MO-99	1.12E-05
TC-99M	1.35E-06
RU-103	1.40E-06
RU-106	1.08E-03
AG-110M	1.34E-03
I-131	2.06E-03
I-132	3.63E-03
I-133	4.61E-03
XE-133	7.29E-03
CS-134	3.81E-03
I-135	3.32E-03
XE-135	9.14E-04
CS-136	2.15E-05
CS-137	4.20E-03
BA-140	4.55E-06
LA-140	4.35E-05
CE-141	0.
CE-144	8.71E-06
NP-239	9.95E-06

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.13E+02
TOTAL LIQUID RELEASE	5.70E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.38E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.49E+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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	1.60E+01	7.90E+00
CO-60	%	6.60E+01	5.60E+01
H-3	%		3.00E+01
MN-54	%	1.20E+01	
B			
CO-58	%	5.00E+00	2.80E+01
CO-60	%		2.30E+01
FE-59	%	7.00E+01	3.50E+01
MN-54	%	1.20E+01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.61E+02
BOTTOMS,ETC.	CI	1.90E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	2.80E+02
EQUIPMENT,ETC.	CI	5.58E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	
D. OTHER	M3	0.
	CI	

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

INSTALLATION JAMES A. FITZPATRICK LOCATION 36 MI N SYRACUSE, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
N-13	1.31E+03
AR-41	2.17E+02
CR-51	1.76E-02
MN-54	3.83E-03
CO-58	5.96E-03
CO-60	1.46E-02
ZN-65	3.94E-04
KR-85M	5.22E+03
KR-87	6.07E+03
KR-88	9.67E+03
SR-89	2.42E-03
SR-90	5.76E-05
ZR-NB-95	1.67E-05
I-131	7.67E-02
XE-131M	1.10E+04
I-133	1.34E-01
XE-133	1.52E+04
XE-133M	1.52E+02
CS-134	3.21E-04
I-135	8.29E-02
XE-135	2.06E+04
XE-135M	2.28E+03
CS-137	4.19E-04
XE-138	5.15E+03
BA-LA-140	2.15E-03
CE-141	2.30E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.79E-02
CR-51	4.63E-02
MN-54	2.10E-01
CO-58	1.07E-01
FE-59	1.31E-02
CO-60	8.03E-01
CU-64	3.42E-02
ZN-65	3.11E-02
AS-76	2.46E-04
KR-85M	2.88E-04
SR-90	3.47E-05
ZR-NB-95	2.14E-03
MO-99	1.41E-02
TC-99M	1.81E-04
AG-110M	1.12E-04
SB-124	4.87E-03

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

INSTALLATION JAMES A. FITZPATRICK LOCATION 36 MI N SYRACUSE, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
I-131	2.77E-02
I-133	1.22E-03
XE-133	9.65E-03
CS-134	7.30E-02
I-135	4.97E-05
XE-135	3.28E-03
CS-137	1.06E-01
BA-LA-140	4.61E-04
CE-141	1.72E-05
CE-144	6.33E-05
NP-239	2.24E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.39E+00
TOTAL LIQUID RELEASE	2.81E+00

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.57E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.55E+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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) A		JAN-JUNE	JULY-DEC
CO-58	%	5.40E+00	7.20E+00
CO-60	%	5.79E+01	6.56E+01
CR-51	%	2.80E+00	1.10E+00
CS-134	%	4.40E+00	2.40E+00
CS-137	%	8.60E+00	4.50E+00
FE-59	%	9.00E-01	3.00E-01
I-131	%	1.00E-01	
MN-54	%	1.68E+01	1.22E+01
NA-24	%	<1.00E-01	
SB-124	%	4.00E-01	3.00E-01
ZN-65	%	2.70E+00	5.80E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	3.48E+02
BOTTOMS,ETC.	CI	8.42E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	3.87E+02
EQUIPMENT,ETC.	CI	4.45E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	1.51E+01
	CI	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 1980
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)
AR-41	1.47E+00
MN-54	1.38E-06
CO-58	1.60E-05
CO-60	4.71E-06
KR-85	6.10E+00
KR-85M	3.58E-02
KR-87	3.83E-02
KR-88	4.81E-02
SR-89	4.20E-07
SR-90	4.68E-07
I-131	2.29E-03
XE-131M	1.34E+00
I-133	1.21E-04
XE-133	2.85E+02
XE-133M	1.62E+00
CS-134	2.29E-05
I-135	6.26E-05
XE-135	1.23E+00
XE-135M	2.63E-02
CS-137	3.67E-05
XE-138	8.65E-02
BA-140	3.27E-05
LA-140	1.29E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	<1.40E-02
MN-54	5.92E-03
CO-57	<1.63E-03
CO-58	4.43E-02
FE-59	<2.02E-03
CO-60	4.89E-03
ZN-65	<2.40E-03
SR-89	5.06E-03
SR-90	1.02E-02
NB-95	<2.38E-03
ZR-95	<2.08E-03
MO-99	<1.11E-03
TC-99M	<5.41E-04
RU-103	<1.64E-03
SN-117M	<1.39E-03
SB-124	<1.42E-03
I-131	5.92E-02
I-133	2.96E-04
XE-133	1.03E+00

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	1.20E-01
XE-135	1.02E-02
CS-136	<2.82E-03
CS-137	2.14E-01
BA-140	<3.95E-03
LA-140	<9.93E-04
CE-141	<9.20E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.30E+00
TOTAL LIQUID RELEASE	5.44E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.82E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.97E+11

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

INSTALLATION= FORT CALHOUN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	7.28E+00	2.00E+00
CS-134	%	4.22E+01	3.10E+01
CS-137	%	4.96E+01	6.20E+01
MN-54	%	9.38E-01	5.00E+00
B			
CO-58	%	7.28E+00	2.00E+00
CS-134	%	4.22E+01	3.10E+01
CS-137	%	4.96E+01	6.20E+01
MN-54	%	9.38E-01	5.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.75E+02
BOTTOMS,ETC.	CI	1.29E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	2.31E+02
EQUIPMENT,ETC.	CI	3.18E+01
C. IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	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 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE PUBLIC SERVICE CO OF COLORADO
TYPE HTG LICENSED POWER (MWT) 842.0
DOCKET NO. 50-267 INITIAL CRITICALITY 01/31/74
COOLING WATER SOURCE SOUTH PLATTE RIVER/SHALLOW WELLS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
KR-85M	1.19E-02
KR-87	1.66E-02
KR-88	1.39E-02
I-131	1.25E-06
XE-131M	3.81E-01
XE-133	9.05E+01
XE-133M	3.27E-01
XE-135	7.29E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
XE-133	8.92E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	9.86E-01
TOTAL LIQUID RELEASE	2.06E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.81E+05
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.25E+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 1980
SOLID WASTES

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

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

INSTALLATION R.E.GINNA LOCATION 16 MI NE ROCHESTER, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

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

LICENSEE ROCHESTER GAS&ELEC
LICENSED POWER (MWT) 1520.1
INITIAL CRITICALITY 11/08/69

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	3.82E-01
MN-54	1.85E-06
CO-58	1.48E-07
CO-60	1.61E-06
KR-85	3.56E+00
KR-85M	2.88E+00
KR-87	1.01E-03
KR-88	3.07E-01
NB-95	6.15E-06
AG-110M	9.82E-08
SB-129	1.36E-07
I-131	3.49E-03
XE-131M	7.86E+00
I-132	4.04E-03
I-133	1.69E-03
XE-133	7.21E+02
XE-133M	2.77E-01
CS-134	2.89E-07
XE-135	2.41E+01
XE-135M	2.91E-02
CS-137	2.74E-06
XE-138	1.50E-03
CE-141	4.34E-09
CE-144	1.61E-08
NP-239	4.99E-07

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	2.47E-04
MN-54	2.62E-04
CO-58	8.77E-04
FE-59	1.90E-06
CO-60	6.54E-03
NB-95	1.90E-05
ZR-95	4.20E-06
MO-99	6.70E-05
RU-103	1.20E-04
RU-106	2.10E-04
AG-110M	2.19E-05
SB-125	5.60E-05
TE-127M	1.70E-06
TE-129M	2.24E-05
I-131	5.19E-05
TE-132	2.00E-06
CS-134	3.15E-03

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

INSTALLATION R.E.GINNA LOCATION 16 MI NE ROCHESTER, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-136	1.39E-04
CS-137	7.42E-03
BA-LA-140	2.13E-04
CE-141	4.25E-05
CE-PR-144	1.37E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.96E+01
TOTAL LIQUID RELEASE	1.60E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.15E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.38E+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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
24	TRUCK	BARNWELL S.C.
2	TRUCK	BEATTY NV.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	4.00E+02
	CI	4.60E+02
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

INSTALLATION HADDAM NECK LOCATION 9.5 MI SE MIDDLETOWN, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
C-14	1.15E+02
AR-37	2.52E+01
AR-41	5.04E-02
CR-51	7.32E-04
MN-54	1.60E-04
CO-58	1.77E-03
CO-60	1.06E-03
KR-85	6.07E+02
KR-85M	9.55E-01
KR-87	1.55E+00
KR-88	1.52E+00
SR-89	8.14E-06
SR-90	4.12E-06
ZR-NB-95	1.27E-04
RU-103	1.14E-04
RU-106	3.25E-04
I-131	2.02E-03
XE-131M	1.65E+00
I-133	1.34E-04
XE-133	1.88E+03
XE-133M	5.31E+00
CS-134	2.26E-04
I-135	N/D
XE-135	2.51E+01
XE-135M	1.02E+00
CS-137	4.80E-04
XE-137	1.90E+00
XE-138	3.39E+00
BA-LA-140	N/D
CE-141	3.51E-05
CE-144	8.13E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	N/D
AR-37	1.24E-04
CR-51	N/D
MN-54	1.12E-03
CO-57	N/D
CO-58	6.02E-03
FE-59	N/D
CO-60	4.97E-02
ZN-65	N/D
KR-85	1.09E-03
SR-89	1.61E-03

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SR-90	2.85E-03
ZR-NB-95	5.17E-04
MO-99	N/D
TC-99M	N/D
RU-103	N/D
RU-106	1.10E-02
AG-110M	N/D
SB-125	2.11E-02
I-131	3.88E-03
I-133	N/D
XE-133	4.46E-02
CS-134	5.90E-02
XE-135	3.35E-03
CS-137	9.77E-02
BA-LA-140	N/D
CE-141	N/D
CE-144	2.14E-02
EU-154	N/D

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.25E+01
TOTAL LIQUID RELEASE	3.29E+03

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	6.07E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.68E+11

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

INSTALLATION= HADDAM NECK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		
3	TRUCK	WEST JEFFERSON OH.

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CE-141	%		9.43E-01
CE-144	%	1.01E+01	2.00E+01
CO-57	%		3.30E-01
CO-58	%	5.52E+00	1.33E+01
CO-60	%	4.53E+00	1.38E+01
CR-51	%		5.07E+00
CS-134	%	3.35E+01	3.92E+00
CS-137	%	4.07E+01	4.33E+00
MN-54	%	2.76E+00	3.40E+00
NB-95	%	8.15E-01	6.17E+00
RU-103	%		2.05E+00
RU-106	%		2.06E+01
ZR-95	%	4.56E-01	4.68E+00
B			
CE-141	%		2.04E-01
CE-144	%	9.06E+00	2.01E+01
CO-57	%		2.88E-01
CO-58	%	1.37E+01	8.75E+00
CO-60	%	5.82E+00	1.34E+01
CR-51	%		4.35E+00
CS-134	%	2.41E+01	1.52E+00
CS-137	%	2.90E+01	2.49E+00
MN-54	%	2.75E+00	1.98E+00
NB-95	%	1.17E+00	1.85E+00
RU-103	%		1.45E+00
RU-106	%	1.29E+01	4.11E+01
ZR-95	%		1.15E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.71E+02
	CI	4.68E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	9.91E+02
	CI	2.11E+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 EDWIN I. HATCH 1 LOCATION 11 MI N BAXLEY, GA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

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

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

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
N-13	8.30E+02
AR-41	8.31E+01
CR-51	3.87E-04
MN-54	7.81E-06
CO-58	3.03E-05
FE-59	0.
CO-60	2.61E-04
KR-85	0.
KR-85M	6.24E+03
KR-87	4.35E+02
KR-88	2.11E+03
KR-89	0.
SR-89	2.22E-03
SR-90	1.63E-05
NB-95	1.03E-05
ZR-95	1.99E-09
SN-113	1.05E-06
I-131	1.28E+00
XE-131M	1.56E+03
I-133	2.42E-01
XE-133	2.20E+04
XE-133M	1.91E+02
CS-134	5.01E-03
I-135	6.15E-02
XE-135	1.54E+03
XE-135M	1.49E+03
CS-137	5.86E-03
XE-137	1.04E+02
XE-138	1.62E+03
BA-140	2.85E-04
LA-140	6.67E-04
CE-141	0.
CE-144	1.35E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	1.35E-03
NA-24	2.11E-04
P-32	0.
CR-51	1.59E-03
MN-54	4.61E-05
FE-55	2.14E-02
MN-56	0.
CO-58	8.09E-05
FE-59	1.68E-05

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

INSTALLATION EDWIN I. HATCH 1 LOCATION 11 MI N BAXLEY, GA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CO-60	2.77E-03
CU-64	6.20E-03
NI-65	1.48E-05
ZN-65	1.90E-03
ZN-69M	0.
AS-76	6.69E-05
KR-85M	8.61E-06
KR-87	1.76E-05
KR-88	2.70E-05
RB-88	4.42E-05
SR-89	1.97E-04
SR-90	1.67E-04
NB-95	6.25E-05
ZR-95	8.29E-05
NB-97	3.08E-06
ZR-97	0.
MO-99	1.64E-04
TC-99M	6.62E-04
TC-104	3.98E-06
AG-110M	3.42E-05
I-131	1.76E-02
XE-131M	6.98E-03
I-132	2.90E-07
I-133	1.94E-03
XE-133	1.99E-01
XE-133M	4.36E-03
CS-134	4.12E-03
CS-134M	4.36E-06
I-135	4.78E-05
XE-135	1.23E-01
XE-135M	1.59E-06
CS-136	2.10E-04
CS-137	5.34E-03
CS-138	4.75E-05
XE-138	2.04E-02
BA-140	0.
LA-140	2.19E-05
CE-141	0.
CE-144	1.93E-03
W-187	2.02E-05
NP-239	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	8.60E+00
TOTAL LIQUID RELEASE	1.42E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.32E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.41E+09

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

INSTALLATION= EDWIN I. HATCH 1

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	1.51E+01	2.70E+00
CR-51	%		1.40E+00
CS-134	%	1.83E+01	2.55E+01
CS-137	%	2.68E+01	3.31E+01
I-131	%	1.42E+01	2.55E+01
OTHERS	%	5.41E+00	9.00E-01
XE-133	%		1.75E+00
ZN-65	%	2.02E+01	9.20E+00
B			
CO-58	%		9.70E+00
CO-60	%	1.51E+01	8.10E+00
CR-51	%		9.30E+00
CS-134	%	1.83E+01	
CS-137	%	2.68E+01	
I-131	%	1.42E+01	
MN-54	%		1.20E+00
NB-65	%		6.60E+00
OTHERS	%	5.41E+00	1.00E+00
ZN-65	%	2.02E+01	6.10E+01
ZR-95	%		3.50E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.81E+02
	CI	9.59E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	1.83E+02
	CI	3.32E+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 EDWIN I. HATCH 2 LOCATION 11 MI N BAXLEY, GA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

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

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

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
N-13	1.61E+01
AR-41	3.72E-01
CR-51	0.
MN-54	1.99E-07
CO-58	0.
FE-59	0.
CO-60	2.43E-05
KR-85	0.
KR-85M	1.93E+01
KR-87	3.48E+00
KR-88	1.02E+01
KR-89	1.18E+01
SR-89	1.09E-04
SR-90	6.87E-07
NB-95	4.95E-07
ZR-95	0.
SN-113	0.
I-131	1.44E-02
XE-131M	1.81E+00
I-133	4.10E-01
XE-133	1.57E+02
XE-133M	6.53E-01
CS-134	2.14E-06
I-135	4.58E+00
XE-135	5.93E+01
XE-135M	3.60E+00
CS-137	1.34E-05
XE-137	2.88E+00
XE-138	6.85E+00
BA-140	2.16E-05
LA-140	2.26E-05
CE-141	1.16E-07
CE-144	5.44E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	2.13E-03
NA-22	2.07E-06
NA-24	5.59E-03
P-32	0.
CR-51	2.19E-03
MN-54	2.93E-04
FE-55	2.29E-02
MN-56	5.06E-06
CO-58	2.25E-03

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

INSTALLATION EDWIN I. HATCH 2 LOCATION 11 MI N BAXLEY, GA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
FE-59	1.94E-05
CO-60	2.63E-03
CU-64	0.
NI-65	1.87E-05
ZN-65	4.61E-03
ZN-69M	0.
AS-76	1.30E-04
KR-85M	0.
KR-87	0.
KR-88	0.
RB-88	6.95E-05
SR-89	0.
SR-90	2.11E-04
NB-95	2.20E-04
ZR-95	4.86E-05
NB-97	1.10E-06
ZR-97	3.09E-06
MO-99	1.19E-05
TC-99M	1.25E-04
AG-110M	0.
I-131	1.04E-03
I-132	8.00E-06
I-133	4.51E-04
XE-133	2.09E-02
XE-133M	1.11E-04
CS-134	1.64E-04
I-135	1.52E-04
XE-135	8.25E-03
XE-135M	5.82E-07
CS-136	5.35E-06
CS-137	3.25E-04
CS-138	9.39E-05
XE-138	5.31E-08
BA-140	0.
LA-140	5.22E-06
CE-141	0.
CE-144	3.17E-05
W-187	8.29E-06
NP-239	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.42E+01
TOTAL LIQUID RELEASE	1.07E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.34E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.93E+09

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

INSTALLATION= EDWIN I. HATCH 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-LA-140	%		5.43E+00
CO-58	%		1.37E+01
CO-60	%		7.95E+00
CR-51	%		4.76E+00
CS-134	%	1.67E+01	
CS-137	%	1.93E+01	
I-131	%		4.61E+00
LA-140	%		4.95E+00
MN-54	%		1.22E+00
NB-95	%	1.18E+01	
OTHERS	%	2.07E+01	7.00E-01
ZN-65	%	3.15E+01	5.67E+01
B			
CO-60	%		1.19E+00
CS-134	%	1.67E+01	3.89E+01
CS-137	%	1.93E+01	5.09E+01
I-131	%		4.60E+00
NB-95	%	1.18E+01	
OTHERS	%	2.07E+01	
ZN-65	%	3.15E+01	3.90E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.24E+02
	CI	8.22E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	3.53E+01
	CI	5.32E-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 HUMBOLDT BAY LOCATION 4 MI SW EUREKA, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
MN-54	2.68E-06
CO-60	2.88E-04
KR-83M	N/D
KR-85M	N/D
KR-87	N/D
KR-88	N/D
KR-89	N/D
SR-89	N/D
SR-90	1.09E-06
I-131	N/D
I-133	N/D
XE-133	N/D
XE-133M	N/D
CS-134	N/D
I-135	N/D
XE-135	N/D
XE-135M	N/D
CS-137	6.85E-05
XE-137	N/D
XE-138	N/D
BA-LA-140	N/D
CE-144	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	N/D
MN-54	1.00E-03
CO-58	N/D
CO-60	3.17E-02
ZN-65	N/D
SR-89	N/D
SR-90	3.11E-06
ZR-NB-95	N/D
MO-99	N/D
TC-99M	N/D
I-131	N/D
XE-133	N/D
CS-134	8.06E-03
XE-135	N/D
CS-137	8.24E-02
BA-LA-140	N/D
CE-144	3.77E-03
NP-239	N/D

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

INSTALLATION HUMBOLDT BAY LOCATION 4 MI SW EUREKA, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	4.00E-02		
TOTAL LIQUID RELEASE	9.70E-02		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	4.85E+05
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	9.03E+10

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

INSTALLATION= HUMBOLDT BAY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) A		JAN-JUNE	JULY-DEC
CO-60	%		1.07E+00
CS-134	%		6.61E+00
CS-137	%		8.83E+01
MN-54	%		5.61E-02
UNIDENTIFIED	%		3.94E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	8.20E+01
BOTTOMS,ETC.	CI	6.95E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	
EQUIPMENT,ETC.	CI	
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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

INSTALLATION INDIAN POINT 1-2 LOCATION 3 MI SW PEEKSKILL, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-3
COOLING WATER SOURCE
LICENSEE CONSOLIDATED EDISON
LICENSED POWER (MWT) 615.0
INITIAL CRITICALITY 08/02/62

UNIT NUMBER 2
TYPE PWR
DOCKET NO. 50-247
COOLING WATER SOURCE
LICENSEE CONSOLIDATED EDISON
LICENSED POWER (MWT) 2758.0
INITIAL CRITICALITY 05/22/73

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
P-32	2.69E-05
CR-51	4.87E-05
MN-54	2.38E-05
FE-55	1.57E-04
CO-57	7.86E-07
CO-58	8.31E-04
CO-60	7.83E-04
NI-63	4.18E-04
ZN-65	2.12E-06
KR-85	1.14E+03
KR-85M	1.34E+01
KR-87	1.71E+00
KR-88	1.89E+01
SR-89	<3.53E-05
SR-90	<8.50E-06
NB-95	5.20E-07
I-131	6.06E-02
XE-131M	2.50E+02
I-133	1.32E-02
XE-133	7.72E+03
XE-133M	6.77E+01
CS-134	2.67E-04
I-135	3.14E-02
XE-135	1.29E+02
XE-135M	6.10E+00
CS-137	7.26E-04
XE-137	2.19E+01
XE-138	3.34E+00
BA-LA-140	<2.21E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
P-32	2.51E-02
CR-51	6.10E-02
MN-54	1.76E-02
FE-55	2.41E-01
CO-57	3.77E-04
CO-58	1.59E-01
FE-59	1.72E-02
CO-60	1.19E-01
NI-63	5.28E-02

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

INSTALLATION INDIAN POINT 1-2 LOCATION 3 MI SW PEEKSKILL, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
ZN-65	1.63E-02
SR-89	<3.48E-03
SR-90	<2.60E-03
ZR-NB-95	6.09E-03
MO-99	2.23E-02
TC-99M	1.97E-03
I-131	1.31E-01
XE-133	1.25E-02
CS-134	8.65E-02
XE-135	4.72E-03
CS-136	1.21E-04
CS-137	1.96E-01
BA-LA-140	<3.74E-02
CE-141	3.85E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.10E+01
TOTAL LIQUID RELEASE	2.76E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.86E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.01E+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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

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			
CO60-I131-MN54-FE55-NI63	%	2.30E+01	
CO-58	%	9.00E+00	2.30E+01
CO-60	%		1.10E+01
CS-134	%	2.20E+01	1.20E+01
CS-137	%	4.60E+01	4.10E+01
I131-MN54-FE55-NI63	%		1.30E+01
B			
CO60-I131-MN54-FE55-NI63	%	2.30E+01	
CO-58	%	9.00E+00	2.30E+01
CO-60	%		1.10E+01
CS-134	%	2.20E+01	1.20E+01
CS-137	%	4.60E+01	4.10E+01
I131-MN54-FE55-NI63	%		1.30E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	6.07E+02
BOTTOMS,ETC.	CI	2.10E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	4.21E+02
EQUIPMENT,ETC.	CI	1.22E+02
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	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 1980
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)
P-32	1.34E-06
CR-51	4.37E-05
MN-54	1.15E-05
FE-55	2.54E-04
CO-57	1.71E-06
CO-58	5.45E-05
CO-60	7.73E-05
NI-63	8.24E-05
KR-85	1.21E+01
KR-85M	1.19E+01
SR-85	9.54E-07
KR-87	5.78E-01
KR-88	6.18E-01
SR-89	1.08E-06
SR-90	1.20E-07
TC-99M	2.37E-07
ZR-99	1.01E-05
CD-109	6.04E-06
SN-113	9.42E-07
SB-122	3.82E-06
I-131	1.23E-02
XE-131M	2.30E+01
BA-133	1.72E-06
I-133	1.22E-03
XE-133	1.02E+03
XE-133M	1.27E+01
CS-134	1.06E-05
XE-135	2.74E+01
XE-135M	2.51E-01
CS-137	3.89E-05
BA-138	1.04E-06
XE-138	8.79E-01
CE-139	6.53E-07
CE-141	5.08E-06
CE-144	7.37E-06
HG-203	3.26E-07
NP-239	9.55E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	6.66E-03
P-32	7.44E-02
CR-51	6.69E-02
MN-54	2.47E-02
FE-55	7.89E-01

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
MN-56	1.10E-04
CO-57	9.96E-04
CO-58	4.49E-01
FE-59	7.96E-03
CO-60	1.66E-01
NI-63	1.29E-01
ZN-65	2.37E-03
SR-85	9.78E-05
RB-88	1.64E-02
Y-88	1.63E-03
SR-89	1.14E-03
SR-90	5.78E-03
Y-91M	5.55E-05
SR-92	8.30E-03
Y-92	2.06E-04
ZR-NB-95	1.39E-02
NB-97	1.82E-02
ZR-97	1.42E-05
MO-99	1.01E-02
TC-99M	6.68E-03
RU-103	1.29E-04
RH-106	1.58E-03
CD-109	1.80E-02
AG-110M	1.43E-02
SN-113	4.36E-04
SB-122	2.87E-02
SB-124	1.69E-02
SB-125	3.28E-02
I-131	9.17E-02
I-132	4.18E-04
BA-133	7.99E-05
I-133	4.47E-03
XE-133	2.49E+00
CS-134	2.98E-01
I-134	3.60E-05
I-135	9.56E-04
XE-135	4.63E-02
CS-136	2.22E-02
CS-137	5.28E-01
CS-138	1.60E-04
CE-139	1.04E-03
BA-LA-140	1.13E-02
CE-141	3.09E-03
CE-144	1.01E-03
W-187	5.04E-04
HG-203	1.63E-05
HG-208	3.71E-06

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 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	4.92E+00		
TOTAL LIQUID RELEASE	4.27E+02		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	1.04E+08
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	1.01E+12

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

INSTALLATION= INDIAN POINT 3

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
29	TRUCK	BARNWELL S.C.
1	TRUCK	BEATTY NV.
1	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	3.30E+01	2.10E+01
CO-60	%	3.10E+01	1.70E+01
CS-134	%		1.90E+01
CS-137	%	1.60E+01	2.70E+01
RU-106	%		1.60E+01
B			
CO-58	%	2.50E+01	5.00E+00
CO-60	%	5.00E+01	1.60E+01
CS-134	%		2.30E+01
CS-137	%	1.20E+01	5.20E+01
MN-54	%		4.00E+00
D			
CO-58	%	5.00E+01	
CO-60	%	1.70E+01	
CS-137	%	1.70E+01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	7.48E+01
	CI	1.78E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	2.72E+02
	CI	2.43E+01
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	
	CI	
D. OTHER	M3	2.12E-01
	CI	4.70E-02

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 1980
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	4.15E+00
CO-58	7.21E-07
CO-60	3.33E-05
KR-85	1.51E-03
KR-85M	2.28E-02
KR-88	2.08E-05
RB-88	7.27E-06
SR-89	<2.29E-06
SR-90	<2.29E-06
I-131	1.82E-04
I-132	9.33E-04
I-133	7.61E-04
XE-133	2.17E+01
XE-133M	3.27E-03
CS-134	1.82E-06
I-134	3.27E-06
I-135	4.53E-06
XE-135	5.75E+00
XE-135M	2.08E-06
CS-137	3.85E-05
RN-222	4.08E-04
UNIDENTIFIED	8.81E+01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.86E-03
CR-51	5.54E-03
MN-54	4.58E-03
CO-58	1.32E-01
FE-59	2.54E-03
CO-60	1.10E-01
SR-89	1.09E-04
SR-90	5.07E-05
NB-95	5.90E-05
ZR-95	2.66E-05
AG-110M	1.17E-01
SN-113	1.68E-03
SB-122	3.44E-03
SB-124	5.66E-02
SB-125	5.98E-02
I-133	2.40E-05
XE-133	2.03E-03
CS-134	5.03E-02
XE-135	6.75E-04
CS-137	6.84E-02

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
BA-140	1.29E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	2.08E+01
TOTAL LIQUID RELEASE	2.33E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.75E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.43E+10

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

INSTALLATION= KEWAUNEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG-110M	%		2.11E-01
CO-57	%	1.22E+00	2.37E-01
CO-58	%	2.63E+00	2.58E+01
CO-60	%	3.41E+01	5.91E+01
CR-51	%		2.69E-01
CS-134	%	1.92E+01	2.88E+00
CS-137	%	3.39E+01	7.02E+00
FE-59	%		8.98E-02
MN-54	%	9.84E+00	4.31E+00
SB-124	%		1.25E-01
SB-125	%		2.27E-01
SN-113	%		1.09E-01
B			
AG-110M	%		1.92E+00
CO-57	%	5.10E-01	1.71E-01
CO-58	%	1.80E+00	3.24E+01
CO-60	%	3.20E+01	4.81E+01
CR-51	%		2.46E+00
CS-134	%	2.04E+01	2.20E+00
CS-137	%	3.60E+01	4.49E+00
FE-59	%		8.17E-01
MN-54	%	9.51E+00	3.47E+00
SB-124	%		1.14E+00
SB-125	%		2.06E+00
SN-113	%		9.95E-01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	7.62E+01
	CI	1.37E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	2.65E+01
	CI	6.61E+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 LACROSSE LOCATION 19 MI S LACROSSE, WI

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
CR-51	1.40E-04
MN-54	3.94E-05
CO-57	1.58E-05
CO-58	6.73E-05
FE-59	8.06E-06
CO-60	4.68E-04
ZN-65	5.11E-05
SE-75	1.43E-05
KR-85	1.33E+00
KR-85M	9.66E+01
KR-87	2.38E+02
KR-88	2.19E+02
KR-89	1.85E+00
SR-89	6.30E-04
SR-90	9.86E-05
Y-91	1.95E-03
NB-94	6.40E-06
NB-95	3.31E-05
ZR-95	3.68E-05
RU-103	1.01E-04
RH-106	1.15E-04
CD-109	4.05E-05
AG-110M	4.62E-07
IN-114M	1.18E-06
TE-121	2.55E-06
TI-121	1.04E-07
SB-125	1.16E-05
SB-126	8.90E-07
XE-129M	2.67E-01
I-131	4.37E-03
XE-131M	1.01E+01
I-132	6.17E-05
I-132M	1.78E-05
BA-133	1.51E-05
I-133	1.65E-03
XE-133	7.56E+02
XE-133M	7.79E+01
CS-134	1.76E-05
I-134	1.48E-04
I-135	9.44E-04
XE-135	2.48E+03
XE-135M	3.03E+02
CS-136	1.37E-05
CS-137	1.42E-04
XE-137	1.79E+02

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 1980
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
XE-138	5.34E+02
CE-139	1.22E-06
CE-141	5.54E-05
CE-144	8.60E-05
PM-145	2.26E-04
SM-145	6.64E-05
PM-148	1.96E-05
PM-148M	8.14E-06
EU-152	2.42E-06
EU-153	5.39E-06
GD-153	1.85E-06
AM-241	8.85E-06
CM-241	2.44E-05
CM-243	9.72E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	2.33E-02
MN-54	1.24E-01
CO-57	3.30E-03
CO-58	2.82E-01
FE-59	4.72E-02
CO-60	9.23E-01
ZN-65	2.68E-02
KR-85M	1.95E-05
KR-87	8.75E-05
SR-89	1.60E-02
SR-90	1.37E-03
SR-91	6.44E-04
Y-91	4.27E-03
Y-91M	1.05E-04
SR-92	3.79E-04
NB-95	2.00E-02
ZR-95	1.27E-02
MO-99	5.16E-03
TC-99M	4.88E-02
RU-103	1.69E-02
RH+RU-105	7.28E-03
RU+RH-105	3.34E-03
RU+RH-106	3.10E-02
CD-109	1.95E-03
SB-122	1.86E-04
SB-124	4.64E-05
TE-127	7.71E-03
I-131	1.11E-02
XE-131M	1.37E-02
I-132	2.70E-04
I-133	1.63E-02
XE-133	1.16E-02
XE-133M	5.98E-04

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	5.59E-02
I-135	1.15E-02
XE-135	6.76E-03
XE-135M	1.62E-03
CS-137	2.50E-01
BA-LA-140	2.28E-02
CE-141	8.39E-03
CE-144	8.88E-02
PM-145	1.98E-02
ND-147	3.49E-05
NP-239	2.03E-02
CM-241	1.42E-04
AM-242	8.07E-03
CM-245	1.08E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.46E+00
TOTAL LIQUID RELEASE	7.20E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.06E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.38E+11

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

INSTALLATION= LACROSSE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	4.21E+01
BOTTOMS,ETC.	CI	2.02E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	
EQUIPMENT,ETC.	CI	
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	1.08E+00
	CI	4.67E-02

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

INSTALLATION MAINE YANKEE LOCATION 3.9 MI S WICASSETT, ME

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

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

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

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	<1.36E-05
MN-54	1.27E-06
CO-58	7.74E-05
CO-60	4.66E-05
KR-85	1.53E+01
KR-85M	<8.00E-07
KR-87	<2.40E-06
KR-88	<2.80E-06
SR-89	6.28E-06
SR-90	7.91E-08
I-131	1.56E-03
XE-131M	2.63E+03
I-132	<4.40E-12
I-133	1.02E-03
XE-133	1.23E+03
XE-133M	7.05E-01
CS-134	1.08E-06
I-134	<1.28E-11
I-135	6.33E-04
XE-135	6.64E+00
XE-135M	<4.00E-06
CS-137	3.50E-05
XE-138	<1.36E-06
BA-140	<2.88E-13
UNIDENTIFIED	2.62E+00

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	1.14E-05
CR-51	3.50E-03
MN-54	1.82E-03
CO-58	2.11E-01
FE-59	N/D
CO-60	1.22E-02
ZN-65	N/D
KR-88	2.01E-05
SR-89	1.09E-03
SR-90	1.17E-05
NB-95	5.95E-04
ZR-95	N/D
MO-99	4.54E-05
TC-99M	N/D
I-131	1.39E-02
XE-131M	5.91E-04
I-133	6.28E-04

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

INSTALLATION MAINE YANKEE LOCATION 3.9 MI S WICASSETT, ME

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
XE-133	2.99E-02
XE-133M	1.56E-04
CS-134	8.57E-03
XE-135	1.80E-03
CS-137	4.26E-02
BA-140	N/D
CE-141	N/D
CE-144	4.77E-04
UNIDENTIFIED	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.16E+00
TOTAL LIQUID RELEASE	2.18E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	8.38E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.52E+11

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

INSTALLATION= MAINE YANKEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
49	TRUCK	BARNWELL S.C.
2	TRUCK	BEATTY NV.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	4.50E+01	4.00E+01
CO-60	%	5.00E+00	1.00E+01
CS-134	%	2.00E+01	1.00E+01
CS-137	%	3.00E+01	4.00E+01
B			
CO-58	%		3.00E+01
CO-60	%	3.00E+01	3.00E+01
CS-134	%		1.00E+01
CS-134-CO-58	%	3.00E+01	
CS-137	%	4.00E+01	3.00E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	2.91E+02
BOTTOMS,ETC.	CI	4.79E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.66E+02
EQUIPMENT,ETC.	CI	9.30E-01
C. IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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

INSTALLATION MILLSTONE 1 LOCATION 3.2 MI WSW NEW LONDON, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
H-3	9.55E+01
CR-51	3.39E-05
MN-54	1.69E-03
CO-58	6.51E-05
FE-59	3.84E-06
CO-60	6.42E-03
ZN-65	2.22E-05
KR-83M	1.86E+02
KR-85	2.75E-03
KR-85M	4.40E+02
KR-87	1.05E+03
KR-88	1.02E+03
KR-89	6.53E-02
SR-89	1.94E-02
SR-90	1.16E-04
I-131	2.14E-01
XE-131M	1.08E-01
I-133	1.14E+00
XE-133	3.36E+02
XE-133M	1.26E+01
CS-134	1.08E-04
I-135	1.81E+00
XE-135	1.39E+03
XE-135M	1.34E+03
CS-137	1.37E-03
XE-137	2.05E+03
XE-138	4.10E+03
BA-LA-140	8.33E-02

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	2.73E+01
NA-24	4.55E-05
CR-51	1.22E-03
MN-54	1.79E-02
MN-56	3.33E-05
CO-58	1.44E-03
FE-59	1.23E-04
CO-60	2.11E-01
ZN-65	2.94E-05
SR-89	4.26E-03
SR-90	9.67E-04
SR-92	1.19E-05
NB-95	1.40E-04
ZR-95	4.06E-05

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

INSTALLATION MILLSTONE 1 LOCATION 3.2 MI WSW NEW LONDON, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
MO-99	1.45E-04
TC-99M	1.21E-05
RU-105	2.07E-05
SB-124	5.77E-02
I-131	1.96E-02
I-133	6.87E-03
XE-133	2.26E-01
CS-134	6.25E-02
I-134	4.21E-05
I-135	1.69E-03
XE-135	2.66E-01
XE-135M	1.15E-04
CS-137	3.28E-01
CS-138	7.98E-05
BA-LA-140	1.11E-03
CE-141	1.09E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	9.55E+01
TOTAL LIQUID RELEASE	2.73E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.72E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.70E+10

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

INSTALLATION= MILLSTONE 1

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		
1	TRUCK	PLEASANTON CA.

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	3.20E+01	4.60E+01
CS134-SB124	%		2.20E+01
CS137-CS134	%	1.90E+01	
CS-137	%		2.30E+01
FE-55	%	3.00E+01	
I131-LA140-SR90-CO58-ZN65-NI63-UNIDENTIFIED	%	5.00E+00	
SB124-MN54-SR-89-BA140-CE144	%	1.40E+01	
SR89-SR90-NI63-FE55-UNIDENTIFIED	%		1.00E+00
ZN65-MN54-CO58-CE144	%		8.00E+00
B			
CO60-CO58	%	2.50E+01	
CO-60	%		7.40E+01
CS134-CS137	%		8.00E+00
CS-134	%	2.60E+01	
CS-137	%	3.30E+01	
MN54-FE55-CE144	%	1.00E+01	
MN-54	%		1.70E+01
SR89-NI63-I131-SR90-UNIDENTIFIED	%	6.00E+00	
SR89-SR90-FE55-NI63-UNIDENTIFIED	%		1.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	9.16E+02
	CI	2.30E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	1.39E+03
	CI	5.89E+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 MILLSTONE 2 LOCATION 3.2 MI WSW NEW LONDON, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
H-3	8.50E+02
AR-41	3.70E-01
MN-54	6.98E-05
CO-58	7.60E-04
FE-59	1.17E-06
CO-60	9.70E-04
KR-85	9.66E+00
KR-85M	2.49E+00
KR-88	7.63E+00
SR-89	N/D
SR-90	3.09E-08
I-131	6.29E-03
XE-131M	6.38E-01
I-133	3.29E-03
XE-133	1.28E+03
XE-133M	6.75E-02
CS-134	3.72E-03
I-135	7.32E-03
XE-135	6.28E+01
CS-137	7.64E-03
CS-138	7.40E-05
BA-LA-140	2.38E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	2.68E+02
NA-24	3.66E-02
CR-51	1.39E-01
MN-54	1.24E-01
MN-56	5.24E-05
CO-58	6.90E-01
FE-59	3.66E-03
CO-60	9.09E-01
ZN-65	2.57E-05
SR-89	5.36E-04
SR-90	2.90E-04
SR-92	1.04E-02
NB-95	4.67E-02
ZR-95	2.28E-02
NB-97	5.88E-02
ZR-97	2.42E-03
MO-TC-99	5.75E-05
MO-99	2.17E-04
TC-99M	1.90E-03
RU-105	3.67E-02

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

INSTALLATION MILLSTONE 2 LOCATION 3.2 MI WSW NEW LONDON, CT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	5.99E-02
SB-124	1.96E-03
SB-125	4.12E-03
I-131	5.03E-02
I-132	1.37E-05
I-133	1.05E-02
XE-133	6.00E+01
CS-134	2.05E-01
I-134	6.25E-05
I-135	1.96E-04
XE-135	2.82E+00
CS-136	5.47E-03
CS-137	2.82E-01
BA-LA-140	1.57E-03
CE-141	1.00E-05
CE-144	2.97E-03
W-187	9.84E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	8.50E+02
TOTAL LIQUID RELEASE	2.68E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.24E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	5.07E+11

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

INSTALLATION= MILLSTONE 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	DICKERSON MD.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%		8.00E+00
CS-134	%		2.80E+01
CS-137	%		6.30E+01
MN54-FE55-SR89-SR90-NI63	%		1.00E+00
C			
CO58-CO60	%		3.70E+01
CR51-NI63-NB95-ZR95-AG110-AG110M-AG108M	%		1.00E+01
FE55-FE59-MN54	%		5.20E+01
RU103-106-RH106-CE141-144-PR144-PM147-CD109	%		1.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	7.14E+00
BOTTOMS,ETC.	CI	1.99E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	
EQUIPMENT,ETC.	CI	
C. IRRADIATED COMPONENTS, CONTROL	M3	3.68E-01
RODS,ETC.	CI	2.92E+01
D. OTHER	M3	
	CI	

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 1980
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)
CR-51	8.24E-05
MN-54	3.71E-05
CO-57	3.10E-07
CO-58	0.
FE-59	2.22E-06
CO-60	1.08E-03
ZN-65	5.08E-05
KR-83M	9.21E+00
KR-85	3.04E+01
KR-85M	8.02E+00
KR-87	4.73E+01
KR-88	2.68E+01
KR-89	8.78E+02
SR-89	1.63E-03
KR-90	2.97E+01
SR-90	3.09E-05
NB-95	2.29E-06
ZR-95	0.
RU-103	0.
SB-124	0.
SB-126	0.
I-131	2.03E-02
XE-131M	5.30E+00
I-133	7.98E-02
XE-133	4.77E+02
XE-133M	2.20E+00
CS-134	1.05E-04
I-135	2.93E-02
XE-135	5.06E+01
XE-135M	6.77E+01
CS-136	0.
CS-137	7.83E-04
XE-137	1.15E+03
XE-138	9.53E+02
XE-139	8.84E+01
BA-140	3.67E-03
CE-141	5.22E-04
CE-144	8.18E-06
ND-147	7.68E-07

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.48E+02
TOTAL LIQUID RELEASE	0.

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 1980
AIRBORNE AND LIQUID EFFLUENTS

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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-140	%	3.19E+00	7.11E+00
CE-141	%	3.64E-01	2.57E-01
CO-58	%	1.27E+00	2.17E-02
CO-60	%	1.52E+01	1.75E+01
CR-51	%	6.51E+00	2.41E+00
CS-134	%	8.54E+00	5.54E+00
CS-137	%	4.34E+01	3.40E+01
I-131	%		7.95E+00
LA-140	%	3.72E+00	7.58E+00
MN-54	%	1.06E+00	1.76E+00
SR-90	%	3.23E-02	
ZN-65	%	1.49E+01	1.14E+01
B			
CE-141	%	1.51E-01	
CO-58	%		7.04E+00
CO-60	%	5.04E+01	6.76E+01
CR-51	%		1.01E+01
CS-134	%	5.94E+00	
CS-136	%	3.30E+00	
CS-137	%	3.19E+01	1.80E+00
FE-59	%		3.95E+00
MN-54	%	8.35E-01	5.05E+00
SR-90	%	1.67E-01	
ZN-65	%	7.13E+00	4.14E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	2.54E+02
BOTTOMS,ETC.	CI	7.26E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	4.87E+02
EQUIPMENT,ETC.	CI	3.09E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	0.
D. OTHER	M3	
	CI	

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

INSTALLATION NINE MILE POINT LOCATION 8 MI NE OSWEGO, NY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE NIAGARA MOHAWK POWER
TYPE BWR LICENSED POWER (MWT) 1850.0
DOCKET NO. 50-220 INITIAL CRITICALITY 09/05/69
COOLING WATER SOURCE LAKE ONTARIO

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	1.17E-04
FE-59	2.33E-05
CO-60	9.73E-03
KR-85M	2.49E+01
KR-88	3.34E+00
SR-89	1.13E-03
SR-90	4.32E-06
I-131	1.19E-02
I-133	8.43E-02
CS-134	1.62E-04
I-135	2.20E-01
XE-135	4.00E+02
XE-135M	1.58E+02
CS-137	2.04E-03
BA-LA-140	3.55E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.08E+02
TOTAL LIQUID RELEASE	

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

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

INSTALLATION= NINE MILE POINT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	5.00E+01	6.00E+01
CS-134	%	1.00E+01	7.00E+00
CS-137	%	3.50E+01	3.00E+01
MN-54	%	5.00E+00	3.00E+00
B			
CO-60	%	5.00E+01	
CS-134	%	1.00E+01	
CS-137	%	3.50E+01	
MN-54	%	5.00E+00	
C			
CO-60	%		9.30E+01
MN-54	%		7.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	7.37E+02
BOTTOMS,ETC.	CI	1.77E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	6.83E+01
EQUIPMENT,ETC.	CI	7.43E+00
C.IRRADIATED COMPONENTS, CONTROL	M3	8.50E+00
RODS,ETC.	CI	2.14E+04
D. OTHER	M3	
	CI	

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

INSTALLATION NORTH ANNA LOCATION 40 MI NW RICHMOND, VA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE VIRGINIA ELECTRIC &POWER
TYPE PWR LICENSED POWER (MWT) 2775.0
DOCKET NO. 50-338 INITIAL CRITICALITY 04/05/78
COOLING WATER SOURCE LAKE ANNA
UNIT NUMBER 2 LICENSEE VIRGINIA ELECTRIC &POWER
TYPE PWR LICENSED POWER (MWT) 2775.0
DOCKET NO. 50-339 INITIAL CRITICALITY 06/12/80
COOLING WATER SOURCE LAKE ANNA

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	6.58E-02
CO-58	2.27E-04
CO-60	5.29E-06
KR-85	2.39E+00
KR-85M	6.45E-01
SR-85	2.32E-08
KR-87	1.84E-02
KR-88	2.40E-01
CD-109	3.67E-05
I-131	1.20E-02
XE-131M	6.79E+00
I-133	1.42E-03
XE-133	3.39E+03
XE-133M	1.20E+01
CS-134	1.37E-06
I-135	1.31E-06
XE-135	8.37E+01
CS-137	3.29E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	4.32E-02
CR-51	3.93E-03
MN-54	6.78E-03
CO-57	8.45E-06
CO-58	5.53E-01
CO-60	2.18E-01
KR-85	2.51E-01
SR-85	1.37E-03
ZR-NB-95	5.56E-04
NB-97	1.40E-03
TC-99M	6.98E-05
SB-124	3.52E-02
I-131	2.91E-02
I-133	4.94E-03
XE-133	2.71E+00
XE-133M	1.32E-02
CS-134	5.00E-02
XE-135	1.85E-02
CS-137	9.11E-02
BA-LA-140	1.92E-04

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

INSTALLATION NORTH ANNA LOCATION 40 MI NW RICHMOND, VA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
TM-170	9.44E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.61E+01
TOTAL LIQUID RELEASE	4.03E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.67E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.59E+12

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

INSTALLATION= NORTH ANNA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE) B		JAN-JUNE	JULY-DEC
CO-58	%	3.44E+01	2.80E+01
CO-60	%	3.56E+01	3.60E+01
CS-134	%	7.37E+00	1.10E+01
CS-137	%	1.62E+01	1.80E+01
MN-54	%	6.61E+00	5.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	6.59E+01
BOTTOMS,ETC.	CI	1.36E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.98E+02
EQUIPMENT,ETC.	CI	1.75E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE DUKE POWER
TYPE PWR LICENSED POWER (MWT) 2568.0
DOCKET NO. 50-269 INITIAL CRITICALITY 04/19/73
COOLING WATER SOURCE KEOWEE LAKE
UNIT NUMBER 2 LICENSEE DUKE POWER
TYPE PWR LICENSED POWER (MWT) 2568.0
DOCKET NO. 50-270 INITIAL CRITICALITY 11/11/73
COOLING WATER SOURCE KEOWEE LAKE
UNIT NUMBER 3 LICENSEE DUKE POWER
TYPE PWR LICENSED POWER (MWT) 2568.0
DOCKET NO. 50-287 INITIAL CRITICALITY 09/05/74
COOLING WATER SOURCE KEOWEE LAKE

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
C-14	0.
P-32	0.
AR-41	2.15E+00
CR-51	5.87E-04
MN-54	1.29E-05
FE-55	0.
CO-58	1.77E-04
FE-59	1.67E-05
CO-60	2.27E-03
NI-63	0.
ZN-65	4.04E-05
KR-83M	0.
KR-85	5.32E+02
KR-85M	1.44E+01
RB-86	0.
KR-87	2.62E+00
KR-88	1.63E+00
KR-89	0.
SR-89	1.74E-08
KR-90	0.
SR-90	5.38E-09
Y-91	0.
NB-95	6.03E-06
ZR-95	7.62E-06
MO-99	4.62E-04
RU-103	1.74E-06
RU-106	6.74E-04
AG-110M	1.33E-04
CD-115M	0.
SN-123	0.
SB-124	0.
SB-125	7.09E-05
SN-126	0.
TE-127M	0.
TE-129M	0.
I-131	9.82E-02
XE-131M	2.01E+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 1980
AIRBORNE AND LIQUID EFFLUENTS

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
I-133	1.38E-02
XE-133	1.80E+04
XE-133M	1.35E+02
CS-134	6.50E-04
I-135	7.85E-03
XE-135	3.49E+02
XE-135M	1.03E+00
CS-136	2.73E-05
CS-137	7.87E-03
XE-137	0.
XE-138	0.
BA-140	2.19E-04
CE-141	0.
CE-144	3.79E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	0.
NA-24	3.92E-04
AR-41	1.82E-04
CR-51	1.45E-02
MN-54	6.17E-03
MN-56	0.
CO-57	4.27E-04
CO-58	3.05E-01
FE-59	5.93E-04
CO-60	8.11E-02
NI-65	1.20E-03
ZN-65	6.41E-04
KR-85	5.53E-01
KR-85M	1.38E-03
KR-87	0.
KR-88	4.88E-05
Y-88	0.
SR-89	1.98E-02
SR-90	2.57E-03
SR-91	2.90E-05
SR-92	5.47E-03
Y-92	0.
NB-95	2.83E-03
ZR-95	4.26E-04
NB-97	4.15E-02
ZR-97	2.60E-04
MO-99	1.75E-03
TC-99M	1.08E-03
RU-103	5.04E-04
RU-103M	0.
RU-106	7.41E-03
AG-108M	0.
CD-109	0.

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
AG-110M	1.73E-02
CD-115	2.11E-04
CD-115M	0.
IN-115M	0.
SB-122	0.
SN-123M	0.
SB-124	0.
SB-125	9.80E-03
SN-125	0.
I-131	1.62E-01
XE-131M	5.28E-02
I-132	1.60E-05
I-133	8.79E-03
XE-133	3.89E+00
XE-133M	3.91E-02
CE-134	0.
CS-134	2.73E-01
I-134	1.24E-02
CS-135M	0.
I-135	1.22E-03
XE-135	6.87E-02
CS-136	5.51E-03
CS-137	5.55E-01
CS-138	8.48E-03
BA-139	0.
BA-LA-140	6.16E-03
CE-141	0.
CE-144	2.98E-03
W-187	6.86E-04
NP-239	7.11E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.07E+01
TOTAL LIQUID RELEASE	7.12E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.29E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.09E+12

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

INSTALLATION= OCONEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
1		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG-110M	%	0.00E+00	
CO-57	%	0.00E+00	
CO-58	%	5.57E+01	
CO-60	%	6.70E+00	
CR-51	%	3.70E+01	
CS-134	%	0.00E+00	
CS-137	%	0.00E+00	
MN-54	%	5.00E-01	
NB-97	%	0.00E+00	
SR-92	%	0.00E+00	
B			
AG-110M	%	0.00E+00	
CO-57	%	0.00E+00	
CO-58	%	1.75E+01	
CO-60	%	1.97E+01	
CR-51	%	0.00E+00	
CS-134	%	2.39E+01	
CS-137	%	3.58E+01	
I-131	%	0.00E+00	
MN-54	%	1.80E+00	
NB-97	%	0.00E+00	
SR-92	%	0.00E+00	
TC-99M	%	0.00E+00	
C			
CO-58	%	1.75E+01	
CO-60	%	1.97E+01	
CS-134	%	2.39E+01	
CS-137	%	3.58E+01	
I-131	%	0.00E+00	
I-133	%	0.00E+00	
I-134	%	0.00E+00	
LA-140	%	0.00E+00	
MN-54	%	1.80E-01	
TC-99M	%	0.00E+00	
D			
CO-58	%	5.57E+01	
CO-60	%	6.70E+00	
CR-51	%	3.70E+01	
MN-54	%	5.00E-01	

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

INSTALLATION= OCONEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	7.48E+02
BOTTOMS,ETC.	CI	2.88E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	2.68E+02
EQUIPMENT,ETC.	CI	1.17E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	3.04E+02
RODS,ETC.	CI	1.94E+01
D. OTHER	M3	9.00E-01
	CI	1.35E-01

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 1980
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)
CR-51	2.94E-03
MN-54	1.28E-03
FE-59	3.17E-04
CO-60	8.91E-03
KR-85M	1.26E+03
KR-87	4.26E+03
KR-88	4.06E+03
KR-89	<1.00E+00
SR-89	1.10E-01
SR-90	2.10E-03
SR-91	1.41E+00
MO-99	2.02E-02
TC-99M	4.44E-01
I-131	9.45E-01
I-133	3.23E+00
XE-133	8.61E+02
XE-133M	N/D
CS-134	1.29E-04
I-135	4.79E+00
XE-135	6.98E+03
XE-135M	3.19E+03
CS-137	4.48E-03
XE-137	2.84E+02
XE-138	1.03E+04
BA-140	1.75E-01
LA-140	1.46E-01
CE-141	3.06E-04
CE-144	1.16E-03
NP-239	5.92E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	9.58E-03
MN-54	5.71E-02
CO-57	5.28E-05
CO-58	6.75E-05
FE-59	1.15E-03
CO-60	3.15E-01
ZN-65	3.80E-04
KR-85M	5.46E-05
SR-89	7.66E-04
SR-90	4.59E-04
NB-95	1.38E-03
NB-95M	5.99E-04
MO-99	4.59E-04

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
TC-99M	8.14E-04
RU-103	6.79E-04
RU-106	6.99E-04
SB-124	3.08E-01
SB-125	1.80E-04
I-131	3.01E-03
I-133	7.81E-03
XE-133	1.27E-01
XE-133M	2.25E-03
CS-134	1.95E-02
XE-135	4.01E-01
CS-137	5.64E-02
BA-140	1.09E-03
LA-140	5.04E-03
CE-141	4.73E-03
CE-143	2.77E-05
CE-144	5.63E-03
PA-233	3.20E-04
NP-239	6.03E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	9.35E+00
TOTAL LIQUID RELEASE	1.54E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.94E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.33E+12

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

INSTALLATION= OYSTER CREEK

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-60	%	3.16E+01	6.24E+01
CS-137	%	2.20E+00	7.30E+00
LA-140	%		2.30E+00
MN-54	%	6.80E+00	1.21E+01
SR-89	%	5.21E+01	6.20E+00
SR-90	%	3.10E+00	
B			
CE-144	%	1.80E+00	
CO-58	%		1.42E+01
CO-60	%	5.99E+01	5.80E+01
CS-137	%		1.30E+00
FE-59	%	3.30E+00	
MN-54	%	1.72E+01	8.50E+00
SB-124	%	1.38E+01	
SR-89	%		1.07E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	7.11E+02
BOTTOMS,ETC.	CI	1.16E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.32E+03
EQUIPMENT,ETC.	CI	1.62E+02
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE CONSUMERS POWER
TYPE PWR LICENSED POWER (MWT) 2530.0
DOCKET NO. 50-255 INITIAL CRITICALITY 05/24/71
COOLING WATER SOURCE LAKE MICHIGAN

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.39E-03
MN-54	2.74E-04
CO-57	1.77E-06
CO-58	1.50E-04
FE-59	1.68E-06
CO-60	1.14E-03
KR-85	5.24E+00
KR-85M	3.21E-02
KR-87	2.87E-02
KR-88	4.26E-02
I-131	2.51E-02
XE-131M	2.58E+00
I-132	4.63E-04
I-133	5.32E-03
XE-133	1.32E+02
XE-133M	4.80E-02
CS-134	2.35E-05
I-135	8.67E-03
XE-135	1.69E-01
XE-135M	7.75E-02
CS-137	2.36E-04
UNIDENTIFIED	6.63E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	1.84E-03
CO-58	8.99E-04
CO-60	3.43E-03
NB-95	9.35E-06
I-131	1.61E-04
XE-133	4.67E-04
CS-134	1.65E-04
CS-137	1.19E-03
UNIDENTIFIED	1.03E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.13E+00
TOTAL LIQUID RELEASE	7.47E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION) LITERS 9.21E+06
VOLUME OF DILUTION WATER USED DURING PERIOD LITERS 7.97E+10

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

INSTALLATION= PALISADES

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	1.85E+02
	CI	1.06E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	5.46E+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 PEACH BOTTOM LOCATION 17.9 MI S LANCASTER, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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) 3293.0
DOCKET NO. 50-278 INITIAL CRITICALITY 08/07/74
COOLING WATER SOURCE CONOWINGO POND/SUSQUEHANNA RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CO-58	8.25E-05
CO-60	8.70E-03
ZN-65	1.50E-02
KR-85M	1.66E+01
KR-87	3.72E+00
KR-88	6.13E+00
RB-88	3.57E-03
RB-89	7.46E-05
SR-89	1.79E-03
SR-90	<1.23E-04
SR-91	1.45E-03
Y-91M	3.18E-03
I-131	2.94E-02
I-133	5.69E-01
XE-133	1.10E+04
XE-133M	1.15E+02
CS-134	1.78E-03
I-135	5.43E-01
XE-135	1.60E+03
XE-135M	7.65E+01
CS-137	4.50E-03
CS-138	5.35E-02
XE-138	1.07E+02
BA-140	1.29E-03
LA-140	9.85E-04

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	5.78E-01
P-32	1.70E-02
CR-51	9.64E-02
MN-54	8.79E-03
FE-55	2.20E-02
MN-56	6.27E-04
CO-58	2.34E-02
CO-60	1.56E-01
NI-63	5.11E-03
ZN-65	3.06E-01
KR-85M	4.03E-04
SR-89	7.57E-03
SR-90	3.80E-04

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SR-91	7.11E-03
Y-91M	1.39E-02
SR-92	7.34E-04
NB-95	5.70E-04
ZR-95	4.16E-04
TC-99M	2.19E-02
CD-109	1.71E-03
SB-124	3.15E-05
I-131	6.39E-02
XE-131M	1.85E-02
I-132	7.84E-04
TE-132	2.38E-02
I-133	7.22E-02
XE-133	3.13E-01
XE-133M	2.22E-03
CS-134	5.68E-01
I-134	7.21E-04
I-135	2.36E-02
XE-135	5.21E-01
XE-135M	5.46E-02
CS-137	6.91E-01
BA-140	7.40E-03
LA-140	1.07E-02
NP-239	1.16E-02

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.29E+01
TOTAL LIQUID RELEASE	3.73E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.99E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.45E+11

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

INSTALLATION= PEACH BOTTOM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
319	TRUCK	BARNWELL S.C.
28	TRUCK	BEATTY NV.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.64E+03
	CI	6.69E+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

INSTALLATION PILGRIM LOCATION 25 MI SE BOSTON, MA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE BOSTON EDISON
TYPE BWR LICENSED POWER (MWT) 1998.0
DOCKET NO. 50-293 INITIAL CRITICALITY 06/16/72
COOLING WATER SOURCE CAPE COD BAY

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	1.79E-04
MN-54	1.93E-04
CO-58	2.36E-04
FE-59	5.22E-05
CO-60	1.12E-03
ZN-65	4.68E-06
KR-85	6.45E-02
KR-85M	4.54E+03
KR-87	1.37E+03
KR-88	5.72E+03
SR-89	3.75E-03
SR-90	3.69E-05
ZR-NB-95	5.46E-06
RU-106	1.92E-04
I-131	8.78E-02
I-133	1.65E-01
XE-133	1.32E+04
XE-133M	2.25E+02
CS-134	2.00E-05
I-135	1.86E-01
XE-135	9.27E+02
XE-135M	4.67E+00
CS-137	2.70E-04
XE-138	7.48E+01
BA-LA-140	1.11E-02
CE-141	6.65E-05
CE-144	5.34E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	4.56E-02
MN-54	7.25E-02
FE-55	5.61E-01
CO-58	3.57E-02
FE-59	1.16E-02
CO-60	7.55E-01
ZN-65	5.60E-03
SR-89	1.64E-02
SR-90	2.10E-03
ZR-NB-95	9.78E-04
MO99-TC99M	3.60E-03
I-131	5.23E-03
I-133	1.67E-03
XE-133	1.41E-03
CS-134	1.09E-01

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

INSTALLATION PILGRIM LOCATION 25 MI SE BOSTON, MA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
XE-135	5.15E-03
CS-137	5.31E-01
BA-LA-140	1.08E-02
CE-141	4.78E-03
CE-144	7.54E-04
UNIDENTIFIED	5.57E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.38E+01
TOTAL LIQUID RELEASE	4.00E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	5.32E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.82E+10

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

INSTALLATION= PILGRIM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
147	TRUCK	BARNWELL S.C.
5	TRUCK	BEATTY NV.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-LA-140	%	4.89E-01	2.70E-01
CE-141	%	8.20E-02	2.00E-02
CO-58	%	1.17E+00	3.61E+00
CO-60	%	3.37E+01	3.17E+01
CR-51	%	8.86E-01	6.18E+00
CS-134	%	4.69E+00	4.10E+00
CS-137	%	1.78E+01	1.85E+01
FE-55	%	3.40E+01	2.54E+01
FE-59	%	2.11E-01	8.60E-01
I-131	%	8.40E-02	2.20E-01
I-133	%		3.00E-02
I-135	%	4.00E-03	
MN-54	%	3.62E+00	4.42E+00
RU-103	%	2.90E-02	3.70E-01
SR-89	%	2.96E+00	2.42E+00
SR-90	%	4.80E-02	1.48E+00
UNIDENTIFIED	%	3.00E-03	3.00E-02
ZN-65	%	1.57E-01	4.20E-01
ZR-NB-95	%	5.00E-03	6.00E-02
B			
CO-58	%	3.87E+01	4.60E+01
CO-60	%	4.45E+01	3.64E+01
CR-51	%	1.84E-01	
CS-137	%	2.08E-01	1.50E-01
FE-55	%	1.42E+00	1.69E+00
FE-59	%	2.43E+00	2.80E+00
MN-54	%	5.84E+00	5.65E+00
RU-103	%	2.11E-01	
UNIDENTIFIED	%	3.49E-01	
ZN-65	%	6.15E+00	7.80E+00
ZR-NB-95	%	4.20E-02	5.00E-02

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	3.47E+02
	CI	1.56E+03
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	2.59E+03
	CI	4.10E+01
C.IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	
	CI	

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

INSTALLATION= PILGRIM

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

D. OTHER	M3	
	CI	

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 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE WISCONSIN ELECTRIC POWER COMPANY
TYPE PWR LICENSED POWER (MWT) 1518.5
DOCKET NO. 50-266 INITIAL CRITICALITY 11/02/70
COOLING WATER SOURCE LAKE MICHIGAN
UNIT NUMBER 2 LICENSEE WISCONSIN ELECTRIC POWER COMPANY
TYPE PWR LICENSED POWER (MWT) 1518.5
DOCKET NO. 50-301 INITIAL CRITICALITY 05/30/72
COOLING WATER SOURCE LAKE MICHIGAN

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	6.49E-01
NA-24	1.74E-07
AR-41	3.30E+01
CR-51	5.48E-07
MN-54	5.03E-07
CO-57	1.19E-06
CO-58	2.93E-05
CO-60	1.06E-04
ZN-65	1.24E-08
KR-85	1.07E+02
KR-85M	3.86E+01
KR-87	1.72E+01
KR-88	5.70E+01
RB-88	1.92E-02
SR-89	N/D
SR-90	N/D
NB-95	3.24E-07
ZR-95	7.42E-08
RU-103	3.12E-07
RU-106	3.01E-08
CD-109	9.31E-06
SN-113	3.90E-08
SB-125	5.36E-07
I-131	9.98E-04
I-132	3.65E-03
TE-132	1.54E-07
BA-133	3.31E-10
I-133	5.11E-04
XE-133	1.76E+02
XE-133M	3.83E+00
CS-134	2.28E-06
I-134	2.18E-07
I-135	4.53E-07
XE-135	1.75E+02
XE-135M	1.29E+01
CS-137	1.07E-04
CS-138	6.18E-03
XE-138	2.07E+01
CE-139	2.11E-09
BA-140	9.88E-07
CE-141	1.84E-05

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
F-18	1.54E-02
NA-24	2.73E-01
CR-51	3.63E-03
MN-54	3.27E-03
CO-57	2.70E-04
CO-58	1.08E-02
CO-60	1.35E-02
KR-85M	1.29E-05
KR-87	1.55E-04
RB-88	7.99E-02
SR-89	2.53E-04
SR-90	4.00E-03
NB-95	9.38E-04
ZR-95	2.28E-04
MO-99	1.11E-05
RU-103	2.29E-05
RU-106	8.97E-04
AG-110M	5.64E-04
SN-113	2.98E-06
SB-125	2.32E-04
I-131	7.11E-02
XE-131M	2.38E-05
I-132	1.32E-02
TE-132	3.54E-06
I-133	7.63E-02
XE-133	9.30E-02
XE-133M	8.94E-04
CS-134	8.53E-03
I-134	1.45E-03
I-135	2.46E-02
XE-135	5.20E-03
CS-137	2.62E-02
CS-138	9.98E-03
XE-138	1.76E-03
BA-140	1.80E-04
LA-140	3.99E-04
CE-141	4.91E-05
CE-144	1.88E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.53E+02
TOTAL LIQUID RELEASE	7.61E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.14E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.14E+11

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

INSTALLATION= POINT BEACH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
29	TRUCK	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	4.49E+02
	CI	9.35E+02
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

INSTALLATION PRAIRIE ISLAND LOCATION 26 MI SE MINNEAPOLIS, MN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE NORTHERN STATES POWER
TYPE PWR LICENSED POWER (MWT) 1650.0
DOCKET NO. 50-282 INITIAL CRITICALITY 12/01/73
COOLING WATER SOURCE MISSISSIPPI RIVER
UNIT NUMBER 2 LICENSEE NORTHERN STATES POWER
TYPE PWR LICENSED POWER (MWT) 1650.0
DOCKET NO. 50-306 INITIAL CRITICALITY 12/17/74
COOLING WATER SOURCE MISSISSIPPI RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	1.02E+01
CO-58	4.10E-05
CO-60	2.83E-05
KR-85	6.89E-01
KR-85M	7.90E-01
KR-87	1.83E+00
KR-88	1.78E-02
RB-88	4.80E-03
Y-88	2.89E-08
ZR-97	1.65E-07
I-131	1.76E-03
XE-131M	8.81E-03
I-133	4.20E-06
XE-133	2.39E+02
XE-133M	2.28E+00
XE-135	5.04E+00

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	6.53E-04
CO-58	2.61E-03
CO-60	3.30E-03
KR-87	4.69E-06
SR-89	3.58E-06
ZR-NB-95	2.50E-05
AG-110M	2.98E-05
SB-124	2.78E-05
I-131	2.04E-04
XE-131M	1.04E-03
XE-133	6.88E-02
XE-133M	1.34E-04
CS-134	1.53E-05
XE-135	3.71E-04
CS-137	7.48E-05
CE-139	1.54E-05
CE-144	1.70E-04

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 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	8.63E+01		
TOTAL LIQUID RELEASE	5.43E+02		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	2.04E+08
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	1.04E+12

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

INSTALLATION= PRAIRIE ISLAND

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG110M-CS134-ZR95	%		3.40E+00
CO-58	%		1.64E+01
CO-60	%		6.50E+01
CS-137	%		1.53E+01
B			
CO-58	%	1.08E+01	1.51E+01
CO-60	%	6.81E+01	5.66E+01
CS-134	%	1.20E+00	
CS-134,MN-54,ETC	%		1.34E+01
CS-137	%	3.90E+00	1.49E+01
MN-54	%	6.20E+00	
NB-95	%	4.70E+00	
ZR-95	%	5.10E+00	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.39E+01
	CI	1.50E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	5.01E+02
	CI	4.76E+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 QUAD-CITIES LOCATION 20 MI NE MOLINE, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE COMMONWEALTH EDISON AND IOWA-ILLINOIS GAS & ELECTRIC
TYPE BWR LICENSED POWER (MWT) 2511.0
DOCKET NO. 50-254 INITIAL CRITICALITY 10/18/71
COOLING WATER SOURCE MISSISSIPPI RIVER
UNIT NUMBER 2 LICENSEE COMMONWEALTH EDISON AND IOWA-ILLINOIS GAS & ELECTRIC
TYPE BWR LICENSED POWER (MWT) 2511.0
DOCKET NO. 50-265 INITIAL CRITICALITY 04/26/72
COOLING WATER SOURCE MISSISSIPPI RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	1.10E-04
MN-54	4.14E-04
CO-58	1.67E-04
CO-60	2.97E-02
ZN-65	1.10E-04
KR-85M	2.23E+03
KR-87	7.08E+02
KR-88	2.70E+03
SR-89	7.52E-02
SR-90	4.14E-04
NB-95	1.57E-04
ZR-95	4.78E-06
RU-103	3.55E-05
AG-110M	2.36E-05
I-131	3.31E-01
I-133	1.50E+00
XE-133	4.41E+03
CS-134	1.49E-03
I-135	2.69E+00
XE-135	4.64E+03
XE-135M	2.16E+03
CS-137	5.35E-03
XE-138	4.56E+03
BA-140	1.61E-01
LA-140	1.24E-01
CE-141	1.35E-03
CE-144	8.44E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	1.04E-01
CO-58	3.63E-02
CO-60	2.80E+00
ZN-65	3.15E-02
SR-89	1.21E-02
SR-90	7.12E-03
SR-91	3.41E-03
Y-92	9.30E-03
ZR-95	9.50E-04
TC-99M	3.17E-04
AG-110M	7.47E-04

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

INSTALLATION QUAD-CITIES LOCATION 20 MI NE MOLINE, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
I-131	5.55E-02
I-133	1.99E-02
XE-133	8.38E-02
CS-134	2.49E+00
I-135	3.66E-03
XE-135	7.15E-02
CS-137	6.81E+00
BA-140	2.80E-01
LA-140	1.93E-01
CE-141	2.09E-03
NP-239	2.99E-02
UNIDENTIFIED	2.94E-01

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	4.40E+01
TOTAL LIQUID RELEASE	1.03E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.01E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.03E+11

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

INSTALLATION= QUAD-CITIES

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
287	TRUCK	BARNWELL S.C.
6	TRUCK	BEATTY NV.
32	TRUCK	RICHLAND WA.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	1.67E+03
	CI	4.07E+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

INSTALLATION RANCHO SECO LOCATION 25 MI SE SACRAMENTO, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
MN54 AND NB95	7.94E-04
AR-41	N/D
CO-58	2.24E-03
CO-60	2.15E-04
KR-85	3.78E+00
KR-85M	N/D
KR-87	1.90E-01
KR-88	N/D
SR-89	N/D
SR-90	N/D
I-131	6.91E-03
XE-131M	7.16E-01
I-133	7.70E-04
XE-133	1.55E+03
XE-133M	5.02E-01
CS-134	1.81E-04
I-135	N/D
XE-135	1.99E+01
XE-135M	N/D
CS-137	2.09E-04
XE-138	N/D
BA-LA-140	N/D
UNIDENTIFIED	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	1.47E-02
CR-51	N/D
MN-54	N/D
CO-58	N/D
FE-59	N/D
CO-60	N/D
ZN-65	N/D
SR-89	N/D
SR-90	N/D
ZR-NB-95	N/D
MO-99	N/D
TC-99M	N/D
I-131	N/D
XE-133	N/D
CS-134	1.34E-03
XE-135	N/D
CS-137	2.43E-03
BA-LA-140	N/D
CE-141	N/D

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

INSTALLATION RANCHO SECO LOCATION 25 MI SE SACRAMENTO, CA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
UNIDENTIFIED	N/D

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.77E+02
TOTAL LIQUID RELEASE	1.47E-02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.76E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.58E+08

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

INSTALLATION= RANCHO SECO

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
7	TRUCK	BEATTY NV.
23	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-DEC
A		
CO-58	%	3.00E+00
CO-60	%	3.00E+00
CS-134	%	9.00E+00
CS-137	%	2.00E+01
H-3	%	6.50E+01
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	M3	2.82E+02
BOTTOMS,ETC.	CI	5.28E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.03E+02
EQUIPMENT,ETC.	CI	2.68E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	0.
D. OTHER	M3	7.50E+01
	CI	3.25E+01

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

INSTALLATION H.B.ROBINSON LOCATION 4.5 MI WNW HARTSVILLE, SC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2 LICENSEE CAROLINA POWER &LIGHT
TYPE PWR LICENSED POWER (MWT) 2300.0
DOCKET NO. 50-261 INITIAL CRITICALITY 09/20/70
COOLING WATER SOURCE ROBINSON INPOUNDMENT

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	0.
NA-24	0.
AR-41	9.42E+01
CR-51	4.54E-05
MN-54	0.
CO-57	3.37E-08
CO-58	4.73E-04
CO-60	5.51E-04
KR-85M	9.76E-01
TC-99M	0.
CD-109	3.02E-05
I-131	1.58E-05
XE-131M	3.14E-03
I-133	9.12E-06
XE-133	4.31E+02
CS-134	0.
I-135	0.
XE-135	5.56E+01
XE-135M	1.93E-03
CS-137	8.07E-06
CE-139	8.17E-06
CE-141	0.
CE-144	0.
HG-203	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
BE-7	0.
NA-22	1.26E-06
AR-41	7.56E-04
CR-51	4.49E-04
MN-54	1.21E-02
CO-57	6.17E-05
CO-58	1.64E-01
CO-60	8.48E-02
SR-89	8.46E-03
SR-90	4.85E-03
NB-97	2.18E-05
CD-109	9.29E-03
AG-110M	1.03E-04
SN-113	1.26E-05
SB-124	2.90E-02
SB-125	0.
I-131	3.98E-03
XE-133	2.88E-03

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

INSTALLATION H.B.ROBINSON LOCATION 4.5 MI WNW HARTSVILLE, SC

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
CS-134	4.16E-03
XE-135	6.23E-03
XE-135M	1.35E-04
CS-136	4.07E-05
CS-137	3.69E-02
CE-139	2.01E-04
BA-140	5.34E-05
CE-141	2.72E-04
CE-144	1.05E-04
W-187	2.18E-05
HG-203	1.24E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	6.97E+00
TOTAL LIQUID RELEASE	1.89E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	7.60E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	8.24E+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 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		
5	RAIL	SOUTHPORT N.C.

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO57-SB124-NB95-CS134-ZN65-CR51	%	1.00E+00	
CO57-SB124-NB95-FE59-CS134-ZR97	%		1.00E+00
CO-58	%	4.30E+01	4.24E+01
CO-60	%	4.20E+01	4.95E+01
CS-137	%	9.00E+00	2.80E+00
MN-54	%	5.00E+00	4.30E+00
B			
CO57-SB124-NB95-CS134-ZN65-CR51-CS137	%	1.00E+00	
CO57-SB124-NB95-FE59-CS134-ZR97	%		1.00E+00
CO-58	%	2.90E+01	1.80E+01
CO-60	%	6.70E+01	6.87E+01
CR-51	%		8.30E+00
CS-137	%		2.70E+00
MN-54	%	3.00E+00	1.30E+00
D			
CO-58	%		7.00E+00
CO-60	%		8.60E+01
CS-137	%		7.00E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	4.14E+02
	CI	2.45E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	5.76E+02
	CI	6.24E+01
C.IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	0.
	CI	0.
D. OTHER	M3	3.00E+03
	CI	2.47E-02

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

INSTALLATION SALEM 1 LOCATION 20 MI S WILMINGTON, DL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE PSE&G
TYPE PWR LICENSED POWER (MWT) 3338.0
DOCKET NO. 50-272 INITIAL CRITICALITY 12/11/76
COOLING WATER SOURCE DELAWARE RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	6.11E-03
AR-41	6.15E-02
CR-51	1.21E-04
MN-54	1.15E-01
CO-58	1.17E-03
FE-59	3.00E-05
CO-60	8.69E-04
KR-85	1.72E-01
KR-85M	8.77E-01
KR-87	1.72E-01
KR-88	1.00E+00
RB-88	1.27E+00
Y-88	6.65E-02
NB-95	4.50E-05
ZR-95	2.13E-05
SN-117M	1.84E-02
I-131	3.91E-03
I-133	8.97E-04
XE-133	6.32E+01
XE-133M	5.08E-01
CS-134	1.41E-05
I-135	2.79E-04
XE-135	6.66E-01
XE-135M	6.69E-01
CS-137	1.99E-05
CE-139	9.38E-03

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	7.26E-03
AR-41	5.58E-05
CR-51	8.38E-02
MN-54	7.89E-02
CO-58	8.44E-01
FE-59	4.80E-02
CO-60	7.80E-01
KR-88	4.60E-04
Y-91	2.98E-02
NB-95	5.30E-03
ZR-95	4.63E-03
SB-124	1.05E-02
SB-125	1.40E-04
I-131	8.71E-02
I-133	4.56E-03
XE-133	6.73E+00

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

INSTALLATION SALEM 1 LOCATION 20 MI S WILMINGTON, DL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
XE-133M	3.47E-02
CS-134	2.91E-01
XE-135	7.72E-02
CS-136	1.16E-03
CS-137	3.75E-01
CE-139	5.09E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	7.02E-03
TOTAL LIQUID RELEASE	0.

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.97E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	4.73E+10

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

INSTALLATION SALEM 2 LOCATION 20 M S WILMINGTON, DL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 2 LICENSEE PSE&G
TYPE PWR LICENSED POWER (MWT) 3338.0
DOCKET NO. 50-311 INITIAL CRITICALITY 08/02/80
COOLING WATER SOURCE DELAWARE RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
I-131	5.44E-05
XE-133	7.74E+00

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	1.38E-02
MN-54	1.34E-02
CO-58	2.66E-01
FE-59	5.05E-03
CO-60	6.77E-02
NB-95	2.35E-03
SN-113	1.90E-03
SB-124	5.03E-03
SB-125	4.08E-03
XE-133	2.42E-04
CS-134	4.22E-03
CS-137	4.93E-03

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	
TOTAL LIQUID RELEASE	

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.34E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.17E+10

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

INSTALLATION= SALEM 1 & SALEM 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	9.00E+00	8.04E+01
CO-60	%	7.40E+01	1.63E+01
MN-54	%	1.70E+01	3.30E+00
B			
CO-58	%	9.00E+00	5.04E+01
CO-60	%	7.40E+01	1.63E+01
MN-54	%	1.70E+01	3.30E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	3.25E+02
BOTTOMS,ETC.	CI	3.87E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	6.87E+02
EQUIPMENT,ETC.	CI	7.16E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	0.
RODS,ETC.	CI	0.
D. OTHER	M3	0.
	CI	0.

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 1980
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 GAS & EL*
LICENSED POWER (MWT) 1347.0
INITIAL CRITICALITY 06/14/67

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	4.50E-01
CO-58	6.49E-06
CO-60	2.95E-05
KR-85	4.24E+00
KR-85M	3.31E+00
KR-87	5.44E-01
KR-88	2.63E+00
RU-103	1.94E-01
I-131	2.33E-04
XE-131M	1.66E+00
I-132	1.95E-05
XE-133	9.24E+02
XE-133M	1.61E+01
XE-135	9.17E+01
XE-135M	1.30E+00
CS-137	6.47E-01
XE-138	7.30E-01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
P-32	4.31E-03
CR-51	1.12E-01
MN-54	1.33E-01
FE-55	7.85E-01
CO-57	5.63E-03
CO-58	3.93E+00
FE-59	4.00E-02
CO-60	1.67E+00
SR-89	1.51E-03
SR-90	5.86E-03
NB-95	3.80E-02
ZR-95	1.89E-02
TC-99M	2.02E+00
RU-103	6.20E-02
SB-124	6.37E-01
I-131	1.16E-01
XE-133	2.87E+00
XE-133M	2.87E-02
CS-134	1.67E+00
CS-137	1.25E+00
CE-141	4.19E-03
CE-144	1.58E-02
PU-238	2.86E-05
NP-239	5.18E-02
PU-239	8.00E-06

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 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	3.69E+01		
TOTAL LIQUID RELEASE	1.03E+03		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	1.31E+07
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	2.59E+11

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

INSTALLATION= SAN ONOFRE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

SOLID WASTE DISPOSITION

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	7.12E+02
	CI	4.35E+02
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

INSTALLATION SEQUOYAH LOCATION DAISY, TN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1
TYPE PWR
DOCKET NO. 50-327
COOLING WATER SOURCE TENNESSEE RIVER

LICENSEE TENNESSEE VALLEY AUTHORITY
LICENSED POWER (MWT) 2815.0
INITIAL CRITICALITY 07/05/80

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.96E-04
MN-54	3.16E-04
CO-58	4.40E-04
CO-60	2.45E-05
KR-85	0.
KR-85M	0.
KR-87	0.
KR-88	0.
SR-89	1.09E-03
SR-90	3.34E-04
TC-99M	7.60E-05
I-131	3.96E-05
XE-131M	4.58E+02
I-133	5.54E-05
XE-133	2.43E+03
XE-133M	7.69E-07
CS-134	0.
I-135	0.
XE-135	1.23E+02
XE-135M	0.
CS-137	0.
XE-138	0.
BA-LA-140	0.
CE-144	5.35E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
H-3	2.86E-01
NA-24	1.44E-01
P-32	2.30E-01
AR-41	1.61E-04
CR-51	1.74E-02
MN-54	3.86E-02
FE-55	1.69E-02
CO-57	1.03E-06
CO-58	1.03E-01
FE-59	8.65E-04
CO-60	7.09E-03
KR-85	9.75E-03
SR-89	2.92E-02
SR-90	8.93E-03
NB-95	1.76E-04
ZR-95	1.76E-04
TC-99M	1.44E-03
SB-124	3.23E-04

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

INSTALLATION SEQUOYAH LOCATION DAISY, TN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
I-131	6.40E-03
XE-131M	3.01E-02
I-133	5.48E-04
XE-133	1.98E+00
XE-135	3.20E-04
CS-137	1.71E-05
CE-144	5.27E-04
W-187	3.58E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	0.
TOTAL LIQUID RELEASE	3.23E-01

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

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

INSTALLATION= SEQUOYAH

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	
	CI	
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

INSTALLATION ST. LUCIE LOCATION 8 MI S FT. PIERCE, FL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE FLORIDA POWER &LIGHT
TYPE PWR LICENSED POWER (MWT) 2560.0
DOCKET NO. 50-335 INITIAL CRITICALITY 04/22/76
COOLING WATER SOURCE ATLANTIC OCEAN

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	4.60E+00
MN-54	5.48E-07
CO-58	1.39E-05
CO-60	4.26E-05
KR-85	1.63E+01
KR-85M	5.99E+01
KR-87	1.44E+01
KR-88	8.82E+01
RB-88	8.42E-02
I-131	3.23E-02
XE-131M	1.73E+02
I-133	1.87E-01
XE-133	1.46E+04
XE-133M	1.87E+02
XE-135	5.15E+02
XE-135M	2.53E+00
CS-137	9.23E-06
XE-138	1.66E+01
UNIDENTIFIED	0.

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.28E-03
AR-41	2.67E-04
CR-51	1.83E-01
MN-54	5.39E-02
MN-56	5.35E-03
CO-57	1.96E-03
CO-58	3.42E-01
FE-59	3.50E-02
CO-60	1.06E+00
NI-65	1.72E-03
ZN-65	5.29E-03
BR-82	1.07E-03
KR-85	6.55E-01
SR-89	2.98E-04
SR-90	3.87E-05
ZR-95	1.12E-01
ZR-97	8.04E-03
MO-99	4.07E-04
RU-103	1.50E-04
AG-110M	9.18E-03
SN-113	3.46E-03
SB-122	1.94E-02
SB-124	1.26E-01

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

INSTALLATION ST. LUCIE LOCATION 8 MI S FT. PIERCE, FL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SB-125	4.96E-02
I-131	2.09E-02
XE-131M	1.24E-02
I-132	1.28E-04
I-133	1.43E-03
XE-133	2.51E-01
XE-133M	4.85E-04
CS-134	1.40E-01
I-134	9.50E-04
I-135	9.90E-03
XE-135	8.07E-04
CS-136	1.44E-03
CS-137	1.43E-01
BA-140	2.09E-03
CE-141	1.22E-04
CE-144	1.53E-02
W-187	6.33E-03
NP-239	1.93E-03
UNIDENTIFIED	0.

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.73E+02
TOTAL LIQUID RELEASE	2.72E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.94E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.92E+10

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

INSTALLATION= ST. LUCIE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	1.00E+01	3.00E+01
CO-60	%		5.20E+01
CS-134	%	2.90E+01	
CS-137	%	6.10E+01	1.80E+01
B			
CO-58	%	2.70E+01	1.10E+01
CO-60	%	5.10E+01	6.30E+01
CS-137	%	2.20E+01	2.60E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.78E+01
	CI	7.39E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	2.84E+02
	CI	7.47E+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 SURRY LOCATION 19 MI NW NEWPORT NEWS, VA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE VIRGINIA ELECTRIC &POWER
TYPE PWR LICENSED POWER (MWT) 2441.0
DOCKET NO. 50-280 INITIAL CRITICALITY 07/01/72
COOLING WATER SOURCE JAMES RIVER
UNIT NUMBER 2 LICENSEE VIRGINIA ELECTRIC &POWER
TYPE PWR LICENSED POWER (MWT) 2441.0
DOCKET NO. 50-281 INITIAL CRITICALITY 05/07/73
COOLING WATER SOURCE JAMES RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	2.82E+00
CR-51	2.98E-04
MN-54	1.71E-05
CO-58	6.50E-04
FE-59	2.23E-07
CO-60	1.05E-03
ZN-65	5.74E-06
KR-85	4.12E+01
KR-85M	2.85E+00
KR-87	8.15E+00
KR-88	2.60E+00
RB-88	1.12E+00
NB-95	1.04E-05
ZR-95	1.80E-05
RU-103	7.80E-06
I-131	1.62E-02
I-132	2.33E-04
I-133	1.76E-03
XE-133	5.61E+03
XE-133M	4.33E+01
CS-134	3.88E-05
I-134	0.
I-135	6.66E-06
XE-135	2.64E+02
CS-137	2.58E-04
CS-138	9.27E-01

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
C-14	2.71E-03
NA-24	8.88E-01
AR-41	2.33E-04
CR-51	9.62E-02
MN-54	3.11E-02
CO-57	2.39E-03
CO-58	1.21E+00
FE-59	2.96E-04
CO-60	1.40E+00
KR-85	0.
RB-88	1.48E-02
SR-89	2.70E-03

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
SR-90	1.42E-04
NB-95	7.34E-03
SB-124	1.24E-02
SB-125	3.59E-02
I-131	6.96E-01
I-132	2.07E-01
I-133	3.66E-01
XE-133	3.65E+00
XE-133M	4.47E-02
CS-134	7.32E-01
I-134	2.19E-01
I-135	3.36E-01
XE-135	7.35E-01
CS-136	3.19E-02
CS-137	1.31E+00
BA-LA-140	2.39E-03
CE-141	2.78E-05
CE-144	9.27E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.83E+01
TOTAL LIQUID RELEASE	3.85E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	4.13E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.57E+12

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

INSTALLATION= SURRY

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
110		BARNWELL S.C.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	2.01E+02
	CI	7.06E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	1.81E+03
	CI	6.36E+02
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 THREE MILE ISLAND 1 LOCATION 10 MI SE HARRISBURG, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
CO-60	2.76E-05
KR-85	4.64E-03
KR-85M	N/D
KR-87	N/D
KR-88	N/D
SR-89	N/D
SR-90	1.26E-06
RU-103	1.49E-06
AG-110M	4.32E-06
I-131	N/D
I-133	1.81E-06
XE-133	N/D
CS-134	3.18E-05
I-135	1.66E-05
XE-135	N/D
XE-135M	N/D
CS-137	2.66E-04
XE-138	N/D
CE-144	1.14E-05
UNIDENTIFIED	5.98E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
P-32	2.38E-04
CR-51	N/D
MN-54	8.30E-04
CO-58	6.90E-04
FE-59	N/D
CO-60	1.59E-02
ZN-65	N/D
SR-89	9.77E-03
SR-90	1.89E-02
ZR-NB-95	N/D
MO-99	N/D
TC-99M	N/D
AG-110M	3.03E-02
SB-125	1.88E-03
I-131	1.03E-03
XE-133	N/D
CS-134	2.36E-02
XE-135	N/D
CS-137	8.37E-02
BA-LA-140	N/D
CE-141	N/D

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 1980
AIRBORNE AND LIQUID EFFLUENTS

TRITIUM	(CI)		
TOTAL AIRBORNE RELEASE	1.81E+01		
TOTAL LIQUID RELEASE	3.26E+01		
VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)		LITERS	3.11E+06
VOLUME OF DILUTION WATER USED DURING PERIOD		LITERS	6.90E+10

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

INSTALLATION= THREE MILE ISLAND 1

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
7	TRACTOR TRAILER	BARNWELL S.C.
3	TRACTOR TRAILER	RICHLAND WA.
7	TRUCK	BARNWELL S.C.
1	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	4.00E+00	
CO-60	%	5.40E+00	
CS-134	%	2.43E+01	
CS-137	%	6.63E+01	
B			
AG-110M	%	4.50E+00	
BA-137M	%		3.10E+01
CO-60	%	5.50E+00	7.00E+00
CS-134	%	3.22E+01	1.90E+01
CS-137	%	5.59E+01	3.30E+01

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.77E+01
BOTTOMS,ETC.	CI	2.28E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	4.44E+02
EQUIPMENT,ETC.	CI	1.91E+00
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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

INSTALLATION THREE MILE ISLAND 2 LOCATION 10 MI SE HARRISBURG, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
CO-60	6.62E-07
KR-85	4.19E+04
KR-85M	N/D
KR-87	N/D
KR-88	N/D
SR-89	2.68E-06
SR-90	2.09E-05
I-131	N/D
I-133	N/D
XE-133	N/D
CS-134	N/D
I-135	N/D
XE-135	N/D
XE-135M	N/D
CS-137	4.90E-04
XE-138	N/D
BA-LA-140	N/D
UNIDENTIFIED	1.04E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
CR-51	N/D
MN-54	N/D
CO-58	N/D
FE-59	N/D
CO-60	N/D
ZN-65	N/D
ZR-NB-95	N/D
MO-99	N/D
TC-99M	N/D
I-131	N/D
XE-133	N/D
CS-134	N/D
XE-135	N/D
CS-137	1.18E-05
BA-LA-140	N/D
CE-141	N/D
UNIDENTIFIED	3.00E-06

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	3.94E+02
TOTAL LIQUID RELEASE	6.10E-04

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

INSTALLATION THREE MILE ISLAND 2 LOCATION 10 MI SE HARRISBURG, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	3.20E+04
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.82E+10

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

INSTALLATION= THREE MILE ISLAND 2

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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	TRACTOR TRAILER	RICHLAND WA.
29	TRUCK	RICHLAND WA.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
CO-58	%	3.56E+00	2.00E+00
CO-60	%		7.00E+00
CS-134	%	1.81E+01	1.60E+01
CS-137	%	6.93E+01	6.60E+01
SR-89	%	5.32E+00	
B			
CS-134	%	1.20E+01	1.20E+01
CS-137	%	8.00E+01	8.00E+01
SR-89	%	2.00E+00	2.00E+00
SR-90	%	6.00E+00	6.00E+00
D			
CS-134	%	1.06E+01	
CS-137	%	4.30E+01	
SR-89	%	1.54E+01	
SR-90	%	3.10E+01	

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.73E+02
BOTTOMS,ETC.	CI	8.93E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	5.74E+02
EQUIPMENT,ETC.	CI	2.70E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	1.95E+01
	CI	9.91E+00

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

INSTALLATION TMI 2/EPICOR LOCATION 10 MI SE HARRISBURG, PA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
KR-85	2.16E+00
KR-85M	N/D
KR-87	N/D
KR-88	N/D
SR-89	1.97E-08
SR-90	3.19E-07
I-131	N/D
I-133	N/D
XE-133	N/D
CS-134	N/D
I-135	N/D
XE-135	N/D
XE-135M	N/D
CS-137	3.74E-06
XE-138	N/D
BA-LA-140	N/D
UNIDENTIFIED	2.73E-06

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	5.68E+02
TOTAL LIQUID RELEASE	

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

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

INSTALLATION TROJAN LOCATION 35 MI NW PORTLAND, OR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
AR-41	2.16E-01
CR-51	6.51E-07
MN-54	2.02E-05
CO-58	5.55E-05
CO-60	1.75E-04
KR-85	1.68E+00
KR-85M	8.65E-01
KR-87	1.56E+00
KR-88	1.93E+00
KR-89	1.97E-02
SR-89	4.17E-08
SR-90	4.17E-08
NB-95	4.86E-06
RU-103	6.25E-06
AG-110M	6.08E-07
SN-113	1.01E-08
I-131	1.14E-02
XE-131M	3.10E+00
I-132	8.21E-06
I-133	1.65E-03
XE-133	3.26E+02
XE-133M	8.39E-01
CS-134	2.50E-05
I-134	2.76E-06
I-135	1.20E-03
XE-135	2.91E+01
XE-135M	1.21E+01
CS-137	2.33E-04
XE-137	2.54E+00
XE-138	3.91E+00
BA-140	<1.36E-03
LA-140	<3.50E-04
UNIDENTIFIED	8.07E+00

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	2.25E-03
NA-24	3.51E-03
CR-51	5.04E-02
MN-54	2.67E-02
CO-57	6.01E-04
CO-58	2.06E-01
FE-59	2.79E-03
CO-60	1.61E-01
KR-85M	6.12E-04

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

INSTALLATION TROJAN LOCATION 35 MI NW PORTLAND, OR

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
RB-88	7.15E-05
SR-89	8.57E-03
SR-90	5.18E-03
NB-95	3.01E-02
ZR-95	1.56E-02
MO-99	5.36E-04
TC-99M	5.59E-04
RU-103	4.68E-03
AG-110M	1.81E-02
SN-113	4.71E-04
SB-124	1.42E-02
SB-125	2.59E-02
I-131	1.81E-02
I-132	1.63E-02
TE-132	1.67E-04
I-133	2.50E-02
XE-133	2.07E-01
XE-133M	1.61E-03
CS-134	1.60E-02
I-134	1.53E-02
I-135	2.78E-02
XE-135	2.34E-01
XE-135M	4.81E-01
CS-136	1.15E-04
CS-137	2.96E-02
CS-138	8.24E-03
BA-140	6.85E-03
LA-140	1.86E-03
CE-141	2.37E-03
CE-144	2.08E-02
NP-239	6.15E-04
UNIDENTIFIED	2.52E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.49E+01
TOTAL LIQUID RELEASE	1.24E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	1.83E+07
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	3.52E+10

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

INSTALLATION= TROJAN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

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

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
AG-110M	%	1.14E+00	
BA-140	%	1.38E-03	7.84E-03
CE-141	%	2.09E-01	1.41E-01
CE-144	%	1.95E+00	1.66E+00
CO-57	%	1.57E-01	1.41E-01
CO-58	%	1.96E+01	6.19E+01
CO-60	%	4.21E+01	1.97E+01
CR-51	%	3.90E-01	7.50E+00
CS-134	%	5.01E+00	8.39E-01
CS-136	%	5.45E-04	
CS-137	%	1.05E+01	1.75E+00
FE-59	%	1.27E-01	1.41E-01
I-131	%	2.17E-01	1.49E-01
I-133	%	4.06E-08	
LA-140	%	3.07E-05	
MN-54	%	5.61E+00	2.63E+00
MO-99	%	1.91E-06	
NB-95	%	3.45E+00	1.67E+00
RU-103	%	1.85E-01	2.35E-02
SB-122	%	7.65E-02	
SB-124	%	4.16E+00	5.18E-01
SB-125	%		1.57E-02
SN-113	%	3.34E-02	1.41E-01
ZR-95	%	1.48E+00	1.08E+00
B			
CE-141	%	4.19E-01	8.88E-02
CE-144	%	1.16E+00	2.18E+00
CO-57	%	1.67E-01	3.55E-01
CO-58	%	5.95E+01	4.64E+01
CO-60	%	1.11E+01	3.12E+01
CR-51	%	2.04E+01	6.84E+00
CS-134	%	1.31E-01	1.69E+00
CS-137	%	2.77E-01	2.40E+00
FE-59	%	2.84E-01	8.88E-02
I-131	%	2.65E-01	4.88E-01
I-132	%	4.76E-03	
MN-54	%	1.06E+00	4.13E+00
MO-99	%	9.52E-01	
NB-95	%	2.68E+00	1.82E+00
RU-103	%	4.20E-01	2.22E-01
SB-124	%	1.42E-03	6.66E-01
SN-113	%	2.48E-01	8.88E-02

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

INSTALLATION= TROJAN

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

TC-99M	%	9.52E-03	
TE-132	%	4.76E-03	
ZR-95	%	1.77E+00	1.33E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	1.42E+02
BOTTOMS,ETC.	CI	2.27E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	3.72E+02
EQUIPMENT,ETC.	CI	2.53E+01
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	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 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 3 LICENSEE FLORIDA POWER & LIGHT
TYPE PWR LICENSED POWER (MWT) 2200.0
DOCKET NO. 50-250 INITIAL CRITICALITY 10/20/72
COOLING WATER SOURCE CLOSED CANAL SYSTEM
UNIT NUMBER 4 LICENSEE FLORIDA POWER & LIGHT
TYPE PWR LICENSED POWER (MWT) 2200.0
DOCKET NO. 50-251 INITIAL CRITICALITY 06/11/73
COOLING WATER SOURCE CLOSED CANAL SYSTEM

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
AR-41	5.63E+01
CR-51	1.22E-03
MN-54	1.40E-04
CO-57	9.04E-06
CO-58	9.16E-03
FE-59	5.70E-05
CO-60	6.69E-03
ZN-65	1.10E-04
BR-82	1.19E-03
KR-85	2.55E+00
KR-85M	1.34E+00
KR-87	8.93E-01
KR-88	9.22E-01
SR-89	7.95E-05
SR-90	5.28E-06
NB-95	2.39E-04
ZR-95	1.20E-04
RU-103	1.34E-04
AG-110M	2.20E-06
SB-124	4.92E-05
SB-125	4.87E-05
I-131	5.19E-02
XE-131M	2.56E+00
I-133	1.24E-02
XE-133	4.14E+03
XE-133M	8.06E+00
CS-134	1.78E-04
I-135	4.26E-03
XE-135	1.61E+01
XE-135M	7.68E+00
CS-136	2.87E-05
CS-137	2.85E-04
XE-138	3.37E+00
BA-140	1.00E-05
LA-140	1.27E-05
CE-141	2.58E-05
CE-144	2.80E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
F-18	6.69E-02

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 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	1.07E-02
CR-51	1.04E-02
MN-54	2.19E-03
CO-57	2.82E-04
CO-58	3.75E-02
CO-60	8.96E-02
ZN-65	1.33E-04
SR-89	1.06E-02
SR-90	3.52E-04
NB-95	2.84E-03
ZR-95	6.89E-04
MO-99	7.35E-04
RU-103	8.01E-04
AG-110M	3.13E-03
SB-124	4.54E-04
SB-125	5.76E-04
I-131	5.06E-02
I-132	5.40E-02
I-133	1.09E-01
CS-134	9.94E-03
I-134	6.33E-02
I-135	7.63E-02
CS-136	5.65E-04
CS-137	2.68E-02
CS-138	4.41E-02
BA-140	4.53E-03
LA-140	8.58E-04

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.15E+00
TOTAL LIQUID RELEASE	7.49E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.28E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	2.53E+12

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

INSTALLATION= TURKEY POINT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

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

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	7.24E+02
	CI	1.61E+02
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

INSTALLATION VERMONT YANKEE LOCATION 5 MI S BRATTLEBORO, VT

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE VERMONT YANKEE NUCLEAR POWER
TYPE BWR LICENSED POWER (MWT) 1593.0
DOCKET NO. 50-271 INITIAL CRITICALITY 03/24/72
COOLING WATER SOURCE CONNECTICUT RIVER

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
MN-54	1.25E-04
CO-58	1.79E-05
CO-60	3.66E-03
ZN-65	5.29E-04
KR-85M	1.64E+01
KR-87	3.45E+01
KR-88	3.73E+01
SR-89	1.84E-04
SR-90	3.71E-06
SB-124	9.62E-05
I-131	1.11E-02
I-133	8.01E-03
XE-133	2.20E+02
CS-134	3.23E-04
I-135	2.13E-03
XE-135	6.72E+01
XE-135M	2.41E+02
CS-137	6.09E-04
XE-138	1.03E+03
BA-LA-140	4.43E-04

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

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

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

INSTALLATION= VERMONT YANKEE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

IRRADIATED FUEL SHIPMENTS(DISPOSITION)

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
0		

SOLID WASTE DISPOSITION

NUMBER OF SHIPMENTS	MODE OF TRANSPORTATION	DESTINATION
47	TRUCK	BARNWELL S.C.
3	TRUCK	BEATTY NV.

ESTIMATE OF MAJOR NUCLIDE COMPOSITION(BY TYPE OF WASTE)		JAN-JUNE	JULY-DEC
A			
BA-140	%	7.27E-04	4.50E-01
CE-141	%	1.89E-03	1.90E-01
CO-58	%	1.18E+00	1.34E+00
CO-60	%	1.41E+01	1.92E+01
CS-134	%	2.69E+01	1.92E+01
CS-137	%	5.05E+01	4.81E+01
I-131	%	1.55E-01	1.23E+00
I-133	%	2.17E-03	
LA-140	%	7.22E-02	5.30E-01
MN-54	%	1.25E+00	1.76E+00
MN-56	%	2.94E-03	3.50E-01
NA-24	%	1.05E-02	
ZN-65	%	5.70E+00	6.73E+00
ZR-95	%	3.25E-03	8.60E-01
B			
CO-58	%	9.80E-01	9.80E-01
CO-60	%	2.43E+01	2.43E+01
CS-134	%	2.31E+01	2.31E+01
CS-137	%	4.08E+01	4.08E+01
MN-54	%	2.45E+00	2.54E+00
ZN-65	%	8.38E+00	8.34E+00

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	1.71E+02
	CI	8.95E+02
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	3.13E+02
	CI	2.48E+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

INSTALLATION YANKEE ROWE LOCATION 20 MI NW GREENFIELD, MA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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)
C-14	1.50E-01
AR-37	4.13E-01
AR-41	9.19E-01
CR-51	<1.61E-05
MN-54	8.28E-06
CO-58	1.28E-06
FE-59	<4.41E-06
CO-60	1.18E-05
KR-85	1.23E+00
KR-85M	7.45E-01
KR-87	7.11E-01
KR-88	1.26E+00
SR-89	3.04E-07
SR-90	1.20E-07
ZR-NB-95	<3.66E-06
AG-110M	<4.71E-06
SB-124	<3.09E-06
SB-125	1.40E-06
I-131	6.32E-05
XE-131M	1.05E+00
I-133	<3.09E-05
XE-133	3.22E+01
XE-133M	9.47E-02
CS-134	3.04E-06
I-135	<4.87E-05
XE-135	1.30E+01
XE-135M	1.85E+01
CS-137	6.48E-06
XE-138	3.66E-01
BA-LA-140	<8.28E-06
CE-141	<2.80E-06
CE-144	<1.31E-05

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
C-14	6.40E-03
CR-51	5.98E-05
MN-54	7.84E-04
CO-58	1.52E-04
FE-59	4.88E-06
CO-60	8.62E-04
ZN-65	<9.54E-05
SE-75	<5.49E-05
SR-89	1.21E-04
SR-90	4.61E-05

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

INSTALLATION YANKEE ROWE LOCATION 20 MI NW GREENFIELD, MA

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
ZR-NB-95	6.80E-06
MO-99	<2.83E-04
TC-99M	9.63E-06
RU-103	3.04E-06
AG-110M	<6.21E-05
SB-124	<1.07E-04
I-131	1.96E-03
I-133	4.61E-04
XE-133	5.15E-01
CS-134	2.59E-03
XE-135	5.52E-03
CS-137	4.02E-03
BA-LA-140	2.41E-05
CE-141	2.37E-06
CE-144	1.13E-05
UNIDENTIFIED	2.20E-05

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	1.47E+00
TOTAL LIQUID RELEASE	5.84E+01

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	9.59E+06
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	6.73E+10

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

INSTALLATION= YANKEE ROWE

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
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.
1	TRUCK	BEATTY NV.

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR	M3	6.46E+01
BOTTOMS,ETC.	CI	9.29E+01
B. DRY COMPRESSIBLE WASTE, CONTAMINATED	M3	1.42E+02
EQUIPMENT,ETC.	CI	2.78E+00
C.IRRADIATED COMPONENTS, CONTROL	M3	
RODS,ETC.	CI	
D. OTHER	M3	
	CI	

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

INSTALLATION ZION LOCATION 6 MI N WAUKEGAN, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

UNIT NUMBER 1 LICENSEE COMMONWEALTH EDISON
TYPE PWR LICENSED POWER (MWT) 3250.0
DOCKET NO. 50-295 INITIAL CRITICALITY 06/19/73
COOLING WATER SOURCE LAKE MICHIGAN
UNIT NUMBER 2 LICENSEE COMMONWEALTH EDISON
TYPE PWR LICENSED POWER (MWT) 3250.0
DOCKET NO. 50-304 INITIAL CRITICALITY 12/24/73
COOLING WATER SOURCE LAKE MICHIGAN

AIRBORNE EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	3.42E-04
AR-41	N/D
CR-51	3.11E-06
MN-54	1.92E-06
CO-58	1.65E-05
FE-59	N/D
CO-60	3.33E-04
KR-85	3.70E-01
KR-85M	1.16E+01
KR-88	8.58E+01
RB-88	2.49E-09
SR-89	1.52E-07
SR-90	2.87E-09
NB-95	N/D
ZR-95	N/D
MO-99	N/D
TC-99M	5.93E-07
AG-110	4.46E-07
SB-124	N/D
I-131	5.94E-04
XE-131M	2.63E+02
I-132	8.63E-06
I-133	4.52E-05
XE-133	5.15E+03
XE-133M	1.01E+01
CS-134	1.02E-04
I-135	4.14E-06
XE-135	2.72E+02
CS-137	2.26E-04
CS-138	1.11E-09
BA-LA-140	6.06E-06
W-187	3.13E-07
NP-239	N/D

LIQUID EFFLUENTS

NUCLIDES RELEASED	ACTIVITY (CI)
NA-24	3.77E-04
CR-51	1.38E-02
MN-54	2.27E-03
CO-57	6.25E-04
CO-58	1.12E-01

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

INSTALLATION ZION LOCATION 6 MI N WAUKEGAN, IL

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
AIRBORNE AND LIQUID EFFLUENTS

LIQUID EFFLUENTS NUCLIDES RELEASED	ACTIVITY (CI)
FE-59	N/D
CO-60	1.83E-01
CU-64	N/D
ZN-65	3.64E-05
SR-89	4.87E-02
SR-90	4.81E-02
NB-95	3.41E-03
ZR-95	2.92E-04
MO-99	2.48E-04
AG-110M	4.63E-04
SB-124	5.73E-03
I-131	5.37E-05
I-132	3.90E-04
I-133	N/D
XE-133	7.95E-02
XE-133M	N/D
CS-134	1.28E-02
XE-135	4.61E-03
XE-135M	N/D
CS-136	2.74E-05
CS-137	2.15E-02
BA-LA-140	N/D
W-187	1.40E-03
NP-239	N/D

TRITIUM	(CI)
TOTAL AIRBORNE RELEASE	N/D
TOTAL LIQUID RELEASE	7.45E+02

VOLUME OF LIQUID WASTE RELEASED(PRIOR TO DILUTION)	LITERS	2.12E+08
VOLUME OF DILUTION WATER USED DURING PERIOD	LITERS	1.73E+12

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

INSTALLATION= ZION

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT FOR YEAR 1980
SOLID WASTES

TYPE OF WASTE	UNIT	YEAR TOTAL
A. SPENT RESINS, FILTER SLUDGES, EVAPORATOR BOTTOMS,ETC.	M3	
	CI	
B. DRY COMPRESSIBLE WASTE, CONTAMINATED EQUIPMENT,ETC.	M3	
	CI	
C. IRRADIATED COMPONENTS, CONTROL RODS,ETC.	M3	
	CI	
D. OTHER	M3	1.64E+03
	CI	2.55E+03

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